template: All

The LaTex code that creates this quiz is released to the Public Domain
Attribution for each question is documented in the Appendix
https://bitbucket.org/Guy_vandegrift/qbwiki/wiki/Home
https://en.wikiversity.org/wiki/Quizbank
mixed quiz 155915086299

Wednesday 29th May, 2019

Though posted on Wikiversity, this document was created without wikitex using Python to write LaTeX markup. With a bit more development it will be possible for users to download and use software that will permit them to create, modify, and print their own versions of this document.

Contents

1 up1-05 **2**
1.1 Renditions 6

2 up1-06 **78**
2.1 Renditions 82

3 up1-07 **152**
3.1 Renditions 156

4 up1-08 **235**
4.1 Renditions 236

5 up1-09 **261**
5.1 Renditions 265

6 up1-10 **329**
6.1 Renditions 333

7 up1-11 **406**
7.1 Renditions 408

8 up1-12 **443**
8.1 Renditions 446

9 up1-13 **499**
9.1 Renditions 502

10 up1-14 **548**
10.1 Renditions 550

11 Attribution **583**

1 up1-05

1. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 30°. David pulls with a force of 4.000E+02 N, and Stephanie pulls with a force of 3.000E+02 N. Find magnitude of the net force. [1]

   A. 6.27E+02 N

   B. 6.77E+02 N

   C. 7.31E+02 N

   D. 7.89E+02 N

   E. 8.52E+02 N

2. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 30°. David pulls with a force of 4.000E+02 N, and Stephanie pulls with a force of 3.000E+02 N. What angle does the net force make with David's rope? [2]

   A. 9.41E+00 degrees

   B. 1.02E+01 degrees

   C. 1.10E+01 degrees

   D. 1.19E+01 degrees

   E. 1.28E+01 degrees

The next page might contain more answer choices for this question

3. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 30°. David pulls with a force of 4.000E+02 N, and Stephanie pulls with a force of 3.000E+02 N. What angle does the net force make with Stephanie's rope? [3]

    A. 1.36E+01 degrees

    B. 1.47E+01 degrees

    C. 1.59E+01 degrees

    D. 1.72E+01 degrees

    E. 1.86E+01 degrees

4. A powerful motorcycle can produce an acceleration of 3.5 m/s^2 while travelling at 90 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.000E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.450E+02kg? [4]

    A. 9.24E+02 N

    B. 9.98E+02 N

    C. 1.08E+03 N

    D. 1.16E+03 N

    E. 1.26E+03 N

5. An object of mass 5 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 10 N in the positive direction, and 2 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [5]

    A. 1.66E+00 m/s^2

    B. 1.79E+00 m/s^2

    C. 1.93E+00 m/s^2

    D. 2.09E+00 m/s^2

    E. 2.25E+00 m/s^2

6. An object of mass 5 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 10 N in the positive direction, and 2 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [6]

    A. 1.58E+01 degrees

    B. 1.71E+01 degrees

    C. 1.84E+01 degrees

The next page might contain more answer choices for this question

D. 1.99E+01 degrees

E. 2.15E+01 degrees

7. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 60 m above his glove. His glove stops the ball in1.000E-02 s. What is the force exerted by his glove on the ball? [7]

A. 3.65E+02 N

B. 3.95E+02 N

C. 4.26E+02 N

D. 4.60E+02 N

E. 4.97E+02 N

8. Two forces of 25 and 45N act on an object. Their directions differ by 70°. The resulting acceleration has a magnitude of 10 m/s^2. What is the object's mass? [8]

A. 4.64E+00 kg

B. 5.01E+00 kg

C. 5.41E+00 kg

D. 5.85E+00 kg

E. 6.32E+00 kg

9. Find the magnitude of the net force if the mass of the car is 1.050E+03 kg, the intial speed is 40 km/hr, and the stopping distance is 25 m. [9]

A. 2.40E+03 N

B. 2.59E+03 N

C. 2.80E+03 N

D. 3.02E+03 N

E. 3.27E+03 N

10. Two forces are applied to a 5-kg object, and it accelerates at a rate of $2m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude12 N, find the magnitude of the other force. [10]

A. 1.56E+01 N

B. 1.69E+01 N

C. 1.82E+01 N

D. 1.97E+01 N

The next page might contain more answer choices for this question

E. 2.13E+01 N

11. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.42-kg. The first player kicks with force 1.620E+02 N at 9° north of west. At the same instant, the second player kicks with force 2.150E+02 N at 15° east of south. Find the magnitude of the acceleration. [11]

A. 4.29E+02 m/s^2

B. 4.63E+02 m/s^2

C. 5.00E+02 m/s^2

D. 5.40E+02 m/s^2

E. 5.83E+02 m/s^2

12. A 0.0502-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.2° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [12]

A. 4.03E-01 m/s^2

B. 4.35E-01 m/s^2

C. 4.70E-01 m/s^2

D. 5.07E-01 m/s^2

E. 5.48E-01 m/s^2

13. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-3\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(6\hat{i} + -4\hat{j}\right) N$, $\vec{F}_3 = \left(2\hat{i} + 5\hat{j}\right) N$. The object experiences acceleration of 4.23 m/s^2. Find the mass of the object. [13]

A. 5.32E+01 kg

B. 5.74E+01 kg

C. 6.20E+01 kg

D. 6.70E+01 kg

E. 7.24E+01 kg

14. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.5-kg, and its velocity is $3\hat{i}m/s$. After 10 s, the velocity is $9\hat{i} + 4\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [14]

The next page might contain more answer choices for this question

A. 5.30E-01 $kg \cdot m/s^2$

B. 5.72E-01 $kg \cdot m/s^2$

C. 6.18E-01 $kg \cdot m/s^2$

D. 6.68E-01 $kg \cdot m/s^2$

E. 7.21E-01 $kg \cdot m/s^2$

1.1 Renditions

up1-05 Q1

1. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 26°. David pulls with a force of 4.890E+02 N, and Stephanie pulls with a force of 3.600E+02 N. Find magnitude of the net force. [15]

   A. 7.10E+02 N

   B. 7.66E+02 N

   C. 8.28E+02 N

   D. 8.94E+02 N

   E. 9.65E+02 N

2. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.360E+02 N, and Stephanie pulls with a force of 3.220E+02 N. Find magnitude of the net force. [16]

   A. 6.81E+02 N

   B. 7.36E+02 N

   C. 7.95E+02 N

   D. 8.58E+02 N

   E. 9.27E+02 N

3. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 22°. David pulls with a force of 4.630E+02 N, and Stephanie pulls with a force of 3.430E+02 N. Find magnitude of the net force. [17]

   A. 5.82E+02 N

   B. 6.28E+02 N

   C. 6.79E+02 N

   D. 7.33E+02 N

The next page might contain more answer choices for this question

E. 7.92E+02 N

4. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.280E+02 N, and Stephanie pulls with a force of 3.230E+02 N. Find magnitude of the net force. [18]

   A. 6.31E+02 N

   B. 6.82E+02 N

   C. 7.36E+02 N

   D. 7.95E+02 N

   E. 8.59E+02 N

5. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 22°. David pulls with a force of 4.940E+02 N, and Stephanie pulls with a force of 3.470E+02 N. Find magnitude of the net force. [19]

   A. 7.08E+02 N

   B. 7.65E+02 N

   C. 8.26E+02 N

   D. 8.92E+02 N

   E. 9.63E+02 N

6. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 25°. David pulls with a force of 4.700E+02 N, and Stephanie pulls with a force of 3.010E+02 N. Find magnitude of the net force. [20]

   A. 5.98E+02 N

   B. 6.46E+02 N

   C. 6.98E+02 N

   D. 7.54E+02 N

   E. 8.14E+02 N

7. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.620E+02 N, and Stephanie pulls with a force of 3.140E+02 N. Find magnitude of the net force. [21]

   A. 7.55E+02 N

   B. 8.16E+02 N

   C. 8.81E+02 N

The next page might contain more answer choices for this question

D. 9.52E+02 N

E. 1.03E+03 N

8. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 21°. David pulls with a force of 4.820E+02 N, and Stephanie pulls with a force of 3.260E+02 N. Find magnitude of the net force. [22]

A. 5.84E+02 N

B. 6.31E+02 N

C. 6.82E+02 N

D. 7.36E+02 N

E. 7.95E+02 N

9. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.720E+02 N, and Stephanie pulls with a force of 3.250E+02 N. Find magnitude of the net force. [23]

A. 5.70E+02 N

B. 6.16E+02 N

C. 6.65E+02 N

D. 7.18E+02 N

E. 7.76E+02 N

10. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.950E+02 N, and Stephanie pulls with a force of 3.380E+02 N. Find magnitude of the net force. [24]

A. 6.42E+02 N

B. 6.94E+02 N

C. 7.49E+02 N

D. 8.09E+02 N

E. 8.74E+02 N

11. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 21°. David pulls with a force of 4.370E+02 N, and Stephanie pulls with a force of 3.530E+02 N. Find magnitude of the net force. [25]

A. 7.77E+02 N

B. 8.39E+02 N

The next page might contain more answer choices for this question

C. 9.06E+02 N

D. 9.79E+02 N

E. 1.06E+03 N

12. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 25°. David pulls with a force of 4.700E+02 N, and Stephanie pulls with a force of 3.140E+02 N. Find magnitude of the net force. [26]

A. 6.08E+02 N

B. 6.57E+02 N

C. 7.09E+02 N

D. 7.66E+02 N

E. 8.27E+02 N

13. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.540E+02 N, and Stephanie pulls with a force of 3.670E+02 N. Find magnitude of the net force. [27]

A. 7.97E+02 N

B. 8.61E+02 N

C. 9.29E+02 N

D. 1.00E+03 N

E. 1.08E+03 N

14. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.530E+02 N, and Stephanie pulls with a force of 3.160E+02 N. Find magnitude of the net force. [28]

A. 6.46E+02 N

B. 6.98E+02 N

C. 7.54E+02 N

D. 8.14E+02 N

E. 8.80E+02 N

15. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 21°. David pulls with a force of 4.700E+02 N, and Stephanie pulls with a force of 3.720E+02 N. Find magnitude of the net force. [29]

A. 8.28E+02 N

The next page might contain more answer choices for this question

B. 8.94E+02 N

C. 9.66E+02 N

D. 1.04E+03 N

E. 1.13E+03 N

16. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.780E+02 N, and Stephanie pulls with a force of 3.270E+02 N. Find magnitude of the net force. [30]

A. 6.72E+02 N

B. 7.26E+02 N

C. 7.84E+02 N

D. 8.46E+02 N

E. 9.14E+02 N

17. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.380E+02 N, and Stephanie pulls with a force of 3.710E+02 N. Find magnitude of the net force. [31]

A. 5.78E+02 N

B. 6.25E+02 N

C. 6.75E+02 N

D. 7.29E+02 N

E. 7.87E+02 N

18. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 26°. David pulls with a force of 4.600E+02 N, and Stephanie pulls with a force of 3.250E+02 N. Find magnitude of the net force. [32]

A. 7.65E+02 N

B. 8.27E+02 N

C. 8.93E+02 N

D. 9.64E+02 N

E. 1.04E+03 N

19. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.620E+02 N, and Stephanie pulls with a force of 3.520E+02 N. Find magnitude of the net force. [33]

The next page might contain more answer choices for this question

A. 7.33E+02 N

B. 7.92E+02 N

C. 8.55E+02 N

D. 9.24E+02 N

E. 9.98E+02 N

up1-05 Q2

1. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 24°. David pulls with a force of 4.370E+02 N, and Stephanie pulls with a force of 3.410E+02 N. What angle does the net force make with David's rope? [34]

   A. 1.05E+01 degrees

   B. 1.13E+01 degrees

   C. 1.22E+01 degrees

   D. 1.32E+01 degrees

   E. 1.43E+01 degrees

2. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.400E+02 N, and Stephanie pulls with a force of 3.310E+02 N. What angle does the net force make with David's rope? [35]

   A. 1.03E+01 degrees

   B. 1.11E+01 degrees

   C. 1.20E+01 degrees

   D. 1.29E+01 degrees

   E. 1.40E+01 degrees

3. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 24°. David pulls with a force of 4.520E+02 N, and Stephanie pulls with a force of 3.600E+02 N. What angle does the net force make with David's rope? [36]

   A. 9.11E+00 degrees

   B. 9.83E+00 degrees

   C. 1.06E+01 degrees

   D. 1.15E+01 degrees

   E. 1.24E+01 degrees

The next page might contain more answer choices for this question

4. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 26°. David pulls with a force of 4.690E+02 N, and Stephanie pulls with a force of 3.060E+02 N. What angle does the net force make with David's rope? [37]

   A. 9.46E+00 degrees

   B. 1.02E+01 degrees

   C. 1.10E+01 degrees

   D. 1.19E+01 degrees

   E. 1.29E+01 degrees

5. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 21°. David pulls with a force of 4.530E+02 N, and Stephanie pulls with a force of 3.310E+02 N. What angle does the net force make with David's rope? [38]

   A. 6.50E+00 degrees

   B. 7.02E+00 degrees

   C. 7.59E+00 degrees

   D. 8.19E+00 degrees

   E. 8.85E+00 degrees

6. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 25°. David pulls with a force of 4.670E+02 N, and Stephanie pulls with a force of 3.280E+02 N. What angle does the net force make with David's rope? [39]

   A. 7.56E+00 degrees

   B. 8.16E+00 degrees

   C. 8.81E+00 degrees

   D. 9.52E+00 degrees

   E. 1.03E+01 degrees

7. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.960E+02 N, and Stephanie pulls with a force of 3.570E+02 N. What angle does the net force make with David's rope? [40]

   A. 1.04E+01 degrees

   B. 1.13E+01 degrees

   C. 1.22E+01 degrees

   D. 1.31E+01 degrees

The next page might contain more answer choices for this question

E. 1.42E+01 degrees

8. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.990E+02 N, and Stephanie pulls with a force of 3.110E+02 N. What angle does the net force make with David's rope? [41]

A. 8.14E+00 degrees

B. 8.80E+00 degrees

C. 9.50E+00 degrees

D. 1.03E+01 degrees

E. 1.11E+01 degrees

9. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 21°. David pulls with a force of 4.730E+02 N, and Stephanie pulls with a force of 3.740E+02 N. What angle does the net force make with David's rope? [42]

A. 7.35E+00 degrees

B. 7.94E+00 degrees

C. 8.57E+00 degrees

D. 9.26E+00 degrees

E. 1.00E+01 degrees

10. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 24°. David pulls with a force of 4.370E+02 N, and Stephanie pulls with a force of 3.240E+02 N. What angle does the net force make with David's rope? [43]

A. 9.44E+00 degrees

B. 1.02E+01 degrees

C. 1.10E+01 degrees

D. 1.19E+01 degrees

E. 1.28E+01 degrees

11. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 26°. David pulls with a force of 4.780E+02 N, and Stephanie pulls with a force of 3.390E+02 N. What angle does the net force make with David's rope? [44]

A. 1.08E+01 degrees

B. 1.16E+01 degrees

C. 1.25E+01 degrees

The next page might contain more answer choices for this question

D. 1.35E+01 degrees

E. 1.46E+01 degrees

12. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.580E+02 N, and Stephanie pulls with a force of 3.650E+02 N. What angle does the net force make with David's rope? [45]

A. 8.73E+00 degrees

B. 9.43E+00 degrees

C. 1.02E+01 degrees

D. 1.10E+01 degrees

E. 1.19E+01 degrees

13. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 24°. David pulls with a force of 4.430E+02 N, and Stephanie pulls with a force of 3.300E+02 N. What angle does the net force make with David's rope? [46]

A. 7.51E+00 degrees

B. 8.11E+00 degrees

C. 8.76E+00 degrees

D. 9.46E+00 degrees

E. 1.02E+01 degrees

14. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.920E+02 N, and Stephanie pulls with a force of 3.500E+02 N. What angle does the net force make with David's rope? [47]

A. 7.57E+00 degrees

B. 8.17E+00 degrees

C. 8.83E+00 degrees

D. 9.53E+00 degrees

E. 1.03E+01 degrees

15. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.580E+02 N, and Stephanie pulls with a force of 3.380E+02 N. What angle does the net force make with David's rope? [48]

A. 1.06E+01 degrees

B. 1.14E+01 degrees

The next page might contain more answer choices for this question

C. 1.23E+01 degrees

D. 1.33E+01 degrees

E. 1.44E+01 degrees

16. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 24°. David pulls with a force of 4.520E+02 N, and Stephanie pulls with a force of 3.600E+02 N. What angle does the net force make with David's rope? [49]

A. 9.83E+00 degrees

B. 1.06E+01 degrees

C. 1.15E+01 degrees

D. 1.24E+01 degrees

E. 1.34E+01 degrees

17. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.930E+02 N, and Stephanie pulls with a force of 3.460E+02 N. What angle does the net force make with David's rope? [50]

A. 8.76E+00 degrees

B. 9.46E+00 degrees

C. 1.02E+01 degrees

D. 1.10E+01 degrees

E. 1.19E+01 degrees

18. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.680E+02 N, and Stephanie pulls with a force of 3.120E+02 N. What angle does the net force make with David's rope? [51]

A. 8.19E+00 degrees

B. 8.85E+00 degrees

C. 9.56E+00 degrees

D. 1.03E+01 degrees

E. 1.11E+01 degrees

19. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.370E+02 N, and Stephanie pulls with a force of 3.730E+02 N. What angle does the net force make with David's rope? [52]

A. 9.07E+00 degrees

The next page might contain more answer choices for this question

B. 9.80E+00 degrees

C. 1.06E+01 degrees

D. 1.14E+01 degrees

E. 1.23E+01 degrees

up1-05 Q3

1. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 23°. David pulls with a force of 4.390E+02 N, and Stephanie pulls with a force of 3.460E+02 N. What angle does the net force make with Stephanie's rope? [53]

   A. 1.02E+01 degrees

   B. 1.10E+01 degrees

   C. 1.19E+01 degrees

   D. 1.29E+01 degrees

   E. 1.39E+01 degrees

2. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 29°. David pulls with a force of 4.630E+02 N, and Stephanie pulls with a force of 3.550E+02 N. What angle does the net force make with Stephanie's rope? [54]

   A. 1.52E+01 degrees

   B. 1.65E+01 degrees

   C. 1.78E+01 degrees

   D. 1.92E+01 degrees

   E. 2.07E+01 degrees

3. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 24°. David pulls with a force of 4.910E+02 N, and Stephanie pulls with a force of 3.030E+02 N. What angle does the net force make with Stephanie's rope? [55]

   A. 1.38E+01 degrees

   B. 1.49E+01 degrees

   C. 1.61E+01 degrees

   D. 1.74E+01 degrees

   E. 1.87E+01 degrees

The next page might contain more answer choices for this question

4. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.850E+02 N, and Stephanie pulls with a force of 3.040E+02 N. What angle does the net force make with Stephanie's rope? [56]

   A. 1.54E+01 degrees

   B. 1.67E+01 degrees

   C. 1.80E+01 degrees

   D. 1.94E+01 degrees

   E. 2.10E+01 degrees

5. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.980E+02 N, and Stephanie pulls with a force of 3.660E+02 N. What angle does the net force make with Stephanie's rope? [57]

   A. 1.50E+01 degrees

   B. 1.62E+01 degrees

   C. 1.75E+01 degrees

   D. 1.89E+01 degrees

   E. 2.04E+01 degrees

6. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 29°. David pulls with a force of 4.640E+02 N, and Stephanie pulls with a force of 3.710E+02 N. What angle does the net force make with Stephanie's rope? [58]

   A. 1.61E+01 degrees

   B. 1.74E+01 degrees

   C. 1.88E+01 degrees

   D. 2.03E+01 degrees

   E. 2.20E+01 degrees

7. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 29°. David pulls with a force of 4.250E+02 N, and Stephanie pulls with a force of 3.060E+02 N. What angle does the net force make with Stephanie's rope? [59]

   A. 1.24E+01 degrees

   B. 1.34E+01 degrees

   C. 1.45E+01 degrees

   D. 1.57E+01 degrees

The next page might contain more answer choices for this question

E. 1.69E+01 degrees

8. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 25°. David pulls with a force of 4.480E+02 N, and Stephanie pulls with a force of 3.250E+02 N. What angle does the net force make with Stephanie's rope? [60]

A. 1.34E+01 degrees

B. 1.45E+01 degrees

C. 1.57E+01 degrees

D. 1.69E+01 degrees

E. 1.83E+01 degrees

9. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.570E+02 N, and Stephanie pulls with a force of 3.680E+02 N. What angle does the net force make with Stephanie's rope? [61]

A. 1.39E+01 degrees

B. 1.50E+01 degrees

C. 1.62E+01 degrees

D. 1.75E+01 degrees

E. 1.89E+01 degrees

10. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 21°. David pulls with a force of 4.580E+02 N, and Stephanie pulls with a force of 3.010E+02 N. What angle does the net force make with Stephanie's rope? [62]

A. 1.18E+01 degrees

B. 1.27E+01 degrees

C. 1.37E+01 degrees

D. 1.48E+01 degrees

E. 1.60E+01 degrees

11. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 25°. David pulls with a force of 4.610E+02 N, and Stephanie pulls with a force of 3.500E+02 N. What angle does the net force make with Stephanie's rope? [63]

A. 1.13E+01 degrees

B. 1.22E+01 degrees

C. 1.32E+01 degrees

The next page might contain more answer choices for this question

D. 1.42E+01 degrees

E. 1.54E+01 degrees

12. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 26°. David pulls with a force of 4.590E+02 N, and Stephanie pulls with a force of 3.570E+02 N. What angle does the net force make with Stephanie's rope? [64]

A. 1.26E+01 degrees

B. 1.36E+01 degrees

C. 1.47E+01 degrees

D. 1.58E+01 degrees

E. 1.71E+01 degrees

13. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 29°. David pulls with a force of 4.490E+02 N, and Stephanie pulls with a force of 3.420E+02 N. What angle does the net force make with Stephanie's rope? [65]

A. 1.31E+01 degrees

B. 1.41E+01 degrees

C. 1.53E+01 degrees

D. 1.65E+01 degrees

E. 1.78E+01 degrees

14. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 28°. David pulls with a force of 4.940E+02 N, and Stephanie pulls with a force of 3.080E+02 N. What angle does the net force make with Stephanie's rope? [66]

A. 1.37E+01 degrees

B. 1.48E+01 degrees

C. 1.60E+01 degrees

D. 1.73E+01 degrees

E. 1.87E+01 degrees

15. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 29°. David pulls with a force of 4.690E+02 N, and Stephanie pulls with a force of 3.070E+02 N. What angle does the net force make with Stephanie's rope? [67]

A. 1.51E+01 degrees

B. 1.63E+01 degrees

The next page might contain more answer choices for this question

C. 1.76E+01 degrees

D. 1.90E+01 degrees

E. 2.05E+01 degrees

16. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 29°. David pulls with a force of 4.770E+02 N, and Stephanie pulls with a force of 3.300E+02 N. What angle does the net force make with Stephanie's rope? [68]

A. 1.72E+01 degrees

B. 1.86E+01 degrees

C. 2.01E+01 degrees

D. 2.17E+01 degrees

E. 2.34E+01 degrees

17. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 25°. David pulls with a force of 4.320E+02 N, and Stephanie pulls with a force of 3.550E+02 N. What angle does the net force make with Stephanie's rope? [69]

A. 1.27E+01 degrees

B. 1.37E+01 degrees

C. 1.48E+01 degrees

D. 1.60E+01 degrees

E. 1.73E+01 degrees

18. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.280E+02 N, and Stephanie pulls with a force of 3.190E+02 N. What angle does the net force make with Stephanie's rope? [70]

A. 1.33E+01 degrees

B. 1.44E+01 degrees

C. 1.55E+01 degrees

D. 1.67E+01 degrees

E. 1.81E+01 degrees

19. Two teenagers are pulling on ropes attached to a tree. The angle between the ropes is 27°. David pulls with a force of 4.260E+02 N, and Stephanie pulls with a force of 3.750E+02 N. What angle does the net force make with Stephanie's rope? [71]

A. 1.23E+01 degrees

The next page might contain more answer choices for this question

B. 1.33E+01 degrees

C. 1.44E+01 degrees

D. 1.55E+01 degrees

E. 1.68E+01 degrees

up1-05 Q4

1. A powerful motorcycle can produce an acceleration of 3.12 m/s^2 while travelling at 84 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.480E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.400E+02kg? [72]

   A. 8.06E+02 N

   B. 8.71E+02 N

   C. 9.40E+02 N

   D. 1.02E+03 N

   E. 1.10E+03 N

2. A powerful motorcycle can produce an acceleration of 3.85 m/s^2 while travelling at 97 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.650E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.490E+02kg? [73]

   A. 1.32E+03 N

   B. 1.42E+03 N

   C. 1.54E+03 N

   D. 1.66E+03 N

   E. 1.79E+03 N

3. A powerful motorcycle can produce an acceleration of 3.31 m/s^2 while travelling at 98 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.740E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.370E+02kg? [74]

   A. 1.08E+03 N

   B. 1.17E+03 N

The next page might contain more answer choices for this question

C. 1.26E+03 N

D. 1.36E+03 N

E. 1.47E+03 N

4. A powerful motorcycle can produce an acceleration of 3.33 m/s^2 while travelling at 98 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.740E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.480E+02kg? [75]

A. 1.20E+03 N

B. 1.30E+03 N

C. 1.40E+03 N

D. 1.52E+03 N

E. 1.64E+03 N

5. A powerful motorcycle can produce an acceleration of 3.02 m/s^2 while travelling at 92 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.180E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.330E+02kg? [76]

A. 9.62E+02 N

B. 1.04E+03 N

C. 1.12E+03 N

D. 1.21E+03 N

E. 1.31E+03 N

6. A powerful motorcycle can produce an acceleration of 3.14 m/s^2 while travelling at 81 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.240E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.510E+02kg? [77]

A. 9.53E+02 N

B. 1.03E+03 N

C. 1.11E+03 N

D. 1.20E+03 N

The next page might contain more answer choices for this question

E. 1.30E+03 N

7. A powerful motorcycle can produce an acceleration of 3.95 m/s^2 while travelling at 80 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.160E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.560E+02kg? [78]

A. 1.33E+03 N

B. 1.43E+03 N

C. 1.55E+03 N

D. 1.67E+03 N

E. 1.81E+03 N

8. A powerful motorcycle can produce an acceleration of 3.96 m/s^2 while travelling at 86 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.650E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.480E+02kg? [79]

A. 1.07E+03 N

B. 1.15E+03 N

C. 1.25E+03 N

D. 1.35E+03 N

E. 1.45E+03 N

9. A powerful motorcycle can produce an acceleration of 3.12 m/s^2 while travelling at 89 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.910E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.520E+02kg? [80]

A. 9.35E+02 N

B. 1.01E+03 N

C. 1.09E+03 N

D. 1.18E+03 N

E. 1.27E+03 N

The next page might contain more answer choices for this question

10. A powerful motorcycle can produce an acceleration of 3.78 m/s^2 while travelling at 91 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.090E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.540E+02kg? [81]

    A. 1.09E+03 N

    B. 1.17E+03 N

    C. 1.27E+03 N

    D. 1.37E+03 N

    E. 1.48E+03 N

11. A powerful motorcycle can produce an acceleration of 3.25 m/s^2 while travelling at 92 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.180E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.470E+02kg? [82]

    A. 1.22E+03 N

    B. 1.32E+03 N

    C. 1.42E+03 N

    D. 1.54E+03 N

    E. 1.66E+03 N

12. A powerful motorcycle can produce an acceleration of 3.67 m/s^2 while travelling at 93 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.270E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.590E+02kg? [83]

    A. 1.28E+03 N

    B. 1.38E+03 N

    C. 1.49E+03 N

    D. 1.61E+03 N

    E. 1.74E+03 N

13. A powerful motorcycle can produce an acceleration of 3.8 m/s^2 while travelling at 90 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.000E+02 N. What is the magnitude of the force that motorcycle exert backward

The next page might contain more answer choices for this question

on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.490E+02kg? [84]

A. 1.15E+03 N

B. 1.25E+03 N

C. 1.35E+03 N

D. 1.45E+03 N

E. 1.57E+03 N

14. A powerful motorcycle can produce an acceleration of 3.84 m/s^2 while travelling at 86 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.650E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.490E+02kg? [85]

A. 1.32E+03 N

B. 1.43E+03 N

C. 1.54E+03 N

D. 1.66E+03 N

E. 1.80E+03 N

15. A powerful motorcycle can produce an acceleration of 3.88 m/s^2 while travelling at 88 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.820E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.360E+02kg? [86]

A. 1.30E+03 N

B. 1.40E+03 N

C. 1.51E+03 N

D. 1.63E+03 N

E. 1.77E+03 N

16. A powerful motorcycle can produce an acceleration of 3.89 m/s^2 while travelling at 97 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.650E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.400E+02kg? [87]

A. 1.11E+03 N

The next page might contain more answer choices for this question

B. 1.20E+03 N

C. 1.29E+03 N

D. 1.40E+03 N

E. 1.51E+03 N

17. A powerful motorcycle can produce an acceleration of 3.11 m/s^2 while travelling at 98 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.740E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.460E+02kg? [88]

A. 1.06E+03 N

B. 1.15E+03 N

C. 1.24E+03 N

D. 1.34E+03 N

E. 1.45E+03 N

18. A powerful motorcycle can produce an acceleration of 3.73 m/s^2 while travelling at 9.900E+01 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 4.840E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.520E+02kg? [89]

A. 1.32E+03 N

B. 1.42E+03 N

C. 1.54E+03 N

D. 1.66E+03 N

E. 1.79E+03 N

19. A powerful motorcycle can produce an acceleration of 3.46 m/s^2 while travelling at 81 km/h. At that speed, the forces resisting motion (e.g. friction and air drag) total 3.240E+02 N. What is the magnitude of the force that motorcycle exert backward on the ground to produce its acceleration if the mass of the motorcycle with rider is 2.440E+02kg? [90]

A. 8.59E+02 N

B. 9.27E+02 N

C. 1.00E+03 N

D. 1.08E+03 N

E. 1.17E+03 N

The next page might contain more answer choices for this question

up1-05 Q5

1. An object of mass 4 kg experiences an upward force of 1 N, as well as two horizontal forces of magnitude 11 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [91]

   A. 1.60E+00 m/s^2

   B. 1.73E+00 m/s^2

   C. 1.87E+00 m/s^2

   D. 2.02E+00 m/s^2

   E. 2.18E+00 m/s^2

2. An object of mass 2 kg experiences an upward force of 5 N, as well as two horizontal forces of magnitude 8 N in the positive direction, and 2 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [92]

   A. 3.62E+00 m/s^2

   B. 3.91E+00 m/s^2

   C. 4.22E+00 m/s^2

   D. 4.55E+00 m/s^2

   E. 4.92E+00 m/s^2

3. An object of mass 4 kg experiences an upward force of 7 N, as well as two horizontal forces of magnitude 5 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [93]

   A. 1.56E+00 m/s^2

   B. 1.69E+00 m/s^2

   C. 1.82E+00 m/s^2

   D. 1.97E+00 m/s^2

   E. 2.12E+00 m/s^2

4. An object of mass 7 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 6 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [94]

   A. 6.61E-01 m/s^2

   B. 7.14E-01 m/s^2

   C. 7.71E-01 m/s^2

The next page might contain more answer choices for this question

D. 8.33E-01 m/s^2

E. 9.00E-01 m/s^2

5. An object of mass 5 kg experiences an upward force of 1 N, as well as two horizontal forces of magnitude 11 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [95]

A. 1.49E+00 m/s^2

B. 1.61E+00 m/s^2

C. 1.74E+00 m/s^2

D. 1.88E+00 m/s^2

E. 2.03E+00 m/s^2

6. An object of mass 8 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 12 N in the positive direction, and 2 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [96]

A. 1.09E+00 m/s^2

B. 1.18E+00 m/s^2

C. 1.27E+00 m/s^2

D. 1.38E+00 m/s^2

E. 1.49E+00 m/s^2

7. An object of mass 6 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 6 N in the positive direction, and 4 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [97]

A. 3.74E-01 m/s^2

B. 4.04E-01 m/s^2

C. 4.36E-01 m/s^2

D. 4.71E-01 m/s^2

E. 5.09E-01 m/s^2

8. An object of mass 5 kg experiences an upward force of 1 N, as well as two horizontal forces of magnitude 14 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [98]

A. 1.62E+00 m/s^2

B. 1.75E+00 m/s^2

The next page might contain more answer choices for this question

C. 1.89E+00 m/s^2

D. 2.05E+00 m/s^2

E. 2.21E+00 m/s^2

9. An object of mass 2 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 12 N in the positive direction, and 4 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [99]

A. 3.27E+00 m/s^2

B. 3.53E+00 m/s^2

C. 3.82E+00 m/s^2

D. 4.12E+00 m/s^2

E. 4.45E+00 m/s^2

10. An object of mass 3 kg experiences an upward force of 5 N, as well as two horizontal forces of magnitude 13 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [100]

A. 2.74E+00 m/s^2

B. 2.96E+00 m/s^2

C. 3.20E+00 m/s^2

D. 3.45E+00 m/s^2

E. 3.73E+00 m/s^2

11. An object of mass 7 kg experiences an upward force of 6 N, as well as two horizontal forces of magnitude 15 N in the positive direction, and 4 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [101]

A. 1.32E+00 m/s^2

B. 1.42E+00 m/s^2

C. 1.53E+00 m/s^2

D. 1.66E+00 m/s^2

E. 1.79E+00 m/s^2

12. An object of mass 7 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 10 N in the positive direction, and 1 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [102]

A. 1.21E+00 m/s^2

The next page might contain more answer choices for this question

B. 1.30E+00 m/s^2

C. 1.41E+00 m/s^2

D. 1.52E+00 m/s^2

E. 1.64E+00 m/s^2

13. An object of mass 3 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 12 N in the positive direction, and 4 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [103]

A. 2.76E+00 m/s^2

B. 2.98E+00 m/s^2

C. 3.22E+00 m/s^2

D. 3.48E+00 m/s^2

E. 3.76E+00 m/s^2

14. An object of mass 4 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 8 N in the positive direction, and 1 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [104]

A. 1.51E+00 m/s^2

B. 1.63E+00 m/s^2

C. 1.76E+00 m/s^2

D. 1.90E+00 m/s^2

E. 2.06E+00 m/s^2

15. An object of mass 4 kg experiences an upward force of 6 N, as well as two horizontal forces of magnitude 14 N in the positive direction, and 3 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [105]

A. 3.13E+00 m/s^2

B. 3.38E+00 m/s^2

C. 3.65E+00 m/s^2

D. 3.95E+00 m/s^2

E. 4.26E+00 m/s^2

16. An object of mass 5 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 13 N in the positive direction, and 2 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [106]

The next page might contain more answer choices for this question

A. 1.92E+00 m/s^2

B. 2.07E+00 m/s^2

C. 2.24E+00 m/s^2

D. 2.41E+00 m/s^2

E. 2.61E+00 m/s^2

17. An object of mass 3 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 9 N in the positive direction, and 2 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [107]

A. 2.08E+00 m/s^2

B. 2.25E+00 m/s^2

C. 2.43E+00 m/s^2

D. 2.62E+00 m/s^2

E. 2.83E+00 m/s^2

18. An object of mass 7 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 14 N in the positive direction, and 2 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [108]

A. 1.61E+00 m/s^2

B. 1.74E+00 m/s^2

C. 1.88E+00 m/s^2

D. 2.03E+00 m/s^2

E. 2.19E+00 m/s^2

19. An object of mass 3 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 10 N in the positive direction, and 4 N in the opposite (horizontal) direction. What is the magnitude of the object's acceleration? [109]

A. 1.95E+00 m/s^2

B. 2.11E+00 m/s^2

C. 2.28E+00 m/s^2

D. 2.46E+00 m/s^2

E. 2.66E+00 m/s^2

The next page might contain more answer choices for this question

up1-05 Q6

1. An object of mass 3 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 9 N in the positive direction, and 3 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [110]

   A. 1.11E+01 degrees

   B. 1.20E+01 degrees

   C. 1.30E+01 degrees

   D. 1.40E+01 degrees

   E. 1.52E+01 degrees

2. An object of mass 8 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 8 N in the positive direction, and 1 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [111]

   A. 1.84E+01 degrees

   B. 1.99E+01 degrees

   C. 2.15E+01 degrees

   D. 2.32E+01 degrees

   E. 2.51E+01 degrees

3. An object of mass 6 kg experiences an upward force of 6 N, as well as two horizontal forces of magnitude 13 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [112]

   A. 1.43E+01 degrees

   B. 1.54E+01 degrees

   C. 1.67E+01 degrees

   D. 1.80E+01 degrees

   E. 1.94E+01 degrees

4. An object of mass 4 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 8 N in the positive direction, and 1 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [113]

   A. 1.71E+01 degrees

   B. 1.84E+01 degrees

   C. 1.99E+01 degrees

The next page might contain more answer choices for this question

D. 2.15E+01 degrees

E. 2.32E+01 degrees

5. An object of mass 8 kg experiences an upward force of 5 N, as well as two horizontal forces of magnitude 6 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [114]

A. 2.28E+01 degrees

B. 2.46E+01 degrees

C. 2.66E+01 degrees

D. 2.87E+01 degrees

E. 3.10E+01 degrees

6. An object of mass 5 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 13 N in the positive direction, and 1 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [115]

A. 5.98E+00 degrees

B. 6.45E+00 degrees

C. 6.97E+00 degrees

D. 7.53E+00 degrees

E. 8.13E+00 degrees

7. An object of mass 3 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 5 N in the positive direction, and 1 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [116]

A. 2.66E+01 degrees

B. 2.87E+01 degrees

C. 3.10E+01 degrees

D. 3.35E+01 degrees

E. 3.61E+01 degrees

8. An object of mass 8 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 15 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [117]

A. 8.97E+00 degrees

B. 9.69E+00 degrees

The next page might contain more answer choices for this question

C. 1.05E+01 degrees

D. 1.13E+01 degrees

E. 1.22E+01 degrees

9. An object of mass 7 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 5 N in the positive direction, and 3 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [118]

A. 2.46E+01 degrees

B. 2.66E+01 degrees

C. 2.87E+01 degrees

D. 3.10E+01 degrees

E. 3.35E+01 degrees

10. An object of mass 8 kg experiences an upward force of 6 N, as well as two horizontal forces of magnitude 14 N in the positive direction, and 1 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [119]

A. 2.18E+01 degrees

B. 2.35E+01 degrees

C. 2.54E+01 degrees

D. 2.75E+01 degrees

E. 2.97E+01 degrees

11. An object of mass 6 kg experiences an upward force of 7 N, as well as two horizontal forces of magnitude 7 N in the positive direction, and 3 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [120]

A. 2.57E+01 degrees

B. 2.78E+01 degrees

C. 3.00E+01 degrees

D. 3.24E+01 degrees

E. 3.50E+01 degrees

12. An object of mass 5 kg experiences an upward force of 5 N, as well as two horizontal forces of magnitude 14 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [121]

A. 1.23E+01 degrees

The next page might contain more answer choices for this question

B. 1.33E+01 degrees

C. 1.44E+01 degrees

D. 1.55E+01 degrees

E. 1.68E+01 degrees

13. An object of mass 2 kg experiences an upward force of 7 N, as well as two horizontal forces of magnitude 9 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [122]

A. 2.83E+01 degrees

B. 3.06E+01 degrees

C. 3.30E+01 degrees

D. 3.57E+01 degrees

E. 3.85E+01 degrees

14. An object of mass 8 kg experiences an upward force of 6 N, as well as two horizontal forces of magnitude 14 N in the positive direction, and 2 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [123]

A. 1.63E+01 degrees

B. 1.76E+01 degrees

C. 1.90E+01 degrees

D. 2.06E+01 degrees

E. 2.22E+01 degrees

15. An object of mass 6 kg experiences an upward force of 5 N, as well as two horizontal forces of magnitude 5 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [124]

A. 2.49E+01 degrees

B. 2.69E+01 degrees

C. 2.91E+01 degrees

D. 3.14E+01 degrees

E. 3.39E+01 degrees

16. An object of mass 7 kg experiences an upward force of 2 N, as well as two horizontal forces of magnitude 13 N in the positive direction, and 2 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [125]

The next page might contain more answer choices for this question

A. 5.58E+00 degrees

B. 6.03E+00 degrees

C. 6.51E+00 degrees

D. 7.03E+00 degrees

E. 7.59E+00 degrees

17. An object of mass 5 kg experiences an upward force of 3 N, as well as two horizontal forces of magnitude 8 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [126]

A. 1.20E+01 degrees

B. 1.30E+01 degrees

C. 1.40E+01 degrees

D. 1.52E+01 degrees

E. 1.64E+01 degrees

18. An object of mass 7 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 5 N in the positive direction, and 4 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [127]

A. 2.05E+01 degrees

B. 2.22E+01 degrees

C. 2.40E+01 degrees

D. 2.59E+01 degrees

E. 2.79E+01 degrees

19. An object of mass 6 kg experiences an upward force of 4 N, as well as two horizontal forces of magnitude 12 N in the positive direction, and 2 N in the opposite (horizontal) direction. What angle does the object's acceleration make above the horizontal? [128]

A. 1.37E+01 degrees

B. 1.48E+01 degrees

C. 1.59E+01 degrees

D. 1.72E+01 degrees

E. 1.86E+01 degrees

The next page might contain more answer choices for this question

up1-05 Q7

1. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 62 m above his glove. His glove stops the ball in6.510E-03 s. What is the force exerted by his glove on the ball? [129]

   A. 6.16E+02 N

   B. 6.66E+02 N

   C. 7.19E+02 N

   D. 7.76E+02 N

   E. 8.39E+02 N

2. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 64 m above his glove. His glove stops the ball in5.140E-03 s. What is the force exerted by his glove on the ball? [130]

   A. 7.93E+02 N

   B. 8.57E+02 N

   C. 9.25E+02 N

   D. 9.99E+02 N

   E. 1.08E+03 N

3. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 56 m above his glove. His glove stops the ball in9.400E-03 s. What is the force exerted by his glove on the ball? [131]

   A. 4.06E+02 N

   B. 4.38E+02 N

   C. 4.73E+02 N

   D. 5.11E+02 N

   E. 5.52E+02 N

4. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 66 m above his glove. His glove stops the ball in0.0134 s. What is the force exerted by his glove on the ball? [132]

   A. 2.86E+02 N

   B. 3.09E+02 N

   C. 3.34E+02 N

The next page might contain more answer choices for this question

D. 3.60E+02 N

E. 3.89E+02 N

5. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 54 m above his glove. His glove stops the ball in0.0116 s. What is the force exerted by his glove on the ball? [133]

A. 4.07E+02 N

B. 4.39E+02 N

C. 4.74E+02 N

D. 5.12E+02 N

E. 5.53E+02 N

6. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 62 m above his glove. His glove stops the ball in7.500E-03 s. What is the force exerted by his glove on the ball? [134]

A. 4.95E+02 N

B. 5.35E+02 N

C. 5.78E+02 N

D. 6.24E+02 N

E. 6.74E+02 N

7. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 59 m above his glove. His glove stops the ball in9.690E-03 s. What is the force exerted by his glove on the ball? [135]

A. 3.74E+02 N

B. 4.04E+02 N

C. 4.36E+02 N

D. 4.71E+02 N

E. 5.09E+02 N

8. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 55 m above his glove. His glove stops the ball in0.0122 s. What is the force exerted by his glove on the ball? [136]

A. 3.10E+02 N

B. 3.35E+02 N

The next page might contain more answer choices for this question

C. 3.61E+02 N

D. 3.90E+02 N

E. 4.21E+02 N

9. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 50 m above his glove. His glove stops the ball in0.012 s. What is the force exerted by his glove on the ball? [137]

A. 2.78E+02 N

B. 3.00E+02 N

C. 3.24E+02 N

D. 3.50E+02 N

E. 3.78E+02 N

10. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 74 m above his glove. His glove stops the ball in6.760E-03 s. What is the force exerted by his glove on the ball? [138]

A. 7.56E+02 N

B. 8.17E+02 N

C. 8.82E+02 N

D. 9.53E+02 N

E. 1.03E+03 N

11. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 63 m above his glove. His glove stops the ball in8.570E-03 s. What is the force exerted by his glove on the ball? [139]

A. 5.10E+02 N

B. 5.51E+02 N

C. 5.95E+02 N

D. 6.42E+02 N

E. 6.93E+02 N

12. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 56 m above his glove. His glove stops the ball in7.480E-03 s. What is the force exerted by his glove on the ball? [140]

A. 4.72E+02 N

The next page might contain more answer choices for this question

B. 5.10E+02 N

C. 5.51E+02 N

D. 5.95E+02 N

E. 6.42E+02 N

13. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 67 m above his glove. His glove stops the ball in7.640E-03 s. What is the force exerted by his glove on the ball? [141]

A. 6.37E+02 N

B. 6.88E+02 N

C. 7.43E+02 N

D. 8.02E+02 N

E. 8.66E+02 N

14. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 68 m above his glove. His glove stops the ball in1.000E-02 s. What is the force exerted by his glove on the ball? [142]

A. 4.90E+02 N

B. 5.29E+02 N

C. 5.72E+02 N

D. 6.17E+02 N

E. 6.67E+02 N

15. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 52 m above his glove. His glove stops the ball in0.015 s. What is the force exerted by his glove on the ball? [143]

A. 2.45E+02 N

B. 2.65E+02 N

C. 2.86E+02 N

D. 3.09E+02 N

E. 3.33E+02 N

16. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 62 m above his glove. His glove stops the ball in0.0141 s. What is the force exerted by his glove on the ball? [144]

The next page might contain more answer choices for this question

A. 3.07E+02 N

B. 3.32E+02 N

C. 3.58E+02 N

D. 3.87E+02 N

E. 4.18E+02 N

17. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 60 m above his glove. His glove stops the ball in0.0134 s. What is the force exerted by his glove on the ball? [145]

A. 3.18E+02 N

B. 3.44E+02 N

C. 3.71E+02 N

D. 4.01E+02 N

E. 4.33E+02 N

18. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 70 m above his glove. His glove stops the ball in0.0129 s. What is the force exerted by his glove on the ball? [146]

A. 3.57E+02 N

B. 3.86E+02 N

C. 4.16E+02 N

D. 4.50E+02 N

E. 4.86E+02 N

19. A baseball catcher is performing a stunt for a television commercial. He will catch a baseball (mass 145 g) dropped from a height of 51 m above his glove. His glove stops the ball in8.270E-03 s. What is the force exerted by his glove on the ball? [147]

A. 4.40E+02 N

B. 4.75E+02 N

C. 5.13E+02 N

D. 5.54E+02 N

E. 5.99E+02 N

The next page might contain more answer choices for this question

up1-05 Q8

1. Two forces of 24 and 31N act on an object. Their directions differ by 83°. The resulting acceleration has a magnitude of 10 m/s^2. What is the object's mass? [148]

   A. 3.55E+00 kg

   B. 3.84E+00 kg

   C. 4.15E+00 kg

   D. 4.48E+00 kg

   E. 4.84E+00 kg

2. Two forces of 31 and 60N act on an object. Their directions differ by 55°. The resulting acceleration has a magnitude of 9 m/s^2. What is the object's mass? [149]

   A. 6.68E+00 kg

   B. 7.22E+00 kg

   C. 7.79E+00 kg

   D. 8.42E+00 kg

   E. 9.09E+00 kg

3. Two forces of 35 and 49N act on an object. Their directions differ by 66°. The resulting acceleration has a magnitude of 8 m/s^2. What is the object's mass? [150]

   A. 7.03E+00 kg

   B. 7.59E+00 kg

   C. 8.20E+00 kg

   D. 8.86E+00 kg

   E. 9.57E+00 kg

4. Two forces of 34 and 60N act on an object. Their directions differ by 63°. The resulting acceleration has a magnitude of 10 m/s^2. What is the object's mass? [151]

   A. 8.13E+00 kg

   B. 8.78E+00 kg

   C. 9.48E+00 kg

   D. 1.02E+01 kg

   E. 1.11E+01 kg

The next page might contain more answer choices for this question

5. Two forces of 35 and 49N act on an object. Their directions differ by 76°. The resulting acceleration has a magnitude of 5 m/s^2. What is the object's mass? [152]

   A. 1.34E+01 kg

   B. 1.44E+01 kg

   C. 1.56E+01 kg

   D. 1.68E+01 kg

   E. 1.82E+01 kg

6. Two forces of 21 and 59N act on an object. Their directions differ by 77°. The resulting acceleration has a magnitude of 9 m/s^2. What is the object's mass? [153]

   A. 6.38E+00 kg

   B. 6.89E+00 kg

   C. 7.44E+00 kg

   D. 8.03E+00 kg

   E. 8.67E+00 kg

7. Two forces of 32 and 40N act on an object. Their directions differ by 55°. The resulting acceleration has a magnitude of 6 m/s^2. What is the object's mass? [154]

   A. 9.14E+00 kg

   B. 9.87E+00 kg

   C. 1.07E+01 kg

   D. 1.15E+01 kg

   E. 1.24E+01 kg

8. Two forces of 16 and 48N act on an object. Their directions differ by 55°. The resulting acceleration has a magnitude of 7 m/s^2. What is the object's mass? [155]

   A. 6.16E+00 kg

   B. 6.65E+00 kg

   C. 7.18E+00 kg

   D. 7.76E+00 kg

   E. 8.38E+00 kg

9. Two forces of 22 and 59N act on an object. Their directions differ by 75°. The resulting acceleration has a magnitude of 13 m/s^2. What is the object's mass? [156]

The next page might contain more answer choices for this question

A. 4.85E+00 kg

B. 5.24E+00 kg

C. 5.66E+00 kg

D. 6.11E+00 kg

E. 6.60E+00 kg

10. Two forces of 29 and 41N act on an object. Their directions differ by 71°. The resulting acceleration has a magnitude of 13 m/s^2. What is the object's mass? [157]

A. 3.79E+00 kg

B. 4.09E+00 kg

C. 4.42E+00 kg

D. 4.77E+00 kg

E. 5.15E+00 kg

11. Two forces of 34 and 55N act on an object. Their directions differ by 68°. The resulting acceleration has a magnitude of 7 m/s^2. What is the object's mass? [158]

A. 8.47E+00 kg

B. 9.15E+00 kg

C. 9.88E+00 kg

D. 1.07E+01 kg

E. 1.15E+01 kg

12. Two forces of 17 and 48N act on an object. Their directions differ by 76°. The resulting acceleration has a magnitude of 8 m/s^2. What is the object's mass? [159]

A. 5.86E+00 kg

B. 6.33E+00 kg

C. 6.83E+00 kg

D. 7.38E+00 kg

E. 7.97E+00 kg

13. Two forces of 29 and 32N act on an object. Their directions differ by 79°. The resulting acceleration has a magnitude of 10 m/s^2. What is the object's mass? [160]

A. 4.36E+00 kg

B. 4.71E+00 kg

The next page might contain more answer choices for this question

C. 5.09E+00 kg

D. 5.49E+00 kg

E. 5.93E+00 kg

14. Two forces of 20 and 31N act on an object. Their directions differ by 69°. The resulting acceleration has a magnitude of 12 m/s^2. What is the object's mass? [161]

A. 2.81E+00 kg

B. 3.04E+00 kg

C. 3.28E+00 kg

D. 3.54E+00 kg

E. 3.82E+00 kg

15. Two forces of 31 and 53N act on an object. Their directions differ by 74°. The resulting acceleration has a magnitude of 11 m/s^2. What is the object's mass? [162]

A. 5.33E+00 kg

B. 5.76E+00 kg

C. 6.22E+00 kg

D. 6.71E+00 kg

E. 7.25E+00 kg

16. Two forces of 19 and 52N act on an object. Their directions differ by 77°. The resulting acceleration has a magnitude of 9 m/s^2. What is the object's mass? [163]

A. 6.58E+00 kg

B. 7.11E+00 kg

C. 7.68E+00 kg

D. 8.29E+00 kg

E. 8.96E+00 kg

17. Two forces of 33 and 55N act on an object. Their directions differ by 59°. The resulting acceleration has a magnitude of 15 m/s^2. What is the object's mass? [164]

A. 4.09E+00 kg

B. 4.42E+00 kg

C. 4.77E+00 kg

D. 5.16E+00 kg

The next page might contain more answer choices for this question

E. 5.57E+00 kg

18. Two forces of 28 and 38N act on an object. Their directions differ by 68°. The resulting acceleration has a magnitude of 6 m/s^2. What is the object's mass? [165]

A. 6.74E+00 kg

B. 7.28E+00 kg

C. 7.86E+00 kg

D. 8.49E+00 kg

E. 9.17E+00 kg

19. Two forces of 22 and 48N act on an object. Their directions differ by 77°. The resulting acceleration has a magnitude of 7 m/s^2. What is the object's mass? [166]

A. 6.48E+00 kg

B. 7.00E+00 kg

C. 7.56E+00 kg

D. 8.16E+00 kg

E. 8.81E+00 kg

up1-05 Q9

1. Find the magnitude of the net force if the mass of the car is 1.100E+03 kg, the intial speed is 48 km/hr, and the stopping distance is 23 m. [167]

A. 4.25E+03 N

B. 4.59E+03 N

C. 4.96E+03 N

D. 5.36E+03 N

E. 5.78E+03 N

2. Find the magnitude of the net force if the mass of the car is 1.140E+03 kg, the intial speed is 39 km/hr, and the stopping distance is 22 m. [168]

A. 2.61E+03 N

B. 2.82E+03 N

C. 3.04E+03 N

D. 3.28E+03 N

The next page might contain more answer choices for this question

E. 3.55E+03 N

3. Find the magnitude of the net force if the mass of the car is 9.760E+02 kg, the intial speed is 42 km/hr, and the stopping distance is 23 m. [169]

A. 2.67E+03 N

B. 2.89E+03 N

C. 3.12E+03 N

D. 3.37E+03 N

E. 3.64E+03 N

4. Find the magnitude of the net force if the mass of the car is 1.100E+03 kg, the intial speed is 50 km/hr, and the stopping distance is 27 m. [170]

A. 3.12E+03 N

B. 3.37E+03 N

C. 3.64E+03 N

D. 3.93E+03 N

E. 4.24E+03 N

5. Find the magnitude of the net force if the mass of the car is 1.050E+03 kg, the intial speed is 47 km/hr, and the stopping distance is 30 m. [171]

A. 2.19E+03 N

B. 2.37E+03 N

C. 2.56E+03 N

D. 2.76E+03 N

E. 2.98E+03 N

6. Find the magnitude of the net force if the mass of the car is 1.200E+03 kg, the intial speed is 31 km/hr, and the stopping distance is 23 m. [172]

A. 1.93E+03 N

B. 2.09E+03 N

C. 2.26E+03 N

D. 2.44E+03 N

E. 2.63E+03 N

The next page might contain more answer choices for this question

7. Find the magnitude of the net force if the mass of the car is 1.180E+03 kg, the intial speed is 45 km/hr, and the stopping distance is 27 m. [173]

   A. 3.41E+03 N

   B. 3.69E+03 N

   C. 3.98E+03 N

   D. 4.30E+03 N

   E. 4.65E+03 N

8. Find the magnitude of the net force if the mass of the car is 1.130E+03 kg, the intial speed is 49 km/hr, and the stopping distance is 24 m. [174]

   A. 3.21E+03 N

   B. 3.46E+03 N

   C. 3.74E+03 N

   D. 4.04E+03 N

   E. 4.36E+03 N

9. Find the magnitude of the net force if the mass of the car is 9.020E+02 kg, the intial speed is 47 km/hr, and the stopping distance is 30 m. [175]

   A. 1.88E+03 N

   B. 2.03E+03 N

   C. 2.20E+03 N

   D. 2.37E+03 N

   E. 2.56E+03 N

10. Find the magnitude of the net force if the mass of the car is 1.130E+03 kg, the intial speed is 49 km/hr, and the stopping distance is 25 m. [176]

    A. 4.19E+03 N

    B. 4.52E+03 N

    C. 4.88E+03 N

    D. 5.27E+03 N

    E. 5.70E+03 N

11. Find the magnitude of the net force if the mass of the car is 1.170E+03 kg, the intial speed is 36 km/hr, and the stopping distance is 24 m. [177]

The next page might contain more answer choices for this question

A. 2.44E+03 N

B. 2.63E+03 N

C. 2.84E+03 N

D. 3.07E+03 N

E. 3.32E+03 N

12. Find the magnitude of the net force if the mass of the car is 1.140E+03 kg, the intial speed is 41 km/hr, and the stopping distance is 20 m. [178]

A. 2.93E+03 N

B. 3.17E+03 N

C. 3.42E+03 N

D. 3.70E+03 N

E. 3.99E+03 N

13. Find the magnitude of the net force if the mass of the car is 1.100E+03 kg, the intial speed is 49 km/hr, and the stopping distance is 23 m. [179]

A. 3.26E+03 N

B. 3.52E+03 N

C. 3.80E+03 N

D. 4.10E+03 N

E. 4.43E+03 N

14. Find the magnitude of the net force if the mass of the car is 9.600E+02 kg, the intial speed is 44 km/hr, and the stopping distance is 24 m. [180]

A. 2.37E+03 N

B. 2.56E+03 N

C. 2.77E+03 N

D. 2.99E+03 N

E. 3.23E+03 N

15. Find the magnitude of the net force if the mass of the car is 1.120E+03 kg, the intial speed is 47 km/hr, and the stopping distance is 21 m. [181]

A. 4.55E+03 N

B. 4.91E+03 N

The next page might contain more answer choices for this question

C. 5.30E+03 N

D. 5.73E+03 N

E. 6.18E+03 N

16. Find the magnitude of the net force if the mass of the car is 9.310E+02 kg, the intial speed is 46 km/hr, and the stopping distance is 26 m. [182]

A. 2.71E+03 N

B. 2.92E+03 N

C. 3.16E+03 N

D. 3.41E+03 N

E. 3.68E+03 N

17. Find the magnitude of the net force if the mass of the car is 1.190E+03 kg, the intial speed is 32 km/hr, and the stopping distance is 29 m. [183]

A. 1.62E+03 N

B. 1.75E+03 N

C. 1.89E+03 N

D. 2.04E+03 N

E. 2.21E+03 N

18. Find the magnitude of the net force if the mass of the car is 1.130E+03 kg, the intial speed is 41 km/hr, and the stopping distance is 30 m. [184]

A. 1.80E+03 N

B. 1.94E+03 N

C. 2.09E+03 N

D. 2.26E+03 N

E. 2.44E+03 N

19. Find the magnitude of the net force if the mass of the car is 9.340E+02 kg, the intial speed is 35 km/hr, and the stopping distance is 28 m. [185]

A. 1.46E+03 N

B. 1.58E+03 N

C. 1.70E+03 N

D. 1.84E+03 N

E. 1.99E+03 N

The next page might contain more answer choices for this question

up1-05 Q10

1. Two forces are applied to a 2-kg object, and it accelerates at a rate of $2m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude11 N, find the magnitude of the other force. [186]

   A. 1.08E+01 N

   B. 1.17E+01 N

   C. 1.26E+01 N

   D. 1.37E+01 N

   E. 1.47E+01 N

2. Two forces are applied to a 3-kg object, and it accelerates at a rate of $1m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude9 N, find the magnitude of the other force. [187]

   A. 8.13E+00 N

   B. 8.78E+00 N

   C. 9.49E+00 N

   D. 1.02E+01 N

   E. 1.11E+01 N

3. Two forces are applied to a 2-kg object, and it accelerates at a rate of $3m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude12 N, find the magnitude of the other force. [188]

   A. 1.07E+01 N

   B. 1.15E+01 N

   C. 1.24E+01 N

   D. 1.34E+01 N

   E. 1.45E+01 N

4. Two forces are applied to a 4-kg object, and it accelerates at a rate of $4m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude11 N, find the magnitude of the other force. [189]

   A. 1.43E+01 N

   B. 1.54E+01 N

   C. 1.66E+01 N

The next page might contain more answer choices for this question

D. 1.80E+01 N

E. 1.94E+01 N

5. Two forces are applied to a 3-kg object, and it accelerates at a rate of $4m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude11 N, find the magnitude of the other force. [190]

A. 1.29E+01 N

B. 1.40E+01 N

C. 1.51E+01 N

D. 1.63E+01 N

E. 1.76E+01 N

6. Two forces are applied to a 5-kg object, and it accelerates at a rate of $4m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude10 N, find the magnitude of the other force. [191]

A. 2.24E+01 N

B. 2.41E+01 N

C. 2.61E+01 N

D. 2.82E+01 N

E. 3.04E+01 N

7. Two forces are applied to a 6-kg object, and it accelerates at a rate of $1m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude10 N, find the magnitude of the other force. [192]

A. 1.08E+01 N

B. 1.17E+01 N

C. 1.26E+01 N

D. 1.36E+01 N

E. 1.47E+01 N

8. Two forces are applied to a 7-kg object, and it accelerates at a rate of $4m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude11 N, find the magnitude of the other force. [193]

A. 3.01E+01 N

B. 3.25E+01 N

The next page might contain more answer choices for this question

C. 3.51E+01 N

D. 3.79E+01 N

E. 4.09E+01 N

9. Two forces are applied to a 5-kg object, and it accelerates at a rate of $2m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude13 N, find the magnitude of the other force. [194]

A. 1.64E+01 N

B. 1.77E+01 N

C. 1.91E+01 N

D. 2.07E+01 N

E. 2.23E+01 N

10. Two forces are applied to a 5-kg object, and it accelerates at a rate of $3m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude9 N, find the magnitude of the other force. [195]

A. 1.75E+01 N

B. 1.89E+01 N

C. 2.04E+01 N

D. 2.20E+01 N

E. 2.38E+01 N

11. Two forces are applied to a 8-kg object, and it accelerates at a rate of $3m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude11 N, find the magnitude of the other force. [196]

A. 2.44E+01 N

B. 2.64E+01 N

C. 2.85E+01 N

D. 3.08E+01 N

E. 3.33E+01 N

12. Two forces are applied to a 8-kg object, and it accelerates at a rate of $4m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude13 N, find the magnitude of the other force. [197]

A. 2.96E+01 N

The next page might contain more answer choices for this question

B. 3.20E+01 N

C. 3.45E+01 N

D. 3.73E+01 N

E. 4.03E+01 N

13. Two forces are applied to a 8-kg object, and it accelerates at a rate of $2m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude9 N, find the magnitude of the other force. [198]

A. 1.57E+01 N

B. 1.70E+01 N

C. 1.84E+01 N

D. 1.98E+01 N

E. 2.14E+01 N

14. Two forces are applied to a 6-kg object, and it accelerates at a rate of $1m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude11 N, find the magnitude of the other force. [199]

A. 9.95E+00 N

B. 1.07E+01 N

C. 1.16E+01 N

D. 1.25E+01 N

E. 1.35E+01 N

15. Two forces are applied to a 3-kg object, and it accelerates at a rate of $2m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude9 N, find the magnitude of the other force. [200]

A. 1.08E+01 N

B. 1.17E+01 N

C. 1.26E+01 N

D. 1.36E+01 N

E. 1.47E+01 N

16. Two forces are applied to a 8-kg object, and it accelerates at a rate of $3m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude9 N, find the magnitude of the other force. [201]

The next page might contain more answer choices for this question

A. 2.20E+01 N

B. 2.37E+01 N

C. 2.56E+01 N

D. 2.77E+01 N

E. 2.99E+01 N

17. Two forces are applied to a 7-kg object, and it accelerates at a rate of $1 m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude14 N, find the magnitude of the other force. [202]

A. 1.34E+01 N

B. 1.45E+01 N

C. 1.57E+01 N

D. 1.69E+01 N

E. 1.83E+01 N

18. Two forces are applied to a 4-kg object, and it accelerates at a rate of $1 m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude9 N, find the magnitude of the other force. [203]

A. 9.12E+00 N

B. 9.85E+00 N

C. 1.06E+01 N

D. 1.15E+01 N

E. 1.24E+01 N

19. Two forces are applied to a 3-kg object, and it accelerates at a rate of $3 m/s^2$ in the positive y-direction. If one of the forces acts in the positive x-direction with magnitude13 N, find the magnitude of the other force. [204]

A. 1.46E+01 N

B. 1.58E+01 N

C. 1.71E+01 N

D. 1.84E+01 N

E. 1.99E+01 N

The next page might contain more answer choices for this question

up1-05 Q11

1. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.271-kg. The first player kicks with force 1.710E+02 N at 14° north of west. At the same instant, the second player kicks with force 2.290E+02 N at 18° east of south. Find the magnitude of the acceleration. [205]

   A. 6.85E+02 m/s^2

   B. 7.40E+02 m/s^2

   C. 7.99E+02 m/s^2

   D. 8.63E+02 m/s^2

   E. 9.32E+02 m/s^2

2. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.617-kg. The first player kicks with force 1.290E+02 N at 11° north of west. At the same instant, the second player kicks with force 2.240E+02 N at 19° east of south. Find the magnitude of the acceleration. [206]

   A. 3.16E+02 m/s^2

   B. 3.41E+02 m/s^2

   C. 3.68E+02 m/s^2

   D. 3.98E+02 m/s^2

   E. 4.29E+02 m/s^2

3. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.784-kg. The first player kicks with force 1.350E+02 N at 13° north of west. At the same instant, the second player kicks with force 2.120E+02 N at 20° east of south. Find the magnitude of the acceleration. [207]

   A. 1.68E+02 m/s^2

   B. 1.81E+02 m/s^2

   C. 1.96E+02 m/s^2

   D. 2.11E+02 m/s^2

   E. 2.28E+02 m/s^2

The next page might contain more answer choices for this question

4. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.268-kg. The first player kicks with force 1.560E+02 N at 10° north of west. At the same instant, the second player kicks with force 2.060E+02 N at 21° east of south. Find the magnitude of the acceleration. [208]

   A. 5.03E+02 m/s^2

   B. 5.44E+02 m/s^2

   C. 5.87E+02 m/s^2

   D. 6.34E+02 m/s^2

   E. 6.85E+02 m/s^2

5. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.653-kg. The first player kicks with force 1.240E+02 N at 13° north of west. At the same instant, the second player kicks with force 2.060E+02 N at 21° east of south. Find the magnitude of the acceleration. [209]

   A. 2.42E+02 m/s^2

   B. 2.62E+02 m/s^2

   C. 2.83E+02 m/s^2

   D. 3.05E+02 m/s^2

   E. 3.30E+02 m/s^2

6. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.152-kg. The first player kicks with force 1.780E+02 N at 10° north of west. At the same instant, the second player kicks with force 2.220E+02 N at 21° east of south. Find the magnitude of the acceleration. [210]

   A. 1.05E+03 m/s^2

   B. 1.13E+03 m/s^2

   C. 1.22E+03 m/s^2

   D. 1.32E+03 m/s^2

   E. 1.43E+03 m/s^2

7. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.662-kg. The first player kicks with force 1.590E+02 N at 13° north of west. At

The next page might contain more answer choices for this question

the same instant, the second player kicks with force 2.150E+02 N at 20° east of south. Find the magnitude of the acceleration. [211]

A. 2.40E+02 m/s^2

B. 2.59E+02 m/s^2

C. 2.80E+02 m/s^2

D. 3.02E+02 m/s^2

E. 3.26E+02 m/s^2

8. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.976-kg. The first player kicks with force 1.310E+02 N at 13° north of west. At the same instant, the second player kicks with force 2.280E+02 N at 19° east of south. Find the magnitude of the acceleration. [212]

A. 1.84E+02 m/s^2

B. 1.98E+02 m/s^2

C. 2.14E+02 m/s^2

D. 2.31E+02 m/s^2

E. 2.50E+02 m/s^2

9. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.284-kg. The first player kicks with force 1.570E+02 N at 10° north of west. At the same instant, the second player kicks with force 2.110E+02 N at 21° east of south. Find the magnitude of the acceleration. [213]

A. 6.59E+02 m/s^2

B. 7.12E+02 m/s^2

C. 7.69E+02 m/s^2

D. 8.30E+02 m/s^2

E. 8.97E+02 m/s^2

10. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.135-kg. The first player kicks with force 1.750E+02 N at 15° north of west. At the same instant, the second player kicks with force 2.060E+02 N at 22° east of south. Find the magnitude of the acceleration. [214]

A. 1.28E+03 m/s^2

The next page might contain more answer choices for this question

B. 1.38E+03 m/s^2

C. 1.49E+03 m/s^2

D. 1.61E+03 m/s^2

E. 1.74E+03 m/s^2

11. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.244-kg. The first player kicks with force 1.270E+02 N at 12° north of west. At the same instant, the second player kicks with force 2.250E+02 N at 18° east of south. Find the magnitude of the acceleration. [215]

A. 6.36E+02 m/s^2

B. 6.87E+02 m/s^2

C. 7.41E+02 m/s^2

D. 8.01E+02 m/s^2

E. 8.65E+02 m/s^2

12. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.443-kg. The first player kicks with force 1.600E+02 N at 14° north of west. At the same instant, the second player kicks with force 2.210E+02 N at 19° east of south. Find the magnitude of the acceleration. [216]

A. 3.96E+02 m/s^2

B. 4.28E+02 m/s^2

C. 4.62E+02 m/s^2

D. 4.99E+02 m/s^2

E. 5.39E+02 m/s^2

13. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.476-kg. The first player kicks with force 1.600E+02 N at 15° north of west. At the same instant, the second player kicks with force 2.170E+02 N at 18° east of south. Find the magnitude of the acceleration. [217]

A. 3.63E+02 m/s^2

B. 3.92E+02 m/s^2

C. 4.24E+02 m/s^2

The next page might contain more answer choices for this question

D. 4.58E+02 m/s^2

E. 4.94E+02 m/s^2

14. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.215-kg. The first player kicks with force 1.530E+02 N at 13° north of west. At the same instant, the second player kicks with force 2.150E+02 N at 19° east of south. Find the magnitude of the acceleration. [218]

A. 8.03E+02 m/s^2

B. 8.67E+02 m/s^2

C. 9.37E+02 m/s^2

D. 1.01E+03 m/s^2

E. 1.09E+03 m/s^2

15. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.281-kg. The first player kicks with force 1.490E+02 N at 14° north of west. At the same instant, the second player kicks with force 2.130E+02 N at 21° east of south. Find the magnitude of the acceleration. [219]

A. 4.99E+02 m/s^2

B. 5.39E+02 m/s^2

C. 5.82E+02 m/s^2

D. 6.28E+02 m/s^2

E. 6.78E+02 m/s^2

16. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.475-kg. The first player kicks with force 1.410E+02 N at 13° north of west. At the same instant, the second player kicks with force 2.230E+02 N at 20° east of south. Find the magnitude of the acceleration. [220]

A. 3.14E+02 m/s^2

B. 3.39E+02 m/s^2

C. 3.67E+02 m/s^2

D. 3.96E+02 m/s^2

E. 4.28E+02 m/s^2

The next page might contain more answer choices for this question

17. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.836-kg. The first player kicks with force 1.240E+02 N at 10° north of west. At the same instant, the second player kicks with force 2.040E+02 N at 21° east of south. Find the magnitude of the acceleration. [221]

    A. 1.95E+02 m/s^2

    B. 2.10E+02 m/s^2

    C. 2.27E+02 m/s^2

    D. 2.45E+02 m/s^2

    E. 2.65E+02 m/s^2

18. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.496-kg. The first player kicks with force 1.550E+02 N at 13° north of west. At the same instant, the second player kicks with force 2.210E+02 N at 22° east of south. Find the magnitude of the acceleration. [222]

    A. 2.72E+02 m/s^2

    B. 2.93E+02 m/s^2

    C. 3.17E+02 m/s^2

    D. 3.42E+02 m/s^2

    E. 3.69E+02 m/s^2

19. Suppose you are viewing a soccer game a helicopter above the playing field. Two soccer players simultaneously kick a stationary soccer ball on the flat field; the soccer ball has mass 0.681-kg. The first player kicks with force 1.420E+02 N at 10° north of west. At the same instant, the second player kicks with force 2.060E+02 N at 18° east of south. Find the magnitude of the acceleration. [223]

    A. 2.55E+02 m/s^2

    B. 2.75E+02 m/s^2

    C. 2.97E+02 m/s^2

    D. 3.21E+02 m/s^2

    E. 3.47E+02 m/s^2

The next page might contain more answer choices for this question

up1-05 Q12

1. A 0.0579-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.42° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [224]

   A. 5.42E-01 m/s^2

   B. 5.86E-01 m/s^2

   C. 6.33E-01 m/s^2

   D. 6.83E-01 m/s^2

   E. 7.38E-01 m/s^2

2. A 0.0564-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.73° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [225]

   A. 5.07E-01 m/s^2

   B. 5.48E-01 m/s^2

   C. 5.92E-01 m/s^2

   D. 6.39E-01 m/s^2

   E. 6.90E-01 m/s^2

3. A 0.0494-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 2.57° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [226]

   A. 4.07E-01 m/s^2

   B. 4.40E-01 m/s^2

   C. 4.75E-01 m/s^2

   D. 5.13E-01 m/s^2

   E. 5.54E-01 m/s^2

4. A 0.0634-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.28° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [227]

The next page might contain more answer choices for this question

A. 5.20E-01 m/s^2

B. 5.62E-01 m/s^2

C. 6.07E-01 m/s^2

D. 6.55E-01 m/s^2

E. 7.07E-01 m/s^2

5. A 0.0596-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.16° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [228]

A. 3.98E-01 m/s^2

B. 4.29E-01 m/s^2

C. 4.64E-01 m/s^2

D. 5.01E-01 m/s^2

E. 5.41E-01 m/s^2

6. A 0.0525-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 2.06° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [229]

A. 2.80E-01 m/s^2

B. 3.02E-01 m/s^2

C. 3.26E-01 m/s^2

D. 3.52E-01 m/s^2

E. 3.81E-01 m/s^2

7. A 0.0644-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.32° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [230]

A. 5.68E-01 m/s^2

B. 6.14E-01 m/s^2

C. 6.63E-01 m/s^2

D. 7.16E-01 m/s^2

E. 7.73E-01 m/s^2

The next page might contain more answer choices for this question

8. A 0.0558-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.92° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [231]

    A. 5.33E-01 m/s^2

    B. 5.76E-01 m/s^2

    C. 6.22E-01 m/s^2

    D. 6.72E-01 m/s^2

    E. 7.25E-01 m/s^2

9. A 0.0502-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.3° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [232]

    A. 5.23E-01 m/s^2

    B. 5.65E-01 m/s^2

    C. 6.10E-01 m/s^2

    D. 6.59E-01 m/s^2

    E. 7.12E-01 m/s^2

10. A 0.0561-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 2.07° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [233]

    A. 3.04E-01 m/s^2

    B. 3.28E-01 m/s^2

    C. 3.54E-01 m/s^2

    D. 3.83E-01 m/s^2

    E. 4.13E-01 m/s^2

11. A 0.0549-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.7° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [234]

    A. 6.34E-01 m/s^2

The next page might contain more answer choices for this question

B. 6.84E-01 m/s^2

C. 7.39E-01 m/s^2

D. 7.98E-01 m/s^2

E. 8.62E-01 m/s^2

12. A 0.056-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 2.75° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [235]

A. 3.74E-01 m/s^2

B. 4.04E-01 m/s^2

C. 4.36E-01 m/s^2

D. 4.71E-01 m/s^2

E. 5.08E-01 m/s^2

13. A 0.0543-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.11° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [236]

A. 5.32E-01 m/s^2

B. 5.75E-01 m/s^2

C. 6.21E-01 m/s^2

D. 6.71E-01 m/s^2

E. 7.24E-01 m/s^2

14. A 0.0598-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 2.33° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [237]

A. 2.93E-01 m/s^2

B. 3.17E-01 m/s^2

C. 3.42E-01 m/s^2

D. 3.69E-01 m/s^2

E. 3.99E-01 m/s^2

The next page might contain more answer choices for this question

15. A 0.0528-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.18° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [238]

    A. 4.00E-01 m/s^2

    B. 4.32E-01 m/s^2

    C. 4.67E-01 m/s^2

    D. 5.04E-01 m/s^2

    E. 5.44E-01 m/s^2

16. A 0.0581-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 2.48° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [239]

    A. 3.12E-01 m/s^2

    B. 3.37E-01 m/s^2

    C. 3.64E-01 m/s^2

    D. 3.93E-01 m/s^2

    E. 4.24E-01 m/s^2

17. A 0.0464-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.77° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [240]

    A. 5.54E-01 m/s^2

    B. 5.98E-01 m/s^2

    C. 6.46E-01 m/s^2

    D. 6.97E-01 m/s^2

    E. 7.53E-01 m/s^2

18. A 0.0491-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.97° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [241]

    A. 6.30E-01 m/s^2

The next page might contain more answer choices for this question

B. 6.80E-01 m/s^2

C. 7.35E-01 m/s^2

D. 7.93E-01 m/s^2

E. 8.57E-01 m/s^2

19. A 0.0618-kg pair of fuzzy dice is attached to the rearview mirror of a car by a short string. The car accelerates at constant rate, and the dice hang at an angle of 3.6° from the vertical because of the carś acceleration. What is the magnitude of the acceleration of the car? [242]

A. 4.89E-01 m/s^2

B. 5.29E-01 m/s^2

C. 5.71E-01 m/s^2

D. 6.17E-01 m/s^2

E. 6.66E-01 m/s^2

up1-05 Q13

1. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-5\hat{i} + 3\hat{j}\right) N$, $\vec{F}_2 = \left(4\hat{i} + -1\hat{j}\right) N$, $\vec{F}_3 = \left(2\hat{i} + 5\hat{j}\right) N$. The object experiences acceleration of 4.53 m/s^2. Find the mass of the object. [243]

A. 8.59E+00 kg

B. 9.27E+00 kg

C. 1.00E+01 kg

D. 1.08E+01 kg

E. 1.17E+01 kg

2. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-6\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(7\hat{i} + -1\hat{j}\right) N$, $\vec{F}_3 = \left(1\hat{i} + 7\hat{j}\right) N$. The object experiences acceleration of 3.8 m/s^2. Find the mass of the object. [244]

A. 6.74E+01 kg

B. 7.28E+01 kg

C. 7.86E+01 kg

D. 8.49E+01 kg

The next page might contain more answer choices for this question

E. 9.17E+01 kg

3. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(4\hat{i} + -6\hat{j}\right) N$, $\vec{F}_3 = \left(4\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 3.59 m/s^2. Find the mass of the object. [245]

A. 3.18E+01 kg

B. 3.44E+01 kg

C. 3.71E+01 kg

D. 4.01E+01 kg

E. 4.33E+01 kg

4. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-5\hat{i} + 1\hat{j}\right) N$, $\vec{F}_2 = \left(4\hat{i} + -6\hat{j}\right) N$, $\vec{F}_3 = \left(3\hat{i} + 7\hat{j}\right) N$. The object experiences acceleration of 5.37 m/s^2. Find the mass of the object. [246]

A. 2.55E+00 kg

B. 2.76E+00 kg

C. 2.98E+00 kg

D. 3.22E+00 kg

E. 3.48E+00 kg

5. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-4\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(6\hat{i} + -4\hat{j}\right) N$, $\vec{F}_3 = \left(3\hat{i} + 5\hat{j}\right) N$. The object experiences acceleration of 5.18 m/s^2. Find the mass of the object. [247]

A. 4.02E+01 kg

B. 4.34E+01 kg

C. 4.69E+01 kg

D. 5.07E+01 kg

E. 5.47E+01 kg

6. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(3\hat{i} + -2\hat{j}\right) N$, $\vec{F}_3 = \left(2\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 3.62 m/s^2. Find the mass of the object. [248]

The next page might contain more answer choices for this question

A. 8.53E+00 kg

B. 9.21E+00 kg

C. 9.94E+00 kg

D. 1.07E+01 kg

E. 1.16E+01 kg

7. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(4\hat{i} + -7\hat{j}\right) N$, $\vec{F}_3 = \left(1\hat{i} + 3\hat{j}\right) N$. The object experiences acceleration of 3.76 m/s^2. Find the mass of the object. [249]

A. 7.04E+00 kg

B. 7.60E+00 kg

C. 8.21E+00 kg

D. 8.87E+00 kg

E. 9.57E+00 kg

8. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-3\hat{i} + 3\hat{j}\right) N$, $\vec{F}_2 = \left(8\hat{i} + -1\hat{j}\right) N$, $\vec{F}_3 = \left(4\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 3.39 m/s^2. Find the mass of the object. [250]

A. 3.28E+02 kg

B. 3.54E+02 kg

C. 3.82E+02 kg

D. 4.13E+02 kg

E. 4.46E+02 kg

9. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(7\hat{i} + -3\hat{j}\right) N$, $\vec{F}_3 = \left(2\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 4.66 m/s^2. Find the mass of the object. [251]

A. 9.74E+00 kg

B. 1.05E+01 kg

C. 1.14E+01 kg

D. 1.23E+01 kg

E. 1.32E+01 kg

The next page might contain more answer choices for this question

10. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 1\hat{j}\right)\ N$, $\vec{F}_2 = \left(4\hat{i} + -6\hat{j}\right)\ N$, $\vec{F}_3 = \left(1\hat{i} + 5\hat{j}\right)\ N$. The object experiences acceleration of 2.89 m/s^2. Find the mass of the object. [252]

    A. 0.00E+00 kg
    B. 0.00E+00 kg
    C. 0.00E+00 kg
    D. 0.00E+00 kg
    E. 0.00E+00 kg

11. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-4\hat{i} + 2\hat{j}\right)\ N$, $\vec{F}_2 = \left(3\hat{i} + -1\hat{j}\right)\ N$, $\vec{F}_3 = \left(1\hat{i} + 5\hat{j}\right)\ N$. The object experiences acceleration of 2.95 m/s^2. Find the mass of the object. [253]

    A. 0.00E+00 kg
    B. 0.00E+00 kg
    C. 0.00E+00 kg
    D. 0.00E+00 kg
    E. 0.00E+00 kg

12. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-3\hat{i} + 4\hat{j}\right)\ N$, $\vec{F}_2 = \left(6\hat{i} + -5\hat{j}\right)\ N$, $\vec{F}_3 = \left(2\hat{i} + 5\hat{j}\right)\ N$. The object experiences acceleration of 3.06 m/s^2. Find the mass of the object. [254]

    A. 1.21E+02 kg
    B. 1.31E+02 kg
    C. 1.41E+02 kg
    D. 1.52E+02 kg
    E. 1.65E+02 kg

13. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 1\hat{j}\right)\ N$, $\vec{F}_2 = \left(4\hat{i} + -3\hat{j}\right)\ N$, $\vec{F}_3 = \left(1\hat{i} + 5\hat{j}\right)\ N$. The object experiences acceleration of 5.71 m/s^2. Find the mass of the object. [255]

    A. 1.42E+01 kg

The next page might contain more answer choices for this question

B. 1.53E+01 kg

C. 1.65E+01 kg

D. 1.79E+01 kg

E. 1.93E+01 kg

14. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-6\hat{i} + 2\hat{j}\right) N$, $\vec{F}_2 = \left(6\hat{i} + -7\hat{j}\right) N$, $\vec{F}_3 = \left(2\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 3.1 m/s^2. Find the mass of the object. [256]

A. 1.16E+01 kg

B. 1.25E+01 kg

C. 1.35E+01 kg

D. 1.46E+01 kg

E. 1.58E+01 kg

15. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-6\hat{i} + 3\hat{j}\right) N$, $\vec{F}_2 = \left(3\hat{i} + -7\hat{j}\right) N$, $\vec{F}_3 = \left(1\hat{i} + 7\hat{j}\right) N$. The object experiences acceleration of 5.58 m/s^2. Find the mass of the object. [257]

A. 5.53E+00 kg

B. 5.97E+00 kg

C. 6.45E+00 kg

D. 6.97E+00 kg

E. 7.53E+00 kg

16. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-2\hat{i} + 4\hat{j}\right) N$, $\vec{F}_2 = \left(3\hat{i} + -4\hat{j}\right) N$, $\vec{F}_3 = \left(3\hat{i} + 1\hat{j}\right) N$. The object experiences acceleration of 3.99 m/s^2. Find the mass of the object. [258]

A. 3.71E+00 kg

B. 4.01E+00 kg

C. 4.33E+00 kg

D. 4.68E+00 kg

E. 5.05E+00 kg

The next page might contain more answer choices for this question

17. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-5\hat{i} + 3\hat{j}\right) N$, $\vec{F}_2 = \left(3\hat{i} + -1\hat{j}\right) N$, $\vec{F}_3 = \left(4\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 5.72 m/s^2. Find the mass of the object. [259]

    A. 9.59E+00 kg
    B. 1.04E+01 kg
    C. 1.12E+01 kg
    D. 1.21E+01 kg
    E. 1.31E+01 kg

18. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-5\hat{i} + 3\hat{j}\right) N$, $\vec{F}_2 = \left(3\hat{i} + -3\hat{j}\right) N$, $\vec{F}_3 = \left(3\hat{i} + 4\hat{j}\right) N$. The object experiences acceleration of 4.42 m/s^2. Find the mass of the object. [260]

    A. 3.35E+00 kg
    B. 3.62E+00 kg
    C. 3.91E+00 kg
    D. 4.22E+00 kg
    E. 4.56E+00 kg

19. An object is acted on by three simultaneous forces: $\vec{F}_1 = \left(-3\hat{i} + 3\hat{j}\right) N$, $\vec{F}_2 = \left(4\hat{i} + -6\hat{j}\right) N$, $\vec{F}_3 = \left(3\hat{i} + 2\hat{j}\right) N$. The object experiences acceleration of 4.71 m/s^2. Find the mass of the object. [261]

    A. 3.40E+00 kg
    B. 3.67E+00 kg
    C. 3.96E+00 kg
    D. 4.28E+00 kg
    E. 4.62E+00 kg

up1-05 Q14

1. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.99-kg, and its velocity is $5\hat{i}m/s$. After 5 s, the velocity is $7\hat{i} + 1\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [262]

The next page might contain more answer choices for this question

A. 4.14E-01 $kg \cdot m/s^2$

B. 4.47E-01 $kg \cdot m/s^2$

C. 4.83E-01 $kg \cdot m/s^2$

D. 5.22E-01 $kg \cdot m/s^2$

E. 5.63E-01 $kg \cdot m/s^2$

2. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.59-kg, and its velocity is $5\hat{i}m/s$. After 11 s, the velocity is $5\hat{i} + 5\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [263]

A. 4.21E-01 $kg \cdot m/s^2$

B. 4.55E-01 $kg \cdot m/s^2$

C. 4.91E-01 $kg \cdot m/s^2$

D. 5.30E-01 $kg \cdot m/s^2$

E. 5.73E-01 $kg \cdot m/s^2$

3. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.25-kg, and its velocity is $2\hat{i}m/s$. After 7 s, the velocity is $10\hat{i} + 3\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [264]

A. 1.22E+00 $kg \cdot m/s^2$

B. 1.32E+00 $kg \cdot m/s^2$

C. 1.42E+00 $kg \cdot m/s^2$

D. 1.54E+00 $kg \cdot m/s^2$

E. 1.66E+00 $kg \cdot m/s^2$

4. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.56-kg, and its velocity is $4\hat{i}m/s$. After 6 s, the velocity is $8\hat{i} + 3\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [265]

A. 6.13E-01 $kg \cdot m/s^2$

B. 6.62E-01 $kg \cdot m/s^2$

C. 7.14E-01 $kg \cdot m/s^2$

D. 7.72E-01 $kg \cdot m/s^2$

E. 8.33E-01 $kg \cdot m/s^2$

The next page might contain more answer choices for this question

5. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.25-kg, and its velocity is $1\hat{i}m/s$. After 6 s, the velocity is $8\hat{i} + 1\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [266]

   A. 1.01E+00 $kg \cdot m/s^2$

   B. 1.09E+00 $kg \cdot m/s^2$

   C. 1.18E+00 $kg \cdot m/s^2$

   D. 1.27E+00 $kg \cdot m/s^2$

   E. 1.37E+00 $kg \cdot m/s^2$

6. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.4-kg, and its velocity is $4\hat{i}m/s$. After 11 s, the velocity is $12\hat{i} + 6\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [267]

   A. 7.79E-01 $kg \cdot m/s^2$

   B. 8.42E-01 $kg \cdot m/s^2$

   C. 9.09E-01 $kg \cdot m/s^2$

   D. 9.82E-01 $kg \cdot m/s^2$

   E. 1.06E+00 $kg \cdot m/s^2$

7. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.71-kg, and its velocity is $2\hat{i}m/s$. After 11 s, the velocity is $13\hat{i} + 6\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [268]

   A. 9.77E-01 $kg \cdot m/s^2$

   B. 1.05E+00 $kg \cdot m/s^2$

   C. 1.14E+00 $kg \cdot m/s^2$

   D. 1.23E+00 $kg \cdot m/s^2$

   E. 1.33E+00 $kg \cdot m/s^2$

8. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.63-kg, and its velocity is $2\hat{i}m/s$. After 15 s, the velocity is $9\hat{i} + 7\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [269]

   A. 5.66E-01 $kg \cdot m/s^2$

The next page might contain more answer choices for this question

B. 6.11E-01 $kg \cdot m/s^2$

C. 6.60E-01 $kg \cdot m/s^2$

D. 7.13E-01 $kg \cdot m/s^2$

E. 7.70E-01 $kg \cdot m/s^2$

9. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.48-kg, and its velocity is $5\hat{i} m/s$. After 6 s, the velocity is $11\hat{i} + 3\hat{j} m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [270]

A. 1.04E+00 $kg \cdot m/s^2$

B. 1.12E+00 $kg \cdot m/s^2$

C. 1.21E+00 $kg \cdot m/s^2$

D. 1.30E+00 $kg \cdot m/s^2$

E. 1.41E+00 $kg \cdot m/s^2$

10. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.35-kg, and its velocity is $4\hat{i} m/s$. After 8 s, the velocity is $12\hat{i} + 6\hat{j} m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [271]

A. 1.25E+00 $kg \cdot m/s^2$

B. 1.35E+00 $kg \cdot m/s^2$

C. 1.46E+00 $kg \cdot m/s^2$

D. 1.57E+00 $kg \cdot m/s^2$

E. 1.70E+00 $kg \cdot m/s^2$

11. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.95-kg, and its velocity is $1\hat{i} m/s$. After 5 s, the velocity is $13\hat{i} + 5\hat{j} m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [272]

A. 1.91E+00 $kg \cdot m/s^2$

B. 2.06E+00 $kg \cdot m/s^2$

C. 2.23E+00 $kg \cdot m/s^2$

D. 2.41E+00 $kg \cdot m/s^2$

E. 2.60E+00 $kg \cdot m/s^2$

The next page might contain more answer choices for this question

12. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.52-kg, and its velocity is $4\hat{i}m/s$. After 5 s, the velocity is $11\hat{i} + 6\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [273]

    A. 1.71E+00 $kg \cdot m/s^2$

    B. 1.84E+00 $kg \cdot m/s^2$

    C. 1.99E+00 $kg \cdot m/s^2$

    D. 2.15E+00 $kg \cdot m/s^2$

    E. 2.32E+00 $kg \cdot m/s^2$

13. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.48-kg, and its velocity is $3\hat{i}m/s$. After 14 s, the velocity is $5\hat{i} + 3\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [274]

    A. 2.04E-01 $kg \cdot m/s^2$

    B. 2.21E-01 $kg \cdot m/s^2$

    C. 2.38E-01 $kg \cdot m/s^2$

    D. 2.58E-01 $kg \cdot m/s^2$

    E. 2.78E-01 $kg \cdot m/s^2$

14. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.98-kg, and its velocity is $4\hat{i}m/s$. After 10 s, the velocity is $9\hat{i} + 3\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [275]

    A. 4.63E-01 $kg \cdot m/s^2$

    B. 5.00E-01 $kg \cdot m/s^2$

    C. 5.40E-01 $kg \cdot m/s^2$

    D. 5.83E-01 $kg \cdot m/s^2$

    E. 6.30E-01 $kg \cdot m/s^2$

15. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.12-kg, and its velocity is $3\hat{i}m/s$. After 11 s, the velocity is $6\hat{i} + 6\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [276]

    A. 5.65E-01 $kg \cdot m/s^2$

The next page might contain more answer choices for this question

B. 6.10E-01 $kg \cdot m/s^2$

C. 6.59E-01 $kg \cdot m/s^2$

D. 7.11E-01 $kg \cdot m/s^2$

E. 7.68E-01 $kg \cdot m/s^2$

16. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.68-kg, and its velocity is $3\hat{i}m/s$. After 5 s, the velocity is $10\hat{i} + 4\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [277]

A. 1.19E+00 $kg \cdot m/s^2$

B. 1.28E+00 $kg \cdot m/s^2$

C. 1.38E+00 $kg \cdot m/s^2$

D. 1.49E+00 $kg \cdot m/s^2$

E. 1.61E+00 $kg \cdot m/s^2$

17. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.21-kg, and its velocity is $2\hat{i}m/s$. After 12 s, the velocity is $11\hat{i} + 5\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [278]

A. 7.36E-01 $kg \cdot m/s^2$

B. 7.94E-01 $kg \cdot m/s^2$

C. 8.58E-01 $kg \cdot m/s^2$

D. 9.27E-01 $kg \cdot m/s^2$

E. 1.00E+00 $kg \cdot m/s^2$

18. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.24-kg, and its velocity is $1\hat{i}m/s$. After 8 s, the velocity is $13\hat{i} + 5\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [279]

A. 1.62E+00 $kg \cdot m/s^2$

B. 1.76E+00 $kg \cdot m/s^2$

C. 1.90E+00 $kg \cdot m/s^2$

D. 2.05E+00 $kg \cdot m/s^2$

E. 2.21E+00 $kg \cdot m/s^2$

The next page might contain more answer choices for this question

19. A drone is being directed across a frictionless ice-covered lake. The mass of the drone is 1.55-kg, and its velocity is $5\hat{i}m/s$. After 11 s, the velocity is $9\hat{i} + 4\hat{j}m/s$. If a constant force is causing this change in motion, find the magnitude of the force (assume a force directed in the xy plane.) [280]

    A. 5.14E-01 $kg \cdot m/s^2$

    B. 5.55E-01 $kg \cdot m/s^2$

    C. 6.00E-01 $kg \cdot m/s^2$

    D. 6.48E-01 $kg \cdot m/s^2$

    E. 7.00E-01 $kg \cdot m/s^2$

2 up1-06

1. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [281]

    A. 1.70E+02 N

    B. 1.84E+02 N

    C. 1.98E+02 N

    D. 2.14E+02 N

    E. 2.31E+02 N

2. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [282]

    A. 1.35E+02 N

    B. 1.46E+02 N

    C. 1.57E+02 N

    D. 1.70E+02 N

    E. 1.84E+02 N

3. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (3\hat{i} - 2\hat{j})\ m/s$. Two of the forces are $(3\hat{i} + 5\hat{j} - 6\hat{k})N$ and $(4\hat{i} - 7\hat{j} + 2\hat{k})N$. Find the z component of the third force. [283]

    A. 4.00E+00 N

The next page might contain more answer choices for this question

B. 5.00E+00 N

C. 6.00E+00 N

D. 7.00E+00 N

E. 8.00E+00 N

4. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [284]

A. 5.87E+01 N

B. 6.34E+01 N

C. 6.85E+01 N

D. 7.40E+01 N

E. 7.99E+01 N

5. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 3.500E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [285]

A. 3.44E+00 s

B. 3.71E+00 s

C. 4.01E+00 s

D. 4.33E+00 s

E. 4.68E+00 s

6. A 2.5-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.100E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.45 long, what is the ratio of the average force on the shell to the shell's weight? [286]

A. 1.93E+02

B. 2.08E+02

C. 2.25E+02

D. 2.43E+02

E. 2.62E+02

The next page might contain more answer choices for this question

7. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [287]

   A. 1.44E+04 N

   B. 1.56E+04 N

   C. 1.68E+04 N

   D. 1.82E+04 N

   E. 1.97E+04 N

8. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator begins to rise with an acceleration of $1.2 m/s^2$ for 8.5 s. What is the tension in the cable 6.07 s after the elevator begins to move? [288]

   A. 1.56E+04 N

   B. 1.68E+04 N

   C. 1.82E+04 N

   D. 1.97E+04 N

   E. 2.12E+04 N

9. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 60 N. What is the mass of the backpack? [289]

   A. 7.94E+00 kg

   B. 8.57E+00 kg

   C. 9.26E+00 kg

   D. 1.00E+01 kg

   E. 1.08E+01 kg

10. A roller coaster starts from rest at the top of a track 30-m long and inclined at 20° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [290]

    A. 4.23E+00 s

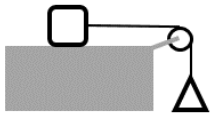
    B. 4.57E+00 s

    C. 4.93E+00 s

    D. 5.33E+00 s

The next page might contain more answer choices for this question

E. 5.75E+00 s

11. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 4-kg and the hanging mass is 1-kg. The table an pulley are frictionless. Find the acceleration of the system. [291]

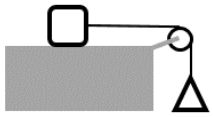
A. 1.96E+00 m/s^2

B. 2.12E+00 m/s^2

C. 2.29E+00 m/s^2

D. 2.47E+00 m/s^2

E. 2.67E+00 m/s^2

12. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 4-kg and the hanging mass is 1-kg. The table an pulley are frictionless. Find the tension in the rope. [292]

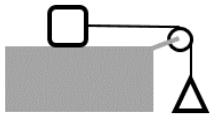
A. 6.22E+00 N

B. 6.72E+00 N

C. 7.26E+00 N

D. 7.84E+00 N

E. 8.47E+00 N

13. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 4-kg and the hanging mass is 1-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 1 m from the floor [293]

A. 1.98E+00 m/s

B. 2.14E+00 m/s

C. 2.31E+00 m/s

The next page might contain more answer choices for this question

D. 2.49E+00 m/s

E. 2.69E+00 m/s

2.1 Renditions

up1-06 Q1

1. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [294]

   A. 1.25E+02 N

   B. 1.35E+02 N

   C. 1.46E+02 N

   D. 1.57E+02 N

   E. 1.70E+02 N

2. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [295]

   A. 1.35E+02 N

   B. 1.46E+02 N

   C. 1.57E+02 N

   D. 1.70E+02 N

   E. 1.84E+02 N

3. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [296]

   A. 1.57E+02 N

   B. 1.70E+02 N

   C. 1.84E+02 N

   D. 1.98E+02 N

   E. 2.14E+02 N

4. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [297]

The next page might contain more answer choices for this question

A. 1.70E+02 N

B. 1.84E+02 N

C. 1.98E+02 N

D. 2.14E+02 N

E. 2.31E+02 N

5. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [298]

A. 1.46E+02 N

B. 1.57E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

6. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [299]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

7. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [300]

A. 1.46E+02 N

B. 1.57E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

8. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [301]

The next page might contain more answer choices for this question

A. 1.70E+02 N

B. 1.84E+02 N

C. 1.98E+02 N

D. 2.14E+02 N

E. 2.31E+02 N

9. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [302]

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

10. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [303]

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

11. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [304]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

12. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [305]

The next page might contain more answer choices for this question

A. 1.70E+02 N

B. 1.84E+02 N

C. 1.98E+02 N

D. 2.14E+02 N

E. 2.31E+02 N

13. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [306]

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

14. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [307]

A. 1.46E+02 N

B. 1.57E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

15. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [308]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

16. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [309]

The next page might contain more answer choices for this question

A. 1.70E+02 N

B. 1.84E+02 N

C. 1.98E+02 N

D. 2.14E+02 N

E. 2.31E+02 N

17. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [310]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

18. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [311]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

19. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the tension in each of the two ropes supporting the swing under these conditions. [312]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

The next page might contain more answer choices for this question

up1-06 Q2

1. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [313]

   A. 1.25E+02 N

   B. 1.35E+02 N

   C. 1.46E+02 N

   D. 1.57E+02 N

   E. 1.70E+02 N

2. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [314]

   A. 1.57E+02 N

   B. 1.70E+02 N

   C. 1.84E+02 N

   D. 1.98E+02 N

   E. 2.14E+02 N

3. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [315]

   A. 1.57E+02 N

   B. 1.70E+02 N

   C. 1.84E+02 N

   D. 1.98E+02 N

   E. 2.14E+02 N

4. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [316]

   A. 1.70E+02 N

   B. 1.84E+02 N

   C. 1.98E+02 N

The next page might contain more answer choices for this question

D. 2.14E+02 N

E. 2.31E+02 N

5. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [317]

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

6. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [318]

A. 1.70E+02 N

B. 1.84E+02 N

C. 1.98E+02 N

D. 2.14E+02 N

E. 2.31E+02 N

7. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [319]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

8. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [320]

A. 1.46E+02 N

B. 1.57E+02 N

The next page might contain more answer choices for this question

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

9. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [321]

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

10. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [322]

A. 1.46E+02 N

B. 1.57E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

11. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [323]

A. 1.35E+02 N

B. 1.46E+02 N

C. 1.57E+02 N

D. 1.70E+02 N

E. 1.84E+02 N

12. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [324]

A. 1.25E+02 N

The next page might contain more answer choices for this question

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

13. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [325]

A. 1.57E+02 N

B. 1.70E+02 N

C. 1.84E+02 N

D. 1.98E+02 N

E. 2.14E+02 N

14. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [326]

A. 1.46E+02 N

B. 1.57E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

15. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [327]

A. 1.57E+02 N

B. 1.70E+02 N

C. 1.84E+02 N

D. 1.98E+02 N

E. 2.14E+02 N

16. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [328]

The next page might contain more answer choices for this question

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

17. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [329]

A. 1.25E+02 N

B. 1.35E+02 N

C. 1.46E+02 N

D. 1.57E+02 N

E. 1.70E+02 N

18. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [330]

A. 1.70E+02 N

B. 1.84E+02 N

C. 1.98E+02 N

D. 2.14E+02 N

E. 2.31E+02 N

19. A 30-kg girl in a swing is pushed to one side and held at rest by a horizontal force $\vec{F}$ so that the swing ropes are 30° with respect to the vertical. Calculate the $||\vec{F}||$ under these conditions. [331]

A. 1.46E+02 N

B. 1.57E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

The next page might contain more answer choices for this question

up1-06 Q3

1. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (9\hat{i} - 5\hat{j})\ m/s$. Two of the forces are $(1\hat{i} + 2\hat{j} - 9\hat{k})N$ and $(4\hat{i} - 9\hat{j} + 5\hat{k})N$. Find the z component of the third force. [332]

   A. 3.00E+00 N

   B. 4.00E+00 N

   C. 5.00E+00 N

   D. 6.00E+00 N

   E. 7.00E+00 N

2. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (4\hat{i} - 9\hat{j})\ m/s$. Two of the forces are $(1\hat{i} + 4\hat{j} - 6\hat{k})N$ and $(2\hat{i} - 5\hat{j} + 2\hat{k})N$. Find the z component of the third force. [333]

   A. 4.00E+00 N

   B. 5.00E+00 N

   C. 6.00E+00 N

   D. 7.00E+00 N

   E. 8.00E+00 N

3. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (9\hat{i} - 8\hat{j})\ m/s$. Two of the forces are $(9\hat{i} + 1\hat{j} - 7\hat{k})N$ and $(4\hat{i} - 1\hat{j} + 3\hat{k})N$. Find the z component of the third force. [334]

   A. 3.00E+00 N

   B. 4.00E+00 N

   C. 5.00E+00 N

   D. 6.00E+00 N

   E. 7.00E+00 N

4. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (6\hat{i} - 5\hat{j})\ m/s$. Two of the forces are $(8\hat{i} + 6\hat{j} - 7\hat{k})N$ and $(6\hat{i} - 3\hat{j} + 5\hat{k})N$. Find the z component of the third force. [335]

   A. 1.00E+00 N

   B. 2.00E+00 N

   C. 3.00E+00 N

The next page might contain more answer choices for this question

D. 4.00E+00 N

E. 5.00E+00 N

5. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (2\hat{i} - 3\hat{j})\ m/s$. Two of the forces are $(5\hat{i} + 7\hat{j} - 8\hat{k})N$ and $(8\hat{i} - 9\hat{j} + 2\hat{k})N$. Find the z component of the third force. [336]

A. 4.00E+00 N

B. 5.00E+00 N

C. 6.00E+00 N

D. 7.00E+00 N

E. 8.00E+00 N

6. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (4\hat{i} - 7\hat{j})\ m/s$. Two of the forces are $(1\hat{i} + 5\hat{j} - 8\hat{k})N$ and $(5\hat{i} - 1\hat{j} + 5\hat{k})N$. Find the z component of the third force. [337]

A. 4.00E+00 N

B. 5.00E+00 N

C. 6.00E+00 N

D. 7.00E+00 N

E. 8.00E+00 N

7. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (3\hat{i} - 7\hat{j})\ m/s$. Two of the forces are $(3\hat{i} + 8\hat{j} - 8\hat{k})N$ and $(2\hat{i} - 2\hat{j} + 5\hat{k})N$. Find the z component of the third force. [338]

A. 2.00E+00 N

B. 3.00E+00 N

C. 4.00E+00 N

D. 5.00E+00 N

E. 6.00E+00 N

8. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (8\hat{i} - 5\hat{j})\ m/s$. Two of the forces are $(2\hat{i} + 2\hat{j} - 6\hat{k})N$ and $(4\hat{i} - 1\hat{j} + 4\hat{k})N$. Find the z component of the third force. [339]

A. 0.00E+00 N

B. 1.00E+00 N

The next page might contain more answer choices for this question

C. 2.00E+00 N

D. 3.00E+00 N

E. 4.00E+00 N

9. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (3\hat{i} - 6\hat{j})\ m/s$. Two of the forces are $(5\hat{i} + 5\hat{j} - 9\hat{k})N$ and $(5\hat{i} - 5\hat{j} + 4\hat{k})N$. Find the z component of the third force. [340]

A. 3.00E+00 N

B. 4.00E+00 N

C. 5.00E+00 N

D. 6.00E+00 N

E. 7.00E+00 N

10. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (3\hat{i} - 8\hat{j})\ m/s$. Two of the forces are $(9\hat{i} + 9\hat{j} - 9\hat{k})N$ and $(9\hat{i} - 9\hat{j} + 5\hat{k})N$. Find the z component of the third force. [341]

A. 2.00E+00 N

B. 3.00E+00 N

C. 4.00E+00 N

D. 5.00E+00 N

E. 6.00E+00 N

11. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (1\hat{i} - 9\hat{j})\ m/s$. Two of the forces are $(6\hat{i} + 8\hat{j} - 8\hat{k})N$ and $(7\hat{i} - 8\hat{j} + 4\hat{k})N$. Find the z component of the third force. [342]

A. 0.00E+00 N

B. 1.00E+00 N

C. 2.00E+00 N

D. 3.00E+00 N

E. 4.00E+00 N

12. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (1\hat{i} - 4\hat{j})\ m/s$. Two of the forces are $(5\hat{i} + 9\hat{j} - 8\hat{k})N$ and $(3\hat{i} - 6\hat{j} + 5\hat{k})N$. Find the z component of the third force. [343]

A. 1.00E+00 N

The next page might contain more answer choices for this question

B. 2.00E+00 N

C. 3.00E+00 N

D. 4.00E+00 N

E. 5.00E+00 N

13. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (3\hat{i} - 9\hat{j})\ m/s$. Two of the forces are $(8\hat{i} + 4\hat{j} - 7\hat{k})N$ and $(3\hat{i} - 5\hat{j} + 5\hat{k})N$. Find the z component of the third force. [344]

A. 0.00E+00 N

B. 1.00E+00 N

C. 2.00E+00 N

D. 3.00E+00 N

E. 4.00E+00 N

14. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (6\hat{i} - 9\hat{j})\ m/s$. Two of the forces are $(7\hat{i} + 6\hat{j} - 7\hat{k})N$ and $(8\hat{i} - 7\hat{j} + 5\hat{k})N$. Find the z component of the third force. [345]

A. 2.00E+00 N

B. 3.00E+00 N

C. 4.00E+00 N

D. 5.00E+00 N

E. 6.00E+00 N

15. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (1\hat{i} - 8\hat{j})\ m/s$. Two of the forces are $(9\hat{i} + 1\hat{j} - 7\hat{k})N$ and $(2\hat{i} - 4\hat{j} + 3\hat{k})N$. Find the z component of the third force. [346]

A. 3.00E+00 N

B. 4.00E+00 N

C. 5.00E+00 N

D. 6.00E+00 N

E. 7.00E+00 N

16. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (4\hat{i} - 2\hat{j})\ m/s$. Two of the forces are $(3\hat{i} + 3\hat{j} - 7\hat{k})N$ and $(2\hat{i} - 3\hat{j} + 3\hat{k})N$. Find the z component of the third force. [347]

The next page might contain more answer choices for this question

A. 3.00E+00 N

B. 4.00E+00 N

C. 5.00E+00 N

D. 6.00E+00 N

E. 7.00E+00 N

17. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (2\hat{i} - 9\hat{j})\ m/s$. Two of the forces are $(7\hat{i} + 7\hat{j} - 8\hat{k})N$ and $(6\hat{i} - 6\hat{j} + 2\hat{k})N$. Find the z component of the third force. [348]

A. 0.00E+00 N

B. 1.00E+00 N

C. 2.00E+00 N

D. 3.00E+00 N

E. 4.00E+00 N

18. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (5\hat{i} - 6\hat{j})\ m/s$. Two of the forces are $(2\hat{i} + 7\hat{j} - 6\hat{k})N$ and $(1\hat{i} - 9\hat{j} + 4\hat{k})N$. Find the z component of the third force. [349]

A. 2.00E+00 N

B. 3.00E+00 N

C. 4.00E+00 N

D. 5.00E+00 N

E. 6.00E+00 N

19. Three forces act on an object, considered to be a particle, which moves with constant velocity $\vec{v} = (8\hat{i} - 1\hat{j})\ m/s$. Two of the forces are $(5\hat{i} + 6\hat{j} - 8\hat{k})N$ and $(7\hat{i} - 6\hat{j} + 3\hat{k})N$. Find the z component of the third force. [350]

A. 2.00E+00 N

B. 3.00E+00 N

C. 4.00E+00 N

D. 5.00E+00 N

E. 6.00E+00 N

The next page might contain more answer choices for this question

up1-06 Q4

1. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [351]

   A. 5.44E+01 N

   B. 5.87E+01 N

   C. 6.34E+01 N

   D. 6.85E+01 N

   E. 7.40E+01 N

2. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [352]

   A. 5.03E+01 N

   B. 5.44E+01 N

   C. 5.87E+01 N

   D. 6.34E+01 N

   E. 6.85E+01 N

3. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [353]

   A. 5.44E+01 N

   B. 5.87E+01 N

   C. 6.34E+01 N

   D. 6.85E+01 N

   E. 7.40E+01 N

4. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [354]

The next page might contain more answer choices for this question

A. 5.87E+01 N

B. 6.34E+01 N

C. 6.85E+01 N

D. 7.40E+01 N

E. 7.99E+01 N

5. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [355]

A. 5.03E+01 N

B. 5.44E+01 N

C. 5.87E+01 N

D. 6.34E+01 N

E. 6.85E+01 N

6. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [356]

A. 6.85E+01 N

B. 7.40E+01 N

C. 7.99E+01 N

D. 8.63E+01 N

E. 9.32E+01 N

7. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [357]

A. 6.85E+01 N

B. 7.40E+01 N

C. 7.99E+01 N

D. 8.63E+01 N

E. 9.32E+01 N

The next page might contain more answer choices for this question

8. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [358]

    A. 5.44E+01 N

    B. 5.87E+01 N

    C. 6.34E+01 N

    D. 6.85E+01 N

    E. 7.40E+01 N

9. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [359]

    A. 5.03E+01 N

    B. 5.44E+01 N

    C. 5.87E+01 N

    D. 6.34E+01 N

    E. 6.85E+01 N

10. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [360]

    A. 6.85E+01 N

    B. 7.40E+01 N

    C. 7.99E+01 N

    D. 8.63E+01 N

    E. 9.32E+01 N

11. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [361]

    A. 5.44E+01 N

The next page might contain more answer choices for this question

B. 5.87E+01 N

C. 6.34E+01 N

D. 6.85E+01 N

E. 7.40E+01 N

12. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [362]

A. 6.85E+01 N

B. 7.40E+01 N

C. 7.99E+01 N

D. 8.63E+01 N

E. 9.32E+01 N

13. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [363]

A. 5.87E+01 N

B. 6.34E+01 N

C. 6.85E+01 N

D. 7.40E+01 N

E. 7.99E+01 N

14. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [364]

A. 6.85E+01 N

B. 7.40E+01 N

C. 7.99E+01 N

D. 8.63E+01 N

E. 9.32E+01 N

The next page might contain more answer choices for this question

15. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [365]

    A. 5.03E+01 N

    B. 5.44E+01 N

    C. 5.87E+01 N

    D. 6.34E+01 N

    E. 6.85E+01 N

16. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [366]

    A. 6.34E+01 N

    B. 6.85E+01 N

    C. 7.40E+01 N

    D. 7.99E+01 N

    E. 8.63E+01 N

17. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [367]

    A. 5.03E+01 N

    B. 5.44E+01 N

    C. 5.87E+01 N

    D. 6.34E+01 N

    E. 6.85E+01 N

18. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [368]

    A. 6.34E+01 N

The next page might contain more answer choices for this question

B. 6.85E+01 N

C. 7.40E+01 N

D. 7.99E+01 N

E. 8.63E+01 N

19. A35-kg dolphin decreases from 12 m/s to 7.5 m/s in 2.3 s to join another dolphin in play. What was the magnitude of the average force exerted to slow the first dolpin if it was moving horizontally? (The gravitational force is balanced by the buoyant force of the water.) [369]

A. 5.87E+01 N

B. 6.34E+01 N

C. 6.85E+01 N

D. 7.40E+01 N

E. 7.99E+01 N

up1-06 Q5

1. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.600E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [370]

A. 3.71E+00 s

B. 4.01E+00 s

C. 4.33E+00 s

D. 4.68E+00 s

E. 5.05E+00 s

2. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 3.620E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [371]

A. 3.71E+00 s

B. 4.01E+00 s

C. 4.33E+00 s

D. 4.68E+00 s

E. 5.05E+00 s

The next page might contain more answer choices for this question

3. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.160E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [372]

    A. 3.18E+00 s

    B. 3.44E+00 s

    C. 3.71E+00 s

    D. 4.01E+00 s

    E. 4.33E+00 s

4. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 3.540E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [373]

    A. 4.33E+00 s

    B. 4.68E+00 s

    C. 5.05E+00 s

    D. 5.45E+00 s

    E. 5.89E+00 s

5. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.120E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [374]

    A. 3.44E+00 s

    B. 3.71E+00 s

    C. 4.01E+00 s

    D. 4.33E+00 s

    E. 4.68E+00 s

6. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.160E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [375]

    A. 3.18E+00 s

    B. 3.44E+00 s

    C. 3.71E+00 s

    D. 4.01E+00 s

The next page might contain more answer choices for this question

E. 4.33E+00 s

7. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.800E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [376]

   A. 4.01E+00 s

   B. 4.33E+00 s

   C. 4.68E+00 s

   D. 5.05E+00 s

   E. 5.45E+00 s

8. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 2.880E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [377]

   A. 4.33E+00 s

   B. 4.68E+00 s

   C. 5.05E+00 s

   D. 5.45E+00 s

   E. 5.89E+00 s

9. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.200E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [378]

   A. 4.01E+00 s

   B. 4.33E+00 s

   C. 4.68E+00 s

   D. 5.05E+00 s

   E. 5.45E+00 s

10. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.140E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [379]

    A. 4.01E+00 s

    B. 4.33E+00 s

    C. 4.68E+00 s

The next page might contain more answer choices for this question

D. 5.05E+00 s

E. 5.45E+00 s

11. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.660E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [380]

A. 3.71E+00 s

B. 4.01E+00 s

C. 4.33E+00 s

D. 4.68E+00 s

E. 5.05E+00 s

12. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.560E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [381]

A. 3.44E+00 s

B. 3.71E+00 s

C. 4.01E+00 s

D. 4.33E+00 s

E. 4.68E+00 s

13. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 3.240E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [382]

A. 3.18E+00 s

B. 3.44E+00 s

C. 3.71E+00 s

D. 4.01E+00 s

E. 4.33E+00 s

14. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.120E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [383]

A. 3.44E+00 s

B. 3.71E+00 s

The next page might contain more answer choices for this question

C. 4.01E+00 s

D. 4.33E+00 s

E. 4.68E+00 s

15. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 3.280E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [384]

A. 4.33E+00 s

B. 4.68E+00 s

C. 5.05E+00 s

D. 5.45E+00 s

E. 5.89E+00 s

16. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 3.100E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [385]

A. 3.44E+00 s

B. 3.71E+00 s

C. 4.01E+00 s

D. 4.33E+00 s

E. 4.68E+00 s

17. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 2.780E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [386]

A. 4.33E+00 s

B. 4.68E+00 s

C. 5.05E+00 s

D. 5.45E+00 s

E. 5.89E+00 s

18. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 4.860E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [387]

A. 4.33E+00 s

The next page might contain more answer choices for this question

B. 4.68E+00 s

C. 5.05E+00 s

D. 5.45E+00 s

E. 5.89E+00 s

19. A large rocket has a mass of 2.000E+06-kg at takeoff, and its engines produce a thrust of 2.680E+07 N. How long does it take to reach a velocity of 1.200E+02 km/h straight up, assuming constant mass and thrust? [388]

A. 4.33E+00 s

B. 4.68E+00 s

C. 5.05E+00 s

D. 5.45E+00 s

E. 5.89E+00 s

up1-06 Q6

1. A 3.11-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.280E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.418 long, what is the ratio of the average force on the shell to the shell's weight? [389]

A. 2.08E+02

B. 2.25E+02

C. 2.43E+02

D. 2.62E+02

E. 2.83E+02

2. A 2.33-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.180E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.375 long, what is the ratio of the average force on the shell to the shell's weight? [390]

A. 2.25E+02

B. 2.43E+02

C. 2.62E+02

D. 2.83E+02

E. 3.06E+02

The next page might contain more answer choices for this question

3. A 2.04-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.840E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.381 long, what is the ratio of the average force on the shell to the shell's weight? [391]

    A. 2.08E+02

    B. 2.25E+02

    C. 2.43E+02

    D. 2.62E+02

    E. 2.83E+02

4. A 1.86-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.770E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.368 long, what is the ratio of the average force on the shell to the shell's weight? [392]

    A. 2.43E+02

    B. 2.62E+02

    C. 2.83E+02

    D. 3.06E+02

    E. 3.30E+02

5. A 3.27-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.270E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.424 long, what is the ratio of the average force on the shell to the shell's weight? [393]

    A. 2.08E+02

    B. 2.25E+02

    C. 2.43E+02

    D. 2.62E+02

    E. 2.83E+02

6. A 2.78-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.110E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.365 long, what is the ratio of the average force on the shell to the shell's weight? [394]

    A. 2.25E+02

The next page might contain more answer choices for this question

B. 2.43E+02

C. 2.62E+02

D. 2.83E+02

E. 3.06E+02

7. A 3.04-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.510E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.403 long, what is the ratio of the average force on the shell to the shell's weight? [395]

A. 2.08E+02

B. 2.25E+02

C. 2.43E+02

D. 2.62E+02

E. 2.83E+02

8. A 3.33-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.510E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.426 long, what is the ratio of the average force on the shell to the shell's weight? [396]

A. 1.93E+02

B. 2.08E+02

C. 2.25E+02

D. 2.43E+02

E. 2.62E+02

9. A 2.11-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.470E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.436 long, what is the ratio of the average force on the shell to the shell's weight? [397]

A. 2.25E+02

B. 2.43E+02

C. 2.62E+02

D. 2.83E+02

E. 3.06E+02

The next page might contain more answer choices for this question

10. A 3.32-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.290E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.381 long, what is the ratio of the average force on the shell to the shell's weight? [398]

    A. 2.08E+02

    B. 2.25E+02

    C. 2.43E+02

    D. 2.62E+02

    E. 2.83E+02

11. A 2.22-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.640E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.357 long, what is the ratio of the average force on the shell to the shell's weight? [399]

    A. 1.79E+02

    B. 1.93E+02

    C. 2.08E+02

    D. 2.25E+02

    E. 2.43E+02

12. A 3.45-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.750E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.376 long, what is the ratio of the average force on the shell to the shell's weight? [400]

    A. 1.79E+02

    B. 1.93E+02

    C. 2.08E+02

    D. 2.25E+02

    E. 2.43E+02

13. A 1.62-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.410E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.38 long, what is the ratio of the average force on the shell to the shell's weight? [401]

    A. 2.25E+02

The next page might contain more answer choices for this question

B. 2.43E+02

C. 2.62E+02

D. 2.83E+02

E. 3.06E+02

14. A 2.84-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.760E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.428 long, what is the ratio of the average force on the shell to the shell's weight? [402]

A. 2.43E+02

B. 2.62E+02

C. 2.83E+02

D. 3.06E+02

E. 3.30E+02

15. A 3.42-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.400E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.376 long, what is the ratio of the average force on the shell to the shell's weight? [403]

A. 1.79E+02

B. 1.93E+02

C. 2.08E+02

D. 2.25E+02

E. 2.43E+02

16. A 2.15-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.190E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.437 long, what is the ratio of the average force on the shell to the shell's weight? [404]

A. 1.93E+02

B. 2.08E+02

C. 2.25E+02

D. 2.43E+02

E. 2.62E+02

The next page might contain more answer choices for this question

17. A 2.22-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.240E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.399 long, what is the ratio of the average force on the shell to the shell's weight? [405]

    A. 2.08E+02

    B. 2.25E+02

    C. 2.43E+02

    D. 2.62E+02

    E. 2.83E+02

18. A 2.32-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.800E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.363 long, what is the ratio of the average force on the shell to the shell's weight? [406]

    A. 1.79E+02

    B. 1.93E+02

    C. 2.08E+02

    D. 2.25E+02

    E. 2.43E+02

19. A 1.94-kg fireworks shell is fired straight up from a mortar at an initial speed that would reach a height of 1.340E+02 m if air resistance is neglected (not a reasonable assumption here.) If the mortar itself is a tube of 0.375 long, what is the ratio of the average force on the shell to the shell's weight? [407]

    A. 2.43E+02

    B. 2.62E+02

    C. 2.83E+02

    D. 3.06E+02

    E. 3.30E+02

up1-06 Q7

1. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [408]

    A. 1.34E+04 N

The next page might contain more answer choices for this question

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

2. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [409]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

3. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [410]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

4. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [411]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

5. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [412]

The next page might contain more answer choices for this question

A. 1.34E+04 N

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

6. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [413]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

7. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [414]

A. 1.44E+04 N

B. 1.56E+04 N

C. 1.68E+04 N

D. 1.82E+04 N

E. 1.97E+04 N

8. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [415]

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

9. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [416]

The next page might contain more answer choices for this question

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

10. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [417]

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

11. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [418]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

12. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [419]

A. 1.34E+04 N

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

13. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [420]

The next page might contain more answer choices for this question

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

14. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [421]

A. 1.34E+04 N

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

15. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [422]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

16. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [423]

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

17. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [424]

The next page might contain more answer choices for this question

A. 1.34E+04 N

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

18. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [425]

A. 1.44E+04 N

B. 1.56E+04 N

C. 1.68E+04 N

D. 1.82E+04 N

E. 1.97E+04 N

19. An elevator filled with passengers has a mass of 1.700E+03-kg. The elevator is going up at a constant velocity of 1.2 m/s when it begins to slow down at a rate of $0.6 m/s^2$ for 8.5 s.What is the tension in the cable after the elevator begins to slow down? [426]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

up1-06 Q8

1. An elevator filled with passengers has a mass of 1.510E+03-kg. The elevator begins to rise with an acceleration of $1.71 m/s^2$ for 6.32 s. What is the tension in the cable 3.72 s after the elevator begins to move? [427]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

The next page might contain more answer choices for this question

2. An elevator filled with passengers has a mass of 2.270E+03-kg. The elevator begins to rise with an acceleration of $1.78 m/s^2$ for 8.45 s. What is the tension in the cable 5.7 s after the elevator begins to move? [428]

   A. 1.24E+04 N

   B. 1.34E+04 N

   C. 1.44E+04 N

   D. 1.56E+04 N

   E. 1.68E+04 N

3. An elevator filled with passengers has a mass of 1.610E+03-kg. The elevator begins to rise with an acceleration of $1.27 m/s^2$ for 4.3 s. What is the tension in the cable 2.83 s after the elevator begins to move? [429]

   A. 1.56E+04 N

   B. 1.68E+04 N

   C. 1.82E+04 N

   D. 1.97E+04 N

   E. 2.12E+04 N

4. An elevator filled with passengers has a mass of 1.490E+03-kg. The elevator begins to rise with an acceleration of $1.19 m/s^2$ for 5.23 s. What is the tension in the cable 2.71 s after the elevator begins to move? [430]

   A. 1.15E+04 N

   B. 1.24E+04 N

   C. 1.34E+04 N

   D. 1.44E+04 N

   E. 1.56E+04 N

5. An elevator filled with passengers has a mass of 2.550E+03-kg. The elevator begins to rise with an acceleration of $1.73 m/s^2$ for 6.98 s. What is the tension in the cable 4.14 s after the elevator begins to move? [431]

   A. 1.56E+04 N

   B. 1.68E+04 N

   C. 1.82E+04 N

   D. 1.97E+04 N

The next page might contain more answer choices for this question

E. 2.12E+04 N

6. An elevator filled with passengers has a mass of 2.500E+03-kg. The elevator begins to rise with an acceleration of $1.33 m/s^2$ for 6.92 s. What is the tension in the cable 4.8 s after the elevator begins to move? [432]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

7. An elevator filled with passengers has a mass of 2.210E+03-kg. The elevator begins to rise with an acceleration of $1.32 m/s^2$ for 6.18 s. What is the tension in the cable 3.81 s after the elevator begins to move? [433]

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

8. An elevator filled with passengers has a mass of 2.180E+03-kg. The elevator begins to rise with an acceleration of $1.64 m/s^2$ for 8.89 s. What is the tension in the cable 5.91 s after the elevator begins to move? [434]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

9. An elevator filled with passengers has a mass of 1.320E+03-kg. The elevator begins to rise with an acceleration of $1.46 m/s^2$ for 4.3 s. What is the tension in the cable 2.48 s after the elevator begins to move? [435]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

The next page might contain more answer choices for this question

D. 1.97E+04 N

E. 2.12E+04 N

10. An elevator filled with passengers has a mass of 1.590E+03-kg. The elevator begins to rise with an acceleration of $1.52 m/s^2$ for 5.97 s. What is the tension in the cable 3.75 s after the elevator begins to move? [436]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

11. An elevator filled with passengers has a mass of 1.730E+03-kg. The elevator begins to rise with an acceleration of $1.22 m/s^2$ for 4.84 s. What is the tension in the cable 2.71 s after the elevator begins to move? [437]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

12. An elevator filled with passengers has a mass of 1.480E+03-kg. The elevator begins to rise with an acceleration of $1.33 m/s^2$ for 4.88 s. What is the tension in the cable 3.66 s after the elevator begins to move? [438]

A. 1.34E+04 N

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

13. An elevator filled with passengers has a mass of 2.870E+03-kg. The elevator begins to rise with an acceleration of $1.87 m/s^2$ for 5.98 s. What is the tension in the cable 4.0 s after the elevator begins to move? [439]

A. 1.56E+04 N

B. 1.68E+04 N

The next page might contain more answer choices for this question

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

14. An elevator filled with passengers has a mass of 2.660E+03-kg. The elevator begins to rise with an acceleration of $1.46 m/s^2$ for 8.71 s. What is the tension in the cable 6.05 s after the elevator begins to move? [440]

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

15. An elevator filled with passengers has a mass of 2.360E+03-kg. The elevator begins to rise with an acceleration of $1.9 m/s^2$ for 6.74 s. What is the tension in the cable 3.59 s after the elevator begins to move? [441]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

16. An elevator filled with passengers has a mass of 2.830E+03-kg. The elevator begins to rise with an acceleration of $1.21 m/s^2$ for 6.38 s. What is the tension in the cable 4.72 s after the elevator begins to move? [442]

A. 1.15E+04 N

B. 1.24E+04 N

C. 1.34E+04 N

D. 1.44E+04 N

E. 1.56E+04 N

17. An elevator filled with passengers has a mass of 1.520E+03-kg. The elevator begins to rise with an acceleration of $1.3 m/s^2$ for 7.69 s. What is the tension in the cable 4.43 s after the elevator begins to move? [443]

A. 1.34E+04 N

The next page might contain more answer choices for this question

B. 1.44E+04 N

C. 1.56E+04 N

D. 1.68E+04 N

E. 1.82E+04 N

18. An elevator filled with passengers has a mass of 2.500E+03-kg. The elevator begins to rise with an acceleration of $1.67 m/s^2$ for 6.62 s. What is the tension in the cable 3.88 s after the elevator begins to move? [444]

A. 1.56E+04 N

B. 1.68E+04 N

C. 1.82E+04 N

D. 1.97E+04 N

E. 2.12E+04 N

19. An elevator filled with passengers has a mass of 1.550E+03-kg. The elevator begins to rise with an acceleration of $1.51 m/s^2$ for 8.47 s. What is the tension in the cable 6.05 s after the elevator begins to move? [445]

A. 1.24E+04 N

B. 1.34E+04 N

C. 1.44E+04 N

D. 1.56E+04 N

E. 1.68E+04 N

up1-06 Q9

1. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [446]

A. 9.26E+00 kg

B. 1.00E+01 kg

C. 1.08E+01 kg

D. 1.17E+01 kg

E. 1.26E+01 kg

The next page might contain more answer choices for this question

2. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [447]

   A. 7.94E+00 kg

   B. 8.57E+00 kg

   C. 9.26E+00 kg

   D. 1.00E+01 kg

   E. 1.08E+01 kg

3. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [448]

   A. 8.57E+00 kg

   B. 9.26E+00 kg

   C. 1.00E+01 kg

   D. 1.08E+01 kg

   E. 1.17E+01 kg

4. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [449]

   A. 7.35E+00 kg

   B. 7.94E+00 kg

   C. 8.57E+00 kg

   D. 9.26E+00 kg

   E. 1.00E+01 kg

5. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [450]

   A. 8.57E+00 kg

   B. 9.26E+00 kg

   C. 1.00E+01 kg

   D. 1.08E+01 kg

The next page might contain more answer choices for this question

E. 1.17E+01 kg

6. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [451]

A. 1.00E+01 kg

B. 1.08E+01 kg

C. 1.17E+01 kg

D. 1.26E+01 kg

E. 1.36E+01 kg

7. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [452]

A. 9.26E+00 kg

B. 1.00E+01 kg

C. 1.08E+01 kg

D. 1.17E+01 kg

E. 1.26E+01 kg

8. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [453]

A. 1.00E+01 kg

B. 1.08E+01 kg

C. 1.17E+01 kg

D. 1.26E+01 kg

E. 1.36E+01 kg

9. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [454]

A. 7.94E+00 kg

B. 8.57E+00 kg

C. 9.26E+00 kg

The next page might contain more answer choices for this question

D. 1.00E+01 kg

E. 1.08E+01 kg

10. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [455]

A. 7.94E+00 kg

B. 8.57E+00 kg

C. 9.26E+00 kg

D. 1.00E+01 kg

E. 1.08E+01 kg

11. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [456]

A. 7.94E+00 kg

B. 8.57E+00 kg

C. 9.26E+00 kg

D. 1.00E+01 kg

E. 1.08E+01 kg

12. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [457]

A. 7.35E+00 kg

B. 7.94E+00 kg

C. 8.57E+00 kg

D. 9.26E+00 kg

E. 1.00E+01 kg

13. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [458]

A. 7.35E+00 kg

B. 7.94E+00 kg

The next page might contain more answer choices for this question

C. 8.57E+00 kg

D. 9.26E+00 kg

E. 1.00E+01 kg

14. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [459]

A. 9.26E+00 kg

B. 1.00E+01 kg

C. 1.08E+01 kg

D. 1.17E+01 kg

E. 1.26E+01 kg

15. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [460]

A. 9.26E+00 kg

B. 1.00E+01 kg

C. 1.08E+01 kg

D. 1.17E+01 kg

E. 1.26E+01 kg

16. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [461]

A. 1.00E+01 kg

B. 1.08E+01 kg

C. 1.17E+01 kg

D. 1.26E+01 kg

E. 1.36E+01 kg

17. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [462]

A. 7.94E+00 kg

The next page might contain more answer choices for this question

B. 8.57E+00 kg

C. 9.26E+00 kg

D. 1.00E+01 kg

E. 1.08E+01 kg

18. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [463]

A. 8.57E+00 kg

B. 9.26E+00 kg

C. 1.00E+01 kg

D. 1.08E+01 kg

E. 1.17E+01 kg

19. A student' backpack, full of textbooks, is hung from a spring scale attached to the ceiling of an elevator. When the elevator is accelerating downward at 3.8 m/s^2, the scale reads 11 N. What is the mass of the backpack? [464]

A. 8.57E+00 kg

B. 9.26E+00 kg

C. 1.00E+01 kg

D. 1.08E+01 kg

E. 1.17E+01 kg

up1-06 Q10

1. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [465]

A. 3.92E+00 s

B. 4.23E+00 s

C. 4.57E+00 s

D. 4.93E+00 s

E. 5.33E+00 s

The next page might contain more answer choices for this question

2. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [466]

   A. 4.23E+00 s

   B. 4.57E+00 s

   C. 4.93E+00 s

   D. 5.33E+00 s

   E. 5.75E+00 s

3. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [467]

   A. 4.23E+00 s

   B. 4.57E+00 s

   C. 4.93E+00 s

   D. 5.33E+00 s

   E. 5.75E+00 s

4. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [468]

   A. 3.92E+00 s

   B. 4.23E+00 s

   C. 4.57E+00 s

   D. 4.93E+00 s

   E. 5.33E+00 s

5. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [469]

   A. 4.23E+00 s

   B. 4.57E+00 s

   C. 4.93E+00 s

   D. 5.33E+00 s

The next page might contain more answer choices for this question

E. 5.75E+00 s

6. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [470]

A. 4.23E+00 s

B. 4.57E+00 s

C. 4.93E+00 s

D. 5.33E+00 s

E. 5.75E+00 s

7. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [471]

A. 4.23E+00 s

B. 4.57E+00 s

C. 4.93E+00 s

D. 5.33E+00 s

E. 5.75E+00 s

8. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [472]

A. 3.36E+00 s

B. 3.63E+00 s

C. 3.92E+00 s

D. 4.23E+00 s

E. 4.57E+00 s

9. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [473]

A. 3.92E+00 s

B. 4.23E+00 s

C. 4.57E+00 s

The next page might contain more answer choices for this question

D. 4.93E+00 s

E. 5.33E+00 s

10. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [474]

A. 4.23E+00 s

B. 4.57E+00 s

C. 4.93E+00 s

D. 5.33E+00 s

E. 5.75E+00 s

11. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [475]

A. 3.92E+00 s

B. 4.23E+00 s

C. 4.57E+00 s

D. 4.93E+00 s

E. 5.33E+00 s

12. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [476]

A. 3.92E+00 s

B. 4.23E+00 s

C. 4.57E+00 s

D. 4.93E+00 s

E. 5.33E+00 s

13. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [477]

A. 3.11E+00 s

B. 3.36E+00 s

The next page might contain more answer choices for this question

C. 3.63E+00 s

D. 3.92E+00 s

E. 4.23E+00 s

14. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [478]

A. 4.23E+00 s

B. 4.57E+00 s

C. 4.93E+00 s

D. 5.33E+00 s

E. 5.75E+00 s

15. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [479]

A. 3.36E+00 s

B. 3.63E+00 s

C. 3.92E+00 s

D. 4.23E+00 s

E. 4.57E+00 s

16. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [480]

A. 3.92E+00 s

B. 4.23E+00 s

C. 4.57E+00 s

D. 4.93E+00 s

E. 5.33E+00 s

17. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [481]

A. 3.11E+00 s

The next page might contain more answer choices for this question

B. 3.36E+00 s

C. 3.63E+00 s

D. 3.92E+00 s

E. 4.23E+00 s

18. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [482]

A. 4.23E+00 s

B. 4.57E+00 s

C. 4.93E+00 s

D. 5.33E+00 s

E. 5.75E+00 s

19. A roller coaster starts from rest at the top of a track 11-m long and inclined at 11° to the horizontal. How much time esapses before it reaches the bottom of the track if friction can be ignored? [483]

A. 3.63E+00 s

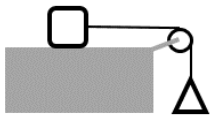
B. 3.92E+00 s

C. 4.23E+00 s

D. 4.57E+00 s

E. 4.93E+00 s

up1-06 Q11

1. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [484]

A. 1.68E+00 m/s^2

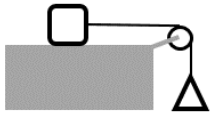
B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

The next page might contain more answer choices for this question

E. 2.29E+00 m/s^2

2. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [485]

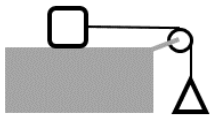
A. 1.96E+00 m/s^2

B. 2.12E+00 m/s^2

C. 2.29E+00 m/s^2

D. 2.47E+00 m/s^2

E. 2.67E+00 m/s^2

3. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [486]

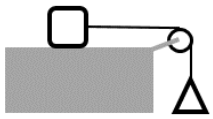
A. 1.81E+00 m/s^2

B. 1.96E+00 m/s^2

C. 2.12E+00 m/s^2

D. 2.29E+00 m/s^2

E. 2.47E+00 m/s^2

4. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [487]

A. 1.44E+00 m/s^2

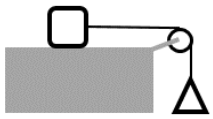
B. 1.56E+00 m/s^2

C. 1.68E+00 m/s^2

The next page might contain more answer choices for this question

D. 1.81E+00 m/s^2

E. 1.96E+00 m/s^2

5. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [488]

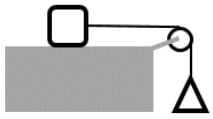
A. 1.68E+00 m/s^2

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

6. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [489]

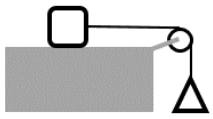
A. 1.81E+00 m/s^2

B. 1.96E+00 m/s^2

C. 2.12E+00 m/s^2

D. 2.29E+00 m/s^2

E. 2.47E+00 m/s^2

7. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [490]

A. 1.56E+00 m/s^2

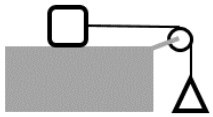
B. 1.68E+00 m/s^2

The next page might contain more answer choices for this question

C. 1.81E+00 m/s^2

D. 1.96E+00 m/s^2

E. 2.12E+00 m/s^2

8. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [491]

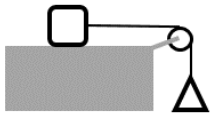
A. 1.56E+00 m/s^2

B. 1.68E+00 m/s^2

C. 1.81E+00 m/s^2

D. 1.96E+00 m/s^2

E. 2.12E+00 m/s^2

9. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [492]

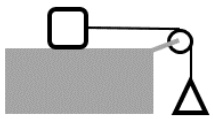
A. 1.68E+00 m/s^2

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

10. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [493]

A. 1.68E+00 m/s^2

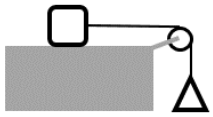
The next page might contain more answer choices for this question

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

11. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [494]

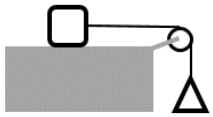
A. 1.96E+00 m/s^2

B. 2.12E+00 m/s^2

C. 2.29E+00 m/s^2

D. 2.47E+00 m/s^2

E. 2.67E+00 m/s^2

12. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [495]

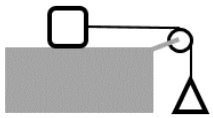
A. 1.56E+00 m/s^2

B. 1.68E+00 m/s^2

C. 1.81E+00 m/s^2

D. 1.96E+00 m/s^2

E. 2.12E+00 m/s^2

13. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [496]

The next page might contain more answer choices for this question

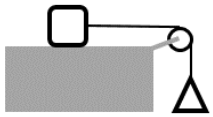
A. 1.68E+00 m/s^2

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

14. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [497]

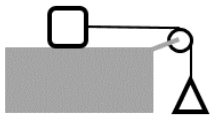
A. 1.68E+00 m/s^2

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

15. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [498]

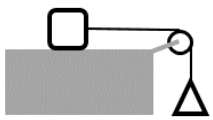
A. 1.68E+00 m/s^2

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

16. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [499]

The next page might contain more answer choices for this question

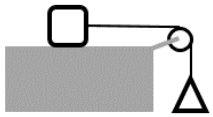
A. 1.68E+00 m/s^2

B. 1.81E+00 m/s^2

C. 1.96E+00 m/s^2

D. 2.12E+00 m/s^2

E. 2.29E+00 m/s^2

17. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [500]

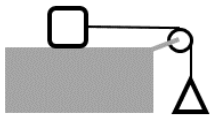
A. 1.44E+00 m/s^2

B. 1.56E+00 m/s^2

C. 1.68E+00 m/s^2

D. 1.81E+00 m/s^2

E. 1.96E+00 m/s^2

18. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [501]

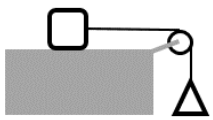
A. 1.81E+00 m/s^2

B. 1.96E+00 m/s^2

C. 2.12E+00 m/s^2

D. 2.29E+00 m/s^2

E. 2.47E+00 m/s^2

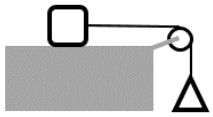
19. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the acceleration of the system. [502]

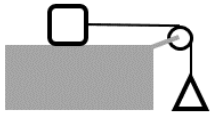
The next page might contain more answer choices for this question

A. 1.56E+00 m/s^2
B. 1.68E+00 m/s^2
C. 1.81E+00 m/s^2
D. 1.96E+00 m/s^2
E. 2.12E+00 m/s^2

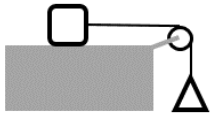
up1-06 Q12

1. 
Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [503]

A. 7.84E+00 N
B. 8.47E+00 N
C. 9.14E+00 N
D. 9.88E+00 N
E. 1.07E+01 N

2. 
Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [504]

A. 6.22E+00 N
B. 6.72E+00 N
C. 7.26E+00 N
D. 7.84E+00 N
E. 8.47E+00 N

3. 
Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [505]

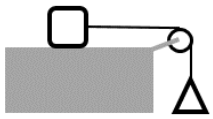
A. 7.84E+00 N

B. 8.47E+00 N

C. 9.14E+00 N

D. 9.88E+00 N

E. 1.07E+01 N

4. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [506]

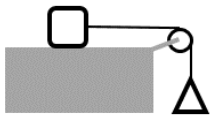
A. 6.22E+00 N

B. 6.72E+00 N

C. 7.26E+00 N

D. 7.84E+00 N

E. 8.47E+00 N

5. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [507]

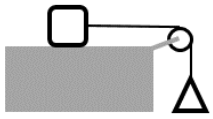
A. 7.26E+00 N

B. 7.84E+00 N

C. 8.47E+00 N

D. 9.14E+00 N

E. 9.88E+00 N

6. 

Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [508]

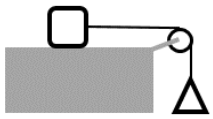
A. 7.26E+00 N

B. 7.84E+00 N

C. 8.47E+00 N

D. 9.14E+00 N

E. 9.88E+00 N

7. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [509]

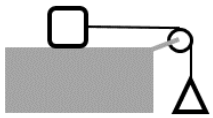
A. 7.26E+00 N

B. 7.84E+00 N

C. 8.47E+00 N

D. 9.14E+00 N

E. 9.88E+00 N

8. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [510]

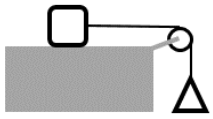
A. 6.72E+00 N

B. 7.26E+00 N

C. 7.84E+00 N

D. 8.47E+00 N

E. 9.14E+00 N

9. 

Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [511]

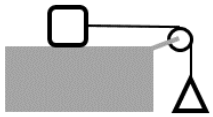
A. 6.72E+00 N

B. 7.26E+00 N

C. 7.84E+00 N

D. 8.47E+00 N

E. 9.14E+00 N

10. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [512]

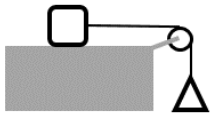
A. 5.76E+00 N

B. 6.22E+00 N

C. 6.72E+00 N

D. 7.26E+00 N

E. 7.84E+00 N

11. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [513]

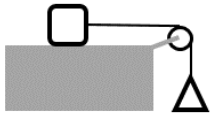
A. 7.84E+00 N

B. 8.47E+00 N

C. 9.14E+00 N

D. 9.88E+00 N

E. 1.07E+01 N

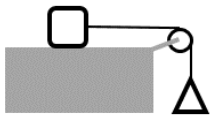
12. 

Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

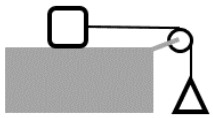
the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [514]

A. 7.26E+00 N
B. 7.84E+00 N
C. 8.47E+00 N
D. 9.14E+00 N
E. 9.88E+00 N

13. 

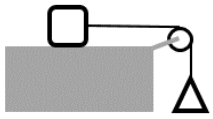
Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [515]

A. 6.22E+00 N
B. 6.72E+00 N
C. 7.26E+00 N
D. 7.84E+00 N
E. 8.47E+00 N

14. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [516]

A. 6.22E+00 N
B. 6.72E+00 N
C. 7.26E+00 N
D. 7.84E+00 N
E. 8.47E+00 N

15. 

Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [517]

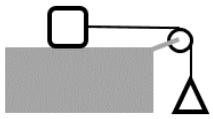
A. 6.72E+00 N

B. 7.26E+00 N

C. 7.84E+00 N

D. 8.47E+00 N

E. 9.14E+00 N

16. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [518]

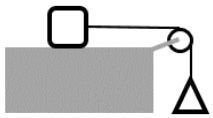
A. 6.72E+00 N

B. 7.26E+00 N

C. 7.84E+00 N

D. 8.47E+00 N

E. 9.14E+00 N

17. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [519]

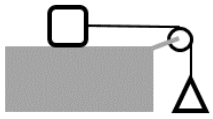
A. 7.84E+00 N

B. 8.47E+00 N

C. 9.14E+00 N

D. 9.88E+00 N

E. 1.07E+01 N

18. 

Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [520]

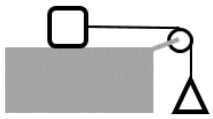
A. 6.22E+00 N

B. 6.72E+00 N

C. 7.26E+00 N

D. 7.84E+00 N

E. 8.47E+00 N

19. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the tension in the rope. [521]

A. 6.22E+00 N

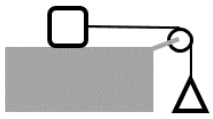
B. 6.72E+00 N

C. 7.26E+00 N

D. 7.84E+00 N

E. 8.47E+00 N

up1-06 Q13

1. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [522]

A. 1.70E+00 m/s

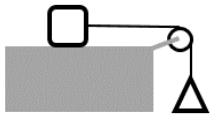
B. 1.83E+00 m/s

C. 1.98E+00 m/s

D. 2.14E+00 m/s

E. 2.31E+00 m/s

The next page might contain more answer choices for this question

2. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [523]

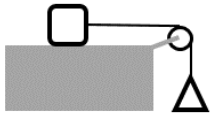
A. 1.70E+00 m/s

B. 1.83E+00 m/s

C. 1.98E+00 m/s

D. 2.14E+00 m/s

E. 2.31E+00 m/s

3. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [524]

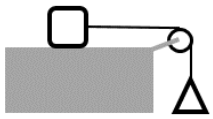
A. 1.57E+00 m/s

B. 1.70E+00 m/s

C. 1.83E+00 m/s

D. 1.98E+00 m/s

E. 2.14E+00 m/s

4. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [525]

A. 1.46E+00 m/s

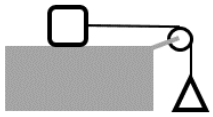
B. 1.57E+00 m/s

The next page might contain more answer choices for this question

C. 1.70E+00 m/s

D. 1.83E+00 m/s

E. 1.98E+00 m/s

5. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [526]

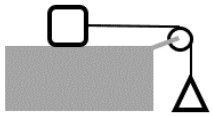
A. 1.98E+00 m/s

B. 2.14E+00 m/s

C. 2.31E+00 m/s

D. 2.49E+00 m/s

E. 2.69E+00 m/s

6. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [527]

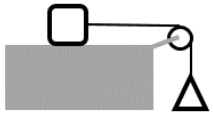
A. 1.98E+00 m/s

B. 2.14E+00 m/s

C. 2.31E+00 m/s

D. 2.49E+00 m/s

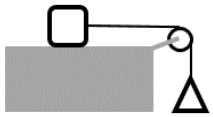
E. 2.69E+00 m/s

7. 

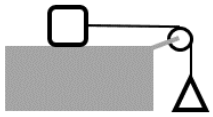
Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [528]

The next page might contain more answer choices for this question

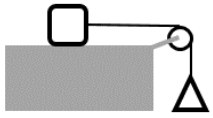
A. 1.70E+00 m/s
B. 1.83E+00 m/s
C. 1.98E+00 m/s
D. 2.14E+00 m/s
E. 2.31E+00 m/s

8. 
Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [529]

A. 1.83E+00 m/s
B. 1.98E+00 m/s
C. 2.14E+00 m/s
D. 2.31E+00 m/s
E. 2.49E+00 m/s

9. 
Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [530]

A. 1.57E+00 m/s
B. 1.70E+00 m/s
C. 1.83E+00 m/s
D. 1.98E+00 m/s
E. 2.14E+00 m/s

10. 
Two blocks are connected by a massless rope as shown above. The mass of the block on

The next page might contain more answer choices for this question

the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [531]

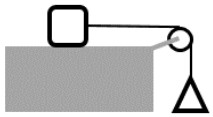
A. 1.46E+00 m/s

B. 1.57E+00 m/s

C. 1.70E+00 m/s

D. 1.83E+00 m/s

E. 1.98E+00 m/s

11. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [532]

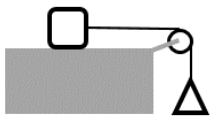
A. 1.83E+00 m/s

B. 1.98E+00 m/s

C. 2.14E+00 m/s

D. 2.31E+00 m/s

E. 2.49E+00 m/s

12. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [533]

A. 1.46E+00 m/s

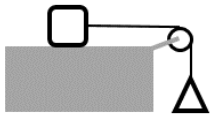
B. 1.57E+00 m/s

C. 1.70E+00 m/s

D. 1.83E+00 m/s

E. 1.98E+00 m/s

The next page might contain more answer choices for this question

13. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [534]

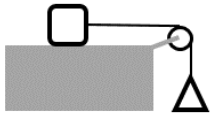
A. 1.46E+00 m/s

B. 1.57E+00 m/s

C. 1.70E+00 m/s

D. 1.83E+00 m/s

E. 1.98E+00 m/s

14. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [535]

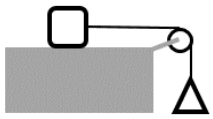
A. 1.70E+00 m/s

B. 1.83E+00 m/s

C. 1.98E+00 m/s

D. 2.14E+00 m/s

E. 2.31E+00 m/s

15. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [536]

A. 1.70E+00 m/s

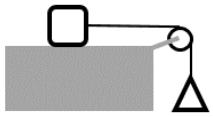
B. 1.83E+00 m/s

The next page might contain more answer choices for this question

C. 1.98E+00 m/s

D. 2.14E+00 m/s

E. 2.31E+00 m/s

16. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [537]

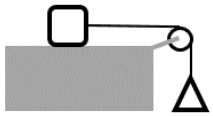
A. 1.70E+00 m/s

B. 1.83E+00 m/s

C. 1.98E+00 m/s

D. 2.14E+00 m/s

E. 2.31E+00 m/s

17. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [538]

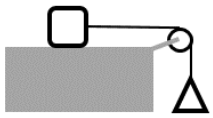
A. 1.70E+00 m/s

B. 1.83E+00 m/s

C. 1.98E+00 m/s

D. 2.14E+00 m/s

E. 2.31E+00 m/s

18. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [539]

The next page might contain more answer choices for this question

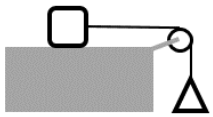
A. 1.98E+00 m/s

B. 2.14E+00 m/s

C. 2.31E+00 m/s

D. 2.49E+00 m/s

E. 2.69E+00 m/s

19. 

Two blocks are connected by a massless rope as shown above. The mass of the block on the table is 11-kg and the hanging mass is 11-kg. The table an pulley are frictionless. Find the speed with which the haning mass hits the floor if it starts from rest and is intially located 11 m from the floor [540]

A. 1.98E+00 m/s

B. 2.14E+00 m/s

C. 2.31E+00 m/s

D. 2.49E+00 m/s

E. 2.69E+00 m/s

3 up1-07

1. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.6-m horizontally with a force of 5.0-N? [541]

A. 2.78E+00 J

B. 3.00E+00 J

C. 3.24E+00 J

D. 3.50E+00 J

E. 3.78E+00 J

2. Calculate the work done on a 1.500E+03-kg elevator car by its cable to lift it 40.0-m at constant speed, assuming friction averages 1.000E+02-N. [542]

A. 3.70E+03 J

B. 4.00E+03 J

C. 4.32E+03 J

The next page might contain more answer choices for this question

D. 4.67E+03 J

E. 5.04E+03 J

3. Calculate the work done by the gravitational force on a 1.500E+03-kg elevator car by its cable to lift it 40.0-m at constant speed, assuming friction averages 1.000E+02-N. [543]

A. 4.64E+05 N

B. 5.01E+05 N

C. 5.41E+05 N

D. 5.85E+05 N

E. 6.31E+05 N

4. What is the total work done on a 1.500E+03-kg elevator car by its cable to lift it 40.0-m at constant speed, assuming friction averages 1.000E+02-.? [544]

A. 5.01E+05 J

B. 5.41E+05 J

C. 5.85E+05 J

D. 6.31E+05 J

E. 6.82E+05 J

5. A constant 20-N force pushes a small ball in the direction of the force over a distance of 5.0-m. What is the work done by the force? [545]

A. 7.94E+01 J

B. 8.57E+01 J

C. 9.26E+01 J

D. 1.00E+02 J

E. 1.08E+02 J

6. A 5.0-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.5. A horizontal force pulls the box at constant velocity for 10.0-cm. Find the work done by the applied horizontal force. [546]

A. 1.80E+02 J

B. 1.95E+02 J

C. 2.10E+02 J

D. 2.27E+02 J

The next page might contain more answer choices for this question

E. 2.45E+02 J

7. A 5.0-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.5. A horizontal force pulls the box at constant velocity for 10.0-cm. Find the work done by the frictional force. [547]

   A. 2.27E+02 J

   B. 2.45E+02 J

   C. 2.65E+02 J

   D. 2.86E+02 J

   E. 3.09E+02 J

8. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.2. It is pushed 20-m across the snow at constant velocity by a force directed 30 below the horizontal. Calculate the work done by the applied force. [548]

   A. 2.22E+03J

   B. 2.39E+03J

   C. 2.58E+03J

   D. 2.79E+03J

   E. 3.01E+03J

9. How fast must a 3.000E+03-kg elephant move to have the same kinetic energy as a 65.0-kg sprinter running at 10.0-m/s? [549]

   A. 1.08E+00m/s

   B. 1.17E+00m/s

   C. 1.26E+00m/s

   D. 1.36E+00m/s

   E. 1.47E+00m/s

10. Calculate the kinetic energies of a 2.000E+03-kg automobile moving at 1.000E+02-km/h. [550]

    A. 9.26E+06J

    B. 1.00E+07J

    C. 1.08E+07J

    D. 1.17E+07J

    E. 1.26E+07J

The next page might contain more answer choices for this question

11. Calculate the kinetic energies of an 80-kg runner sprinting at 10-m/s. [551]

    A. 3.43E+03 J

    B. 3.70E+03 J

    C. 4.00E+03 J

    D. 4.32E+03 J

    E. 4.67E+03 J

12. An 8.0-g bullet has a speed of 8.000E+02-m/s. What is its kinetic energy? [552]

    A. 2.03E+06 J

    B. 2.19E+06 J

    C. 2.37E+06 J

    D. 2.56E+06 J

    E. 2.76E+06 J

13. An 8.0-g bullet has a speed of 8.000E+02-m/s. What is its kinetic energy if the speed is halved? [553]

    A. 4.70E+05 J

    B. 5.08E+05 J

    C. 5.49E+05 J

    D. 5.93E+05 J

    E. 6.40E+05 J

14. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.2-m while bringing a 9.000E+02-kg car to rest from an initial speed of 1.1-m/s. [554]

    A. 3.93E+03N

    B. 4.24E+03N

    C. 4.58E+03N

    D. 4.95E+03N

    E. 5.35E+03N

15. A constant 10-N horizontal force is applied to a 20-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 8.0-m? [555]

The next page might contain more answer choices for this question

A. 2.08E+00m/s

B. 2.25E+00m/s

C. 2.42E+00m/s

D. 2.62E+00m/s

E. 2.83E+00m/s

16. How long will it take an 8.500E+02-kg car with a useful power output of 40.0-hp (1 hp equals 746 W) to reach a speed of 15.0-m/s, neglecting friction? [556]

A. 1.08E+04 s

B. 1.17E+04 s

C. 1.26E+04 s

D. 1.36E+04 s

E. 1.47E+04 s

17. A man of mass 80-kg runs up a flight of stairs 20.0-m high in 10.0-s. How much power is used to lift the man? [557]

A. 1.35E+03 W

B. 1.45E+03 W

C. 1.57E+03 W

D. 1.70E+03 W

E. 1.83E+03 W

3.1 Renditions

up1-07 Q1

1. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.605-m horizontally with a force of 5.6-N? [558]

A. 2.69E+00 J

B. 2.90E+00 J

C. 3.14E+00 J

D. 3.39E+00 J

E. 3.66E+00 J

2. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.581-m horizontally with a force of 5.66-N? [559]

The next page might contain more answer choices for this question

A. 2.61E+00 J

B. 2.82E+00 J

C. 3.04E+00 J

D. 3.29E+00 J

E. 3.55E+00 J

3. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.406-m horizontally with a force of 5.1-N? [560]

A. 1.64E+00 J

B. 1.78E+00 J

C. 1.92E+00 J

D. 2.07E+00 J

E. 2.24E+00 J

4. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.774-m horizontally with a force of 5.74-N? [561]

A. 3.81E+00 J

B. 4.11E+00 J

C. 4.44E+00 J

D. 4.80E+00 J

E. 5.18E+00 J

5. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.653-m horizontally with a force of 5.22-N? [562]

A. 2.51E+00 J

B. 2.71E+00 J

C. 2.92E+00 J

D. 3.16E+00 J

E. 3.41E+00 J

6. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.63-m horizontally with a force of 5.46-N? [563]

A. 2.53E+00 J

B. 2.73E+00 J

The next page might contain more answer choices for this question

C. 2.95E+00 J

D. 3.18E+00 J

E. 3.44E+00 J

7. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.771-m horizontally with a force of 4.67-N? [564]

A. 3.60E+00 J

B. 3.89E+00 J

C. 4.20E+00 J

D. 4.54E+00 J

E. 4.90E+00 J

8. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.633-m horizontally with a force of 4.4-N? [565]

A. 2.39E+00 J

B. 2.58E+00 J

C. 2.79E+00 J

D. 3.01E+00 J

E. 3.25E+00 J

9. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.613-m horizontally with a force of 5.37-N? [566]

A. 2.61E+00 J

B. 2.82E+00 J

C. 3.05E+00 J

D. 3.29E+00 J

E. 3.56E+00 J

10. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.771-m horizontally with a force of 4.14-N? [567]

A. 2.74E+00 J

B. 2.96E+00 J

C. 3.19E+00 J

D. 3.45E+00 J

The next page might contain more answer choices for this question

E. 3.72E+00 J

11. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.664-m horizontally with a force of 4.18-N? [568]

A. 2.38E+00 J

B. 2.57E+00 J

C. 2.78E+00 J

D. 3.00E+00 J

E. 3.24E+00 J

12. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.539-m horizontally with a force of 4.81-N? [569]

A. 2.40E+00 J

B. 2.59E+00 J

C. 2.80E+00 J

D. 3.02E+00 J

E. 3.27E+00 J

13. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.534-m horizontally with a force of 4.16-N? [570]

A. 1.90E+00 J

B. 2.06E+00 J

C. 2.22E+00 J

D. 2.40E+00 J

E. 2.59E+00 J

14. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.799-m horizontally with a force of 5.32-N? [571]

A. 3.94E+00 J

B. 4.25E+00 J

C. 4.59E+00 J

D. 4.96E+00 J

E. 5.35E+00 J

The next page might contain more answer choices for this question

15. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.431-m horizontally with a force of 5.0-N? [572]

    A. 2.15E+00 J

    B. 2.33E+00 J

    C. 2.51E+00 J

    D. 2.71E+00 J

    E. 2.93E+00 J

16. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.75-m horizontally with a force of 4.04-N? [573]

    A. 2.23E+00 J

    B. 2.41E+00 J

    C. 2.60E+00 J

    D. 2.81E+00 J

    E. 3.03E+00 J

17. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.479-m horizontally with a force of 5.37-N? [574]

    A. 2.04E+00 J

    B. 2.21E+00 J

    C. 2.38E+00 J

    D. 2.57E+00 J

    E. 2.78E+00 J

18. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.525-m horizontally with a force of 5.38-N? [575]

    A. 2.82E+00 J

    B. 3.05E+00 J

    C. 3.29E+00 J

    D. 3.56E+00 J

    E. 3.84E+00 J

19. How much work does a supermarker checkout attendant do on a can of soup he pushes 0.415-m horizontally with a force of 5.62-N? [576]

The next page might contain more answer choices for this question

A. 2.16E+00 J

B. 2.33E+00 J

C. 2.52E+00 J

D. 2.72E+00 J

E. 2.94E+00 J

up1-07 Q2

1. Calculate the work done on a 1.280E+03-kg elevator car by its cable to lift it 41.0-m at constant speed, assuming friction averages 98-N. [577]

   A. 3.19E+03 J

   B. 3.44E+03 J

   C. 3.72E+03 J

   D. 4.02E+03 J

   E. 4.34E+03 J

2. Calculate the work done on a 1.700E+03-kg elevator car by its cable to lift it 40.1-m at constant speed, assuming friction averages 90-N. [578]

   A. 3.61E+03 J

   B. 3.90E+03 J

   C. 4.21E+03 J

   D. 4.55E+03 J

   E. 4.91E+03 J

3. Calculate the work done on a 1.240E+03-kg elevator car by its cable to lift it 41.5-m at constant speed, assuming friction averages 85-N. [579]

   A. 3.02E+03 J

   B. 3.27E+03 J

   C. 3.53E+03 J

   D. 3.81E+03 J

   E. 4.11E+03 J

4. Calculate the work done on a 1.300E+03-kg elevator car by its cable to lift it 45.1-m at constant speed, assuming friction averages 1.050E+02-N. [580]

The next page might contain more answer choices for this question

A. 4.74E+03 J

B. 5.11E+03 J

C. 5.52E+03 J

D. 5.97E+03 J

E. 6.44E+03 J

5. Calculate the work done on a 1.280E+03-kg elevator car by its cable to lift it 39.8-m at constant speed, assuming friction averages 1.130E+02-N. [581]

A. 3.86E+03 J

B. 4.16E+03 J

C. 4.50E+03 J

D. 4.86E+03 J

E. 5.25E+03 J

6. Calculate the work done on a 1.800E+03-kg elevator car by its cable to lift it 44.2-m at constant speed, assuming friction averages 1.180E+02-N. [582]

A. 5.22E+03 J

B. 5.63E+03 J

C. 6.08E+03 J

D. 6.57E+03 J

E. 7.10E+03 J

7. Calculate the work done on a 1.660E+03-kg elevator car by its cable to lift it 44.7-m at constant speed, assuming friction averages 1.110E+02-N. [583]

A. 4.25E+03 J

B. 4.59E+03 J

C. 4.96E+03 J

D. 5.36E+03 J

E. 5.79E+03 J

8. Calculate the work done on a 1.490E+03-kg elevator car by its cable to lift it 35.4-m at constant speed, assuming friction averages 85-N. [584]

A. 2.79E+03 J

B. 3.01E+03 J

The next page might contain more answer choices for this question

C. 3.25E+03 J

D. 3.51E+03 J

E. 3.79E+03 J

9. Calculate the work done on a 1.210E+03-kg elevator car by its cable to lift it 47.3-m at constant speed, assuming friction averages 1.100E+02-N. [585]

A. 5.20E+03 J

B. 5.62E+03 J

C. 6.07E+03 J

D. 6.55E+03 J

E. 7.08E+03 J

10. Calculate the work done on a 1.470E+03-kg elevator car by its cable to lift it 42.0-m at constant speed, assuming friction averages 1.170E+02-N. [586]

A. 3.61E+03 J

B. 3.90E+03 J

C. 4.21E+03 J

D. 4.55E+03 J

E. 4.91E+03 J

11. Calculate the work done on a 1.360E+03-kg elevator car by its cable to lift it 30.1-m at constant speed, assuming friction averages 9.900E+01-N. [587]

A. 2.37E+03 J

B. 2.55E+03 J

C. 2.76E+03 J

D. 2.98E+03 J

E. 3.22E+03 J

12. Calculate the work done on a 1.620E+03-kg elevator car by its cable to lift it 45.2-m at constant speed, assuming friction averages 1.050E+02-N. [588]

A. 4.39E+03 J

B. 4.75E+03 J

C. 5.13E+03 J

D. 5.54E+03 J

The next page might contain more answer choices for this question

E. 5.98E+03 J

13. Calculate the work done on a 1.230E+03-kg elevator car by its cable to lift it 43.7-m at constant speed, assuming friction averages 93-N. [589]

A. 3.48E+03 J

B. 3.76E+03 J

C. 4.06E+03 J

D. 4.39E+03 J

E. 4.74E+03 J

14. Calculate the work done on a 1.380E+03-kg elevator car by its cable to lift it 46.5-m at constant speed, assuming friction averages 9.900E+01-N. [590]

A. 3.65E+03 J

B. 3.95E+03 J

C. 4.26E+03 J

D. 4.60E+03 J

E. 4.97E+03 J

15. Calculate the work done on a 1.260E+03-kg elevator car by its cable to lift it 43.9-m at constant speed, assuming friction averages 87-N. [591]

A. 3.54E+03 J

B. 3.82E+03 J

C. 4.12E+03 J

D. 4.45E+03 J

E. 4.81E+03 J

16. Calculate the work done on a 1.510E+03-kg elevator car by its cable to lift it 48.9-m at constant speed, assuming friction averages 98-N. [592]

A. 3.52E+03 J

B. 3.80E+03 J

C. 4.11E+03 J

D. 4.44E+03 J

E. 4.79E+03 J

The next page might contain more answer choices for this question

17. Calculate the work done on a 1.730E+03-kg elevator car by its cable to lift it 32.6-m at constant speed, assuming friction averages 84-N. [593]

    A. 2.74E+03 J

    B. 2.96E+03 J

    C. 3.19E+03 J

    D. 3.45E+03 J

    E. 3.73E+03 J

18. Calculate the work done on a 1.580E+03-kg elevator car by its cable to lift it 37.3-m at constant speed, assuming friction averages 1.160E+02-N. [594]

    A. 3.18E+03 J

    B. 3.43E+03 J

    C. 3.71E+03 J

    D. 4.01E+03 J

    E. 4.33E+03 J

19. Calculate the work done on a 1.300E+03-kg elevator car by its cable to lift it 46.8-m at constant speed, assuming friction averages 1.180E+02-N. [595]

    A. 4.73E+03 J

    B. 5.11E+03 J

    C. 5.52E+03 J

    D. 5.96E+03 J

    E. 6.44E+03 J

up1-07 Q3

1. Calculate the work done by the gravitational force on a 1.330E+03-kg elevator car by its cable to lift it 38.7-m at constant speed, assuming friction averages 81-N. [596]

    A. 5.02E+05 N

    B. 5.42E+05 N

    C. 5.85E+05 N

    D. 6.32E+05 N

    E. 6.83E+05 N

The next page might contain more answer choices for this question

2. Calculate the work done by the gravitational force on a 1.360E+03-kg elevator car by its cable to lift it 30.1-m at constant speed, assuming friction averages 1.010E+02-N. [597]

   A. 3.42E+05 N

   B. 3.69E+05 N

   C. 3.99E+05 N

   D. 4.30E+05 N

   E. 4.65E+05 N

3. Calculate the work done by the gravitational force on a 1.360E+03-kg elevator car by its cable to lift it 49.9-m at constant speed, assuming friction averages 92-N. [598]

   A. 5.25E+05 N

   B. 5.67E+05 N

   C. 6.12E+05 N

   D. 6.61E+05 N

   E. 7.14E+05 N

4. Calculate the work done by the gravitational force on a 1.690E+03-kg elevator car by its cable to lift it 47.0-m at constant speed, assuming friction averages 96-N. [599]

   A. 7.75E+05 N

   B. 8.37E+05 N

   C. 9.04E+05 N

   D. 9.76E+05 N

   E. 1.05E+06 N

5. Calculate the work done by the gravitational force on a 1.540E+03-kg elevator car by its cable to lift it 44.5-m at constant speed, assuming friction averages 1.170E+02-N. [600]

   A. 6.18E+05 N

   B. 6.67E+05 N

   C. 7.20E+05 N

   D. 7.78E+05 N

   E. 8.40E+05 N

6. Calculate the work done by the gravitational force on a 1.230E+03-kg elevator car by its cable to lift it 48.4-m at constant speed, assuming friction averages 1.120E+02-N. [601]

The next page might contain more answer choices for this question

A. 5.36E+05 N

B. 5.79E+05 N

C. 6.25E+05 N

D. 6.75E+05 N

E. 7.29E+05 N

7. Calculate the work done by the gravitational force on a 1.660E+03-kg elevator car by its cable to lift it 48.3-m at constant speed, assuming friction averages 90-N. [602]

A. 7.82E+05 N

B. 8.45E+05 N

C. 9.12E+05 N

D. 9.85E+05 N

E. 1.06E+06 N

8. Calculate the work done by the gravitational force on a 1.780E+03-kg elevator car by its cable to lift it 32.2-m at constant speed, assuming friction averages 1.190E+02-N. [603]

A. 4.79E+05 N

B. 5.17E+05 N

C. 5.58E+05 N

D. 6.03E+05 N

E. 6.51E+05 N

9. Calculate the work done by the gravitational force on a 1.310E+03-kg elevator car by its cable to lift it 47.1-m at constant speed, assuming friction averages 1.070E+02-N. [604]

A. 5.15E+05 N

B. 5.56E+05 N

C. 6.00E+05 N

D. 6.48E+05 N

E. 7.00E+05 N

10. Calculate the work done by the gravitational force on a 1.510E+03-kg elevator car by its cable to lift it 36.8-m at constant speed, assuming friction averages 86-N. [605]

A. 4.65E+05 N

B. 5.02E+05 N

The next page might contain more answer choices for this question

C. 5.42E+05 N

D. 5.85E+05 N

E. 6.32E+05 N

11. Calculate the work done by the gravitational force on a 1.240E+03-kg elevator car by its cable to lift it 35.5-m at constant speed, assuming friction averages 83-N. [606]

A. 4.29E+05 N

B. 4.63E+05 N

C. 5.00E+05 N

D. 5.40E+05 N

E. 5.83E+05 N

12. Calculate the work done by the gravitational force on a 1.740E+03-kg elevator car by its cable to lift it 46.6-m at constant speed, assuming friction averages 1.060E+02-N. [607]

A. 7.32E+05 N

B. 7.90E+05 N

C. 8.54E+05 N

D. 9.22E+05 N

E. 9.96E+05 N

13. Calculate the work done by the gravitational force on a 1.300E+03-kg elevator car by its cable to lift it 41.0-m at constant speed, assuming friction averages 96-N. [608]

A. 4.45E+05 N

B. 4.80E+05 N

C. 5.19E+05 N

D. 5.60E+05 N

E. 6.05E+05 N

14. Calculate the work done by the gravitational force on a 1.440E+03-kg elevator car by its cable to lift it 38.1-m at constant speed, assuming friction averages 1.160E+02-N. [609]

A. 3.92E+05 N

B. 4.24E+05 N

C. 4.58E+05 N

D. 4.94E+05 N

The next page might contain more answer choices for this question

E. 5.34E+05 N

15. Calculate the work done by the gravitational force on a 1.410E+03-kg elevator car by its cable to lift it 32.0-m at constant speed, assuming friction averages 1.140E+02-N. [610]

A. 3.23E+05 N

B. 3.48E+05 N

C. 3.76E+05 N

D. 4.06E+05 N

E. 4.39E+05 N

16. Calculate the work done by the gravitational force on a 1.280E+03-kg elevator car by its cable to lift it 45.0-m at constant speed, assuming friction averages 84-N. [611]

A. 5.20E+05 N

B. 5.61E+05 N

C. 6.06E+05 N

D. 6.55E+05 N

E. 7.07E+05 N

17. Calculate the work done by the gravitational force on a 1.700E+03-kg elevator car by its cable to lift it 42.6-m at constant speed, assuming friction averages 1.150E+02-N. [612]

A. 5.19E+05 N

B. 5.60E+05 N

C. 6.05E+05 N

D. 6.53E+05 N

E. 7.06E+05 N

18. Calculate the work done by the gravitational force on a 1.200E+03-kg elevator car by its cable to lift it 43.4-m at constant speed, assuming friction averages 93-N. [613]

A. 4.02E+05 N

B. 4.35E+05 N

C. 4.69E+05 N

D. 5.07E+05 N

E. 5.47E+05 N

The next page might contain more answer choices for this question

19. Calculate the work done by the gravitational force on a 1.320E+03-kg elevator car by its cable to lift it 43.6-m at constant speed, assuming friction averages 1.040E+02-N. [614]

    A. 5.60E+05 N

    B. 6.05E+05 N

    C. 6.53E+05 N

    D. 7.06E+05 N

    E. 7.62E+05 N

up1-07 Q4

1. What is the total work done on a 1.510E+03-kg elevator car by its cable to lift it 36.0-m at constant speed, assuming friction averages 97-.? [615]

    A. 5.30E+05 J

    B. 5.72E+05 J

    C. 6.18E+05 J

    D. 6.67E+05 J

    E. 7.21E+05 J

2. What is the total work done on a 1.620E+03-kg elevator car by its cable to lift it 34.2-m at constant speed, assuming friction averages 85-.? [616]

    A. 5.01E+05 J

    B. 5.41E+05 J

    C. 5.84E+05 J

    D. 6.31E+05 J

    E. 6.81E+05 J

3. What is the total work done on a 1.430E+03-kg elevator car by its cable to lift it 45.8-m at constant speed, assuming friction averages 1.080E+02-.? [617]

    A. 5.06E+05 J

    B. 5.47E+05 J

    C. 5.90E+05 J

    D. 6.38E+05 J

    E. 6.89E+05 J

The next page might contain more answer choices for this question

4. What is the total work done on a 1.680E+03-kg elevator car by its cable to lift it 35.8-m at constant speed, assuming friction averages 82-.? [618]

   A. 5.87E+05 J

   B. 6.34E+05 J

   C. 6.85E+05 J

   D. 7.40E+05 J

   E. 7.99E+05 J

5. What is the total work done on a 1.490E+03-kg elevator car by its cable to lift it 42.2-m at constant speed, assuming friction averages 1.110E+02-.? [619]

   A. 4.86E+05 J

   B. 5.25E+05 J

   C. 5.67E+05 J

   D. 6.12E+05 J

   E. 6.61E+05 J

6. What is the total work done on a 1.210E+03-kg elevator car by its cable to lift it 33.1-m at constant speed, assuming friction averages 1.130E+02-.? [620]

   A. 3.09E+05 J

   B. 3.34E+05 J

   C. 3.60E+05 J

   D. 3.89E+05 J

   E. 4.20E+05 J

7. What is the total work done on a 1.280E+03-kg elevator car by its cable to lift it 36.3-m at constant speed, assuming friction averages 97-.? [621]

   A. 4.19E+05 J

   B. 4.52E+05 J

   C. 4.88E+05 J

   D. 5.28E+05 J

   E. 5.70E+05 J

8. What is the total work done on a 1.610E+03-kg elevator car by its cable to lift it 47.4-m at constant speed, assuming friction averages 1.140E+02-.? [622]

The next page might contain more answer choices for this question

A. 6.37E+05 J

B. 6.88E+05 J

C. 7.43E+05 J

D. 8.03E+05 J

E. 8.67E+05 J

9. What is the total work done on a 1.430E+03-kg elevator car by its cable to lift it 38.0-m at constant speed, assuming friction averages 1.170E+02-.? [623]

A. 4.53E+05 J

B. 4.89E+05 J

C. 5.29E+05 J

D. 5.71E+05 J

E. 6.17E+05 J

10. What is the total work done on a 1.410E+03-kg elevator car by its cable to lift it 44.1-m at constant speed, assuming friction averages 1.190E+02-.? [624]

A. 5.60E+05 J

B. 6.05E+05 J

C. 6.53E+05 J

D. 7.05E+05 J

E. 7.62E+05 J

11. What is the total work done on a 1.480E+03-kg elevator car by its cable to lift it 43.2-m at constant speed, assuming friction averages 1.000E+02-.? [625]

A. 5.34E+05 J

B. 5.77E+05 J

C. 6.23E+05 J

D. 6.73E+05 J

E. 7.27E+05 J

12. What is the total work done on a 1.700E+03-kg elevator car by its cable to lift it 39.0-m at constant speed, assuming friction averages 86-.? [626]

A. 6.47E+05 J

B. 6.99E+05 J

The next page might contain more answer choices for this question

C. 7.55E+05 J

D. 8.15E+05 J

E. 8.80E+05 J

13. What is the total work done on a 1.410E+03-kg elevator car by its cable to lift it 42.8-m at constant speed, assuming friction averages 1.130E+02-.? [627]

A. 5.87E+05 J

B. 6.34E+05 J

C. 6.85E+05 J

D. 7.40E+05 J

E. 7.99E+05 J

14. What is the total work done on a 1.230E+03-kg elevator car by its cable to lift it 34.9-m at constant speed, assuming friction averages 1.110E+02-.? [628]

A. 3.58E+05 J

B. 3.86E+05 J

C. 4.17E+05 J

D. 4.51E+05 J

E. 4.87E+05 J

15. What is the total work done on a 1.440E+03-kg elevator car by its cable to lift it 46.8-m at constant speed, assuming friction averages 1.060E+02-.? [629]

A. 6.08E+05 J

B. 6.56E+05 J

C. 7.09E+05 J

D. 7.65E+05 J

E. 8.27E+05 J

16. What is the total work done on a 1.590E+03-kg elevator car by its cable to lift it 40.4-m at constant speed, assuming friction averages 92-.? [630]

A. 4.60E+05 J

B. 4.97E+05 J

C. 5.37E+05 J

D. 5.80E+05 J

The next page might contain more answer choices for this question

E. 6.26E+05 J

17. What is the total work done on a 1.690E+03-kg elevator car by its cable to lift it 48.8-m at constant speed, assuming friction averages 1.040E+02-.? [631]

A. 6.38E+05 J

B. 6.89E+05 J

C. 7.44E+05 J

D. 8.04E+05 J

E. 8.68E+05 J

18. What is the total work done on a 1.440E+03-kg elevator car by its cable to lift it 48.0-m at constant speed, assuming friction averages 1.020E+02-.? [632]

A. 4.95E+05 J

B. 5.34E+05 J

C. 5.77E+05 J

D. 6.23E+05 J

E. 6.73E+05 J

19. What is the total work done on a 1.580E+03-kg elevator car by its cable to lift it 38.1-m at constant speed, assuming friction averages 1.000E+02-.? [633]

A. 4.31E+05 J

B. 4.66E+05 J

C. 5.03E+05 J

D. 5.43E+05 J

E. 5.87E+05 J

up1-07 Q5

1. A constant 28-N force pushes a small ball in the direction of the force over a distance of 5.27-m. What is the work done by the force? [634]

A. 1.37E+02 J

B. 1.48E+02 J

C. 1.59E+02 J

D. 1.72E+02 J

The next page might contain more answer choices for this question

E. 1.86E+02 J

2. A constant 18-N force pushes a small ball in the direction of the force over a distance of 3.72-m. What is the work done by the force? [635]

   A. 5.74E+01 J

   B. 6.20E+01 J

   C. 6.70E+01 J

   D. 7.23E+01 J

   E. 7.81E+01 J

3. A constant 22-N force pushes a small ball in the direction of the force over a distance of 3.08-m. What is the work done by the force? [636]

   A. 4.98E+01 J

   B. 5.38E+01 J

   C. 5.81E+01 J

   D. 6.27E+01 J

   E. 6.78E+01 J

4. A constant 29-N force pushes a small ball in the direction of the force over a distance of 4.64-m. What is the work done by the force? [637]

   A. 1.15E+02 J

   B. 1.25E+02 J

   C. 1.35E+02 J

   D. 1.45E+02 J

   E. 1.57E+02 J

5. A constant 30-N force pushes a small ball in the direction of the force over a distance of 6.35-m. What is the work done by the force? [638]

   A. 1.63E+02 J

   B. 1.76E+02 J

   C. 1.90E+02 J

   D. 2.06E+02 J

   E. 2.22E+02 J

The next page might contain more answer choices for this question

6. A constant 16-N force pushes a small ball in the direction of the force over a distance of 5.31-m. What is the work done by the force? [639]

   A. 7.28E+01 J

   B. 7.87E+01 J

   C. 8.50E+01 J

   D. 9.18E+01 J

   E. 9.91E+01 J

7. A constant 19-N force pushes a small ball in the direction of the force over a distance of 5.43-m. What is the work done by the force? [640]

   A. 8.85E+01 J

   B. 9.55E+01 J

   C. 1.03E+02 J

   D. 1.11E+02 J

   E. 1.20E+02 J

8. A constant 20-N force pushes a small ball in the direction of the force over a distance of 3.65-m. What is the work done by the force? [641]

   A. 5.37E+01 J

   B. 5.79E+01 J

   C. 6.26E+01 J

   D. 6.76E+01 J

   E. 7.30E+01 J

9. A constant 23-N force pushes a small ball in the direction of the force over a distance of 3.98-m. What is the work done by the force? [642]

   A. 8.48E+01 J

   B. 9.15E+01 J

   C. 9.89E+01 J

   D. 1.07E+02 J

   E. 1.15E+02 J

10. A constant 26-N force pushes a small ball in the direction of the force over a distance of 6.1-m. What is the work done by the force? [643]

The next page might contain more answer choices for this question

A. 1.17E+02 J

B. 1.26E+02 J

C. 1.36E+02 J

D. 1.47E+02 J

E. 1.59E+02 J

11. A constant 16-N force pushes a small ball in the direction of the force over a distance of 3.21-m. What is the work done by the force? [644]

A. 5.14E+01 J

B. 5.55E+01 J

C. 5.99E+01 J

D. 6.47E+01 J

E. 6.99E+01 J

12. A constant 18-N force pushes a small ball in the direction of the force over a distance of 5.19-m. What is the work done by the force? [645]

A. 8.01E+01 J

B. 8.65E+01 J

C. 9.34E+01 J

D. 1.01E+02 J

E. 1.09E+02 J

13. A constant 13-N force pushes a small ball in the direction of the force over a distance of 5.12-m. What is the work done by the force? [646]

A. 6.16E+01 J

B. 6.66E+01 J

C. 7.19E+01 J

D. 7.76E+01 J

E. 8.38E+01 J

14. A constant 24-N force pushes a small ball in the direction of the force over a distance of 5.83-m. What is the work done by the force? [647]

A. 1.11E+02 J

B. 1.20E+02 J

The next page might contain more answer choices for this question

C. 1.30E+02 J

D. 1.40E+02 J

E. 1.51E+02 J

15. A constant 13-N force pushes a small ball in the direction of the force over a distance of 4.46-m. What is the work done by the force? [648]

A. 5.37E+01 J

B. 5.80E+01 J

C. 6.26E+01 J

D. 6.76E+01 J

E. 7.30E+01 J

16. A constant 24-N force pushes a small ball in the direction of the force over a distance of 4.77-m. What is the work done by the force? [649]

A. 1.14E+02 J

B. 1.24E+02 J

C. 1.34E+02 J

D. 1.44E+02 J

E. 1.56E+02 J

17. A constant 20-N force pushes a small ball in the direction of the force over a distance of 4.97-m. What is the work done by the force? [650]

A. 7.89E+01 J

B. 8.52E+01 J

C. 9.20E+01 J

D. 9.94E+01 J

E. 1.07E+02 J

18. A constant 26-N force pushes a small ball in the direction of the force over a distance of 5.77-m. What is the work done by the force? [651]

A. 1.10E+02 J

B. 1.19E+02 J

C. 1.29E+02 J

D. 1.39E+02 J

The next page might contain more answer choices for this question

E. 1.50E+02 J

19. A constant 22-N force pushes a small ball in the direction of the force over a distance of 4.07-m. What is the work done by the force? [652]

A. 7.11E+01 J

B. 7.68E+01 J

C. 8.29E+01 J

D. 8.95E+01 J

E. 9.67E+01 J

up1-07 Q6

1. A 3.8-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.669. A horizontal force pulls the box at constant velocity for 8.55-cm. Find the work done by the applied horizontal force. [653]

A. 2.13E+02 J

B. 2.30E+02 J

C. 2.49E+02 J

D. 2.69E+02 J

E. 2.90E+02 J

2. A 6.53-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.431. A horizontal force pulls the box at constant velocity for 11.3-cm. Find the work done by the applied horizontal force. [654]

A. 2.89E+02 J

B. 3.12E+02 J

C. 3.37E+02 J

D. 3.64E+02 J

E. 3.93E+02 J

3. A 5.0-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.502. A horizontal force pulls the box at constant velocity for 6.09-cm. Find the work done by the applied horizontal force. [655]

A. 1.10E+02 J

B. 1.19E+02 J

The next page might contain more answer choices for this question

C. 1.29E+02 J

D. 1.39E+02 J

E. 1.50E+02 J

4. A 4.3-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.583. A horizontal force pulls the box at constant velocity for 10.2-cm. Find the work done by the applied horizontal force. [656]

A. 2.15E+02 J

B. 2.32E+02 J

C. 2.51E+02 J

D. 2.71E+02 J

E. 2.93E+02 J

5. A 5.31-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.674. A horizontal force pulls the box at constant velocity for 7.67-cm. Find the work done by the applied horizontal force. [657]

A. 2.14E+02 J

B. 2.31E+02 J

C. 2.49E+02 J

D. 2.69E+02 J

E. 2.91E+02 J

6. A 5.63-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.645. A horizontal force pulls the box at constant velocity for 13.0-cm. Find the work done by the applied horizontal force. [658]

A. 4.29E+02 J

B. 4.63E+02 J

C. 5.00E+02 J

D. 5.40E+02 J

E. 5.83E+02 J

7. A 3.24-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.308. A horizontal force pulls the box at constant velocity for 7.93-cm. Find the work done by the applied horizontal force. [659]

A. 6.66E+01 J

The next page might contain more answer choices for this question

B. 7.19E+01 J

C. 7.76E+01 J

D. 8.38E+01 J

E. 9.05E+01 J

8. A 6.38-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.353. A horizontal force pulls the box at constant velocity for 12.4-cm. Find the work done by the applied horizontal force. [660]

A. 2.54E+02 J

B. 2.74E+02 J

C. 2.96E+02 J

D. 3.20E+02 J

E. 3.45E+02 J

9. A 4.69-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.464. A horizontal force pulls the box at constant velocity for 6.48-cm. Find the work done by the applied horizontal force. [661]

A. 1.10E+02 J

B. 1.19E+02 J

C. 1.28E+02 J

D. 1.38E+02 J

E. 1.49E+02 J

10. A 5.98-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.382. A horizontal force pulls the box at constant velocity for 8.08-cm. Find the work done by the applied horizontal force. [662]

A. 1.68E+02 J

B. 1.81E+02 J

C. 1.96E+02 J

D. 2.11E+02 J

E. 2.28E+02 J

11. A 6.07-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.555. A horizontal force pulls the box at constant velocity for 13.3-cm. Find the work done by the applied horizontal force. [663]

The next page might contain more answer choices for this question

A. 3.49E+02 J

B. 3.77E+02 J

C. 4.07E+02 J

D. 4.40E+02 J

E. 4.75E+02 J

12. A 3.64-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.578. A horizontal force pulls the box at constant velocity for 13.5-cm. Find the work done by the applied horizontal force. [664]

A. 2.05E+02 J

B. 2.21E+02 J

C. 2.39E+02 J

D. 2.58E+02 J

E. 2.79E+02 J

13. A 3.59-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.656. A horizontal force pulls the box at constant velocity for 8.76-cm. Find the work done by the applied horizontal force. [665]

A. 1.87E+02 J

B. 2.02E+02 J

C. 2.19E+02 J

D. 2.36E+02 J

E. 2.55E+02 J

14. A 5.49-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.674. A horizontal force pulls the box at constant velocity for 12.2-cm. Find the work done by the applied horizontal force. [666]

A. 4.43E+02 J

B. 4.78E+02 J

C. 5.17E+02 J

D. 5.58E+02 J

E. 6.02E+02 J

15. A 5.92-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.666. A horizontal force pulls the box at constant velocity for 7.75-cm. Find the work done by the applied horizontal force. [667]

The next page might contain more answer choices for this question

A. 2.38E+02 J

B. 2.57E+02 J

C. 2.78E+02 J

D. 3.00E+02 J

E. 3.24E+02 J

16. A 4.75-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.377. A horizontal force pulls the box at constant velocity for 11.4-cm. Find the work done by the applied horizontal force. [668]

A. 1.47E+02 J

B. 1.59E+02 J

C. 1.72E+02 J

D. 1.85E+02 J

E. 2.00E+02 J

17. A 6.88-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.451. A horizontal force pulls the box at constant velocity for 7.23-cm. Find the work done by the applied horizontal force. [669]

A. 2.04E+02 J

B. 2.20E+02 J

C. 2.38E+02 J

D. 2.57E+02 J

E. 2.77E+02 J

18. A 3.41-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.444. A horizontal force pulls the box at constant velocity for 8.45-cm. Find the work done by the applied horizontal force. [670]

A. 9.96E+01 J

B. 1.08E+02 J

C. 1.16E+02 J

D. 1.26E+02 J

E. 1.36E+02 J

19. A 4.59-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.357. A horizontal force pulls the box at constant velocity for 9.06-cm. Find the work done by the applied horizontal force. [671]

The next page might contain more answer choices for this question

A. 1.07E+02 J

B. 1.16E+02 J

C. 1.25E+02 J

D. 1.35E+02 J

E. 1.46E+02 J

up1-07 Q7

1. A 6.96-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.332. A horizontal force pulls the box at constant velocity for 13.7-cm. Find the work done by the frictional force. [672]

A. 3.11E+02 J

B. 3.35E+02 J

C. 3.62E+02 J

D. 3.91E+02 J

E. 4.23E+02 J

2. A 5.85-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.623. A horizontal force pulls the box at constant velocity for 11.8-cm. Find the work done by the frictional force. [673]

A. 4.22E+02 J

B. 4.56E+02 J

C. 4.92E+02 J

D. 5.31E+02 J

E. 5.74E+02 J

3. A 3.3-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.61. A horizontal force pulls the box at constant velocity for 10.3-cm. Find the work done by the frictional force. [674]

A. 2.03E+02 J

B. 2.20E+02 J

C. 2.37E+02 J

D. 2.56E+02 J

E. 2.77E+02 J

The next page might contain more answer choices for this question

4. A 5.62-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.617. A horizontal force pulls the box at constant velocity for 13.1-cm. Find the work done by the frictional force. [675]

   A. 4.46E+02 J

   B. 4.81E+02 J

   C. 5.20E+02 J

   D. 5.61E+02 J

   E. 6.06E+02 J

5. A 3.22-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.618. A horizontal force pulls the box at constant velocity for 6.04-cm. Find the work done by the frictional force. [676]

   A. 1.09E+02 J

   B. 1.18E+02 J

   C. 1.27E+02 J

   D. 1.38E+02 J

   E. 1.49E+02 J

6. A 6.93-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.512. A horizontal force pulls the box at constant velocity for 9.92-cm. Find the work done by the frictional force. [677]

   A. 3.45E+02 J

   B. 3.73E+02 J

   C. 4.03E+02 J

   D. 4.35E+02 J

   E. 4.70E+02 J

7. A 6.33-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.472. A horizontal force pulls the box at constant velocity for 9.19-cm. Find the work done by the frictional force. [678]

   A. 2.14E+02 J

   B. 2.31E+02 J

   C. 2.49E+02 J

   D. 2.69E+02 J

The next page might contain more answer choices for this question

E. 2.91E+02 J

8. A 6.69-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.503. A horizontal force pulls the box at constant velocity for 13.6-cm. Find the work done by the frictional force. [679]

   A. 3.85E+02 J

   B. 4.16E+02 J

   C. 4.49E+02 J

   D. 4.85E+02 J

   E. 5.24E+02 J

9. A 3.32-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.56. A horizontal force pulls the box at constant velocity for 12.5-cm. Find the work done by the frictional force. [680]

   A. 2.28E+02 J

   B. 2.46E+02 J

   C. 2.66E+02 J

   D. 2.87E+02 J

   E. 3.10E+02 J

10. A 6.94-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.503. A horizontal force pulls the box at constant velocity for 10.0-cm. Find the work done by the frictional force. [681]

    A. 2.94E+02 J

    B. 3.17E+02 J

    C. 3.42E+02 J

    D. 3.70E+02 J

    E. 3.99E+02 J

11. A 3.51-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.49. A horizontal force pulls the box at constant velocity for 7.56-cm. Find the work done by the frictional force. [682]

    A. 9.38E+01 J

    B. 1.01E+02 J

    C. 1.09E+02 J

The next page might contain more answer choices for this question

D. 1.18E+02 J

E. 1.28E+02 J

12. A 3.58-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.387. A horizontal force pulls the box at constant velocity for 11.9-cm. Find the work done by the frictional force. [683]

A. 1.19E+02 J

B. 1.28E+02 J

C. 1.39E+02 J

D. 1.50E+02 J

E. 1.62E+02 J

13. A 6.03-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.416. A horizontal force pulls the box at constant velocity for 9.63-cm. Find the work done by the frictional force. [684]

A. 2.03E+02 J

B. 2.19E+02 J

C. 2.37E+02 J

D. 2.56E+02 J

E. 2.76E+02 J

14. A 3.38-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.581. A horizontal force pulls the box at constant velocity for 13.5-cm. Find the work done by the frictional force. [685]

A. 2.06E+02 J

B. 2.23E+02 J

C. 2.41E+02 J

D. 2.60E+02 J

E. 2.81E+02 J

15. A 3.27-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.518. A horizontal force pulls the box at constant velocity for 12.3-cm. Find the work done by the frictional force. [686]

A. 1.62E+02 J

B. 1.75E+02 J

The next page might contain more answer choices for this question

C. 1.89E+02 J

D. 2.04E+02 J

E. 2.21E+02 J

16. A 4.19-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.335. A horizontal force pulls the box at constant velocity for 7.84-cm. Find the work done by the frictional force. [687]

A. 1.00E+02 J

B. 1.08E+02 J

C. 1.17E+02 J

D. 1.26E+02 J

E. 1.36E+02 J

17. A 3.65-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.65. A horizontal force pulls the box at constant velocity for 11.7-cm. Find the work done by the frictional force. [688]

A. 2.00E+02 J

B. 2.16E+02 J

C. 2.33E+02 J

D. 2.52E+02 J

E. 2.72E+02 J

18. A 5.84-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.508. A horizontal force pulls the box at constant velocity for 10.3-cm. Find the work done by the frictional force. [689]

A. 2.20E+02 J

B. 2.38E+02 J

C. 2.57E+02 J

D. 2.78E+02 J

E. 3.00E+02 J

19. A 6.72-kg box rests on a horizontal surface. The coefficient of kinetic friction between the box and surface is 0.635. A horizontal force pulls the box at constant velocity for 10.7-cm. Find the work done by the frictional force. [690]

A. 3.29E+02 J

The next page might contain more answer choices for this question

B. 3.56E+02 J

C. 3.84E+02 J

D. 4.15E+02 J

E. 4.48E+02 J

up1-07 Q8

1. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.183. It is pushed 19-m across the snow at constant velocity by a force directed 37 below the horizontal. Calculate the work done by the applied force. 691

A. 1.57E+03J

B. 1.69E+03J

C. 1.83E+03J

D. 1.98E+03J

E. 2.13E+03J

2. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.177. It is pushed 17-m across the snow at constant velocity by a force directed 21 below the horizontal. Calculate the work done by the applied force. 692

A. 1.26E+03J

B. 1.36E+03J

C. 1.46E+03J

D. 1.58E+03J

E. 1.71E+03J

3. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.266. It is pushed 30-m across the snow at constant velocity by a force directed 24 below the horizontal. Calculate the work done by the applied force. 693

A. 4.44E+03J

B. 4.79E+03J

C. 5.17E+03J

D. 5.59E+03J

The next page might contain more answer choices for this question

E. 6.03E+03J

4. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.168. It is pushed 17-m across the snow at constant velocity by a force directed 27 below the horizontal. Calculate the work done by the applied force. 694

A. 1.21E+03J

B. 1.31E+03J

C. 1.42E+03J

D. 1.53E+03J

E. 1.65E+03J

5. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.164. It is pushed 28-m across the snow at constant velocity by a force directed 23 below the horizontal. Calculate the work done by the applied force. 695

A. 1.92E+03J

B. 2.07E+03J

C. 2.24E+03J

D. 2.42E+03J

E. 2.61E+03J

6. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.294. It is pushed 19-m across the snow at constant velocity by a force directed 34 below the horizontal. Calculate the work done by the applied force. 696

A. 3.41E+03J

B. 3.69E+03J

C. 3.98E+03J

D. 4.30E+03J

E. 4.64E+03J

7. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.308. It is pushed 18-m across the snow at constant velocity by a force directed 24 below the horizontal. Calculate the work done by the applied force. 697

The next page might contain more answer choices for this question

A. 2.92E+03J

B. 3.15E+03J

C. 3.40E+03J

D. 3.67E+03J

E. 3.97E+03J

8. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.264. It is pushed 13-m across the snow at constant velocity by a force directed 36 below the horizontal. Calculate the work done by the applied force. 698

A. 1.65E+03J

B. 1.78E+03J

C. 1.93E+03J

D. 2.08E+03J

E. 2.25E+03J

9. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.179. It is pushed 29-m across the snow at constant velocity by a force directed 36 below the horizontal. Calculate the work done by the applied force. 699

A. 2.32E+03J

B. 2.51E+03J

C. 2.71E+03J

D. 2.92E+03J

E. 3.16E+03J

10. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.246. It is pushed 22-m across the snow at constant velocity by a force directed 20 below the horizontal. Calculate the work done by the applied force. 700

A. 2.31E+03J

B. 2.50E+03J

C. 2.70E+03J

D. 2.91E+03J

E. 3.15E+03J

The next page might contain more answer choices for this question

11. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.259. It is pushed 30-m across the snow at constant velocity by a force directed 39 below the horizontal. Calculate the work done by the applied force. 701

    A. 3.54E+03J

    B. 3.82E+03J

    C. 4.13E+03J

    D. 4.46E+03J

    E. 4.82E+03J

12. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.231. It is pushed 16-m across the snow at constant velocity by a force directed 33 below the horizontal. Calculate the work done by the applied force. 702

    A. 1.97E+03J

    B. 2.13E+03J

    C. 2.30E+03J

    D. 2.49E+03J

    E. 2.68E+03J

13. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.29. It is pushed 17-m across the snow at constant velocity by a force directed 20 below the horizontal. Calculate the work done by the applied force. 703

    A. 2.70E+03J

    B. 2.92E+03J

    C. 3.15E+03J

    D. 3.40E+03J

    E. 3.67E+03J

14. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.219. It is pushed 15-m across the snow at constant velocity by a force directed 39 below the horizontal. Calculate the work done by the applied force. 704

    A. 1.81E+03J

The next page might contain more answer choices for this question

B. 1.96E+03J

C. 2.11E+03J

D. 2.28E+03J

E. 2.46E+03J

15. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.245. It is pushed 22-m across the snow at constant velocity by a force directed 32 below the horizontal. Calculate the work done by the applied force.
705

A. 2.29E+03J

B. 2.48E+03J

C. 2.67E+03J

D. 2.89E+03J

E. 3.12E+03J

16. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.215. It is pushed 10-m across the snow at constant velocity by a force directed 40 below the horizontal. Calculate the work done by the applied force.
706

A. 1.02E+03J

B. 1.10E+03J

C. 1.19E+03J

D. 1.29E+03J

E. 1.39E+03J

17. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.152. It is pushed 18-m across the snow at constant velocity by a force directed 28 below the horizontal. Calculate the work done by the applied force.
707

A. 1.07E+03J

B. 1.16E+03J

C. 1.25E+03J

D. 1.35E+03J

E. 1.46E+03J

The next page might contain more answer choices for this question

18. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.158. It is pushed 29-m across the snow at constant velocity by a force directed 37 below the horizontal. Calculate the work done by the applied force. [708]

    A. 2.36E+03J
    B. 2.55E+03J
    C. 2.75E+03J
    D. 2.97E+03J
    E. 3.21E+03J

19. Suppose that a sled plus passenger weighs 50kg. The coefficientof kinetic friction between the box and surface is 0.341. It is pushed 27-m across the snow at constant velocity by a force directed 33 below the horizontal. Calculate the work done by the applied force. [709]

    A. 5.79E+03J
    B. 6.26E+03J
    C. 6.76E+03J
    D. 7.30E+03J
    E. 7.88E+03J

up1-07 Q9

1. How fast must a 3.180E+03-kg elephant move to have the same kinetic energy as a 58.9-kg sprinter running at 11.9-m/s? [710]

    A. 1.29E+00m/s
    B. 1.39E+00m/s
    C. 1.50E+00m/s
    D. 1.62E+00m/s
    E. 1.75E+00m/s

2. How fast must a 3.310E+03-kg elephant move to have the same kinetic energy as a 58.5-kg sprinter running at 9.63-m/s? [711]

    A. 1.10E+00m/s
    B. 1.19E+00m/s
    C. 1.28E+00m/s

The next page might contain more answer choices for this question

D. 1.38E+00m/s

E. 1.49E+00m/s

3. How fast must a 2.830E+03-kg elephant move to have the same kinetic energy as a 63.2-kg sprinter running at 12.0-m/s? [712]

A. 1.32E+00m/s

B. 1.42E+00m/s

C. 1.54E+00m/s

D. 1.66E+00m/s

E. 1.79E+00m/s

4. How fast must a 3.460E+03-kg elephant move to have the same kinetic energy as a 60.7-kg sprinter running at 9.63-m/s? [713]

A. 9.38E-01m/s

B. 1.01E+00m/s

C. 1.09E+00m/s

D. 1.18E+00m/s

E. 1.28E+00m/s

5. How fast must a 3.100E+03-kg elephant move to have the same kinetic energy as a 60.0-kg sprinter running at 8.29-m/s? [714]

A. 9.16E-01m/s

B. 9.89E-01m/s

C. 1.07E+00m/s

D. 1.15E+00m/s

E. 1.25E+00m/s

6. How fast must a 2.670E+03-kg elephant move to have the same kinetic energy as a 55.6-kg sprinter running at 10.0-m/s? [715]

A. 1.34E+00m/s

B. 1.44E+00m/s

C. 1.56E+00m/s

D. 1.68E+00m/s

E. 1.82E+00m/s

The next page might contain more answer choices for this question

7. How fast must a 2.900E+03-kg elephant move to have the same kinetic energy as a 60.0-kg sprinter running at 8.88-m/s? [716]

   A. 1.10E+00m/s

   B. 1.18E+00m/s

   C. 1.28E+00m/s

   D. 1.38E+00m/s

   E. 1.49E+00m/s

8. How fast must a 3.060E+03-kg elephant move to have the same kinetic energy as a 60.4-kg sprinter running at 8.77-m/s? [717]

   A. 1.14E+00m/s

   B. 1.23E+00m/s

   C. 1.33E+00m/s

   D. 1.44E+00m/s

   E. 1.55E+00m/s

9. How fast must a 3.100E+03-kg elephant move to have the same kinetic energy as a 74.9-kg sprinter running at 8.48-m/s? [718]

   A. 9.69E-01m/s

   B. 1.05E+00m/s

   C. 1.13E+00m/s

   D. 1.22E+00m/s

   E. 1.32E+00m/s

10. How fast must a 2.530E+03-kg elephant move to have the same kinetic energy as a 57.4-kg sprinter running at 10.4-m/s? [719]

    A. 1.45E+00m/s

    B. 1.57E+00m/s

    C. 1.69E+00m/s

    D. 1.83E+00m/s

    E. 1.97E+00m/s

11. How fast must a 3.310E+03-kg elephant move to have the same kinetic energy as a 63.4-kg sprinter running at 8.55-m/s? [720]

The next page might contain more answer choices for this question

A. 1.10E+00m/s

B. 1.18E+00m/s

C. 1.28E+00m/s

D. 1.38E+00m/s

E. 1.49E+00m/s

12. How fast must a 3.370E+03-kg elephant move to have the same kinetic energy as a 61.6-kg sprinter running at 8.8-m/s? [721]

A. 9.44E-01m/s

B. 1.02E+00m/s

C. 1.10E+00m/s

D. 1.19E+00m/s

E. 1.28E+00m/s

13. How fast must a 3.350E+03-kg elephant move to have the same kinetic energy as a 59.9-kg sprinter running at 11.2-m/s? [722]

A. 1.39E+00m/s

B. 1.50E+00m/s

C. 1.62E+00m/s

D. 1.75E+00m/s

E. 1.89E+00m/s

14. How fast must a 3.260E+03-kg elephant move to have the same kinetic energy as a 72.2-kg sprinter running at 11.8-m/s? [723]

A. 1.51E+00m/s

B. 1.63E+00m/s

C. 1.76E+00m/s

D. 1.90E+00m/s

E. 2.05E+00m/s

15. How fast must a 3.200E+03-kg elephant move to have the same kinetic energy as a 73.5-kg sprinter running at 10.2-m/s? [724]

A. 1.33E+00m/s

B. 1.43E+00m/s

The next page might contain more answer choices for this question

C. 1.55E+00m/s

D. 1.67E+00m/s

E. 1.80E+00m/s

16. How fast must a 3.320E+03-kg elephant move to have the same kinetic energy as a 56.5-kg sprinter running at 9.97-m/s? [725]

A. 1.03E+00m/s

B. 1.12E+00m/s

C. 1.20E+00m/s

D. 1.30E+00m/s

E. 1.40E+00m/s

17. How fast must a 3.360E+03-kg elephant move to have the same kinetic energy as a 74.8-kg sprinter running at 10.7-m/s? [726]

A. 1.60E+00m/s

B. 1.72E+00m/s

C. 1.86E+00m/s

D. 2.01E+00m/s

E. 2.17E+00m/s

18. How fast must a 2.890E+03-kg elephant move to have the same kinetic energy as a 55.7-kg sprinter running at 11.8-m/s? [727]

A. 1.40E+00m/s

B. 1.52E+00m/s

C. 1.64E+00m/s

D. 1.77E+00m/s

E. 1.91E+00m/s

19. How fast must a 3.490E+03-kg elephant move to have the same kinetic energy as a 69.2-kg sprinter running at 11.1-m/s? [728]

A. 1.45E+00m/s

B. 1.56E+00m/s

C. 1.69E+00m/s

D. 1.82E+00m/s

E. 1.97E+00m/s

The next page might contain more answer choices for this question

up1-07 Q10

1. Calculate the kinetic energies of a 1.500E+03-kg automobile moving at 91.8-km/h. [729]

   A. 4.65E+06J

   B. 5.02E+06J

   C. 5.42E+06J

   D. 5.85E+06J

   E. 6.32E+06J

2. Calculate the kinetic energies of a 2.410E+03-kg automobile moving at 1.130E+02-km/h. [730]

   A. 1.54E+07J

   B. 1.66E+07J

   C. 1.79E+07J

   D. 1.94E+07J

   E. 2.09E+07J

3. Calculate the kinetic energies of a 2.370E+03-kg automobile moving at 98.9-km/h. [731]

   A. 8.52E+06J

   B. 9.20E+06J

   C. 9.94E+06J

   D. 1.07E+07J

   E. 1.16E+07J

4. Calculate the kinetic energies of a 1.550E+03-kg automobile moving at 96.7-km/h. [732]

   A. 6.21E+06J

   B. 6.71E+06J

   C. 7.25E+06J

   D. 7.83E+06J

   E. 8.45E+06J

5. Calculate the kinetic energies of a 1.560E+03-kg automobile moving at 1.020E+02-km/h. [733]

   A. 5.96E+06J

The next page might contain more answer choices for this question

B. 6.44E+06J

C. 6.96E+06J

D. 7.51E+06J

E. 8.12E+06J

6. Calculate the kinetic energies of a 1.900E+03-kg automobile moving at 94.0-km/h. [734]

A. 6.66E+06J

B. 7.20E+06J

C. 7.77E+06J

D. 8.39E+06J

E. 9.07E+06J

7. Calculate the kinetic energies of a 1.880E+03-kg automobile moving at 1.030E+02-km/h. [735]

A. 7.33E+06J

B. 7.92E+06J

C. 8.55E+06J

D. 9.23E+06J

E. 9.97E+06J

8. Calculate the kinetic energies of a 1.800E+03-kg automobile moving at 1.130E+02-km/h. [736]

A. 9.85E+06J

B. 1.06E+07J

C. 1.15E+07J

D. 1.24E+07J

E. 1.34E+07J

9. Calculate the kinetic energies of a 1.550E+03-kg automobile moving at 88.6-km/h. [737]

A. 5.63E+06J

B. 6.08E+06J

C. 6.57E+06J

D. 7.10E+06J

The next page might contain more answer choices for this question

E. 7.66E+06J

10. Calculate the kinetic energies of a 2.120E+03-kg automobile moving at 1.140E+02-km/h. [738]

A. 1.09E+07J

B. 1.18E+07J

C. 1.28E+07J

D. 1.38E+07J

E. 1.49E+07J

11. Calculate the kinetic energies of a 2.170E+03-kg automobile moving at 1.010E+02-km/h. [739]

A. 8.14E+06J

B. 8.79E+06J

C. 9.49E+06J

D. 1.02E+07J

E. 1.11E+07J

12. Calculate the kinetic energies of a 2.100E+03-kg automobile moving at 85.7-km/h. [740]

A. 7.14E+06J

B. 7.71E+06J

C. 8.33E+06J

D. 8.99E+06J

E. 9.71E+06J

13. Calculate the kinetic energies of a 2.440E+03-kg automobile moving at 1.010E+02-km/h. [741]

A. 1.24E+07J

B. 1.34E+07J

C. 1.45E+07J

D. 1.57E+07J

E. 1.69E+07J

14. Calculate the kinetic energies of a 1.570E+03-kg automobile moving at 92.7-km/h. [742]

The next page might contain more answer choices for this question

A. 5.35E+06J

B. 5.78E+06J

C. 6.25E+06J

D. 6.75E+06J

E. 7.29E+06J

15. Calculate the kinetic energies of a 2.070E+03-kg automobile moving at 86.3-km/h. [743]

A. 6.12E+06J

B. 6.61E+06J

C. 7.14E+06J

D. 7.71E+06J

E. 8.33E+06J

16. Calculate the kinetic energies of a 1.530E+03-kg automobile moving at 1.070E+02-km/h. [744]

A. 6.95E+06J

B. 7.51E+06J

C. 8.11E+06J

D. 8.76E+06J

E. 9.46E+06J

17. Calculate the kinetic energies of a 2.470E+03-kg automobile moving at 95.5-km/h. [745]

A. 8.28E+06J

B. 8.94E+06J

C. 9.66E+06J

D. 1.04E+07J

E. 1.13E+07J

18. Calculate the kinetic energies of a 2.470E+03-kg automobile moving at 87.6-km/h. [746]

A. 8.78E+06J

B. 9.48E+06J

C. 1.02E+07J

D. 1.11E+07J

The next page might contain more answer choices for this question

E. 1.19E+07J

19. Calculate the kinetic energies of a 2.240E+03-kg automobile moving at 1.080E+02-km/h. [747]

A. 1.12E+07J

B. 1.21E+07J

C. 1.31E+07J

D. 1.41E+07J

E. 1.52E+07J

up1-07 Q11

1. Calculate the kinetic energies of an 84-kg runner sprinting at 8-m/s. [748]

A. 2.30E+03 J

B. 2.49E+03 J

C. 2.69E+03 J

D. 2.90E+03 J

E. 3.14E+03 J

2. Calculate the kinetic energies of an 71-kg runner sprinting at 12-m/s. [749]

A. 4.73E+03 J

B. 5.11E+03 J

C. 5.52E+03 J

D. 5.96E+03 J

E. 6.44E+03 J

3. Calculate the kinetic energies of an 76-kg runner sprinting at 11-m/s. [750]

A. 4.26E+03 J

B. 4.60E+03 J

C. 4.97E+03 J

D. 5.36E+03 J

E. 5.79E+03 J

4. Calculate the kinetic energies of an 79-kg runner sprinting at 10-m/s. [751]

The next page might contain more answer choices for this question

A. 2.90E+03 J

B. 3.14E+03 J

C. 3.39E+03 J

D. 3.66E+03 J

E. 3.95E+03 J

5. Calculate the kinetic energies of an 74-kg runner sprinting at 10-m/s. [752]

A. 3.17E+03 J

B. 3.43E+03 J

C. 3.70E+03 J

D. 4.00E+03 J

E. 4.32E+03 J

6. Calculate the kinetic energies of an 85-kg runner sprinting at 11-m/s. [753]

A. 4.76E+03 J

B. 5.14E+03 J

C. 5.55E+03 J

D. 6.00E+03 J

E. 6.48E+03 J

7. Calculate the kinetic energies of an 89-kg runner sprinting at 8-m/s. [754]

A. 2.44E+03 J

B. 2.64E+03 J

C. 2.85E+03 J

D. 3.08E+03 J

E. 3.32E+03 J

8. Calculate the kinetic energies of an 87-kg runner sprinting at 8-m/s. [755]

A. 2.21E+03 J

B. 2.39E+03 J

C. 2.58E+03 J

D. 2.78E+03 J

E. 3.01E+03 J

The next page might contain more answer choices for this question

9. Calculate the kinetic energies of an 73-kg runner sprinting at 9-m/s. [756]

    A. 2.17E+03 J

    B. 2.35E+03 J

    C. 2.53E+03 J

    D. 2.74E+03 J

    E. 2.96E+03 J

10. Calculate the kinetic energies of an 82-kg runner sprinting at 8-m/s. [757]

    A. 1.93E+03 J

    B. 2.08E+03 J

    C. 2.25E+03 J

    D. 2.43E+03 J

    E. 2.62E+03 J

11. Calculate the kinetic energies of an 82-kg runner sprinting at 9-m/s. [758]

    A. 2.85E+03 J

    B. 3.07E+03 J

    C. 3.32E+03 J

    D. 3.59E+03 J

    E. 3.87E+03 J

12. Calculate the kinetic energies of an 81-kg runner sprinting at 9-m/s. [759]

    A. 3.28E+03 J

    B. 3.54E+03 J

    C. 3.83E+03 J

    D. 4.13E+03 J

    E. 4.46E+03 J

13. Calculate the kinetic energies of an 85-kg runner sprinting at 9-m/s. [760]

    A. 3.44E+03 J

    B. 3.72E+03 J

    C. 4.02E+03 J

    D. 4.34E+03 J

The next page might contain more answer choices for this question

E. 4.68E+03 J

14. Calculate the kinetic energies of an 87-kg runner sprinting at 12-m/s. [761]

A. 4.60E+03 J

B. 4.97E+03 J

C. 5.37E+03 J

D. 5.80E+03 J

E. 6.26E+03 J

15. Calculate the kinetic energies of an 72-kg runner sprinting at 10-m/s. [762]

A. 3.60E+03 J

B. 3.89E+03 J

C. 4.20E+03 J

D. 4.53E+03 J

E. 4.90E+03 J

16. Calculate the kinetic energies of an 82-kg runner sprinting at 12-m/s. [763]

A. 5.47E+03 J

B. 5.90E+03 J

C. 6.38E+03 J

D. 6.89E+03 J

E. 7.44E+03 J

17. Calculate the kinetic energies of an 84-kg runner sprinting at 11-m/s. [764]

A. 3.74E+03 J

B. 4.03E+03 J

C. 4.36E+03 J

D. 4.71E+03 J

E. 5.08E+03 J

18. Calculate the kinetic energies of an 74-kg runner sprinting at 8-m/s. [765]

A. 2.19E+03 J

B. 2.37E+03 J

C. 2.56E+03 J

The next page might contain more answer choices for this question

D. 2.76E+03 J

E. 2.98E+03 J

19. Calculate the kinetic energies of an 74-kg runner sprinting at 11-m/s. [766]

A. 4.48E+03 J

B. 4.84E+03 J

C. 5.22E+03 J

D. 5.64E+03 J

E. 6.09E+03 J

up1-07 Q12

1. An 6.47-g bullet has a speed of 7.420E+02-m/s. What is its kinetic energy? [767]

A. 1.53E+06 J

B. 1.65E+06 J

C. 1.78E+06 J

D. 1.92E+06 J

E. 2.08E+06 J

2. An 7.01-g bullet has a speed of 8.960E+02-m/s. What is its kinetic energy? [768]

A. 2.81E+06 J

B. 3.04E+06 J

C. 3.28E+06 J

D. 3.54E+06 J

E. 3.83E+06 J

3. An 8.16-g bullet has a speed of 7.740E+02-m/s. What is its kinetic energy? [769]

A. 1.80E+06 J

B. 1.94E+06 J

C. 2.10E+06 J

D. 2.26E+06 J

E. 2.44E+06 J

4. An 9.26-g bullet has a speed of 8.290E+02-m/s. What is its kinetic energy? [770]

The next page might contain more answer choices for this question

A. 2.95E+06 J

B. 3.18E+06 J

C. 3.44E+06 J

D. 3.71E+06 J

E. 4.01E+06 J

5. An 6.12-g bullet has a speed of 6.920E+02-m/s. What is its kinetic energy? [771]

A. 1.47E+06 J

B. 1.58E+06 J

C. 1.71E+06 J

D. 1.85E+06 J

E. 1.99E+06 J

6. An 9.94-g bullet has a speed of 9.300E+02-m/s. What is its kinetic energy? [772]

A. 3.41E+06 J

B. 3.69E+06 J

C. 3.98E+06 J

D. 4.30E+06 J

E. 4.64E+06 J

7. An 6.72-g bullet has a speed of 8.920E+02-m/s. What is its kinetic energy? [773]

A. 2.29E+06 J

B. 2.48E+06 J

C. 2.67E+06 J

D. 2.89E+06 J

E. 3.12E+06 J

8. An 7.69-g bullet has a speed of 8.760E+02-m/s. What is its kinetic energy? [774]

A. 2.73E+06 J

B. 2.95E+06 J

C. 3.19E+06 J

D. 3.44E+06 J

E. 3.72E+06 J

The next page might contain more answer choices for this question

9. An 6.41-g bullet has a speed of 6.930E+02-m/s. What is its kinetic energy? [775]

   A. 1.13E+06 J

   B. 1.22E+06 J

   C. 1.32E+06 J

   D. 1.43E+06 J

   E. 1.54E+06 J

10. An 8.1-g bullet has a speed of 8.350E+02-m/s. What is its kinetic energy? [776]

    A. 2.42E+06 J

    B. 2.61E+06 J

    C. 2.82E+06 J

    D. 3.05E+06 J

    E. 3.29E+06 J

11. An 8.31-g bullet has a speed of 9.320E+02-m/s. What is its kinetic energy? [777]

    A. 3.61E+06 J

    B. 3.90E+06 J

    C. 4.21E+06 J

    D. 4.55E+06 J

    E. 4.91E+06 J

12. An 8.24-g bullet has a speed of 7.830E+02-m/s. What is its kinetic energy? [778]

    A. 1.86E+06 J

    B. 2.01E+06 J

    C. 2.17E+06 J

    D. 2.34E+06 J

    E. 2.53E+06 J

13. An 8.07-g bullet has a speed of 9.350E+02-m/s. What is its kinetic energy? [779]

    A. 3.53E+06 J

    B. 3.81E+06 J

    C. 4.11E+06 J

    D. 4.44E+06 J

The next page might contain more answer choices for this question

E. 4.80E+06 J

14. An 6.76-g bullet has a speed of 9.190E+02-m/s. What is its kinetic energy? [780]

A. 2.64E+06 J

B. 2.85E+06 J

C. 3.08E+06 J

D. 3.33E+06 J

E. 3.60E+06 J

15. An 7.38-g bullet has a speed of 8.800E+02-m/s. What is its kinetic energy? [781]

A. 2.45E+06 J

B. 2.65E+06 J

C. 2.86E+06 J

D. 3.09E+06 J

E. 3.33E+06 J

16. An 6.39-g bullet has a speed of 8.840E+02-m/s. What is its kinetic energy? [782]

A. 1.98E+06 J

B. 2.14E+06 J

C. 2.31E+06 J

D. 2.50E+06 J

E. 2.70E+06 J

17. An 7.23-g bullet has a speed of 8.550E+02-m/s. What is its kinetic energy? [783]

A. 2.64E+06 J

B. 2.85E+06 J

C. 3.08E+06 J

D. 3.33E+06 J

E. 3.60E+06 J

18. An 7.46-g bullet has a speed of 9.030E+02-m/s. What is its kinetic energy? [784]

A. 2.41E+06 J

B. 2.61E+06 J

C. 2.82E+06 J

The next page might contain more answer choices for this question

D. 3.04E+06 J

E. 3.28E+06 J

19. An 6.08-g bullet has a speed of 8.820E+02-m/s. What is its kinetic energy? [785]

A. 2.36E+06 J

B. 2.55E+06 J

C. 2.76E+06 J

D. 2.98E+06 J

E. 3.22E+06 J

up1-07 Q13

1. An 9.83-g bullet has a speed of 8.110E+02-m/s. What is its kinetic energy if the speed is halved? [786]

A. 7.48E+05 J

B. 8.08E+05 J

C. 8.73E+05 J

D. 9.43E+05 J

E. 1.02E+06 J

2. An 8.34-g bullet has a speed of 7.650E+02-m/s. What is its kinetic energy if the speed is halved? [787]

A. 4.84E+05 J

B. 5.23E+05 J

C. 5.65E+05 J

D. 6.10E+05 J

E. 6.59E+05 J

3. An 7.38-g bullet has a speed of 7.340E+02-m/s. What is its kinetic energy if the speed is halved? [788]

A. 3.65E+05 J

B. 3.95E+05 J

C. 4.26E+05 J

D. 4.60E+05 J

The next page might contain more answer choices for this question

E. 4.97E+05 J

4. An 6.59-g bullet has a speed of 9.060E+02-m/s. What is its kinetic energy if the speed is halved? [789]

   A. 6.26E+05 J

   B. 6.76E+05 J

   C. 7.30E+05 J

   D. 7.89E+05 J

   E. 8.52E+05 J

5. An 8.95-g bullet has a speed of 8.690E+02-m/s. What is its kinetic energy if the speed is halved? [790]

   A. 8.45E+05 J

   B. 9.12E+05 J

   C. 9.85E+05 J

   D. 1.06E+06 J

   E. 1.15E+06 J

6. An 6.18-g bullet has a speed of 9.020E+02-m/s. What is its kinetic energy if the speed is halved? [791]

   A. 4.62E+05 J

   B. 4.99E+05 J

   C. 5.39E+05 J

   D. 5.82E+05 J

   E. 6.29E+05 J

7. An 9.22-g bullet has a speed of 6.800E+02-m/s. What is its kinetic energy if the speed is halved? [792]

   A. 4.23E+05 J

   B. 4.57E+05 J

   C. 4.93E+05 J

   D. 5.33E+05 J

   E. 5.76E+05 J

The next page might contain more answer choices for this question

8. An 8.74-g bullet has a speed of 7.290E+02-m/s. What is its kinetic energy if the speed is halved? [793]

   A. 4.98E+05 J

   B. 5.38E+05 J

   C. 5.81E+05 J

   D. 6.27E+05 J

   E. 6.77E+05 J

9. An 6.88-g bullet has a speed of 7.150E+02-m/s. What is its kinetic energy if the speed is halved? [794]

   A. 3.77E+05 J

   B. 4.07E+05 J

   C. 4.40E+05 J

   D. 4.75E+05 J

   E. 5.13E+05 J

10. An 9.87-g bullet has a speed of 8.360E+02-m/s. What is its kinetic energy if the speed is halved? [795]

    A. 8.62E+05 J

    B. 9.31E+05 J

    C. 1.01E+06 J

    D. 1.09E+06 J

    E. 1.17E+06 J

11. An 8.46-g bullet has a speed of 7.760E+02-m/s. What is its kinetic energy if the speed is halved? [796]

    A. 5.06E+05 J

    B. 5.46E+05 J

    C. 5.90E+05 J

    D. 6.37E+05 J

    E. 6.88E+05 J

12. An 7.98-g bullet has a speed of 7.590E+02-m/s. What is its kinetic energy if the speed is halved? [797]

The next page might contain more answer choices for this question

A. 4.93E+05 J

B. 5.32E+05 J

C. 5.75E+05 J

D. 6.21E+05 J

E. 6.70E+05 J

13. An 7.42-g bullet has a speed of 9.000E+02-m/s. What is its kinetic energy if the speed is halved? [798]

A. 5.52E+05 J

B. 5.96E+05 J

C. 6.44E+05 J

D. 6.96E+05 J

E. 7.51E+05 J

14. An 8.39-g bullet has a speed of 6.700E+02-m/s. What is its kinetic energy if the speed is halved? [799]

A. 4.04E+05 J

B. 4.36E+05 J

C. 4.71E+05 J

D. 5.08E+05 J

E. 5.49E+05 J

15. An 7.19-g bullet has a speed of 6.830E+02-m/s. What is its kinetic energy if the speed is halved? [800]

A. 4.19E+05 J

B. 4.53E+05 J

C. 4.89E+05 J

D. 5.28E+05 J

E. 5.70E+05 J

16. An 6.01-g bullet has a speed of 7.680E+02-m/s. What is its kinetic energy if the speed is halved? [801]

A. 3.80E+05 J

B. 4.10E+05 J

The next page might contain more answer choices for this question

C. 4.43E+05 J

D. 4.79E+05 J

E. 5.17E+05 J

17. An 6.19-g bullet has a speed of 8.910E+02-m/s. What is its kinetic energy if the speed is halved? [802]

A. 4.88E+05 J

B. 5.27E+05 J

C. 5.69E+05 J

D. 6.14E+05 J

E. 6.63E+05 J

18. An 9.21-g bullet has a speed of 7.860E+02-m/s. What is its kinetic energy if the speed is halved? [803]

A. 6.10E+05 J

B. 6.59E+05 J

C. 7.11E+05 J

D. 7.68E+05 J

E. 8.30E+05 J

19. An 7.05-g bullet has a speed of 8.350E+02-m/s. What is its kinetic energy if the speed is halved? [804]

A. 5.27E+05 J

B. 5.69E+05 J

C. 6.14E+05 J

D. 6.64E+05 J

E. 7.17E+05 J

up1-07 Q14

1. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.288-m while bringing a 1.040E+03-kg car to rest from an initial speed of 1.19-m/s. [805]

The next page might contain more answer choices for this question

A. 4.30E+03N

B. 4.64E+03N

C. 5.01E+03N

D. 5.41E+03N

E. 5.85E+03N

2. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.293-m while bringing a 9.470E+02-kg car to rest from an initial speed of 1.19-m/s. [806]

A. 2.83E+03N

B. 3.05E+03N

C. 3.30E+03N

D. 3.56E+03N

E. 3.85E+03N

3. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.139-m while bringing a 1.040E+03-kg car to rest from an initial speed of 1.22-m/s. [807]

A. 6.71E+03N

B. 7.25E+03N

C. 7.83E+03N

D. 8.45E+03N

E. 9.13E+03N

4. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.261-m while bringing a 9.160E+02-kg car to rest from an initial speed of 1.11-m/s. [808]

A. 3.90E+03N

B. 4.21E+03N

The next page might contain more answer choices for this question

C. 4.54E+03N

D. 4.91E+03N

E. 5.30E+03N

5. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.195-m while bringing a 7.600E+02-kg car to rest from an initial speed of 1.17-m/s. [809]

A. 4.56E+03N

B. 4.92E+03N

C. 5.32E+03N

D. 5.74E+03N

E. 6.20E+03N

6. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.286-m while bringing a 7.660E+02-kg car to rest from an initial speed of 1.2-m/s. [810]

A. 2.55E+03N

B. 2.76E+03N

C. 2.98E+03N

D. 3.21E+03N

E. 3.47E+03N

7. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.288-m while bringing a 9.050E+02-kg car to rest from an initial speed of 0.929-m/s. [811]

A. 2.50E+03N

B. 2.70E+03N

C. 2.92E+03N

D. 3.15E+03N

The next page might contain more answer choices for this question

E. 3.41E+03N

8. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.113-m while bringing a 7.930E+02-kg car to rest from an initial speed of 0.861-m/s. [812]

   A. 4.44E+03N

   B. 4.80E+03N

   C. 5.18E+03N

   D. 5.59E+03N

   E. 6.04E+03N

9. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.266-m while bringing a 8.250E+02-kg car to rest from an initial speed of 1.26-m/s. [813]

   A. 3.10E+03N

   B. 3.35E+03N

   C. 3.62E+03N

   D. 3.91E+03N

   E. 4.22E+03N

10. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.187-m while bringing a 1.010E+03-kg car to rest from an initial speed of 1.21-m/s. [814]

    A. 5.60E+03N

    B. 6.05E+03N

    C. 6.54E+03N

    D. 7.06E+03N

    E. 7.62E+03N

The next page might contain more answer choices for this question

11. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.184-m while bringing a 9.300E+02-kg car to rest from an initial speed of 1.08-m/s. [815]

    A. 4.68E+03N

    B. 5.05E+03N

    C. 5.46E+03N

    D. 5.90E+03N

    E. 6.37E+03N

12. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.212-m while bringing a 9.190E+02-kg car to rest from an initial speed of 0.819-m/s. [816]

    A. 2.82E+03N

    B. 3.04E+03N

    C. 3.29E+03N

    D. 3.55E+03N

    E. 3.83E+03N

13. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.219-m while bringing a 9.420E+02-kg car to rest from an initial speed of 1.08-m/s. [817]

    A. 4.30E+03N

    B. 4.65E+03N

    C. 5.02E+03N

    D. 5.42E+03N

    E. 5.85E+03N

14. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a

The next page might contain more answer choices for this question

bumper that collapses 0.244-m while bringing a 8.240E+02-kg car to rest from an initial speed of 1.25-m/s. [818]

A. 4.22E+03N

B. 4.56E+03N

C. 4.92E+03N

D. 5.32E+03N

E. 5.74E+03N

15. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.101-m while bringing a 9.920E+02-kg car to rest from an initial speed of 0.997-m/s. [819]

A. 9.79E+03N

B. 1.06E+04N

C. 1.14E+04N

D. 1.23E+04N

E. 1.33E+04N

16. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.298-m while bringing a 7.520E+02-kg car to rest from an initial speed of 1.06-m/s. [820]

A. 2.67E+03N

B. 2.89E+03N

C. 3.12E+03N

D. 3.37E+03N

E. 3.64E+03N

17. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.266-m while bringing a 8.300E+02-kg car to rest from an initial speed of 0.992-m/s. [821]

A. 2.28E+03N

The next page might contain more answer choices for this question

B. 2.46E+03N

C. 2.65E+03N

D. 2.87E+03N

E. 3.10E+03N

18. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.187-m while bringing a 8.720E+02-kg car to rest from an initial speed of 1.22-m/s. [822]

A. 5.69E+03N

B. 6.14E+03N

C. 6.64E+03N

D. 7.17E+03N

E. 7.74E+03N

19. A cars bumper is designed to withstand a 4.0-km/h (1.1-m/s) collision with an immovable object without damage to the body of the car. The bumper cushions the shock by absorbing the force over a distance. Calculate the magnitude of the average force on a bumper that collapses 0.205-m while bringing a 1.020E+03-kg car to rest from an initial speed of 1.15-m/s. [823]

A. 5.72E+03N

B. 6.18E+03N

C. 6.67E+03N

D. 7.21E+03N

E. 7.78E+03N

up1-07 Q15

1. A constant 12-N horizontal force is applied to a 16-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 6.4-m? [824]

A. 2.66E+00m/s

B. 2.87E+00m/s

C. 3.10E+00m/s

D. 3.35E+00m/s

The next page might contain more answer choices for this question

E. 3.61E+00m/s

2. A constant 13-N horizontal force is applied to a 25-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 6.3-m? [825]

A. 2.37E+00m/s

B. 2.56E+00m/s

C. 2.76E+00m/s

D. 2.99E+00m/s

E. 3.22E+00m/s

3. A constant 10-N horizontal force is applied to a 16-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 6.6-m? [826]

A. 2.66E+00m/s

B. 2.87E+00m/s

C. 3.10E+00m/s

D. 3.35E+00m/s

E. 3.62E+00m/s

4. A constant 9-N horizontal force is applied to a 24-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 9.39-m? [827]

A. 1.95E+00m/s

B. 2.11E+00m/s

C. 2.28E+00m/s

D. 2.46E+00m/s

E. 2.65E+00m/s

5. A constant 8-N horizontal force is applied to a 18-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 9.84-m? [828]

A. 2.54E+00m/s

B. 2.74E+00m/s

C. 2.96E+00m/s

D. 3.19E+00m/s

E. 3.45E+00m/s

The next page might contain more answer choices for this question

6. A constant 12-N horizontal force is applied to a 24-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 10.4-m? [829]

   A. 2.76E+00m/s

   B. 2.99E+00m/s

   C. 3.22E+00m/s

   D. 3.48E+00m/s

   E. 3.76E+00m/s

7. A constant 12-N horizontal force is applied to a 16-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 9.74-m? [830]

   A. 3.82E+00m/s

   B. 4.13E+00m/s

   C. 4.46E+00m/s

   D. 4.82E+00m/s

   E. 5.20E+00m/s

8. A constant 13-N horizontal force is applied to a 15-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 8.2-m? [831]

   A. 2.99E+00m/s

   B. 3.23E+00m/s

   C. 3.49E+00m/s

   D. 3.77E+00m/s

   E. 4.07E+00m/s

9. A constant 13-N horizontal force is applied to a 15-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 6.99-m? [832]

   A. 2.98E+00m/s

   B. 3.22E+00m/s

   C. 3.48E+00m/s

   D. 3.76E+00m/s

   E. 4.06E+00m/s

10. A constant 7-N horizontal force is applied to a 17-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 5.33-m? [833]

The next page might contain more answer choices for this question

A. 1.54E+00m/s

B. 1.66E+00m/s

C. 1.80E+00m/s

D. 1.94E+00m/s

E. 2.10E+00m/s

11. A constant 11-N horizontal force is applied to a 21-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 6.91-m? [834]

A. 2.49E+00m/s

B. 2.69E+00m/s

C. 2.91E+00m/s

D. 3.14E+00m/s

E. 3.39E+00m/s

12. A constant 9-N horizontal force is applied to a 20-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 5.86-m? [835]

A. 2.13E+00m/s

B. 2.30E+00m/s

C. 2.48E+00m/s

D. 2.68E+00m/s

E. 2.89E+00m/s

13. A constant 12-N horizontal force is applied to a 21-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 5.38-m? [836]

A. 1.82E+00m/s

B. 1.97E+00m/s

C. 2.13E+00m/s

D. 2.30E+00m/s

E. 2.48E+00m/s

14. A constant 11-N horizontal force is applied to a 15-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 10.3-m? [837]

A. 3.33E+00m/s

B. 3.60E+00m/s

The next page might contain more answer choices for this question

C. 3.89E+00m/s

D. 4.20E+00m/s

E. 4.53E+00m/s

15. A constant 11-N horizontal force is applied to a 18-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 9.78-m? [838]

A. 3.46E+00m/s

B. 3.73E+00m/s

C. 4.03E+00m/s

D. 4.36E+00m/s

E. 4.70E+00m/s

16. A constant 10-N horizontal force is applied to a 24-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 8.21-m? [839]

A. 2.42E+00m/s

B. 2.62E+00m/s

C. 2.82E+00m/s

D. 3.05E+00m/s

E. 3.29E+00m/s

17. A constant 13-N horizontal force is applied to a 25-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 6.23-m? [840]

A. 2.36E+00m/s

B. 2.55E+00m/s

C. 2.75E+00m/s

D. 2.97E+00m/s

E. 3.21E+00m/s

18. A constant 10-N horizontal force is applied to a 23-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 9.11-m? [841]

A. 2.61E+00m/s

B. 2.81E+00m/s

C. 3.04E+00m/s

D. 3.28E+00m/s

The next page might contain more answer choices for this question

E. 3.55E+00m/s

19. A constant 13-N horizontal force is applied to a 23-kg car at rest on a level floor. If friction is negligible, what is the speed of the cart when it has been pushed 8.38-m? [842]

A. 3.08E+00m/s

B. 3.32E+00m/s

C. 3.59E+00m/s

D. 3.88E+00m/s

E. 4.19E+00m/s

up1-07 Q16

1. How long will it take an 6.670E+02-kg car with a useful power output of 36.7-hp (1 hp equals 746 W) to reach a speed of 16.0-m/s, neglecting friction? [843]

A. 9.39E+03 s

B. 1.01E+04 s

C. 1.10E+04 s

D. 1.18E+04 s

E. 1.28E+04 s

2. How long will it take an 7.280E+02-kg car with a useful power output of 43.5-hp (1 hp equals 746 W) to reach a speed of 17.9-m/s, neglecting friction? [844]

A. 1.77E+04 s

B. 1.91E+04 s

C. 2.06E+04 s

D. 2.23E+04 s

E. 2.40E+04 s

3. How long will it take an 6.800E+02-kg car with a useful power output of 43.6-hp (1 hp equals 746 W) to reach a speed of 13.1-m/s, neglecting friction? [845]

A. 2.96E+03 s

B. 3.20E+03 s

C. 3.46E+03 s

D. 3.73E+03 s

The next page might contain more answer choices for this question

E. 4.03E+03 s

4. How long will it take an 9.290E+02-kg car with a useful power output of 41.8-hp (1 hp equals 746 W) to reach a speed of 18.8-m/s, neglecting friction? [846]

   A. 3.24E+04 s

   B. 3.50E+04 s

   C. 3.78E+04 s

   D. 4.08E+04 s

   E. 4.41E+04 s

5. How long will it take an 6.180E+02-kg car with a useful power output of 36.2-hp (1 hp equals 746 W) to reach a speed of 18.3-m/s, neglecting friction? [847]

   A. 1.73E+04 s

   B. 1.86E+04 s

   C. 2.01E+04 s

   D. 2.17E+04 s

   E. 2.35E+04 s

6. How long will it take an 8.690E+02-kg car with a useful power output of 44.0-hp (1 hp equals 746 W) to reach a speed of 18.8-m/s, neglecting friction? [848]

   A. 2.29E+04 s

   B. 2.47E+04 s

   C. 2.67E+04 s

   D. 2.88E+04 s

   E. 3.11E+04 s

7. How long will it take an 6.420E+02-kg car with a useful power output of 39.3-hp (1 hp equals 746 W) to reach a speed of 13.5-m/s, neglecting friction? [849]

   A. 4.91E+03 s

   B. 5.30E+03 s

   C. 5.73E+03 s

   D. 6.18E+03 s

   E. 6.68E+03 s

The next page might contain more answer choices for this question

8. How long will it take an 9.060E+02-kg car with a useful power output of 39.6-hp (1 hp equals 746 W) to reach a speed of 12.9-m/s, neglecting friction? [850]

    A. 4.70E+03 s

    B. 5.07E+03 s

    C. 5.48E+03 s

    D. 5.92E+03 s

    E. 6.39E+03 s

9. How long will it take an 8.440E+02-kg car with a useful power output of 36.4-hp (1 hp equals 746 W) to reach a speed of 11.2-m/s, neglecting friction? [851]

    A. 2.35E+03 s

    B. 2.54E+03 s

    C. 2.74E+03 s

    D. 2.96E+03 s

    E. 3.19E+03 s

10. How long will it take an 7.930E+02-kg car with a useful power output of 41.3-hp (1 hp equals 746 W) to reach a speed of 13.5-m/s, neglecting friction? [852]

    A. 4.95E+03 s

    B. 5.34E+03 s

    C. 5.77E+03 s

    D. 6.23E+03 s

    E. 6.73E+03 s

11. How long will it take an 7.510E+02-kg car with a useful power output of 44.2-hp (1 hp equals 746 W) to reach a speed of 14.7-m/s, neglecting friction? [853]

    A. 5.75E+03 s

    B. 6.21E+03 s

    C. 6.70E+03 s

    D. 7.24E+03 s

    E. 7.82E+03 s

12. How long will it take an 8.140E+02-kg car with a useful power output of 35.9-hp (1 hp equals 746 W) to reach a speed of 17.6-m/s, neglecting friction? [854]

The next page might contain more answer choices for this question

A. 2.04E+04 s

B. 2.20E+04 s

C. 2.38E+04 s

D. 2.57E+04 s

E. 2.77E+04 s

13. How long will it take an 6.870E+02-kg car with a useful power output of 37.8-hp (1 hp equals 746 W) to reach a speed of 12.0-m/s, neglecting friction? [855]

A. 2.41E+03 s

B. 2.60E+03 s

C. 2.81E+03 s

D. 3.03E+03 s

E. 3.27E+03 s

14. How long will it take an 7.710E+02-kg car with a useful power output of 38.1-hp (1 hp equals 746 W) to reach a speed of 15.8-m/s, neglecting friction? [856]

A. 1.24E+04 s

B. 1.34E+04 s

C. 1.44E+04 s

D. 1.56E+04 s

E. 1.68E+04 s

15. How long will it take an 6.100E+02-kg car with a useful power output of 42.5-hp (1 hp equals 746 W) to reach a speed of 15.9-m/s, neglecting friction? [857]

A. 9.05E+03 s

B. 9.78E+03 s

C. 1.06E+04 s

D. 1.14E+04 s

E. 1.23E+04 s

16. How long will it take an 8.800E+02-kg car with a useful power output of 44.8-hp (1 hp equals 746 W) to reach a speed of 15.6-m/s, neglecting friction? [858]

A. 1.22E+04 s

B. 1.31E+04 s

The next page might contain more answer choices for this question

C. 1.42E+04 s

D. 1.53E+04 s

E. 1.65E+04 s

17. How long will it take an 9.720E+02-kg car with a useful power output of 42.6-hp (1 hp equals 746 W) to reach a speed of 12.2-m/s, neglecting friction? [859]

A. 3.54E+03 s

B. 3.83E+03 s

C. 4.13E+03 s

D. 4.46E+03 s

E. 4.82E+03 s

18. How long will it take an 9.550E+02-kg car with a useful power output of 44.3-hp (1 hp equals 746 W) to reach a speed of 12.4-m/s, neglecting friction? [860]

A. 3.11E+03 s

B. 3.36E+03 s

C. 3.63E+03 s

D. 3.92E+03 s

E. 4.24E+03 s

19. How long will it take an 7.760E+02-kg car with a useful power output of 41.2-hp (1 hp equals 746 W) to reach a speed of 11.8-m/s, neglecting friction? [861]

A. 2.89E+03 s

B. 3.12E+03 s

C. 3.37E+03 s

D. 3.64E+03 s

E. 3.93E+03 s

up1-07 Q17

1. A man of mass 89.9-kg runs up a flight of stairs 25.0-m high in 13.2-s. How much power is used to lift the man? [862]

A. 1.43E+03 W

B. 1.55E+03 W

The next page might contain more answer choices for this question

C. 1.67E+03 W

D. 1.80E+03 W

E. 1.95E+03 W

2. A man of mass 73.9-kg runs up a flight of stairs 29.6-m high in 10.8-s. How much power is used to lift the man? [863]

A. 1.99E+03 W

B. 2.15E+03 W

C. 2.32E+03 W

D. 2.50E+03 W

E. 2.70E+03 W

3. A man of mass 82.1-kg runs up a flight of stairs 24.1-m high in 9.91-s. How much power is used to lift the man? [864]

A. 1.68E+03 W

B. 1.81E+03 W

C. 1.96E+03 W

D. 2.12E+03 W

E. 2.28E+03 W

4. A man of mass 87.7-kg runs up a flight of stairs 20.1-m high in 11.2-s. How much power is used to lift the man? [865]

A. 1.43E+03 W

B. 1.54E+03 W

C. 1.67E+03 W

D. 1.80E+03 W

E. 1.94E+03 W

5. A man of mass 86.1-kg runs up a flight of stairs 23.3-m high in 10.3-s. How much power is used to lift the man? [866]

A. 1.77E+03 W

B. 1.91E+03 W

C. 2.06E+03 W

D. 2.23E+03 W

The next page might contain more answer choices for this question

E. 2.41E+03 W

6. A man of mass 76.9-kg runs up a flight of stairs 17.6-m high in 14.9-s. How much power is used to lift the man? [867]

A. 7.07E+02 W

B. 7.64E+02 W

C. 8.25E+02 W

D. 8.91E+02 W

E. 9.62E+02 W

7. A man of mass 71.0-kg runs up a flight of stairs 18.5-m high in 11.2-s. How much power is used to lift the man? [868]

A. 9.86E+02 W

B. 1.07E+03 W

C. 1.15E+03 W

D. 1.24E+03 W

E. 1.34E+03 W

8. A man of mass 75.5-kg runs up a flight of stairs 21.3-m high in 11.3-s. How much power is used to lift the man? [869]

A. 1.11E+03 W

B. 1.20E+03 W

C. 1.29E+03 W

D. 1.40E+03 W

E. 1.51E+03 W

9. A man of mass 88.4-kg runs up a flight of stairs 25.8-m high in 14.0-s. How much power is used to lift the man? [870]

A. 1.17E+03 W

B. 1.27E+03 W

C. 1.37E+03 W

D. 1.48E+03 W

E. 1.60E+03 W

The next page might contain more answer choices for this question

10. A man of mass 79.4-kg runs up a flight of stairs 25.8-m high in 10.9-s. How much power is used to lift the man? [871]

    A. 1.71E+03 W

    B. 1.84E+03 W

    C. 1.99E+03 W

    D. 2.15E+03 W

    E. 2.32E+03 W

11. A man of mass 80.4-kg runs up a flight of stairs 27.5-m high in 14.2-s. How much power is used to lift the man? [872]

    A. 1.21E+03 W

    B. 1.31E+03 W

    C. 1.41E+03 W

    D. 1.53E+03 W

    E. 1.65E+03 W

12. A man of mass 70.8-kg runs up a flight of stairs 21.2-m high in 14.8-s. How much power is used to lift the man? [873]

    A. 7.31E+02 W

    B. 7.90E+02 W

    C. 8.53E+02 W

    D. 9.21E+02 W

    E. 9.95E+02 W

13. A man of mass 89.0-kg runs up a flight of stairs 28.0-m high in 11.9-s. How much power is used to lift the man? [874]

    A. 1.76E+03 W

    B. 1.90E+03 W

    C. 2.05E+03 W

    D. 2.22E+03 W

    E. 2.40E+03 W

14. A man of mass 71.4-kg runs up a flight of stairs 26.7-m high in 11.0-s. How much power is used to lift the man? [875]

The next page might contain more answer choices for this question

A. 1.57E+03 W

B. 1.70E+03 W

C. 1.84E+03 W

D. 1.98E+03 W

E. 2.14E+03 W

15. A man of mass 88.7-kg runs up a flight of stairs 27.3-m high in 11.3-s. How much power is used to lift the man? [876]

A. 1.95E+03 W

B. 2.10E+03 W

C. 2.27E+03 W

D. 2.45E+03 W

E. 2.65E+03 W

16. A man of mass 85.0-kg runs up a flight of stairs 28.5-m high in 12.0-s. How much power is used to lift the man? [877]

A. 1.70E+03 W

B. 1.83E+03 W

C. 1.98E+03 W

D. 2.14E+03 W

E. 2.31E+03 W

17. A man of mass 82.0-kg runs up a flight of stairs 28.8-m high in 12.2-s. How much power is used to lift the man? [878]

A. 1.63E+03 W

B. 1.76E+03 W

C. 1.90E+03 W

D. 2.05E+03 W

E. 2.21E+03 W

18. A man of mass 90.7-kg runs up a flight of stairs 24.2-m high in 12.9-s. How much power is used to lift the man? [879]

A. 1.23E+03 W

B. 1.33E+03 W

The next page might contain more answer choices for this question

C. 1.43E+03 W

D. 1.55E+03 W

E. 1.67E+03 W

19. A man of mass 87.8-kg runs up a flight of stairs 21.5-m high in 11.0-s. How much power is used to lift the man? [880]

A. 1.68E+03 W

B. 1.82E+03 W

C. 1.96E+03 W

D. 2.12E+03 W

E. 2.29E+03 W

4 up1-08

1. A camera weighing 10-N falls from a small drone hovering 20.0-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [881]

A. 1.59E+02J

B. 1.71E+02J

C. 1.85E+02J

D. 2.00E+02J

E. 2.16E+02J

2. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [882]

A. 4.96E+01

B. 5.36E+01

C. 5.79E+01

D. 6.25E+01

E. 6.75E+01

3. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [883]

The next page might contain more answer choices for this question

A. 4.96E+01

B. 5.36E+01

C. 5.79E+01

D. 6.25E+01

E. 6.75E+01

4. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [884]

A. 2.02E+00

B. 2.18E+00

C. 2.35E+00

D. 2.54E+00

E. 2.75E+00

5. A boy throws a ball of mass 0.25-kg straight upward with an initial speed of 20-m/s. When the ball returns to the boy, its speed is 17-m/s. How much work does air resistance do on the ball during its flight? [885]

A. 1.39E+01watts

B. 1.50E+01watts

C. 1.62E+01watts

D. 1.75E+01watts

E. 1.89E+01watts

4.1 Renditions

up1-08 Q1

1. A camera weighing 9-N falls from a small drone hovering 10.9-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [886]

A. 9.08E+01J

B. 9.81E+01J

C. 1.06E+02J

D. 1.14E+02J

The next page might contain more answer choices for this question

E. 1.24E+02J

2. A camera weighing 11-N falls from a small drone hovering 20.1-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [887]

   A. 2.05E+02J

   B. 2.21E+02J

   C. 2.39E+02J

   D. 2.58E+02J

   E. 2.79E+02J

3. A camera weighing 8-N falls from a small drone hovering 13.8-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [888]

   A. 9.47E+01J

   B. 1.02E+02J

   C. 1.10E+02J

   D. 1.19E+02J

   E. 1.29E+02J

4. A camera weighing 8-N falls from a small drone hovering 10.0-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [889]

   A. 8.00E+01J

   B. 8.64E+01J

   C. 9.33E+01J

   D. 1.01E+02J

   E. 1.09E+02J

5. A camera weighing 8-N falls from a small drone hovering 27.4-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [890]

   A. 1.74E+02J

   B. 1.88E+02J

   C. 2.03E+02J

The next page might contain more answer choices for this question

D. 2.19E+02J

E. 2.37E+02J

6. A camera weighing 12-N falls from a small drone hovering 20.8-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [891]

A. 1.98E+02J

B. 2.14E+02J

C. 2.31E+02J

D. 2.50E+02J

E. 2.70E+02J

7. A camera weighing 11-N falls from a small drone hovering 25.3-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [892]

A. 2.78E+02J

B. 3.01E+02J

C. 3.25E+02J

D. 3.51E+02J

E. 3.79E+02J

8. A camera weighing 11-N falls from a small drone hovering 30.0-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [893]

A. 2.43E+02J

B. 2.62E+02J

C. 2.83E+02J

D. 3.06E+02J

E. 3.30E+02J

9. A camera weighing 10-N falls from a small drone hovering 17.6-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [894]

A. 1.40E+02J

B. 1.51E+02J

The next page might contain more answer choices for this question

C. 1.63E+02J

D. 1.76E+02J

E. 1.90E+02J

10. A camera weighing 8-N falls from a small drone hovering 11.5-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [895]

A. 8.52E+01J

B. 9.20E+01J

C. 9.94E+01J

D. 1.07E+02J

E. 1.16E+02J

11. A camera weighing 12-N falls from a small drone hovering 24.4-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [896]

A. 2.15E+02J

B. 2.32E+02J

C. 2.51E+02J

D. 2.71E+02J

E. 2.93E+02J

12. A camera weighing 12-N falls from a small drone hovering 10.6-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [897]

A. 1.18E+02J

B. 1.27E+02J

C. 1.37E+02J

D. 1.48E+02J

E. 1.60E+02J

13. A camera weighing 10-N falls from a small drone hovering 17.7-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [898]

A. 1.64E+02J

The next page might contain more answer choices for this question

B. 1.77E+02J

C. 1.91E+02J

D. 2.06E+02J

E. 2.23E+02J

14. A camera weighing 11-N falls from a small drone hovering 27.3-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [899]

A. 2.38E+02J

B. 2.57E+02J

C. 2.78E+02J

D. 3.00E+02J

E. 3.24E+02J

15. A camera weighing 9-N falls from a small drone hovering 22.3-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [900]

A. 1.48E+02J

B. 1.59E+02J

C. 1.72E+02J

D. 1.86E+02J

E. 2.01E+02J

16. A camera weighing 11-N falls from a small drone hovering 29.4-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [901]

A. 3.23E+02J

B. 3.49E+02J

C. 3.77E+02J

D. 4.07E+02J

E. 4.40E+02J

17. A camera weighing 9-N falls from a small drone hovering 20.5-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [902]

The next page might contain more answer choices for this question

A. 1.71E+02J

B. 1.84E+02J

C. 1.99E+02J

D. 2.15E+02J

E. 2.32E+02J

18. A camera weighing 12-N falls from a small drone hovering 11.1-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [903]

A. 1.23E+02J

B. 1.33E+02J

C. 1.44E+02J

D. 1.55E+02J

E. 1.68E+02J

19. A camera weighing 9-N falls from a small drone hovering 21.3-m overhead and enters free fall.What is the gravitational potential energy of the camera before it falls from the drone? [904]

A. 1.78E+02J

B. 1.92E+02J

C. 2.07E+02J

D. 2.24E+02J

E. 2.41E+02J

up1-08 Q2

1. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [905]

A. 6.50E+00

B. 7.02E+00

C. 7.58E+00

D. 8.19E+00

E. 8.84E+00

The next page might contain more answer choices for this question

2. A cats crinkle ball toy of mass 14-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [906]

   A. 1.75E+02

   B. 1.89E+02

   C. 2.04E+02

   D. 2.20E+02

   E. 2.38E+02

3. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [907]

   A. 6.25E+01

   B. 6.75E+01

   C. 7.29E+01

   D. 7.87E+01

   E. 8.50E+01

4. A cats crinkle ball toy of mass 17-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [908]

   A. 2.70E+01

   B. 2.91E+01

   C. 3.15E+01

   D. 3.40E+01

   E. 3.67E+01

5. A cats crinkle ball toy of mass 16-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [909]

   A. 2.74E+01

   B. 2.96E+01

   C. 3.20E+01

   D. 3.46E+01

The next page might contain more answer choices for this question

E. 3.73E+01

6. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [910]

   A. 7.35E+00

   B. 7.94E+00

   C. 8.57E+00

   D. 9.26E+00

   E. 1.00E+01

7. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [911]

   A. 6.00E+00

   B. 6.48E+00

   C. 7.00E+00

   D. 7.56E+00

   E. 8.16E+00

8. A cats crinkle ball toy of mass 11-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [912]

   A. 1.38E+02

   B. 1.48E+02

   C. 1.60E+02

   D. 1.73E+02

   E. 1.87E+02

9. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [913]

   A. 1.84E+02

   B. 1.98E+02

   C. 2.14E+02

The next page might contain more answer choices for this question

D. 2.31E+02

E. 2.50E+02

10. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [914]

A. 2.06E+01

B. 2.22E+01

C. 2.40E+01

D. 2.59E+01

E. 2.80E+01

11. A cats crinkle ball toy of mass 17-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [915]

A. 2.50E+01

B. 2.70E+01

C. 2.91E+01

D. 3.15E+01

E. 3.40E+01

12. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [916]

A. 5.02E+01

B. 5.42E+01

C. 5.85E+01

D. 6.32E+01

E. 6.82E+01

13. A cats crinkle ball toy of mass 14-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [917]

A. 9.60E+01

B. 1.04E+02

The next page might contain more answer choices for this question

C. 1.12E+02

D. 1.21E+02

E. 1.31E+02

14. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [918]

A. 1.88E+02

B. 2.02E+02

C. 2.19E+02

D. 2.36E+02

E. 2.55E+02

15. A cats crinkle ball toy of mass 18-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [919]

A. 6.62E+00

B. 7.14E+00

C. 7.72E+00

D. 8.33E+00

E. 9.00E+00

16. A cats crinkle ball toy of mass 14-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [920]

A. 2.80E+01

B. 3.02E+01

C. 3.27E+01

D. 3.53E+01

E. 3.81E+01

17. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [921]

A. 1.50E+02

The next page might contain more answer choices for this question

B. 1.62E+02

C. 1.75E+02

D. 1.89E+02

E. 2.04E+02

18. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [922]

A. 5.51E+00

B. 5.95E+00

C. 6.43E+00

D. 6.94E+00

E. 7.50E+00

19. A cats crinkle ball toy of mass 15-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the kinetic energy of the ball as it leaves the hand? [923]

A. 5.79E+01

B. 6.25E+01

C. 6.75E+01

D. 7.29E+01

E. 7.87E+01

up1-08 Q3

1. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [924]

A. 7.72E+01

B. 8.33E+01

C. 9.00E+01

D. 9.72E+01

E. 1.05E+02

The next page might contain more answer choices for this question

2. A cats crinkle ball toy of mass 19-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [925]

    A. 3.02E+01

    B. 3.26E+01

    C. 3.52E+01

    D. 3.80E+01

    E. 4.10E+01

3. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [926]

    A. 1.39E+02

    B. 1.50E+02

    C. 1.62E+02

    D. 1.75E+02

    E. 1.89E+02

4. A cats crinkle ball toy of mass 10-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [927]

    A. 3.97E+00

    B. 4.29E+00

    C. 4.63E+00

    D. 5.00E+00

    E. 5.40E+00

5. A cats crinkle ball toy of mass 16-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [928]

    A. 2.54E+01

    B. 2.74E+01

    C. 2.96E+01

    D. 3.20E+01

The next page might contain more answer choices for this question

E. 3.46E+01

6. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [929]

   A. 4.41E+00

   B. 4.76E+00

   C. 5.14E+00

   D. 5.56E+00

   E. 6.00E+00

7. A cats crinkle ball toy of mass 19-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [930]

   A. 2.38E+02

   B. 2.56E+02

   C. 2.77E+02

   D. 2.99E+02

   E. 3.23E+02

8. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [931]

   A. 4.76E+00

   B. 5.14E+00

   C. 5.56E+00

   D. 6.00E+00

   E. 6.48E+00

9. A cats crinkle ball toy of mass 14-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [932]

   A. 6.48E+00

   B. 7.00E+00

   C. 7.56E+00

The next page might contain more answer choices for this question

D. 8.16E+00

E. 8.82E+00

10. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [933]

A. 1.29E+02

B. 1.39E+02

C. 1.50E+02

D. 1.62E+02

E. 1.76E+02

11. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [934]

A. 2.60E+01

B. 2.81E+01

C. 3.03E+01

D. 3.28E+01

E. 3.54E+01

12. A cats crinkle ball toy of mass 18-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [935]

A. 3.09E+01

B. 3.33E+01

C. 3.60E+01

D. 3.89E+01

E. 4.20E+01

13. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [936]

A. 3.70E+01

B. 4.00E+01

The next page might contain more answer choices for this question

C. 4.32E+01

D. 4.67E+01

E. 5.04E+01

14. A cats crinkle ball toy of mass 18-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [937]

A. 1.33E+02

B. 1.44E+02

C. 1.56E+02

D. 1.68E+02

E. 1.81E+02

15. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [938]

A. 1.27E+02

B. 1.37E+02

C. 1.48E+02

D. 1.60E+02

E. 1.73E+02

16. A cats crinkle ball toy of mass 16-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [939]

A. 6.67E+01

B. 7.20E+01

C. 7.78E+01

D. 8.40E+01

E. 9.07E+01

17. A cats crinkle ball toy of mass 14-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [940]

A. 7.00E+00

The next page might contain more answer choices for this question

B. 7.56E+00

C. 8.16E+00

D. 8.82E+00

E. 9.52E+00

18. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [941]

A. 7.14E+01

B. 7.72E+01

C. 8.33E+01

D. 9.00E+01

E. 9.72E+01

19. A cats crinkle ball toy of mass 11-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. How much work is done by the gravitational force during the balls rise to its peak? [942]

A. 5.09E+00

B. 5.50E+00

C. 5.94E+00

D. 6.42E+00

E. 6.93E+00

up1-08 Q4

1. A cats crinkle ball toy of mass 16-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [943]

A. 3.61E+00

B. 3.89E+00

C. 4.21E+00

D. 4.54E+00

E. 4.91E+00

The next page might contain more answer choices for this question

2. A cats crinkle ball toy of mass 11-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [944]

    A. 4.91E+00

    B. 5.30E+00

    C. 5.72E+00

    D. 6.18E+00

    E. 6.67E+00

3. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [945]

    A. 1.60E+00

    B. 1.73E+00

    C. 1.87E+00

    D. 2.02E+00

    E. 2.18E+00

4. A cats crinkle ball toy of mass 12-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [946]

    A. 9.01E-01

    B. 9.73E-01

    C. 1.05E+00

    D. 1.14E+00

    E. 1.23E+00

5. A cats crinkle ball toy of mass 18-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [947]

    A. 1.82E+01

    B. 1.96E+01

    C. 2.12E+01

    D. 2.29E+01

The next page might contain more answer choices for this question

E. 2.47E+01

6. A cats crinkle ball toy of mass 10-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [948]

   A. 9.01E-01

   B. 9.73E-01

   C. 1.05E+00

   D. 1.14E+00

   E. 1.23E+00

7. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [949]

   A. 1.23E+00

   B. 1.32E+00

   C. 1.43E+00

   D. 1.54E+00

   E. 1.67E+00

8. A cats crinkle ball toy of mass 19-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [950]

   A. 1.73E+00

   B. 1.87E+00

   C. 2.02E+00

   D. 2.18E+00

   E. 2.35E+00

9. A cats crinkle ball toy of mass 13-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [951]

   A. 6.73E-01

   B. 7.27E-01

   C. 7.85E-01

The next page might contain more answer choices for this question

D. 8.48E-01

E. 9.15E-01

10. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 5-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [952]

A. 5.77E-01

B. 6.23E-01

C. 6.73E-01

D. 7.27E-01

E. 7.85E-01

11. A cats crinkle ball toy of mass 11-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [953]

A. 4.91E+00

B. 5.30E+00

C. 5.72E+00

D. 6.18E+00

E. 6.67E+00

12. A cats crinkle ball toy of mass 10-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [954]

A. 1.87E+00

B. 2.02E+00

C. 2.18E+00

D. 2.35E+00

E. 2.54E+00

13. A cats crinkle ball toy of mass 14-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [955]

A. 1.87E+00

B. 2.02E+00

The next page might contain more answer choices for this question

C. 2.18E+00

D. 2.35E+00

E. 2.54E+00

14. A cats crinkle ball toy of mass 11-g is thrown straight up with an initial speed of 2-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [956]

A. 4.54E+00

B. 4.91E+00

C. 5.30E+00

D. 5.72E+00

E. 6.18E+00

15. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [957]

A. 1.14E+00

B. 1.23E+00

C. 1.32E+00

D. 1.43E+00

E. 1.54E+00

16. A cats crinkle ball toy of mass 20-g is thrown straight up with an initial speed of 1-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [958]

A. 1.44E+01

B. 1.56E+01

C. 1.68E+01

D. 1.82E+01

E. 1.96E+01

17. A cats crinkle ball toy of mass 18-g is thrown straight up with an initial speed of 4-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [959]

A. 1.05E+00

The next page might contain more answer choices for this question

B. 1.14E+00

C. 1.23E+00

D. 1.32E+00

E. 1.43E+00

18. A cats crinkle ball toy of mass 16-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [960]

A. 2.18E+00

B. 2.35E+00

C. 2.54E+00

D. 2.75E+00

E. 2.97E+00

19. A cats crinkle ball toy of mass 18-g is thrown straight up with an initial speed of 3-m/s. Assume in the problem that air drag is negligible. What is the maximum height the ball reaches? [961]

A. 1.87E+00

B. 2.02E+00

C. 2.18E+00

D. 2.35E+00

E. 2.54E+00

up1-08 Q5

1. A boy throws a ball of mass 0.277-kg straight upward with an initial speed of 19-m/s. When the ball returns to the boy, its speed is 14-m/s. How much work does air resistance do on the ball during its flight? [962]

A. 1.68E+01watts

B. 1.81E+01watts

C. 1.96E+01watts

D. 2.12E+01watts

E. 2.29E+01watts

The next page might contain more answer choices for this question

2. A boy throws a ball of mass 0.178-kg straight upward with an initial speed of 21-m/s. When the ball returns to the boy, its speed is 12-m/s. How much work does air resistance do on the ball during its flight? [963]

   A. 2.10E+01watts

   B. 2.27E+01watts

   C. 2.45E+01watts

   D. 2.64E+01watts

   E. 2.85E+01watts

3. A boy throws a ball of mass 0.329-kg straight upward with an initial speed of 15-m/s. When the ball returns to the boy, its speed is 13-m/s. How much work does air resistance do on the ball during its flight? [964]

   A. 7.31E+00watts

   B. 7.90E+00watts

   C. 8.53E+00watts

   D. 9.21E+00watts

   E. 9.95E+00watts

4. A boy throws a ball of mass 0.244-kg straight upward with an initial speed of 20-m/s. When the ball returns to the boy, its speed is 21-m/s. How much work does air resistance do on the ball during its flight? [965]

   A. -3.68E+00watts

   B. -3.97E+00watts

   C. -4.29E+00watts

   D. -4.63E+00watts

   E. -5.00E+00watts

5. A boy throws a ball of mass 0.204-kg straight upward with an initial speed of 16-m/s. When the ball returns to the boy, its speed is 17-m/s. How much work does air resistance do on the ball during its flight? [966]

   A. -2.89E+00watts

   B. -3.12E+00watts

   C. -3.37E+00watts

   D. -3.64E+00watts

The next page might contain more answer choices for this question

E. -3.93E+00watts

6. A boy throws a ball of mass 0.331-kg straight upward with an initial speed of 16-m/s. When the ball returns to the boy, its speed is 12-m/s. How much work does air resistance do on the ball during its flight? [967]

A. 1.47E+01watts

B. 1.59E+01watts

C. 1.72E+01watts

D. 1.85E+01watts

E. 2.00E+01watts

7. A boy throws a ball of mass 0.211-kg straight upward with an initial speed of 22-m/s. When the ball returns to the boy, its speed is 12-m/s. How much work does air resistance do on the ball during its flight? [968]

A. 3.32E+01watts

B. 3.59E+01watts

C. 3.87E+01watts

D. 4.18E+01watts

E. 4.52E+01watts

8. A boy throws a ball of mass 0.195-kg straight upward with an initial speed of 15-m/s. When the ball returns to the boy, its speed is 18-m/s. How much work does air resistance do on the ball during its flight? [969]

A. -8.28E+00watts

B. -8.94E+00watts

C. -9.65E+00watts

D. -1.04E+01watts

E. -1.13E+01watts

9. A boy throws a ball of mass 0.19-kg straight upward with an initial speed of 19-m/s. When the ball returns to the boy, its speed is 12-m/s. How much work does air resistance do on the ball during its flight? [970]

A. 1.77E+01watts

B. 1.91E+01watts

C. 2.06E+01watts

The next page might contain more answer choices for this question

D. 2.23E+01watts

E. 2.40E+01watts

10. A boy throws a ball of mass 0.202-kg straight upward with an initial speed of 16-m/s. When the ball returns to the boy, its speed is 14-m/s. How much work does air resistance do on the ball during its flight? [971]

A. 6.06E+00watts

B. 6.54E+00watts

C. 7.07E+00watts

D. 7.63E+00watts

E. 8.24E+00watts

11. A boy throws a ball of mass 0.245-kg straight upward with an initial speed of 24-m/s. When the ball returns to the boy, its speed is 13-m/s. How much work does air resistance do on the ball during its flight? [972]

A. 4.62E+01watts

B. 4.99E+01watts

C. 5.38E+01watts

D. 5.82E+01watts

E. 6.28E+01watts

12. A boy throws a ball of mass 0.267-kg straight upward with an initial speed of 20-m/s. When the ball returns to the boy, its speed is 20-m/s. How much work does air resistance do on the ball during its flight? [973]

A. 0.00E+00watts

B. 0.00E+00watts

C. 0.00E+00watts

D. 0.00E+00watts

E. 0.00E+00watts

13. A boy throws a ball of mass 0.287-kg straight upward with an initial speed of 20-m/s. When the ball returns to the boy, its speed is 16-m/s. How much work does air resistance do on the ball during its flight? [974]

A. 1.64E+01watts

B. 1.77E+01watts

The next page might contain more answer choices for this question

C. 1.91E+01watts

D. 2.07E+01watts

E. 2.23E+01watts

14. A boy throws a ball of mass 0.34-kg straight upward with an initial speed of 15-m/s. When the ball returns to the boy, its speed is 22-m/s. How much work does air resistance do on the ball during its flight? [975]

A. -4.08E+01watts

B. -4.40E+01watts

C. -4.76E+01watts

D. -5.14E+01watts

E. -5.55E+01watts

15. A boy throws a ball of mass 0.182-kg straight upward with an initial speed of 17-m/s. When the ball returns to the boy, its speed is 21-m/s. How much work does air resistance do on the ball during its flight? [976]

A. -1.38E+01watts

B. -1.49E+01watts

C. -1.61E+01watts

D. -1.74E+01watts

E. -1.88E+01watts

16. A boy throws a ball of mass 0.197-kg straight upward with an initial speed of 22-m/s. When the ball returns to the boy, its speed is 22-m/s. How much work does air resistance do on the ball during its flight? [977]

A. 0.00E+00watts

B. 0.00E+00watts

C. 0.00E+00watts

D. 0.00E+00watts

E. 0.00E+00watts

17. A boy throws a ball of mass 0.179-kg straight upward with an initial speed of 20-m/s. When the ball returns to the boy, its speed is 21-m/s. How much work does air resistance do on the ball during its flight? [978]

A. -2.70E+00watts

The next page might contain more answer choices for this question

B. -2.91E+00watts

C. -3.15E+00watts

D. -3.40E+00watts

E. -3.67E+00watts

18. A boy throws a ball of mass 0.283-kg straight upward with an initial speed of 19-m/s. When the ball returns to the boy, its speed is 12-m/s. How much work does air resistance do on the ball during its flight? [979]

A. 3.07E+01watts

B. 3.32E+01watts

C. 3.58E+01watts

D. 3.87E+01watts

E. 4.18E+01watts

19. A boy throws a ball of mass 0.25-kg straight upward with an initial speed of 25-m/s. When the ball returns to the boy, its speed is 22-m/s. How much work does air resistance do on the ball during its flight? [980]

A. 1.63E+01watts

B. 1.76E+01watts

C. 1.90E+01watts

D. 2.06E+01watts

E. 2.22E+01watts

5 up1-09

1. A skater of mass 40-kg is carrying a box of mass 5-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [981]

A. 2.14E+01kg*m/s

B. 2.31E+01kg*m/s

C. 2.50E+01kg*m/s

D. 2.70E+01kg*m/s

E. 2.92E+01kg*m/s

The next page might contain more answer choices for this question

2. A skater of mass 40-kg is carrying a box of mass 5-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [982]

   A. 2.50E+01kg*m/s

   B. 2.70E+01kg*m/s

   C. 2.92E+01kg*m/s

   D. 3.15E+01kg*m/s

   E. 3.40E+01kg*m/s

3. What is the average momentum of an avalanche that moves a 40-cm-thick layer of snow over an area of 1.000E+02-m by 5.000E+02-m over a distance of 1.0-km down a hill in 5.5-s? Assume a density of 3.500E+02-kg/m^3 for the snow. [983]

   A. 1.27E+08kg*m/s

   B. 1.37E+08kg*m/s

   C. 1.48E+08kg*m/s

   D. 1.60E+08kg*m/s

   E. 1.73E+08kg*m/s

4. A 75-kg person is riding in a car moving at 20.0 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.0-cm. [984]

   A. 2.78E+04N

   B. 3.00E+04N

   C. 3.24E+04N

   D. 3.50E+04N

   E. 3.78E+04N

5. A 75-kg person is riding in a car moving at 20.0when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 15.0-cm. [985]

   A. 2.00E+03N

   B. 2.16E+03N

   C. 2.33E+03N

   D. 2.52E+03N

The next page might contain more answer choices for this question

E. 2.72E+03N

6. Water from a fire hose is directed horizontally against a wall at a rate of 50-kg/s and a speed of 42.0-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [986]

   A. 1.94E+03N
   B. 2.10E+03N
   C. 2.27E+03N
   D. 2.45E+03N
   E. 2.65E+03N

7. A bullet of mass 2.000E+02-g traveling horizontally towards the east with speed 4.000E+02-m/s, which strikes a block of mass 1.5-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [987]

   A. 3.68E+02m/s east
   B. 3.97E+02m/s east
   C. 4.29E+02m/s east
   D. 4.63E+02m/s east
   E. 5.00E+02m/s east

8. A bullet of mass 2.000E+02-g traveling horizontally towards the east with speed 4.000E+02-m/s, which strikes a block of mass 1.5-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [988]

   A. 4.38E+02N towards the bullet
   B. 4.73E+02N towards the bullet
   C. 5.11E+02N towards the bullet
   D. 5.51E+02N towards the bullet
   E. 5.96E+02N towards the bullet

9. A bullet of mass 2.000E+02-g traveling horizontally towards the east with speed 4.000E+02-m/s, which strikes a block of mass 1.5-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [989]

The next page might contain more answer choices for this question

A. 4.73E+02N towards the block

B. 5.11E+02N towards the block

C. 5.51E+02N towards the block

D. 5.96E+02N towards the block

E. 6.43E+02N towards the block

10. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.5-m/s and the trailing skater moving at 6.2-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 50-kg leading skater, what is their speed after he picks her up? [990]

A. 5.08E+00m/s

B. 5.48E+00m/s

C. 5.92E+00m/s

D. 6.39E+00m/s

E. 6.91E+00m/s

11. A 5.5-kg bowling ball moving at 9.0-m/s collides with a 0.85-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.0-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [991]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

12. A 90.0-kg ice hockey player hits a 0.15-kg puck, giving the puck a velocity of 45.0-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 15.0-m away? [992]

A. 1.98E-02m

B. 2.14E-02m

C. 2.31E-02m

D. 2.50E-02m

E. 2.70E-02m

The next page might contain more answer choices for this question

5.1 Renditions

up1-09 Q1

1. A skater of mass 44-kg is carrying a box of mass 5-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [993]

   A. 2.78E+01kg*m/s

   B. 3.00E+01kg*m/s

   C. 3.24E+01kg*m/s

   D. 3.50E+01kg*m/s

   E. 3.78E+01kg*m/s

2. A skater of mass 46-kg is carrying a box of mass 7-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [994]

   A. 2.40E+01kg*m/s

   B. 2.59E+01kg*m/s

   C. 2.80E+01kg*m/s

   D. 3.02E+01kg*m/s

   E. 3.27E+01kg*m/s

3. A skater of mass 30-kg is carrying a box of mass 6-kg. The skater has a speed of 3-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [995]

   A. 1.32E+01kg*m/s

   B. 1.43E+01kg*m/s

   C. 1.54E+01kg*m/s

   D. 1.67E+01kg*m/s

   E. 1.80E+01kg*m/s

4. A skater of mass 42-kg is carrying a box of mass 4-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [996]

   A. 2.00E+01kg*m/s

   B. 2.16E+01kg*m/s

The next page might contain more answer choices for this question

C. 2.33E+01kg*m/s

D. 2.52E+01kg*m/s

E. 2.72E+01kg*m/s

5. A skater of mass 40-kg is carrying a box of mass 5-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [997]

A. 3.50E+01kg*m/s

B. 3.78E+01kg*m/s

C. 4.08E+01kg*m/s

D. 4.41E+01kg*m/s

E. 4.76E+01kg*m/s

6. A skater of mass 45-kg is carrying a box of mass 3-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [998]

A. 1.67E+01kg*m/s

B. 1.80E+01kg*m/s

C. 1.94E+01kg*m/s

D. 2.10E+01kg*m/s

E. 2.27E+01kg*m/s

7. A skater of mass 47-kg is carrying a box of mass 4-kg. The skater has a speed of 3-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [999]

A. 9.53E+00kg*m/s

B. 1.03E+01kg*m/s

C. 1.11E+01kg*m/s

D. 1.20E+01kg*m/s

E. 1.30E+01kg*m/s

8. A skater of mass 34-kg is carrying a box of mass 4-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1000]

A. 2.22E+01kg*m/s

The next page might contain more answer choices for this question

B. 2.40E+01kg*m/s

C. 2.59E+01kg*m/s

D. 2.80E+01kg*m/s

E. 3.02E+01kg*m/s

9. A skater of mass 39-kg is carrying a box of mass 4-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1001]

A. 2.80E+01kg*m/s

B. 3.02E+01kg*m/s

C. 3.27E+01kg*m/s

D. 3.53E+01kg*m/s

E. 3.81E+01kg*m/s

10. A skater of mass 39-kg is carrying a box of mass 4-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1002]

A. 1.91E+01kg*m/s

B. 2.06E+01kg*m/s

C. 2.22E+01kg*m/s

D. 2.40E+01kg*m/s

E. 2.59E+01kg*m/s

11. A skater of mass 32-kg is carrying a box of mass 5-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1003]

A. 1.85E+01kg*m/s

B. 2.00E+01kg*m/s

C. 2.16E+01kg*m/s

D. 2.33E+01kg*m/s

E. 2.52E+01kg*m/s

12. A skater of mass 32-kg is carrying a box of mass 7-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1004]

The next page might contain more answer choices for this question

A. 2.59E+01kg*m/s

B. 2.80E+01kg*m/s

C. 3.02E+01kg*m/s

D. 3.27E+01kg*m/s

E. 3.53E+01kg*m/s

13. A skater of mass 50-kg is carrying a box of mass 7-kg. The skater has a speed of 3-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1005]

A. 1.80E+01kg*m/s

B. 1.94E+01kg*m/s

C. 2.10E+01kg*m/s

D. 2.27E+01kg*m/s

E. 2.45E+01kg*m/s

14. A skater of mass 37-kg is carrying a box of mass 7-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1006]

A. 4.20E+01kg*m/s

B. 4.54E+01kg*m/s

C. 4.90E+01kg*m/s

D. 5.29E+01kg*m/s

E. 5.72E+01kg*m/s

15. A skater of mass 33-kg is carrying a box of mass 5-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1007]

A. 1.47E+01kg*m/s

B. 1.59E+01kg*m/s

C. 1.71E+01kg*m/s

D. 1.85E+01kg*m/s

E. 2.00E+01kg*m/s

16. A skater of mass 33-kg is carrying a box of mass 5-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1008]

The next page might contain more answer choices for this question

A. 2.14E+01kg*m/s

B. 2.31E+01kg*m/s

C. 2.50E+01kg*m/s

D. 2.70E+01kg*m/s

E. 2.92E+01kg*m/s

17. A skater of mass 35-kg is carrying a box of mass 4-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1009]

A. 2.22E+01kg*m/s

B. 2.40E+01kg*m/s

C. 2.59E+01kg*m/s

D. 2.80E+01kg*m/s

E. 3.02E+01kg*m/s

18. A skater of mass 49-kg is carrying a box of mass 4-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1010]

A. 1.76E+01kg*m/s

B. 1.91E+01kg*m/s

C. 2.06E+01kg*m/s

D. 2.22E+01kg*m/s

E. 2.40E+01kg*m/s

19. A skater of mass 32-kg is carrying a box of mass 7-kg. The skater has a speed of 3-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor. [1011]

A. 1.67E+01kg*m/s

B. 1.80E+01kg*m/s

C. 1.94E+01kg*m/s

D. 2.10E+01kg*m/s

E. 2.27E+01kg*m/s

The next page might contain more answer choices for this question

up1-09 Q2

1. A skater of mass 43-kg is carrying a box of mass 3-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1012]

   A. 1.32E+01kg*m/s

   B. 1.43E+01kg*m/s

   C. 1.54E+01kg*m/s

   D. 1.67E+01kg*m/s

   E. 1.80E+01kg*m/s

2. A skater of mass 32-kg is carrying a box of mass 7-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1013]

   A. 2.06E+01kg*m/s

   B. 2.22E+01kg*m/s

   C. 2.40E+01kg*m/s

   D. 2.59E+01kg*m/s

   E. 2.80E+01kg*m/s

3. A skater of mass 50-kg is carrying a box of mass 4-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1014]

   A. 2.80E+01kg*m/s

   B. 3.02E+01kg*m/s

   C. 3.27E+01kg*m/s

   D. 3.53E+01kg*m/s

   E. 3.81E+01kg*m/s

4. A skater of mass 35-kg is carrying a box of mass 7-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1015]

The next page might contain more answer choices for this question

A. 4.90E+01kg*m/s

B. 5.29E+01kg*m/s

C. 5.72E+01kg*m/s

D. 6.17E+01kg*m/s

E. 6.67E+01kg*m/s

5. A skater of mass 47-kg is carrying a box of mass 6-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1016]

A. 3.60E+01kg*m/s

B. 3.89E+01kg*m/s

C. 4.20E+01kg*m/s

D. 4.53E+01kg*m/s

E. 4.90E+01kg*m/s

6. A skater of mass 38-kg is carrying a box of mass 3-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1017]

A. 1.11E+01kg*m/s

B. 1.20E+01kg*m/s

C. 1.30E+01kg*m/s

D. 1.40E+01kg*m/s

E. 1.51E+01kg*m/s

7. A skater of mass 32-kg is carrying a box of mass 3-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1018]

A. 1.50E+01kg*m/s

B. 1.62E+01kg*m/s

C. 1.75E+01kg*m/s

D. 1.89E+01kg*m/s

E. 2.04E+01kg*m/s

The next page might contain more answer choices for this question

8. A skater of mass 37-kg is carrying a box of mass 7-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1019]

    A. 4.20E+01kg*m/s

    B. 4.54E+01kg*m/s

    C. 4.90E+01kg*m/s

    D. 5.29E+01kg*m/s

    E. 5.72E+01kg*m/s

9. A skater of mass 50-kg is carrying a box of mass 7-kg. The skater has a speed of 4-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1020]

    A. 2.59E+01kg*m/s

    B. 2.80E+01kg*m/s

    C. 3.02E+01kg*m/s

    D. 3.27E+01kg*m/s

    E. 3.53E+01kg*m/s

10. A skater of mass 45-kg is carrying a box of mass 5-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1021]

    A. 1.98E+01kg*m/s

    B. 2.14E+01kg*m/s

    C. 2.31E+01kg*m/s

    D. 2.50E+01kg*m/s

    E. 2.70E+01kg*m/s

11. A skater of mass 36-kg is carrying a box of mass 6-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1022]

    A. 2.38E+01kg*m/s

The next page might contain more answer choices for this question

B. 2.57E+01kg*m/s

C. 2.78E+01kg*m/s

D. 3.00E+01kg*m/s

E. 3.24E+01kg*m/s

12. A skater of mass 38-kg is carrying a box of mass 5-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1023]

A. 2.38E+01kg*m/s

B. 2.57E+01kg*m/s

C. 2.78E+01kg*m/s

D. 3.00E+01kg*m/s

E. 3.24E+01kg*m/s

13. A skater of mass 47-kg is carrying a box of mass 6-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1024]

A. 3.60E+01kg*m/s

B. 3.89E+01kg*m/s

C. 4.20E+01kg*m/s

D. 4.53E+01kg*m/s

E. 4.90E+01kg*m/s

14. A skater of mass 33-kg is carrying a box of mass 4-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1025]

A. 1.85E+01kg*m/s

B. 2.00E+01kg*m/s

C. 2.16E+01kg*m/s

D. 2.33E+01kg*m/s

E. 2.52E+01kg*m/s

The next page might contain more answer choices for this question

15. A skater of mass 31-kg is carrying a box of mass 3-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1026]

    A. 1.43E+01kg*m/s

    B. 1.54E+01kg*m/s

    C. 1.67E+01kg*m/s

    D. 1.80E+01kg*m/s

    E. 1.94E+01kg*m/s

16. A skater of mass 39-kg is carrying a box of mass 5-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1027]

    A. 3.00E+01kg*m/s

    B. 3.24E+01kg*m/s

    C. 3.50E+01kg*m/s

    D. 3.78E+01kg*m/s

    E. 4.08E+01kg*m/s

17. A skater of mass 32-kg is carrying a box of mass 4-kg. The skater has a speed of 7-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1028]

    A. 2.59E+01kg*m/s

    B. 2.80E+01kg*m/s

    C. 3.02E+01kg*m/s

    D. 3.27E+01kg*m/s

    E. 3.53E+01kg*m/s

18. A skater of mass 44-kg is carrying a box of mass 6-kg. The skater has a speed of 6-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1029]

    A. 2.65E+01kg*m/s

The next page might contain more answer choices for this question

B. 2.86E+01kg*m/s

C. 3.09E+01kg*m/s

D. 3.33E+01kg*m/s

E. 3.60E+01kg*m/s

19. A skater of mass 39-kg is carrying a box of mass 4-kg. The skater has a speed of 5-m/s with respect to the floor and is gliding without any friction on a smooth surface. Find the momentum of the box with respect to the floor after she puts the box down on the frictionless skating surface. [1030]

A. 1.59E+01kg*m/s

B. 1.71E+01kg*m/s

C. 1.85E+01kg*m/s

D. 2.00E+01kg*m/s

E. 2.16E+01kg*m/s

up1-09 Q3

1. What is the average momentum of an avalanche that moves a 34-cm-thick layer of snow over an area of 1.120E+02-m by 4.680E+02-m over a distance of 0.833-km down a hill in 4.97-s? Assume a density of 3.220E+02-kg/m^3 for the snow. [1031]

A. 7.07E+07kg*m/s

B. 7.64E+07kg*m/s

C. 8.25E+07kg*m/s

D. 8.91E+07kg*m/s

E. 9.62E+07kg*m/s

2. What is the average momentum of an avalanche that moves a 35-cm-thick layer of snow over an area of 89-m by 5.170E+02-m over a distance of 1.21-km down a hill in 4.53-s? Assume a density of 3.280E+02-kg/m^3 for the snow. [1032]

A. 1.04E+08kg*m/s

B. 1.12E+08kg*m/s

C. 1.21E+08kg*m/s

D. 1.31E+08kg*m/s

E. 1.41E+08kg*m/s

The next page might contain more answer choices for this question

3. What is the average momentum of an avalanche that moves a 42-cm-thick layer of snow over an area of 1.020E+02-m by 4.370E+02-m over a distance of 0.93-km down a hill in 4.63-s? Assume a density of 3.290E+02-kg/m^3 for the snow. [1033]

   A. 1.15E+08kg*m/s

   B. 1.24E+08kg*m/s

   C. 1.34E+08kg*m/s

   D. 1.44E+08kg*m/s

   E. 1.56E+08kg*m/s

4. What is the average momentum of an avalanche that moves a 39-cm-thick layer of snow over an area of 94-m by 5.560E+02-m over a distance of 0.835-km down a hill in 5.3-s? Assume a density of 3.960E+02-kg/m^3 for the snow. [1034]

   A. 1.18E+08kg*m/s

   B. 1.27E+08kg*m/s

   C. 1.37E+08kg*m/s

   D. 1.48E+08kg*m/s

   E. 1.60E+08kg*m/s

5. What is the average momentum of an avalanche that moves a 42-cm-thick layer of snow over an area of 1.060E+02-m by 4.410E+02-m over a distance of 1.09-km down a hill in 4.68-s? Assume a density of 3.240E+02-kg/m^3 for the snow. [1035]

   A. 1.18E+08kg*m/s

   B. 1.27E+08kg*m/s

   C. 1.37E+08kg*m/s

   D. 1.48E+08kg*m/s

   E. 1.60E+08kg*m/s

6. What is the average momentum of an avalanche that moves a 34-cm-thick layer of snow over an area of 9.900E+01-m by 4.050E+02-m over a distance of 1.2-km down a hill in 6.39-s? Assume a density of 3.410E+02-kg/m^3 for the snow. [1036]

   A. 8.73E+07kg*m/s

   B. 9.43E+07kg*m/s

   C. 1.02E+08kg*m/s

   D. 1.10E+08kg*m/s

The next page might contain more answer choices for this question

E. 1.19E+08kg*m/s

7. What is the average momentum of an avalanche that moves a 30-cm-thick layer of snow over an area of 1.080E+02-m by 4.060E+02-m over a distance of 1.23-km down a hill in 5.8-s? Assume a density of 3.610E+02-kg/m^3 for the snow. [1037]

A. 9.32E+07kg*m/s

B. 1.01E+08kg*m/s

C. 1.09E+08kg*m/s

D. 1.17E+08kg*m/s

E. 1.27E+08kg*m/s

8. What is the average momentum of an avalanche that moves a 47-cm-thick layer of snow over an area of 83-m by 4.900E+02-m over a distance of 1.08-km down a hill in 5.06-s? Assume a density of 3.390E+02-kg/m^3 for the snow. [1038]

A. 1.28E+08kg*m/s

B. 1.38E+08kg*m/s

C. 1.49E+08kg*m/s

D. 1.61E+08kg*m/s

E. 1.74E+08kg*m/s

9. What is the average momentum of an avalanche that moves a 33-cm-thick layer of snow over an area of 83-m by 4.170E+02-m over a distance of 0.85-km down a hill in 4.5-s? Assume a density of 3.060E+02-kg/m^3 for the snow. [1039]

A. 6.11E+07kg*m/s

B. 6.60E+07kg*m/s

C. 7.13E+07kg*m/s

D. 7.70E+07kg*m/s

E. 8.32E+07kg*m/s

10. What is the average momentum of an avalanche that moves a 39-cm-thick layer of snow over an area of 83-m by 5.150E+02-m over a distance of 0.948-km down a hill in 5.85-s? Assume a density of 3.130E+02-kg/m^3 for the snow. [1040]

A. 7.83E+07kg*m/s

B. 8.46E+07kg*m/s

C. 9.13E+07kg*m/s

The next page might contain more answer choices for this question

D. 9.86E+07kg*m/s

E. 1.07E+08kg*m/s

11. What is the average momentum of an avalanche that moves a 49-cm-thick layer of snow over an area of 85-m by 5.100E+02-m over a distance of 0.866-km down a hill in 5.89-s? Assume a density of 3.980E+02-kg/m^3 for the snow. [1041]

A. 1.15E+08kg*m/s

B. 1.24E+08kg*m/s

C. 1.34E+08kg*m/s

D. 1.45E+08kg*m/s

E. 1.57E+08kg*m/s

12. What is the average momentum of an avalanche that moves a 38-cm-thick layer of snow over an area of 91-m by 5.820E+02-m over a distance of 1.17-km down a hill in 5.73-s? Assume a density of 3.530E+02-kg/m^3 for the snow. [1042]

A. 1.07E+08kg*m/s

B. 1.15E+08kg*m/s

C. 1.24E+08kg*m/s

D. 1.34E+08kg*m/s

E. 1.45E+08kg*m/s

13. What is the average momentum of an avalanche that moves a 31-cm-thick layer of snow over an area of 1.090E+02-m by 5.520E+02-m over a distance of 1.06-km down a hill in 5.74-s? Assume a density of 3.000E+02-kg/m^3 for the snow. [1043]

A. 1.03E+08kg*m/s

B. 1.12E+08kg*m/s

C. 1.21E+08kg*m/s

D. 1.30E+08kg*m/s

E. 1.41E+08kg*m/s

14. What is the average momentum of an avalanche that moves a 33-cm-thick layer of snow over an area of 1.070E+02-m by 5.660E+02-m over a distance of 1.2-km down a hill in 5.42-s? Assume a density of 3.320E+02-kg/m^3 for the snow. [1044]

A. 1.17E+08kg*m/s

B. 1.26E+08kg*m/s

The next page might contain more answer choices for this question

C. 1.36E+08kg*m/s

D. 1.47E+08kg*m/s

E. 1.59E+08kg*m/s

15. What is the average momentum of an avalanche that moves a 39-cm-thick layer of snow over an area of 1.130E+02-m by 5.500E+02-m over a distance of 0.887-km down a hill in 4.68-s? Assume a density of 3.740E+02-kg/m^3 for the snow. [1045]

A. 1.47E+08kg*m/s

B. 1.59E+08kg*m/s

C. 1.72E+08kg*m/s

D. 1.86E+08kg*m/s

E. 2.00E+08kg*m/s

16. What is the average momentum of an avalanche that moves a 47-cm-thick layer of snow over an area of 84-m by 4.560E+02-m over a distance of 1.05-km down a hill in 4.83-s? Assume a density of 3.660E+02-kg/m^3 for the snow. [1046]

A. 1.05E+08kg*m/s

B. 1.14E+08kg*m/s

C. 1.23E+08kg*m/s

D. 1.33E+08kg*m/s

E. 1.43E+08kg*m/s

17. What is the average momentum of an avalanche that moves a 30-cm-thick layer of snow over an area of 1.180E+02-m by 5.470E+02-m over a distance of 0.953-km down a hill in 6.3-s? Assume a density of 3.080E+02-kg/m^3 for the snow. [1047]

A. 6.63E+07kg*m/s

B. 7.16E+07kg*m/s

C. 7.73E+07kg*m/s

D. 8.35E+07kg*m/s

E. 9.02E+07kg*m/s

18. What is the average momentum of an avalanche that moves a 32-cm-thick layer of snow over an area of 1.000E+02-m by 4.660E+02-m over a distance of 1.02-km down a hill in 6.37-s? Assume a density of 3.020E+02-kg/m^3 for the snow. [1048]

A. 5.72E+07kg*m/s

The next page might contain more answer choices for this question

B. 6.18E+07kg*m/s

C. 6.68E+07kg*m/s

D. 7.21E+07kg*m/s

E. 7.79E+07kg*m/s

19. What is the average momentum of an avalanche that moves a 45-cm-thick layer of snow over an area of 1.110E+02-m by 5.170E+02-m over a distance of 1.05-km down a hill in 5.12-s? Assume a density of 3.030E+02-kg/m^3 for the snow. [1049]

A. 1.49E+08kg*m/s

B. 1.60E+08kg*m/s

C. 1.73E+08kg*m/s

D. 1.87E+08kg*m/s

E. 2.02E+08kg*m/s

up1-09 Q4

1. A 81-kg person is riding in a car moving at 19.1 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.2-cm. [1050]

A. 1.81E+04N

B. 1.95E+04N

C. 2.11E+04N

D. 2.28E+04N

E. 2.46E+04N

2. A 73-kg person is riding in a car moving at 14.9 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.952-cm. [1051]

A. 1.70E+04N

B. 1.84E+04N

C. 1.99E+04N

D. 2.14E+04N

E. 2.32E+04N

The next page might contain more answer choices for this question

3. A 73-kg person is riding in a car moving at 15.0 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.694-cm. [1052]

   A. 2.37E+04N

   B. 2.56E+04N

   C. 2.76E+04N

   D. 2.98E+04N

   E. 3.22E+04N

4. A 65-kg person is riding in a car moving at 10.8 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.87-cm. [1053]

   A. 8.71E+03N

   B. 9.41E+03N

   C. 1.02E+04N

   D. 1.10E+04N

   E. 1.19E+04N

5. A 80-kg person is riding in a car moving at 23.3 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.995-cm. [1054]

   A. 3.74E+04N

   B. 4.04E+04N

   C. 4.36E+04N

   D. 4.71E+04N

   E. 5.09E+04N

6. A 70-kg person is riding in a car moving at 19.6 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.41-cm. [1055]

   A. 1.77E+04N

   B. 1.91E+04N

   C. 2.06E+04N

   D. 2.22E+04N

The next page might contain more answer choices for this question

E. 2.40E+04N

7. A 75-kg person is riding in a car moving at 18.2 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.08-cm. [1056]

   A. 1.97E+04N

   B. 2.13E+04N

   C. 2.30E+04N

   D. 2.48E+04N

   E. 2.68E+04N

8. A 76-kg person is riding in a car moving at 24.8 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.716-cm. [1057]

   A. 5.60E+04N

   B. 6.04E+04N

   C. 6.53E+04N

   D. 7.05E+04N

   E. 7.61E+04N

9. A 71-kg person is riding in a car moving at 19.5 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.598-cm. [1058]

   A. 3.32E+04N

   B. 3.58E+04N

   C. 3.87E+04N

   D. 4.18E+04N

   E. 4.51E+04N

10. A 64-kg person is riding in a car moving at 10.0 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.42-cm. [1059]

    A. 4.17E+03N

    B. 4.51E+03N

    C. 4.87E+03N

The next page might contain more answer choices for this question

D. 5.26E+03N

E. 5.68E+03N

11. A 74-kg person is riding in a car moving at 24.4 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.81-cm. [1060]

A. 5.04E+04N

B. 5.44E+04N

C. 5.87E+04N

D. 6.34E+04N

E. 6.85E+04N

12. A 78-kg person is riding in a car moving at 27.5 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.777-cm. [1061]

A. 7.59E+04N

B. 8.20E+04N

C. 8.85E+04N

D. 9.56E+04N

E. 1.03E+05N

13. A 76-kg person is riding in a car moving at 16.5 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.27-cm. [1062]

A. 1.51E+04N

B. 1.63E+04N

C. 1.76E+04N

D. 1.90E+04N

E. 2.05E+04N

14. A 82-kg person is riding in a car moving at 28.1 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.935-cm. [1063]

A. 5.50E+04N

B. 5.94E+04N

The next page might contain more answer choices for this question

C. 6.41E+04N

D. 6.92E+04N

E. 7.48E+04N

15. A 68-kg person is riding in a car moving at 12.9 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.33-cm. [1064]

A. 6.25E+03N

B. 6.75E+03N

C. 7.29E+03N

D. 7.88E+03N

E. 8.51E+03N

16. A 79-kg person is riding in a car moving at 12.2 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.991-cm. [1065]

A. 1.10E+04N

B. 1.19E+04N

C. 1.28E+04N

D. 1.38E+04N

E. 1.49E+04N

17. A 64-kg person is riding in a car moving at 23.8 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 0.855-cm. [1066]

A. 3.37E+04N

B. 3.64E+04N

C. 3.93E+04N

D. 4.24E+04N

E. 4.58E+04N

18. A 65-kg person is riding in a car moving at 18.9 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.38-cm. [1067]

A. 1.44E+04N

The next page might contain more answer choices for this question

B. 1.56E+04N

C. 1.68E+04N

D. 1.82E+04N

E. 1.96E+04N

19. A 69-kg person is riding in a car moving at 18.5 when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by a padded dashboard that compresses an average of 1.37-cm. [1068]

A. 1.60E+04N

B. 1.72E+04N

C. 1.86E+04N

D. 2.01E+04N

E. 2.17E+04N

up1-09 Q5

1. A 66-kg person is riding in a car moving at 28.7when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 19.4-cm. [1069]

A. 2.22E+03N

B. 2.40E+03N

C. 2.59E+03N

D. 2.80E+03N

E. 3.03E+03N

2. A 63-kg person is riding in a car moving at 19.6when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 11.3-cm. [1070]

A. 1.57E+03N

B. 1.70E+03N

C. 1.84E+03N

D. 1.98E+03N

E. 2.14E+03N

The next page might contain more answer choices for this question

3. A 64-kg person is riding in a car moving at 12.6when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 19.5-cm. [1071]

    A. 3.83E+02N

    B. 4.14E+02N

    C. 4.47E+02N

    D. 4.82E+02N

    E. 5.21E+02N

4. A 69-kg person is riding in a car moving at 28.2when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 10.8-cm. [1072]

    A. 4.70E+03N

    B. 5.08E+03N

    C. 5.49E+03N

    D. 5.93E+03N

    E. 6.40E+03N

5. A 82-kg person is riding in a car moving at 28.8when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 15.0-cm. [1073]

    A. 4.53E+03N

    B. 4.90E+03N

    C. 5.29E+03N

    D. 5.71E+03N

    E. 6.17E+03N

6. A 81-kg person is riding in a car moving at 15.4when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 15.5-cm. [1074]

    A. 9.11E+02N

    B. 9.84E+02N

    C. 1.06E+03N

    D. 1.15E+03N

The next page might contain more answer choices for this question

E. 1.24E+03N

7. A 75-kg person is riding in a car moving at 23.4when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 19.6-cm. [1075]

   A. 1.54E+03N

   B. 1.66E+03N

   C. 1.80E+03N

   D. 1.94E+03N

   E. 2.10E+03N

8. A 71-kg person is riding in a car moving at 14.2when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 16.9-cm. [1076]

   A. 7.84E+02N

   B. 8.47E+02N

   C. 9.15E+02N

   D. 9.88E+02N

   E. 1.07E+03N

9. A 73-kg person is riding in a car moving at 12.9when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 15.8-cm. [1077]

   A. 6.10E+02N

   B. 6.59E+02N

   C. 7.12E+02N

   D. 7.69E+02N

   E. 8.30E+02N

10. A 60-kg person is riding in a car moving at 25.8when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 10.8-cm. [1078]

    A. 2.94E+03N

    B. 3.17E+03N

    C. 3.42E+03N

The next page might contain more answer choices for this question

D. 3.70E+03N

E. 3.99E+03N

11. A 60-kg person is riding in a car moving at 11.8when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 17.9-cm. [1079]

A. 4.32E+02N

B. 4.67E+02N

C. 5.04E+02N

D. 5.44E+02N

E. 5.88E+02N

12. A 88-kg person is riding in a car moving at 21.2when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 15.0-cm. [1080]

A. 2.09E+03N

B. 2.26E+03N

C. 2.44E+03N

D. 2.64E+03N

E. 2.85E+03N

13. A 88-kg person is riding in a car moving at 10.2when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 10.2-cm. [1081]

A. 8.31E+02N

B. 8.98E+02N

C. 9.69E+02N

D. 1.05E+03N

E. 1.13E+03N

14. A 90-kg person is riding in a car moving at 14.2when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 15.5-cm. [1082]

A. 1.17E+03N

B. 1.26E+03N

The next page might contain more answer choices for this question

C. 1.37E+03N

D. 1.47E+03N

E. 1.59E+03N

15. A 67-kg person is riding in a car moving at 21.1when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 12.8-cm. [1083]

A. 2.16E+03N

B. 2.33E+03N

C. 2.52E+03N

D. 2.72E+03N

E. 2.94E+03N

16. A 85-kg person is riding in a car moving at 19.9when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 11.6-cm. [1084]

A. 2.13E+03N

B. 2.30E+03N

C. 2.49E+03N

D. 2.69E+03N

E. 2.90E+03N

17. A 84-kg person is riding in a car moving at 18.8when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 19.6-cm. [1085]

A. 1.20E+03N

B. 1.30E+03N

C. 1.40E+03N

D. 1.51E+03N

E. 1.64E+03N

18. A 86-kg person is riding in a car moving at 26.7when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 18.9-cm. [1086]

A. 2.78E+03N

The next page might contain more answer choices for this question

B. 3.00E+03N

C. 3.24E+03N

D. 3.50E+03N

E. 3.78E+03N

19. A 72-kg person is riding in a car moving at 29.5when the car runs into a bridge abutment. Calculate the average force on the person if he is stopped by an air bag that compresses an average of 11.4-cm. [1087]

A. 4.36E+03N

B. 4.71E+03N

C. 5.09E+03N

D. 5.50E+03N

E. 5.94E+03N

up1-09 Q6

1. Water from a fire hose is directed horizontally against a wall at a rate of 47-kg/s and a speed of 48.8-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1088]

A. 2.29E+03N

B. 2.48E+03N

C. 2.68E+03N

D. 2.89E+03N

E. 3.12E+03N

2. Water from a fire hose is directed horizontally against a wall at a rate of 44-kg/s and a speed of 31.9-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1089]

A. 1.03E+03N

B. 1.11E+03N

C. 1.20E+03N

D. 1.30E+03N

E. 1.40E+03N

The next page might contain more answer choices for this question

3. Water from a fire hose is directed horizontally against a wall at a rate of 55-kg/s and a speed of 36.8-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1090]

   A. 2.02E+03N

   B. 2.19E+03N

   C. 2.36E+03N

   D. 2.55E+03N

   E. 2.75E+03N

4. Water from a fire hose is directed horizontally against a wall at a rate of 53-kg/s and a speed of 52.2-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1091]

   A. 2.77E+03N

   B. 2.99E+03N

   C. 3.23E+03N

   D. 3.49E+03N

   E. 3.76E+03N

5. Water from a fire hose is directed horizontally against a wall at a rate of 52-kg/s and a speed of 41.6-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1092]

   A. 2.00E+03N

   B. 2.16E+03N

   C. 2.34E+03N

   D. 2.52E+03N

   E. 2.73E+03N

6. Water from a fire hose is directed horizontally against a wall at a rate of 48-kg/s and a speed of 34.2-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1093]

   A. 1.21E+03N

   B. 1.30E+03N

   C. 1.41E+03N

   D. 1.52E+03N

The next page might contain more answer choices for this question

E. 1.64E+03N

7. Water from a fire hose is directed horizontally against a wall at a rate of 44-kg/s and a speed of 37.8-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1094]

   A. 1.43E+03N

   B. 1.54E+03N

   C. 1.66E+03N

   D. 1.80E+03N

   E. 1.94E+03N

8. Water from a fire hose is directed horizontally against a wall at a rate of 48-kg/s and a speed of 42.9-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1095]

   A. 1.63E+03N

   B. 1.77E+03N

   C. 1.91E+03N

   D. 2.06E+03N

   E. 2.22E+03N

9. Water from a fire hose is directed horizontally against a wall at a rate of 56-kg/s and a speed of 38.7-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1096]

   A. 2.17E+03N

   B. 2.34E+03N

   C. 2.53E+03N

   D. 2.73E+03N

   E. 2.95E+03N

10. Water from a fire hose is directed horizontally against a wall at a rate of 53-kg/s and a speed of 43.5-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1097]

    A. 2.31E+03N

    B. 2.49E+03N

    C. 2.69E+03N

The next page might contain more answer choices for this question

D. 2.90E+03N

E. 3.14E+03N

11. Water from a fire hose is directed horizontally against a wall at a rate of 41-kg/s and a speed of 34.2-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1098]

A. 1.03E+03N

B. 1.11E+03N

C. 1.20E+03N

D. 1.30E+03N

E. 1.40E+03N

12. Water from a fire hose is directed horizontally against a wall at a rate of 54-kg/s and a speed of 39.5-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1099]

A. 1.83E+03N

B. 1.97E+03N

C. 2.13E+03N

D. 2.30E+03N

E. 2.49E+03N

13. Water from a fire hose is directed horizontally against a wall at a rate of 45-kg/s and a speed of 35.6-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1100]

A. 1.37E+03N

B. 1.48E+03N

C. 1.60E+03N

D. 1.73E+03N

E. 1.87E+03N

14. Water from a fire hose is directed horizontally against a wall at a rate of 53-kg/s and a speed of 50.3-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1101]

A. 2.47E+03N

B. 2.67E+03N

The next page might contain more answer choices for this question

C. 2.88E+03N

D. 3.11E+03N

E. 3.36E+03N

15. Water from a fire hose is directed horizontally against a wall at a rate of 48-kg/s and a speed of 41.6-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1102]

A. 1.47E+03N

B. 1.59E+03N

C. 1.71E+03N

D. 1.85E+03N

E. 2.00E+03N

16. Water from a fire hose is directed horizontally against a wall at a rate of 55-kg/s and a speed of 47.8-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1103]

A. 2.43E+03N

B. 2.63E+03N

C. 2.84E+03N

D. 3.07E+03N

E. 3.31E+03N

17. Water from a fire hose is directed horizontally against a wall at a rate of 46-kg/s and a speed of 52.1-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1104]

A. 1.76E+03N

B. 1.90E+03N

C. 2.05E+03N

D. 2.22E+03N

E. 2.40E+03N

18. Water from a fire hose is directed horizontally against a wall at a rate of 41-kg/s and a speed of 51.7-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1105]

A. 2.12E+03N

The next page might contain more answer choices for this question

B. 2.29E+03N

C. 2.47E+03N

D. 2.67E+03N

E. 2.88E+03N

19. Water from a fire hose is directed horizontally against a wall at a rate of 49-kg/s and a speed of 52.2-m/s. Calculate the force exerted on the wall, assuming the waters horizontal momentum is reduced to zero. [1106]

A. 2.19E+03N

B. 2.37E+03N

C. 2.56E+03N

D. 2.76E+03N

E. 2.98E+03N

up1-09 Q7

1. A bullet of mass 2.480E+02-g traveling horizontally towards the east with speed 4.880E+02-m/s, which strikes a block of mass 1.48-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1107]

A. 4.85E+02m/s east

B. 5.24E+02m/s east

C. 5.66E+02m/s east

D. 6.11E+02m/s east

E. 6.60E+02m/s east

2. A bullet of mass 2.470E+02-g traveling horizontally towards the east with speed 4.300E+02-m/s, which strikes a block of mass 1.88-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1108]

A. 3.39E+02m/s east

B. 3.66E+02m/s east

C. 3.95E+02m/s east

The next page might contain more answer choices for this question

D. 4.27E+02m/s east

E. 4.61E+02m/s east

3. A bullet of mass 1.520E+02-g traveling horizontally towards the east with speed 3.210E+02-m/s, which strikes a block of mass 1.94-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1109]

A. 2.52E+02m/s east

B. 2.72E+02m/s east

C. 2.93E+02m/s east

D. 3.17E+02m/s east

E. 3.42E+02m/s east

4. A bullet of mass 1.670E+02-g traveling horizontally towards the east with speed 4.940E+02-m/s, which strikes a block of mass 1.9-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1110]

A. 4.52E+02m/s east

B. 4.88E+02m/s east

C. 5.28E+02m/s east

D. 5.70E+02m/s east

E. 6.15E+02m/s east

5. A bullet of mass 1.710E+02-g traveling horizontally towards the east with speed 3.040E+02-m/s, which strikes a block of mass 1.63-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1111]

A. 2.21E+02m/s east

B. 2.39E+02m/s east

C. 2.58E+02m/s east

D. 2.79E+02m/s east

E. 3.01E+02m/s east

The next page might contain more answer choices for this question

6. A bullet of mass 2.210E+02-g traveling horizontally towards the east with speed 3.240E+02-m/s, which strikes a block of mass 1.63-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1112]

   A. 2.76E+02m/s east

   B. 2.98E+02m/s east

   C. 3.22E+02m/s east

   D. 3.47E+02m/s east

   E. 3.75E+02m/s east

7. A bullet of mass 2.260E+02-g traveling horizontally towards the east with speed 4.820E+02-m/s, which strikes a block of mass 1.21-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1113]

   A. 4.44E+02m/s east

   B. 4.79E+02m/s east

   C. 5.18E+02m/s east

   D. 5.59E+02m/s east

   E. 6.04E+02m/s east

8. A bullet of mass 1.860E+02-g traveling horizontally towards the east with speed 4.810E+02-m/s, which strikes a block of mass 1.69-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1114]

   A. 3.50E+02m/s east

   B. 3.78E+02m/s east

   C. 4.09E+02m/s east

   D. 4.41E+02m/s east

   E. 4.77E+02m/s east

9. A bullet of mass 2.050E+02-g traveling horizontally towards the east with speed 3.080E+02-m/s, which strikes a block of mass 1.8-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet

The next page might contain more answer choices for this question

move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1115]

A. 2.24E+02m/s east

B. 2.42E+02m/s east

C. 2.62E+02m/s east

D. 2.83E+02m/s east

E. 3.05E+02m/s east

10. A bullet of mass 1.820E+02-g traveling horizontally towards the east with speed 4.390E+02-m/s, which strikes a block of mass 1.41-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1116]

A. 3.20E+02m/s east

B. 3.46E+02m/s east

C. 3.73E+02m/s east

D. 4.03E+02m/s east

E. 4.36E+02m/s east

11. A bullet of mass 2.450E+02-g traveling horizontally towards the east with speed 4.940E+02-m/s, which strikes a block of mass 1.95-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1117]

A. 3.89E+02m/s east

B. 4.20E+02m/s east

C. 4.54E+02m/s east

D. 4.90E+02m/s east

E. 5.29E+02m/s east

12. A bullet of mass 2.080E+02-g traveling horizontally towards the east with speed 4.970E+02-m/s, which strikes a block of mass 1.23-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1118]

A. 3.63E+02m/s east

The next page might contain more answer choices for this question

B. 3.92E+02m/s east

C. 4.24E+02m/s east

D. 4.57E+02m/s east

E. 4.94E+02m/s east

13. A bullet of mass 2.480E+02-g traveling horizontally towards the east with speed 4.850E+02-m/s, which strikes a block of mass 1.3-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1119]

A. 4.82E+02m/s east

B. 5.21E+02m/s east

C. 5.63E+02m/s east

D. 6.08E+02m/s east

E. 6.56E+02m/s east

14. A bullet of mass 1.870E+02-g traveling horizontally towards the east with speed 4.270E+02-m/s, which strikes a block of mass 1.27-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1120]

A. 3.64E+02m/s east

B. 3.93E+02m/s east

C. 4.24E+02m/s east

D. 4.58E+02m/s east

E. 4.95E+02m/s east

15. A bullet of mass 1.770E+02-g traveling horizontally towards the east with speed 4.630E+02-m/s, which strikes a block of mass 1.5-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1121]

A. 3.94E+02m/s east

B. 4.25E+02m/s east

C. 4.59E+02m/s east

The next page might contain more answer choices for this question

D. 4.96E+02m/s east

E. 5.36E+02m/s east

16. A bullet of mass 1.950E+02-g traveling horizontally towards the east with speed 3.090E+02-m/s, which strikes a block of mass 1.66-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1122]

A. 2.63E+02m/s east

B. 2.84E+02m/s east

C. 3.06E+02m/s east

D. 3.31E+02m/s east

E. 3.57E+02m/s east

17. A bullet of mass 1.750E+02-g traveling horizontally towards the east with speed 4.980E+02-m/s, which strikes a block of mass 1.15-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1123]

A. 4.24E+02m/s east

B. 4.58E+02m/s east

C. 4.95E+02m/s east

D. 5.34E+02m/s east

E. 5.77E+02m/s east

18. A bullet of mass 1.840E+02-g traveling horizontally towards the east with speed 3.420E+02-m/s, which strikes a block of mass 1.23-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1124]

A. 3.15E+02m/s east

B. 3.40E+02m/s east

C. 3.67E+02m/s east

D. 3.96E+02m/s east

E. 4.28E+02m/s east

The next page might contain more answer choices for this question

19. A bullet of mass 2.150E+02-g traveling horizontally towards the east with speed 4.810E+02-m/s, which strikes a block of mass 1.95-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the velocity of the block/bullet combination immediately after the impact? [1125]

    A. 4.09E+02m/s east

    B. 4.41E+02m/s east

    C. 4.77E+02m/s east

    D. 5.15E+02m/s east

    E. 5.56E+02m/s east

up1-09 Q8

1. A bullet of mass 1.550E+02-g traveling horizontally towards the east with speed 3.490E+02-m/s, which strikes a block of mass 1.25-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1126]

    A. 4.01E+02N towards the bullet

    B. 4.33E+02N towards the bullet

    C. 4.67E+02N towards the bullet

    D. 5.05E+02N towards the bullet

    E. 5.45E+02N towards the bullet

2. A bullet of mass 2.060E+02-g traveling horizontally towards the east with speed 3.970E+02-m/s, which strikes a block of mass 1.68-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1127]

    A. 5.67E+02N towards the bullet

    B. 6.13E+02N towards the bullet

    C. 6.62E+02N towards the bullet

    D. 7.14E+02N towards the bullet

    E. 7.72E+02N towards the bullet

The next page might contain more answer choices for this question

3. A bullet of mass 2.440E+02-g traveling horizontally towards the east with speed 4.710E+02-m/s, which strikes a block of mass 1.69-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1128]

    A. 6.28E+02N towards the bullet

    B. 6.78E+02N towards the bullet

    C. 7.32E+02N towards the bullet

    D. 7.91E+02N towards the bullet

    E. 8.54E+02N towards the bullet

4. A bullet of mass 1.780E+02-g traveling horizontally towards the east with speed 4.820E+02-m/s, which strikes a block of mass 1.4-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1129]

    A. 5.31E+02N towards the bullet

    B. 5.74E+02N towards the bullet

    C. 6.20E+02N towards the bullet

    D. 6.70E+02N towards the bullet

    E. 7.23E+02N towards the bullet

5. A bullet of mass 2.090E+02-g traveling horizontally towards the east with speed 3.650E+02-m/s, which strikes a block of mass 1.66-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1130]

    A. 5.57E+02N towards the bullet

    B. 6.01E+02N towards the bullet

    C. 6.49E+02N towards the bullet

    D. 7.01E+02N towards the bullet

    E. 7.57E+02N towards the bullet

6. A bullet of mass 1.670E+02-g traveling horizontally towards the east with speed 4.380E+02-m/s, which strikes a block of mass 1.74-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet

The next page might contain more answer choices for this question

move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1131]

A. 6.98E+02N towards the bullet

B. 7.54E+02N towards the bullet

C. 8.15E+02N towards the bullet

D. 8.80E+02N towards the bullet

E. 9.50E+02N towards the bullet

7. A bullet of mass 2.090E+02-g traveling horizontally towards the east with speed 4.730E+02-m/s, which strikes a block of mass 1.66-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1132]

A. 6.18E+02N towards the bullet

B. 6.68E+02N towards the bullet

C. 7.21E+02N towards the bullet

D. 7.79E+02N towards the bullet

E. 8.41E+02N towards the bullet

8. A bullet of mass 2.400E+02-g traveling horizontally towards the east with speed 3.450E+02-m/s, which strikes a block of mass 1.12-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1133]

A. 3.05E+02N towards the bullet

B. 3.30E+02N towards the bullet

C. 3.56E+02N towards the bullet

D. 3.85E+02N towards the bullet

E. 4.15E+02N towards the bullet

9. A bullet of mass 1.810E+02-g traveling horizontally towards the east with speed 4.910E+02-m/s, which strikes a block of mass 1.47-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1134]

A. 6.14E+02N towards the bullet

The next page might contain more answer choices for this question

B. 6.63E+02N towards the bullet

C. 7.16E+02N towards the bullet

D. 7.73E+02N towards the bullet

E. 8.35E+02N towards the bullet

10. A bullet of mass 2.450E+02-g traveling horizontally towards the east with speed 3.390E+02-m/s, which strikes a block of mass 1.6-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1135]

A. 4.28E+02N towards the bullet

B. 4.62E+02N towards the bullet

C. 4.99E+02N towards the bullet

D. 5.39E+02N towards the bullet

E. 5.82E+02N towards the bullet

11. A bullet of mass 1.710E+02-g traveling horizontally towards the east with speed 4.510E+02-m/s, which strikes a block of mass 1.8-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1136]

A. 8.03E+02N towards the bullet

B. 8.68E+02N towards the bullet

C. 9.37E+02N towards the bullet

D. 1.01E+03N towards the bullet

E. 1.09E+03N towards the bullet

12. A bullet of mass 2.470E+02-g traveling horizontally towards the east with speed 3.500E+02-m/s, which strikes a block of mass 1.27-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1137]

A. 4.42E+02N towards the bullet

B. 4.78E+02N towards the bullet

C. 5.16E+02N towards the bullet

The next page might contain more answer choices for this question

D. 5.57E+02N towards the bullet

E. 6.02E+02N towards the bullet

13. A bullet of mass 2.370E+02-g traveling horizontally towards the east with speed 3.530E+02-m/s, which strikes a block of mass 1.2-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1138]

A. 3.90E+02N towards the bullet

B. 4.21E+02N towards the bullet

C. 4.55E+02N towards the bullet

D. 4.92E+02N towards the bullet

E. 5.31E+02N towards the bullet

14. A bullet of mass 2.460E+02-g traveling horizontally towards the east with speed 4.880E+02-m/s, which strikes a block of mass 1.9-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1139]

A. 7.30E+02N towards the bullet

B. 7.89E+02N towards the bullet

C. 8.52E+02N towards the bullet

D. 9.20E+02N towards the bullet

E. 9.94E+02N towards the bullet

15. A bullet of mass 2.440E+02-g traveling horizontally towards the east with speed 3.170E+02-m/s, which strikes a block of mass 1.96-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1140]

A. 6.16E+02N towards the bullet

B. 6.66E+02N towards the bullet

C. 7.19E+02N towards the bullet

D. 7.76E+02N towards the bullet

E. 8.39E+02N towards the bullet

The next page might contain more answer choices for this question

16. A bullet of mass 1.840E+02-g traveling horizontally towards the east with speed 4.690E+02-m/s, which strikes a block of mass 1.96-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1141]

    A. 7.22E+02N towards the bullet

    B. 7.80E+02N towards the bullet

    C. 8.42E+02N towards the bullet

    D. 9.10E+02N towards the bullet

    E. 9.82E+02N towards the bullet

17. A bullet of mass 1.600E+02-g traveling horizontally towards the east with speed 4.580E+02-m/s, which strikes a block of mass 1.87-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1142]

    A. 6.72E+02N towards the bullet

    B. 7.26E+02N towards the bullet

    C. 7.84E+02N towards the bullet

    D. 8.47E+02N towards the bullet

    E. 9.14E+02N towards the bullet

18. A bullet of mass 2.190E+02-g traveling horizontally towards the east with speed 3.120E+02-m/s, which strikes a block of mass 1.74-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1143]

    A. 4.28E+02N towards the bullet

    B. 4.62E+02N towards the bullet

    C. 4.99E+02N towards the bullet

    D. 5.39E+02N towards the bullet

    E. 5.82E+02N towards the bullet

19. A bullet of mass 2.400E+02-g traveling horizontally towards the east with speed 4.520E+02-m/s, which strikes a block of mass 2.0-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet

The next page might contain more answer choices for this question

move together as one unit. What is the magnitude and direction of the impulse by the block on the bullet? [1144]

A. 8.30E+02N towards the bullet

B. 8.97E+02N towards the bullet

C. 9.68E+02N towards the bullet

D. 1.05E+03N towards the bullet

E. 1.13E+03N towards the bullet

up1-09 Q9

1. A bullet of mass 2.120E+02-g traveling horizontally towards the east with speed 4.520E+02-m/s, which strikes a block of mass 1.77-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1145]

   A. 5.83E+02N towards the block

   B. 6.30E+02N towards the block

   C. 6.80E+02N towards the block

   D. 7.35E+02N towards the block

   E. 7.93E+02N towards the block

2. A bullet of mass 2.250E+02-g traveling horizontally towards the east with speed 4.310E+02-m/s, which strikes a block of mass 1.09-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1146]

   A. 4.33E+02N towards the block

   B. 4.68E+02N towards the block

   C. 5.05E+02N towards the block

   D. 5.45E+02N towards the block

   E. 5.89E+02N towards the block

3. A bullet of mass 1.810E+02-g traveling horizontally towards the east with speed 3.260E+02-m/s, which strikes a block of mass 1.79-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1147]

The next page might contain more answer choices for this question

A. 5.78E+02N towards the block

B. 6.24E+02N towards the block

C. 6.74E+02N towards the block

D. 7.28E+02N towards the block

E. 7.86E+02N towards the block

4. A bullet of mass 2.420E+02-g traveling horizontally towards the east with speed 3.130E+02-m/s, which strikes a block of mass 1.5-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1148]

A. 4.32E+02N towards the block

B. 4.67E+02N towards the block

C. 5.04E+02N towards the block

D. 5.44E+02N towards the block

E. 5.88E+02N towards the block

5. A bullet of mass 1.970E+02-g traveling horizontally towards the east with speed 3.080E+02-m/s, which strikes a block of mass 1.41-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1149]

A. 3.99E+02N towards the block

B. 4.31E+02N towards the block

C. 4.66E+02N towards the block

D. 5.03E+02N towards the block

E. 5.43E+02N towards the block

6. A bullet of mass 2.130E+02-g traveling horizontally towards the east with speed 4.050E+02-m/s, which strikes a block of mass 1.41-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1150]

A. 5.67E+02N towards the block

B. 6.13E+02N towards the block

The next page might contain more answer choices for this question

C. 6.62E+02N towards the block

D. 7.15E+02N towards the block

E. 7.72E+02N towards the block

7. A bullet of mass 1.600E+02-g traveling horizontally towards the east with speed 4.520E+02-m/s, which strikes a block of mass 1.19-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1151]

A. 4.24E+02N towards the block

B. 4.58E+02N towards the block

C. 4.94E+02N towards the block

D. 5.34E+02N towards the block

E. 5.77E+02N towards the block

8. A bullet of mass 2.470E+02-g traveling horizontally towards the east with speed 3.210E+02-m/s, which strikes a block of mass 1.33-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1152]

A. 3.12E+02N towards the block

B. 3.37E+02N towards the block

C. 3.64E+02N towards the block

D. 3.93E+02N towards the block

E. 4.25E+02N towards the block

9. A bullet of mass 2.390E+02-g traveling horizontally towards the east with speed 4.740E+02-m/s, which strikes a block of mass 1.95-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1153]

A. 7.86E+02N towards the block

B. 8.49E+02N towards the block

C. 9.17E+02N towards the block

D. 9.90E+02N towards the block

The next page might contain more answer choices for this question

E. 1.07E+03N towards the block

10. A bullet of mass 1.970E+02-g traveling horizontally towards the east with speed 4.900E+02-m/s, which strikes a block of mass 1.54-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1154]

A. 6.42E+02N towards the block

B. 6.93E+02N towards the block

C. 7.49E+02N towards the block

D. 8.09E+02N towards the block

E. 8.73E+02N towards the block

11. A bullet of mass 2.420E+02-g traveling horizontally towards the east with speed 3.830E+02-m/s, which strikes a block of mass 1.15-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1155]

A. 3.76E+02N towards the block

B. 4.06E+02N towards the block

C. 4.38E+02N towards the block

D. 4.73E+02N towards the block

E. 5.11E+02N towards the block

12. A bullet of mass 2.010E+02-g traveling horizontally towards the east with speed 3.780E+02-m/s, which strikes a block of mass 1.72-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1156]

A. 6.45E+02N towards the block

B. 6.96E+02N towards the block

C. 7.52E+02N towards the block

D. 8.12E+02N towards the block

E. 8.77E+02N towards the block

The next page might contain more answer choices for this question

13. A bullet of mass 1.800E+02-g traveling horizontally towards the east with speed 3.080E+02-m/s, which strikes a block of mass 1.39-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1157]

    A. 3.12E+02N towards the block

    B. 3.37E+02N towards the block

    C. 3.64E+02N towards the block

    D. 3.93E+02N towards the block

    E. 4.25E+02N towards the block

14. A bullet of mass 2.140E+02-g traveling horizontally towards the east with speed 3.130E+02-m/s, which strikes a block of mass 1.32-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1158]

    A. 4.11E+02N towards the block

    B. 4.43E+02N towards the block

    C. 4.79E+02N towards the block

    D. 5.17E+02N towards the block

    E. 5.59E+02N towards the block

15. A bullet of mass 2.190E+02-g traveling horizontally towards the east with speed 4.400E+02-m/s, which strikes a block of mass 1.26-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1159]

    A. 4.38E+02N towards the block

    B. 4.73E+02N towards the block

    C. 5.10E+02N towards the block

    D. 5.51E+02N towards the block

    E. 5.95E+02N towards the block

16. A bullet of mass 2.340E+02-g traveling horizontally towards the east with speed 3.470E+02-m/s, which strikes a block of mass 1.91-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet

The next page might contain more answer choices for this question

move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1160]

A. 6.57E+02N towards the block

B. 7.10E+02N towards the block

C. 7.67E+02N towards the block

D. 8.28E+02N towards the block

E. 8.94E+02N towards the block

17. A bullet of mass 1.950E+02-g traveling horizontally towards the east with speed 3.200E+02-m/s, which strikes a block of mass 1.76-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1161]

A. 4.10E+02N towards the block

B. 4.43E+02N towards the block

C. 4.79E+02N towards the block

D. 5.17E+02N towards the block

E. 5.58E+02N towards the block

18. A bullet of mass 2.090E+02-g traveling horizontally towards the east with speed 4.740E+02-m/s, which strikes a block of mass 1.72-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1162]

A. 6.93E+02N towards the block

B. 7.49E+02N towards the block

C. 8.09E+02N towards the block

D. 8.73E+02N towards the block

E. 9.43E+02N towards the block

19. A bullet of mass 2.090E+02-g traveling horizontally towards the east with speed 3.380E+02-m/s, which strikes a block of mass 1.95-kg that is initially at rest on a frictionless table. After striking the block, the bullet is embedded in the block and the block and the bullet move together as one unit. What is the magnitude and direction of the impulse from the bullet on the block? [1163]

A. 6.53E+02N towards the block

The next page might contain more answer choices for this question

B. 7.05E+02N towards the block

C. 7.62E+02N towards the block

D. 8.23E+02N towards the block

E. 8.88E+02N towards the block

up1-09 Q10

1. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.55-m/s and the trailing skater moving at 5.91-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 48-kg leading skater, what is their speed after he picks her up? [1164]

   A. 4.58E+00m/s

   B. 4.94E+00m/s

   C. 5.34E+00m/s

   D. 5.77E+00m/s

   E. 6.23E+00m/s

2. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.4-m/s and the trailing skater moving at 6.27-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 52-kg leading skater, what is their speed after he picks her up? [1165]

   A. 5.48E+00m/s

   B. 5.92E+00m/s

   C. 6.40E+00m/s

   D. 6.91E+00m/s

   E. 7.46E+00m/s

3. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.88-m/s and the trailing skater moving at 6.47-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 49-kg leading skater, what is their speed after he picks her up? [1166]

   A. 4.95E+00m/s

   B. 5.34E+00m/s

The next page might contain more answer choices for this question

C. 5.77E+00m/s

D. 6.23E+00m/s

E. 6.73E+00m/s

4. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.06-m/s and the trailing skater moving at 6.14-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 42-kg leading skater, what is their speed after he picks her up? [1167]

A. 4.89E+00m/s

B. 5.29E+00m/s

C. 5.71E+00m/s

D. 6.16E+00m/s

E. 6.66E+00m/s

5. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.98-m/s and the trailing skater moving at 6.33-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 40-kg leading skater, what is their speed after he picks her up? [1168]

A. 6.19E+00m/s

B. 6.69E+00m/s

C. 7.22E+00m/s

D. 7.80E+00m/s

E. 8.42E+00m/s

6. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.65-m/s and the trailing skater moving at 5.58-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 47-kg leading skater, what is their speed after he picks her up? [1169]

A. 4.12E+00m/s

B. 4.45E+00m/s

C. 4.81E+00m/s

D. 5.19E+00m/s

The next page might contain more answer choices for this question

E. 5.61E+00m/s

7. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.0-m/s and the trailing skater moving at 6.88-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 59-kg leading skater, what is their speed after he picks her up? [1170]

A. 6.13E+00m/s

B. 6.62E+00m/s

C. 7.15E+00m/s

D. 7.72E+00m/s

E. 8.34E+00m/s

8. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.59-m/s and the trailing skater moving at 5.84-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 45-kg leading skater, what is their speed after he picks her up? [1171]

A. 4.56E+00m/s

B. 4.92E+00m/s

C. 5.31E+00m/s

D. 5.74E+00m/s

E. 6.20E+00m/s

9. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.78-m/s and the trailing skater moving at 6.13-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 55-kg leading skater, what is their speed after he picks her up? [1172]

A. 5.55E+00m/s

B. 5.99E+00m/s

C. 6.47E+00m/s

D. 6.99E+00m/s

E. 7.55E+00m/s

The next page might contain more answer choices for this question

10. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.75-m/s and the trailing skater moving at 6.14-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 50-kg leading skater, what is their speed after he picks her up? [1173]

    A. 4.40E+00m/s

    B. 4.75E+00m/s

    C. 5.13E+00m/s

    D. 5.54E+00m/s

    E. 5.98E+00m/s

11. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.05-m/s and the trailing skater moving at 6.54-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 54-kg leading skater, what is their speed after he picks her up? [1174]

    A. 5.50E+00m/s

    B. 5.94E+00m/s

    C. 6.42E+00m/s

    D. 6.93E+00m/s

    E. 7.49E+00m/s

12. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.84-m/s and the trailing skater moving at 5.82-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 46-kg leading skater, what is their speed after he picks her up? [1175]

    A. 4.63E+00m/s

    B. 5.00E+00m/s

    C. 5.40E+00m/s

    D. 5.83E+00m/s

    E. 6.29E+00m/s

13. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.86-m/s and the trailing skater moving at 6.63-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on

The next page might contain more answer choices for this question

his skates. If the trailing skater is 50% heavier than the 40-kg leading skater, what is their speed after he picks her up? [1176]

A. 4.65E+00m/s

B. 5.02E+00m/s

C. 5.42E+00m/s

D. 5.85E+00m/s

E. 6.32E+00m/s

14. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.45-m/s and the trailing skater moving at 6.89-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 60-kg leading skater, what is their speed after he picks her up? [1177]

A. 5.01E+00m/s

B. 5.41E+00m/s

C. 5.85E+00m/s

D. 6.31E+00m/s

E. 6.82E+00m/s

15. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.64-m/s and the trailing skater moving at 6.04-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 47-kg leading skater, what is their speed after he picks her up? [1178]

A. 5.44E+00m/s

B. 5.88E+00m/s

C. 6.35E+00m/s

D. 6.86E+00m/s

E. 7.41E+00m/s

16. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.71-m/s and the trailing skater moving at 5.91-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 54-kg leading skater, what is their speed after he picks her up? [1179]

A. 4.63E+00m/s

The next page might contain more answer choices for this question

B. 5.00E+00m/s

C. 5.40E+00m/s

D. 5.83E+00m/s

E. 6.30E+00m/s

17. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.84-m/s and the trailing skater moving at 6.07-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 60-kg leading skater, what is their speed after he picks her up? [1180]

A. 4.75E+00m/s

B. 5.13E+00m/s

C. 5.54E+00m/s

D. 5.98E+00m/s

E. 6.46E+00m/s

18. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.18-m/s and the trailing skater moving at 5.8-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 60-kg leading skater, what is their speed after he picks her up? [1181]

A. 5.55E+00m/s

B. 6.00E+00m/s

C. 6.48E+00m/s

D. 6.99E+00m/s

E. 7.55E+00m/s

19. Two figure skaters are coasting in the same direction, with the leading skater moving at 5.03-m/s and the trailing skater moving at 5.67-m/s. When the trailing skater catches up with the leading skater, he picks her up without applying any horizontal forces on his skates. If the trailing skater is 50% heavier than the 59-kg leading skater, what is their speed after he picks her up? [1182]

A. 5.01E+00m/s

B. 5.41E+00m/s

C. 5.85E+00m/s

D. 6.31E+00m/s

E. 6.82E+00m/s

The next page might contain more answer choices for this question

up1-09 Q11

1. A 5.92-kg bowling ball moving at 7.04-m/s collides with a 0.782-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 17.1-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1183]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

2. A 5.01-kg bowling ball moving at 10.4-m/s collides with a 0.824-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 13.4-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1184]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

3. A 5.27-kg bowling ball moving at 10.9-m/s collides with a 0.883-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.9-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1185]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

4. A 5.18-kg bowling ball moving at 7.95-m/s collides with a 0.909-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.6-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1186]

The next page might contain more answer choices for this question

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

5. A 5.85-kg bowling ball moving at 8.71-m/s collides with a 0.874-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.2-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1187]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

6. A 5.69-kg bowling ball moving at 9.46-m/s collides with a 0.885-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 13.3-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1188]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

7. A 5.21-kg bowling ball moving at 9.64-m/s collides with a 0.794-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.0-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1189]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

The next page might contain more answer choices for this question

8. A 5.7-kg bowling ball moving at 10.7-m/s collides with a 0.815-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 17.1-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1190]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

9. A 5.54-kg bowling ball moving at 10.1-m/s collides with a 0.855-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 17.2-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1191]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

10. A 5.09-kg bowling ball moving at 8.68-m/s collides with a 0.844-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 17.3-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1192]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

11. A 5.77-kg bowling ball moving at 9.7-m/s collides with a 0.928-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.7-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1193]

    A. Problem solved by 0.00E+00 students (to date.)

The next page might contain more answer choices for this question

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

12. A 5.94-kg bowling ball moving at 8.83-m/s collides with a 0.845-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 13.5-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1194]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

13. A 5.84-kg bowling ball moving at 9.47-m/s collides with a 0.89-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 16.3-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1195]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

14. A 5.09-kg bowling ball moving at 10.4-m/s collides with a 0.936-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 14.1-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1196]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

The next page might contain more answer choices for this question

15. A 5.41-kg bowling ball moving at 7.43-m/s collides with a 0.789-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 17.4-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1197]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

16. A 5.85-kg bowling ball moving at 7.0-m/s collides with a 0.797-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 13.1-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1198]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

17. A 5.75-kg bowling ball moving at 7.72-m/s collides with a 0.825-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 14.0-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1199]

    A. Problem solved by 0.00E+00 students (to date.)

    B. Problem solved by 0.00E+00 students (to date.)

    C. Problem solved by 0.00E+00 students (to date.)

    D. Problem solved by 0.00E+00 students (to date.)

    E. Problem solved by 0.00E+00 students (to date.)

18. A 5.53-kg bowling ball moving at 8.57-m/s collides with a 0.852-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.3-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1200]

    A. Problem solved by 0.00E+00 students (to date.)

The next page might contain more answer choices for this question

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

19. A 5.91-kg bowling ball moving at 9.62-m/s collides with a 0.938-kg bowling pin, which is scattered at an angle to the initial direction of the bowling ball and with a speed of 15.8-m/s. Verify that the collision is elastic and calculate the final speed of the bowling ball. [1201]

A. Problem solved by 0.00E+00 students (to date.)

B. Problem solved by 0.00E+00 students (to date.)

C. Problem solved by 0.00E+00 students (to date.)

D. Problem solved by 0.00E+00 students (to date.)

E. Problem solved by 0.00E+00 students (to date.)

up1-09 Q12

1. A 91.4-kg ice hockey player hits a 0.184-kg puck, giving the puck a velocity of 43.8-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 15.4-m away? [1202]

A. 2.28E-02m

B. 2.46E-02m

C. 2.66E-02m

D. 2.87E-02m

E. 3.10E-02m

2. A 9.930E+01-kg ice hockey player hits a 0.156-kg puck, giving the puck a velocity of 45.5-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 12.7-m away? [1203]

A. 1.85E-02m

B. 2.00E-02m

C. 2.15E-02m

D. 2.33E-02m

E. 2.51E-02m

The next page might contain more answer choices for this question

3. A 96.4-kg ice hockey player hits a 0.122-kg puck, giving the puck a velocity of 44.0-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 17.0-m away? [1204]

    A. 1.71E-02m

    B. 1.84E-02m

    C. 1.99E-02m

    D. 2.15E-02m

    E. 2.32E-02m

4. A 89.7-kg ice hockey player hits a 0.195-kg puck, giving the puck a velocity of 42.7-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.3-m away? [1205]

    A. 2.81E-02m

    B. 3.04E-02m

    C. 3.28E-02m

    D. 3.54E-02m

    E. 3.83E-02m

5. A 98.1-kg ice hockey player hits a 0.167-kg puck, giving the puck a velocity of 43.0-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.9-m away? [1206]

    A. 2.28E-02m

    B. 2.47E-02m

    C. 2.66E-02m

    D. 2.88E-02m

    E. 3.11E-02m

6. A 97.9-kg ice hockey player hits a 0.124-kg puck, giving the puck a velocity of 45.2-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 14.8-m away? [1207]

    A. 1.49E-02m

    B. 1.61E-02m

    C. 1.74E-02m

    D. 1.87E-02m

The next page might contain more answer choices for this question

E. 2.02E-02m

7. A 81.4-kg ice hockey player hits a 0.172-kg puck, giving the puck a velocity of 40.1-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 15.1-m away? [1208]

A. 2.74E-02m

B. 2.95E-02m

C. 3.19E-02m

D. 3.45E-02m

E. 3.72E-02m

8. A 96.8-kg ice hockey player hits a 0.119-kg puck, giving the puck a velocity of 44.9-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 14.6-m away? [1209]

A. 1.32E-02m

B. 1.42E-02m

C. 1.54E-02m

D. 1.66E-02m

E. 1.79E-02m

9. A 80.9-kg ice hockey player hits a 0.166-kg puck, giving the puck a velocity of 49.6-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.9-m away? [1210]

A. 3.21E-02m

B. 3.47E-02m

C. 3.75E-02m

D. 4.04E-02m

E. 4.37E-02m

10. A 85.2-kg ice hockey player hits a 0.115-kg puck, giving the puck a velocity of 42.3-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 15.8-m away? [1211]

A. 1.97E-02m

B. 2.13E-02m

C. 2.30E-02m

The next page might contain more answer choices for this question

D. 2.49E-02m

E. 2.69E-02m

11. A 91.0-kg ice hockey player hits a 0.169-kg puck, giving the puck a velocity of 45.6-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.9-m away? [1212]

A. 2.49E-02m

B. 2.69E-02m

C. 2.91E-02m

D. 3.14E-02m

E. 3.39E-02m

12. A 97.7-kg ice hockey player hits a 0.119-kg puck, giving the puck a velocity of 49.6-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.3-m away? [1213]

A. 1.46E-02m

B. 1.58E-02m

C. 1.70E-02m

D. 1.84E-02m

E. 1.99E-02m

13. A 96.1-kg ice hockey player hits a 0.126-kg puck, giving the puck a velocity of 47.3-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.4-m away? [1214]

A. 1.99E-02m

B. 2.15E-02m

C. 2.32E-02m

D. 2.51E-02m

E. 2.71E-02m

14. A 80.8-kg ice hockey player hits a 0.19-kg puck, giving the puck a velocity of 47.7-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 13.5-m away? [1215]

A. 3.17E-02m

B. 3.43E-02m

The next page might contain more answer choices for this question

C. 3.70E-02m

D. 4.00E-02m

E. 4.32E-02m

15. A 95.6-kg ice hockey player hits a 0.106-kg puck, giving the puck a velocity of 49.9-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 16.0-m away? [1216]

A. 1.77E-02m

B. 1.92E-02m

C. 2.07E-02m

D. 2.23E-02m

E. 2.41E-02m

16. A 9.990E+01-kg ice hockey player hits a 0.188-kg puck, giving the puck a velocity of 46.3-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 17.8-m away? [1217]

A. 3.35E-02m

B. 3.62E-02m

C. 3.91E-02m

D. 4.22E-02m

E. 4.56E-02m

17. A 98.7-kg ice hockey player hits a 0.11-kg puck, giving the puck a velocity of 44.9-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 14.8-m away? [1218]

A. 1.31E-02m

B. 1.41E-02m

C. 1.53E-02m

D. 1.65E-02m

E. 1.78E-02m

18. A 80.1-kg ice hockey player hits a 0.137-kg puck, giving the puck a velocity of 42.9-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 17.5-m away? [1219]

A. 2.57E-02m

The next page might contain more answer choices for this question

B. 2.77E-02m

C. 2.99E-02m

D. 3.23E-02m

E. 3.49E-02m

19. A 84.9-kg ice hockey player hits a 0.129-kg puck, giving the puck a velocity of 47.2-m/s. If both are initially at rest and if the ice is frictionless, how far does the player recoil in the time it takes the puck to reach the goal 13.5-m away? [1220]

A. 2.05E-02m

B. 2.22E-02m

C. 2.39E-02m

D. 2.58E-02m

E. 2.79E-02m

6 up1-10

1. A particle moves 3 m along a circle with a radius of 1.5 m in a time of +1 s. Through what angle does it rotate? [1221]

A. 1.85E+00 rad

B. 2.00E+00 rad

C. 2.16E+00 rad

D. 2.33E+00 rad

E. 2.52E+00 rad

2. A particle moves 3 m along a circle with a radius of 1.5 m in 1.0 seconds. What is its angular velocity? [1222]

A. 2.00E+00 rad/s

B. 2.16E+00 rad/s

C. 2.33E+00 rad/s

D. 2.52E+00 rad/s

E. 2.72E+00 rad/s

3. A particle moves 3 m along a circle with a radius of 1.5 m in 1.0 sec. What is its acceleration? [1223]

The next page might contain more answer choices for this question

A. 5.56E+00 m/s^2

B. 6.00E+00 m/s^2

C. 6.48E+00 m/s^2

D. 7.00E+00 m/s^2

E. 7.56E+00 m/s^2

4. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (25\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 2.0 s? [1224]

A. 4.29E+01 rad/s

B. 4.63E+01 rad/s

C. 5.00E+01 rad/s

D. 5.40E+01 rad/s

E. 5.83E+01 rad/s

5. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (25\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.0 s? [1225]

A. 1.84E+01 rad/s^2

B. 1.98E+01 rad/s^2

C. 2.14E+01 rad/s^2

D. 2.31E+01 rad/s^2

E. 2.50E+01 rad/s^2

6. A wind turbine is rotating counterclockwise at 0.5 rev/s and slows to a stop in 10.0 s. Its blades are 20 m in length. What was the magnitude of the angular acceleration of the turbine? [1226]

A. 2.69E-01 rad/s^2

B. 2.91E-01 rad/s^2

C. 3.14E-01 rad/s^2

D. 3.39E-01 rad/s^2

E. 3.66E-01 rad/s^2

7. A wind turbine is rotating counterclockwise at 0.5 rev/s and slows to a stop in 10.0 s. Its blades are 20 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1227]

The next page might contain more answer choices for this question

A. 1.57E+02 m/s^2

B. 1.69E+02 m/s^2

C. 1.83E+02 m/s^2

D. 1.97E+02 m/s^2

E. 2.13E+02 m/s^2

8. A wind turbine is rotating counterclockwise at 0.5 rev/s and slows to a stop in 10.0 s. Its blades are 20 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1228]

A. 1.45E+02m/s^2

B. 1.57E+02m/s^2

C. 1.69E+02m/s^2

D. 1.83E+02m/s^2

E. 1.97E+02m/s^2

9. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 12-kg motorcycle wheel if its angular velocity is 1.200E+02 rad/s and its inner radius is 0.28 m and outer radius is 0.33 m. [1229]

A. 1.05E+03 J

B. 1.13E+03 J

C. 1.22E+03 J

D. 1.32E+03 J

E. 1.42E+03 J

10. When opening a door, you push on it perperndicularlywith a force of 55.0 N at a distance of 0.85 m from thehinges. What torque are you exerting relative to the hinges? [1230]

A. 4.01E+01Nm

B. 4.33E+01Nm

C. 4.68E+01Nm

D. 5.05E+01Nm

E. 5.45E+01Nm

11. Suppose you exert a force of 1.800E+02 N tangentialto a 0.28-m-radius, 75.0-kg grindstone (a solid disc).What torque is exerted? [1231]

The next page might contain more answer choices for this question

A. 4.67E+01Nm

B. 5.04E+01Nm

C. 5.44E+01Nm

D. 5.88E+01Nm

E. 6.35E+01Nm

12. Suppose you exert a force of 1.800E+02 N tangentialto a 0.28-m-radius, 75.0-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1232]

A. 1.71E+01rad/s^2

B. 1.85E+01rad/s^2

C. 2.00E+01rad/s^2

D. 2.16E+01rad/s^2

E. 2.33E+01rad/s^2

13. Suppose you exert a force of 1.800E+02 N tangentialto a 0.28-m-radius, 75.0-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 20.0+ N exerted 1.5 1.50-cm from the axis? [1233]

A. 1.70E+01 rad/s^2

B. 1.84E+01 rad/s^2

C. 1.99E+01 rad/s^2

D. 2.15E+01 rad/s^2

E. 2.32E+01 rad/s^2

14. A propeller is accelerated from rest to an angular velocity of 1.000E+03 rev/min over a period of 6.0 seconds by a constant torque of 2.000E+03 Nm. What is the moment of inertia on the propeller? [1234]

A. 9.10E+01 $kg \cdot m^2$

B. 9.82E+01 $kg \cdot m^2$

C. 1.06E+02 $kg \cdot m^2$

D. 1.15E+02 $kg \cdot m^2$

E. 1.24E+02 $kg \cdot m^2$

15. A propeller is accelerated from rest to an angular velocity of 1.000E+03 rev/min over a period of 6.0 seconds by a constant torque of 2.000E+03 Nm. What power is being provided to the propeller 3.0 s after it starts rotating? [1235]

The next page might contain more answer choices for this question

A. 8.98E+04 W

B. 9.70E+04 W

C. 1.05E+05 W

D. 1.13E+05 W

E. 1.22E+05 W

6.1 Renditions

up1-10 Q1

1. A particle moves 1.16 m along a circle with a radius of 1.31 m in a time of +1.91 s. Through what angle does it rotate? [1236]

   A. 7.03E-01 rad

   B. 7.59E-01 rad

   C. 8.20E-01 rad

   D. 8.85E-01 rad

   E. 9.56E-01 rad

2. A particle moves 3.22 m along a circle with a radius of 1.38 m in a time of +1.68 s. Through what angle does it rotate? [1237]

   A. 2.33E+00 rad

   B. 2.52E+00 rad

   C. 2.72E+00 rad

   D. 2.94E+00 rad

   E. 3.17E+00 rad

3. A particle moves 4.35 m along a circle with a radius of 1.99 m in a time of +1.85 s. Through what angle does it rotate? [1238]

   A. 1.61E+00 rad

   B. 1.74E+00 rad

   C. 1.87E+00 rad

   D. 2.02E+00 rad

   E. 2.19E+00 rad

4. A particle moves 3.88 m along a circle with a radius of 1.15 m in a time of +1.53 s. Through what angle does it rotate? [1239]

The next page might contain more answer choices for this question

A. 2.68E+00 rad

B. 2.89E+00 rad

C. 3.12E+00 rad

D. 3.37E+00 rad

E. 3.64E+00 rad

5. A particle moves 2.8 m along a circle with a radius of 1.15 m in a time of +1.17 s. Through what angle does it rotate? [1240]

A. 1.79E+00 rad

B. 1.93E+00 rad

C. 2.09E+00 rad

D. 2.25E+00 rad

E. 2.43E+00 rad

6. A particle moves 1.96 m along a circle with a radius of 1.87 m in a time of +1.88 s. Through what angle does it rotate? [1241]

A. 7.70E-01 rad

B. 8.32E-01 rad

C. 8.99E-01 rad

D. 9.70E-01 rad

E. 1.05E+00 rad

7. A particle moves 1.17 m along a circle with a radius of 1.14 m in a time of +1.21 s. Through what angle does it rotate? [1242]

A. 9.50E-01 rad

B. 1.03E+00 rad

C. 1.11E+00 rad

D. 1.20E+00 rad

E. 1.29E+00 rad

8. A particle moves 2.63 m along a circle with a radius of 1.54 m in a time of +1.4 s. Through what angle does it rotate? [1243]

A. 1.26E+00 rad

B. 1.36E+00 rad

The next page might contain more answer choices for this question

C. 1.46E+00 rad

D. 1.58E+00 rad

E. 1.71E+00 rad

9. A particle moves 4.2 m along a circle with a radius of 1.51 m in a time of +1.8 s. Through what angle does it rotate? [1244]

A. 2.78E+00 rad

B. 3.00E+00 rad

C. 3.24E+00 rad

D. 3.50E+00 rad

E. 3.78E+00 rad

10. A particle moves 2.71 m along a circle with a radius of 1.6 m in a time of +1.88 s. Through what angle does it rotate? [1245]

A. 1.24E+00 rad

B. 1.34E+00 rad

C. 1.45E+00 rad

D. 1.57E+00 rad

E. 1.69E+00 rad

11. A particle moves 4.87 m along a circle with a radius of 1.58 m in a time of +1.67 s. Through what angle does it rotate? [1246]

A. 2.27E+00 rad

B. 2.45E+00 rad

C. 2.64E+00 rad

D. 2.85E+00 rad

E. 3.08E+00 rad

12. A particle moves 2.49 m along a circle with a radius of 1.85 m in a time of +1.74 s. Through what angle does it rotate? [1247]

A. 1.15E+00 rad

B. 1.25E+00 rad

C. 1.35E+00 rad

D. 1.45E+00 rad

The next page might contain more answer choices for this question

E. 1.57E+00 rad

13. A particle moves 3.88 m along a circle with a radius of 1.45 m in a time of +1.37 s. Through what angle does it rotate? [1248]

A. 2.29E+00 rad

B. 2.48E+00 rad

C. 2.68E+00 rad

D. 2.89E+00 rad

E. 3.12E+00 rad

14. A particle moves 1.7 m along a circle with a radius of 1.47 m in a time of +1.42 s. Through what angle does it rotate? [1249]

A. 9.91E-01 rad

B. 1.07E+00 rad

C. 1.16E+00 rad

D. 1.25E+00 rad

E. 1.35E+00 rad

15. A particle moves 3.62 m along a circle with a radius of 1.82 m in a time of +1.23 s. Through what angle does it rotate? [1250]

A. 1.58E+00 rad

B. 1.71E+00 rad

C. 1.84E+00 rad

D. 1.99E+00 rad

E. 2.15E+00 rad

16. A particle moves 1.11 m along a circle with a radius of 1.84 m in a time of +1.95 s. Through what angle does it rotate? [1251]

A. 4.79E-01 rad

B. 5.17E-01 rad

C. 5.59E-01 rad

D. 6.03E-01 rad

E. 6.52E-01 rad

The next page might contain more answer choices for this question

17. A particle moves 3.0 m along a circle with a radius of 1.21 m in a time of +1.22 s. Through what angle does it rotate? [1252]

    A. 2.30E+00 rad

    B. 2.48E+00 rad

    C. 2.68E+00 rad

    D. 2.89E+00 rad

    E. 3.12E+00 rad

18. A particle moves 3.8 m along a circle with a radius of 1.86 m in a time of +1.2 s. Through what angle does it rotate? [1253]

    A. 1.62E+00 rad

    B. 1.75E+00 rad

    C. 1.89E+00 rad

    D. 2.04E+00 rad

    E. 2.21E+00 rad

19. A particle moves 4.48 m along a circle with a radius of 1.86 m in a time of +1.91 s. Through what angle does it rotate? [1254]

    A. 1.77E+00 rad

    B. 1.91E+00 rad

    C. 2.06E+00 rad

    D. 2.23E+00 rad

    E. 2.41E+00 rad

up1-10 Q2

1. A particle moves 4.74 m along a circle with a radius of 1.35 m in 0.828 seconds. What is its angular velocity? [1255]

    A. 3.93E+00 rad/s

    B. 4.24E+00 rad/s

    C. 4.58E+00 rad/s

    D. 4.95E+00 rad/s

    E. 5.34E+00 rad/s

The next page might contain more answer choices for this question

2. A particle moves 4.9 m along a circle with a radius of 1.97 m in 1.96 seconds. What is its angular velocity? [1256]

   A. 1.09E+00 rad/s

   B. 1.18E+00 rad/s

   C. 1.27E+00 rad/s

   D. 1.37E+00 rad/s

   E. 1.48E+00 rad/s

3. A particle moves 2.28 m along a circle with a radius of 1.8 m in 1.62 seconds. What is its angular velocity? [1257]

   A. 7.82E-01 rad/s

   B. 8.44E-01 rad/s

   C. 9.12E-01 rad/s

   D. 9.85E-01 rad/s

   E. 1.06E+00 rad/s

4. A particle moves 1.86 m along a circle with a radius of 1.68 m in 1.36 seconds. What is its angular velocity? [1258]

   A. 7.54E-01 rad/s

   B. 8.14E-01 rad/s

   C. 8.79E-01 rad/s

   D. 9.50E-01 rad/s

   E. 1.03E+00 rad/s

5. A particle moves 3.13 m along a circle with a radius of 1.94 m in 0.553 seconds. What is its angular velocity? [1259]

   A. 2.50E+00 rad/s

   B. 2.70E+00 rad/s

   C. 2.92E+00 rad/s

   D. 3.15E+00 rad/s

   E. 3.40E+00 rad/s

6. A particle moves 3.57 m along a circle with a radius of 1.62 m in 0.919 seconds. What is its angular velocity? [1260]

The next page might contain more answer choices for this question

A. 2.40E+00 rad/s

B. 2.59E+00 rad/s

C. 2.80E+00 rad/s

D. 3.02E+00 rad/s

E. 3.26E+00 rad/s

7. A particle moves 1.12 m along a circle with a radius of 1.65 m in 1.4 seconds. What is its angular velocity? [1261]

A. 3.56E-01 rad/s

B. 3.85E-01 rad/s

C. 4.16E-01 rad/s

D. 4.49E-01 rad/s

E. 4.85E-01 rad/s

8. A particle moves 4.07 m along a circle with a radius of 1.75 m in 1.74 seconds. What is its angular velocity? [1262]

A. 1.24E+00 rad/s

B. 1.34E+00 rad/s

C. 1.44E+00 rad/s

D. 1.56E+00 rad/s

E. 1.68E+00 rad/s

9. A particle moves 2.26 m along a circle with a radius of 1.52 m in 1.06 seconds. What is its angular velocity? [1263]

A. 1.11E+00 rad/s

B. 1.20E+00 rad/s

C. 1.30E+00 rad/s

D. 1.40E+00 rad/s

E. 1.51E+00 rad/s

10. A particle moves 4.34 m along a circle with a radius of 1.61 m in 1.68 seconds. What is its angular velocity? [1264]

A. 1.27E+00 rad/s

B. 1.38E+00 rad/s

The next page might contain more answer choices for this question

C. 1.49E+00 rad/s

D. 1.60E+00 rad/s

E. 1.73E+00 rad/s

11. A particle moves 4.26 m along a circle with a radius of 1.84 m in 1.07 seconds. What is its angular velocity? [1265]

A. 1.72E+00 rad/s

B. 1.86E+00 rad/s

C. 2.00E+00 rad/s

D. 2.16E+00 rad/s

E. 2.34E+00 rad/s

12. A particle moves 2.72 m along a circle with a radius of 1.75 m in 0.59 seconds. What is its angular velocity? [1266]

A. 2.44E+00 rad/s

B. 2.63E+00 rad/s

C. 2.85E+00 rad/s

D. 3.07E+00 rad/s

E. 3.32E+00 rad/s

13. A particle moves 1.19 m along a circle with a radius of 1.75 m in 0.636 seconds. What is its angular velocity? [1267]

A. 1.07E+00 rad/s

B. 1.15E+00 rad/s

C. 1.25E+00 rad/s

D. 1.35E+00 rad/s

E. 1.45E+00 rad/s

14. A particle moves 2.88 m along a circle with a radius of 1.22 m in 1.71 seconds. What is its angular velocity? [1268]

A. 1.10E+00 rad/s

B. 1.18E+00 rad/s

C. 1.28E+00 rad/s

D. 1.38E+00 rad/s

The next page might contain more answer choices for this question

E. 1.49E+00 rad/s

15. A particle moves 3.41 m along a circle with a radius of 1.48 m in 1.31 seconds. What is its angular velocity? [1269]

A. 1.29E+00 rad/s

B. 1.40E+00 rad/s

C. 1.51E+00 rad/s

D. 1.63E+00 rad/s

E. 1.76E+00 rad/s

16. A particle moves 1.38 m along a circle with a radius of 1.71 m in 1.95 seconds. What is its angular velocity? [1270]

A. 4.14E-01 rad/s

B. 4.47E-01 rad/s

C. 4.83E-01 rad/s

D. 5.21E-01 rad/s

E. 5.63E-01 rad/s

17. A particle moves 1.7 m along a circle with a radius of 1.78 m in 1.7 seconds. What is its angular velocity? [1271]

A. 4.82E-01 rad/s

B. 5.20E-01 rad/s

C. 5.62E-01 rad/s

D. 6.07E-01 rad/s

E. 6.55E-01 rad/s

18. A particle moves 3.49 m along a circle with a radius of 1.49 m in 1.72 seconds. What is its angular velocity? [1272]

A. 1.08E+00 rad/s

B. 1.17E+00 rad/s

C. 1.26E+00 rad/s

D. 1.36E+00 rad/s

E. 1.47E+00 rad/s

The next page might contain more answer choices for this question

19. A particle moves 2.17 m along a circle with a radius of 1.85 m in 0.887 seconds. What is its angular velocity? [1273]

    A. 1.13E+00 rad/s

    B. 1.22E+00 rad/s

    C. 1.32E+00 rad/s

    D. 1.43E+00 rad/s

    E. 1.54E+00 rad/s

up1-10 Q3

1. A particle moves 2.29 m along a circle with a radius of 1.8 m in 0.615 sec. What is its acceleration? [1274]

    A. 7.13E+00 m/s^2

    B. 7.70E+00 m/s^2

    C. 8.32E+00 m/s^2

    D. 8.98E+00 m/s^2

    E. 9.70E+00 m/s^2

2. A particle moves 3.32 m along a circle with a radius of 1.76 m in 0.735 sec. What is its acceleration? [1275]

    A. 8.52E+00 m/s^2

    B. 9.20E+00 m/s^2

    C. 9.94E+00 m/s^2

    D. 1.07E+01 m/s^2

    E. 1.16E+01 m/s^2

3. A particle moves 1.16 m along a circle with a radius of 1.24 m in 1.49 sec. What is its acceleration? [1276]

    A. 4.89E-01 m/s^2

    B. 5.28E-01 m/s^2

    C. 5.70E-01 m/s^2

    D. 6.16E-01 m/s^2

    E. 6.65E-01 m/s^2

The next page might contain more answer choices for this question

4. A particle moves 4.94 m along a circle with a radius of 1.37 m in 1.15 sec. What is its acceleration? [1277]

   A. 1.15E+01 m/s^2

   B. 1.25E+01 m/s^2

   C. 1.35E+01 m/s^2

   D. 1.45E+01 m/s^2

   E. 1.57E+01 m/s^2

5. A particle moves 2.61 m along a circle with a radius of 1.21 m in 1.32 sec. What is its acceleration? [1278]

   A. 2.99E+00 m/s^2

   B. 3.23E+00 m/s^2

   C. 3.49E+00 m/s^2

   D. 3.77E+00 m/s^2

   E. 4.07E+00 m/s^2

6. A particle moves 1.39 m along a circle with a radius of 1.94 m in 1.76 sec. What is its acceleration? [1279]

   A. 3.22E-01 m/s^2

   B. 3.47E-01 m/s^2

   C. 3.75E-01 m/s^2

   D. 4.05E-01 m/s^2

   E. 4.37E-01 m/s^2

7. A particle moves 1.56 m along a circle with a radius of 1.3 m in 1.2 sec. What is its acceleration? [1280]

   A. 1.11E+00 m/s^2

   B. 1.20E+00 m/s^2

   C. 1.30E+00 m/s^2

   D. 1.40E+00 m/s^2

   E. 1.52E+00 m/s^2

8. A particle moves 4.2 m along a circle with a radius of 2.65 m in 1.75 sec. What is its acceleration? [1281]

The next page might contain more answer choices for this question

A. 1.86E+00 m/s^2

B. 2.01E+00 m/s^2

C. 2.17E+00 m/s^2

D. 2.35E+00 m/s^2

E. 2.54E+00 m/s^2

9. A particle moves 4.84 m along a circle with a radius of 2.44 m in 0.952 sec. What is its acceleration? [1282]

A. 8.41E+00 m/s^2

B. 9.08E+00 m/s^2

C. 9.81E+00 m/s^2

D. 1.06E+01 m/s^2

E. 1.14E+01 m/s^2

10. A particle moves 2.84 m along a circle with a radius of 2.15 m in 1.17 sec. What is its acceleration? [1283]

A. 2.01E+00 m/s^2

B. 2.18E+00 m/s^2

C. 2.35E+00 m/s^2

D. 2.54E+00 m/s^2

E. 2.74E+00 m/s^2

11. A particle moves 4.25 m along a circle with a radius of 1.62 m in 1.25 sec. What is its acceleration? [1284]

A. 5.66E+00 m/s^2

B. 6.12E+00 m/s^2

C. 6.61E+00 m/s^2

D. 7.14E+00 m/s^2

E. 7.71E+00 m/s^2

12. A particle moves 3.6 m along a circle with a radius of 2.31 m in 0.936 sec. What is its acceleration? [1285]

A. 5.93E+00 m/s^2

B. 6.40E+00 m/s^2

The next page might contain more answer choices for this question

C. 6.92E+00 m/s^2

D. 7.47E+00 m/s^2

E. 8.07E+00 m/s^2

13. A particle moves 4.91 m along a circle with a radius of 2.69 m in 0.695 sec. What is its acceleration? [1286]

A. 1.59E+01 m/s^2

B. 1.72E+01 m/s^2

C. 1.86E+01 m/s^2

D. 2.00E+01 m/s^2

E. 2.16E+01 m/s^2

14. A particle moves 3.57 m along a circle with a radius of 2.68 m in 1.81 sec. What is its acceleration? [1287]

A. 1.07E+00 m/s^2

B. 1.15E+00 m/s^2

C. 1.24E+00 m/s^2

D. 1.34E+00 m/s^2

E. 1.45E+00 m/s^2

15. A particle moves 4.46 m along a circle with a radius of 2.06 m in 1.71 sec. What is its acceleration? [1288]

A. 2.62E+00 m/s^2

B. 2.83E+00 m/s^2

C. 3.06E+00 m/s^2

D. 3.30E+00 m/s^2

E. 3.57E+00 m/s^2

16. A particle moves 1.53 m along a circle with a radius of 2.3 m in 0.788 sec. What is its acceleration? [1289]

A. 1.20E+00 m/s^2

B. 1.30E+00 m/s^2

C. 1.41E+00 m/s^2

D. 1.52E+00 m/s^2

The next page might contain more answer choices for this question

E. 1.64E+00 m/s^2

17. A particle moves 1.81 m along a circle with a radius of 1.85 m in 0.992 sec. What is its acceleration? [1290]

A. 1.67E+00 m/s^2

B. 1.80E+00 m/s^2

C. 1.94E+00 m/s^2

D. 2.10E+00 m/s^2

E. 2.27E+00 m/s^2

18. A particle moves 4.76 m along a circle with a radius of 1.62 m in 0.692 sec. What is its acceleration? [1291]

A. 2.92E+01 m/s^2

B. 3.15E+01 m/s^2

C. 3.41E+01 m/s^2

D. 3.68E+01 m/s^2

E. 3.97E+01 m/s^2

19. A particle moves 4.15 m along a circle with a radius of 1.61 m in 0.635 sec. What is its acceleration? [1292]

A. 2.11E+01 m/s^2

B. 2.27E+01 m/s^2

C. 2.46E+01 m/s^2

D. 2.65E+01 m/s^2

E. 2.87E+01 m/s^2

up1-10 Q4

1. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (21\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.58 s? [1293]

A. 2.84E+01 rad/s

B. 3.07E+01 rad/s

C. 3.32E+01 rad/s

D. 3.58E+01 rad/s

The next page might contain more answer choices for this question

E. 3.87E+01 rad/s

2. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (15\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.33 s? [1294]

A. 2.00E+01 rad/s

B. 2.15E+01 rad/s

C. 2.33E+01 rad/s

D. 2.51E+01 rad/s

E. 2.71E+01 rad/s

3. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (21\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.64 s? [1295]

A. 2.73E+01 rad/s

B. 2.95E+01 rad/s

C. 3.19E+01 rad/s

D. 3.44E+01 rad/s

E. 3.72E+01 rad/s

4. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (18\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.97 s? [1296]

A. 2.81E+01 rad/s

B. 3.04E+01 rad/s

C. 3.28E+01 rad/s

D. 3.55E+01 rad/s

E. 3.83E+01 rad/s

5. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (35\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.79 s? [1297]

A. 6.26E+01 rad/s

B. 6.77E+01 rad/s

C. 7.31E+01 rad/s

The next page might contain more answer choices for this question

D. 7.89E+01 rad/s

E. 8.52E+01 rad/s

6. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (19\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.31 s? [1298]

A. 1.83E+01 rad/s

B. 1.98E+01 rad/s

C. 2.13E+01 rad/s

D. 2.30E+01 rad/s

E. 2.49E+01 rad/s

7. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (28\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.75 s? [1299]

A. 4.20E+01 rad/s

B. 4.54E+01 rad/s

C. 4.90E+01 rad/s

D. 5.29E+01 rad/s

E. 5.72E+01 rad/s

8. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (19\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.37 s? [1300]

A. 2.60E+01 rad/s

B. 2.81E+01 rad/s

C. 3.04E+01 rad/s

D. 3.28E+01 rad/s

E. 3.54E+01 rad/s

9. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (26\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 2.42 s? [1301]

A. 5.39E+01 rad/s

B. 5.83E+01 rad/s

The next page might contain more answer choices for this question

C. 6.29E+01 rad/s

D. 6.80E+01 rad/s

E. 7.34E+01 rad/s

10. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (19\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.47 s? [1302]

A. 2.05E+01 rad/s

B. 2.22E+01 rad/s

C. 2.39E+01 rad/s

D. 2.59E+01 rad/s

E. 2.79E+01 rad/s

11. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (20\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.66 s? [1303]

A. 3.32E+01 rad/s

B. 3.59E+01 rad/s

C. 3.87E+01 rad/s

D. 4.18E+01 rad/s

E. 4.52E+01 rad/s

12. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (25\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 2.45 s? [1304]

A. 4.50E+01 rad/s

B. 4.86E+01 rad/s

C. 5.25E+01 rad/s

D. 5.67E+01 rad/s

E. 6.13E+01 rad/s

13. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (25\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.33 s? [1305]

A. 3.08E+01 rad/s

The next page might contain more answer choices for this question

B. 3.32E+01 rad/s

C. 3.59E+01 rad/s

D. 3.88E+01 rad/s

E. 4.19E+01 rad/s

14. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (16\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 2.08 s? [1306]

A. 3.08E+01 rad/s

B. 3.33E+01 rad/s

C. 3.59E+01 rad/s

D. 3.88E+01 rad/s

E. 4.19E+01 rad/s

15. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (17\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.35 s? [1307]

A. 2.12E+01 rad/s

B. 2.30E+01 rad/s

C. 2.48E+01 rad/s

D. 2.68E+01 rad/s

E. 2.89E+01 rad/s

16. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (15\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 0.994 s? [1308]

A. 1.18E+01 rad/s

B. 1.28E+01 rad/s

C. 1.38E+01 rad/s

D. 1.49E+01 rad/s

E. 1.61E+01 rad/s

17. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (34\ t)$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 2.05 s? [1309]

The next page might contain more answer choices for this question

A. 6.97E+01 rad/s

B. 7.53E+01 rad/s

C. 8.13E+01 rad/s

D. 8.78E+01 rad/s

E. 9.48E+01 rad/s

18. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (34\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.44 s? [1310]

A. 3.60E+01 rad/s

B. 3.89E+01 rad/s

C. 4.20E+01 rad/s

D. 4.53E+01 rad/s

E. 4.90E+01 rad/s

19. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (25\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the instaneous angular velocity of the propellers at t = 1.39 s? [1311]

A. 2.98E+01 rad/s

B. 3.22E+01 rad/s

C. 3.48E+01 rad/s

D. 3.75E+01 rad/s

E. 4.05E+01 rad/s

up1-10 Q5

1. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (30\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.5 s? [1312]

A. 2.21E+01 rad/s^2

B. 2.38E+01 rad/s^2

C. 2.57E+01 rad/s^2

D. 2.78E+01 rad/s^2

E. 3.00E+01 rad/s^2

The next page might contain more answer choices for this question

2. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (29\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.61 s? [1313]

   A. 2.90E+01 rad/s^2

   B. 3.13E+01 rad/s^2

   C. 3.38E+01 rad/s^2

   D. 3.65E+01 rad/s^2

   E. 3.95E+01 rad/s^2

3. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (20\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.15 s? [1314]

   A. 1.59E+01 rad/s^2

   B. 1.71E+01 rad/s^2

   C. 1.85E+01 rad/s^2

   D. 2.00E+01 rad/s^2

   E. 2.16E+01 rad/s^2

4. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (26\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.9 s? [1315]

   A. 2.23E+01 rad/s^2

   B. 2.41E+01 rad/s^2

   C. 2.60E+01 rad/s^2

   D. 2.81E+01 rad/s^2

   E. 3.03E+01 rad/s^2

5. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (27\ \mathrm{t})$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.39 s? [1316]

   A. 2.14E+01 rad/s^2

   B. 2.31E+01 rad/s^2

   C. 2.50E+01 rad/s^2

   D. 2.70E+01 rad/s^2

The next page might contain more answer choices for this question

E. 2.92E+01 rad/s^2

6. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (30\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.75 s? [1317]

   A. 2.21E+01 rad/s^2

   B. 2.38E+01 rad/s^2

   C. 2.57E+01 rad/s^2

   D. 2.78E+01 rad/s^2

   E. 3.00E+01 rad/s^2

7. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (20\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.73 s? [1318]

   A. 2.00E+01 rad/s^2

   B. 2.16E+01 rad/s^2

   C. 2.33E+01 rad/s^2

   D. 2.52E+01 rad/s^2

   E. 2.72E+01 rad/s^2

8. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (28\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 2.62 s? [1319]

   A. 2.59E+01 rad/s^2

   B. 2.80E+01 rad/s^2

   C. 3.02E+01 rad/s^2

   D. 3.27E+01 rad/s^2

   E. 3.53E+01 rad/s^2

9. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (21\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 2.9 s? [1320]

   A. 1.54E+01 rad/s^2

   B. 1.67E+01 rad/s^2

   C. 1.80E+01 rad/s^2

The next page might contain more answer choices for this question

D. 1.94E+01 rad/s^2

E. 2.10E+01 rad/s^2

10. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (32\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.59 s? [1321]

A. 3.20E+01 rad/s^2

B. 3.46E+01 rad/s^2

C. 3.73E+01 rad/s^2

D. 4.03E+01 rad/s^2

E. 4.35E+01 rad/s^2

11. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (25\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 2.98 s? [1322]

A. 1.98E+01 rad/s^2

B. 2.14E+01 rad/s^2

C. 2.31E+01 rad/s^2

D. 2.50E+01 rad/s^2

E. 2.70E+01 rad/s^2

12. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (27\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 2.56 s? [1323]

A. 2.14E+01 rad/s^2

B. 2.31E+01 rad/s^2

C. 2.50E+01 rad/s^2

D. 2.70E+01 rad/s^2

E. 2.92E+01 rad/s^2

13. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (22\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 2.52 s? [1324]

A. 1.62E+01 rad/s^2

B. 1.75E+01 rad/s^2

The next page might contain more answer choices for this question

C. 1.89E+01 rad/s^2

D. 2.04E+01 rad/s^2

E. 2.20E+01 rad/s^2

14. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (24\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.65 s? [1325]

A. 2.06E+01 rad/s^2

B. 2.22E+01 rad/s^2

C. 2.40E+01 rad/s^2

D. 2.59E+01 rad/s^2

E. 2.80E+01 rad/s^2

15. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (23\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.16 s? [1326]

A. 1.97E+01 rad/s^2

B. 2.13E+01 rad/s^2

C. 2.30E+01 rad/s^2

D. 2.48E+01 rad/s^2

E. 2.68E+01 rad/s^2

16. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (21\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.45 s? [1327]

A. 1.54E+01 rad/s^2

B. 1.67E+01 rad/s^2

C. 1.80E+01 rad/s^2

D. 1.94E+01 rad/s^2

E. 2.10E+01 rad/s^2

17. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (20\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.79 s? [1328]

A. 2.00E+01 rad/s^2

The next page might contain more answer choices for this question

B. 2.16E+01 rad/s^2

C. 2.33E+01 rad/s^2

D. 2.52E+01 rad/s^2

E. 2.72E+01 rad/s^2

18. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (23\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.59 s? [1329]

A. 1.97E+01 rad/s^2

B. 2.13E+01 rad/s^2

C. 2.30E+01 rad/s^2

D. 2.48E+01 rad/s^2

E. 2.68E+01 rad/s^2

19. On takeoff, the propellers on a UAV increase their angularvelocity for 3.0 seconds from rest in such a way that the angular velocity obeys, $\omega = (29\ t)$ rad/s, where t is measured in seconds. What is the angular acceleration of the propellers at t = 3.52 s? [1330]

A. 2.90E+01 rad/s^2

B. 3.13E+01 rad/s^2

C. 3.38E+01 rad/s^2

D. 3.65E+01 rad/s^2

E. 3.95E+01 rad/s^2

up1-10 Q6

1. A wind turbine is rotating counterclockwise at 0.499 rev/s and slows to a stop in 11.1 s. Its blades are 19 m in length. What was the magnitude of the angular acceleration of the turbine? [1331]

A. 2.62E-01 rad/s^2

B. 2.82E-01 rad/s^2

C. 3.05E-01 rad/s^2

D. 3.29E-01 rad/s^2

E. 3.56E-01 rad/s^2

The next page might contain more answer choices for this question

2. A wind turbine is rotating counterclockwise at 0.502 rev/s and slows to a stop in 12.9 s. Its blades are 18 m in length. What was the magnitude of the angular acceleration of the turbine? [1332]

   A. 2.10E-01 rad/s^2

   B. 2.26E-01 rad/s^2

   C. 2.45E-01 rad/s^2

   D. 2.64E-01 rad/s^2

   E. 2.85E-01 rad/s^2

3. A wind turbine is rotating counterclockwise at 0.284 rev/s and slows to a stop in 10.3 s. Its blades are 22 m in length. What was the magnitude of the angular acceleration of the turbine? [1333]

   A. 1.27E-01 rad/s^2

   B. 1.38E-01 rad/s^2

   C. 1.49E-01 rad/s^2

   D. 1.60E-01 rad/s^2

   E. 1.73E-01 rad/s^2

4. A wind turbine is rotating counterclockwise at 0.434 rev/s and slows to a stop in 7.82 s. Its blades are 20 m in length. What was the magnitude of the angular acceleration of the turbine? [1334]

   A. 2.56E-01 rad/s^2

   B. 2.77E-01 rad/s^2

   C. 2.99E-01 rad/s^2

   D. 3.23E-01 rad/s^2

   E. 3.49E-01 rad/s^2

5. A wind turbine is rotating counterclockwise at 0.962 rev/s and slows to a stop in 9.81 s. Its blades are 24 m in length. What was the magnitude of the angular acceleration of the turbine? [1335]

   A. 6.16E-01 rad/s^2

   B. 6.65E-01 rad/s^2

   C. 7.19E-01 rad/s^2

   D. 7.76E-01 rad/s^2

The next page might contain more answer choices for this question

E. 8.38E-01 rad/s^2

6. A wind turbine is rotating counterclockwise at 0.653 rev/s and slows to a stop in 8.02 s. Its blades are 15 m in length. What was the magnitude of the angular acceleration of the turbine? [1336]

A. 3.76E-01 rad/s^2

B. 4.06E-01 rad/s^2

C. 4.39E-01 rad/s^2

D. 4.74E-01 rad/s^2

E. 5.12E-01 rad/s^2

7. A wind turbine is rotating counterclockwise at 0.614 rev/s and slows to a stop in 9.19 s. Its blades are 23 m in length. What was the magnitude of the angular acceleration of the turbine? [1337]

A. 4.20E-01 rad/s^2

B. 4.53E-01 rad/s^2

C. 4.90E-01 rad/s^2

D. 5.29E-01 rad/s^2

E. 5.71E-01 rad/s^2

8. A wind turbine is rotating counterclockwise at 0.435 rev/s and slows to a stop in 12.0 s. Its blades are 16 m in length. What was the magnitude of the angular acceleration of the turbine? [1338]

A. 1.95E-01 rad/s^2

B. 2.11E-01 rad/s^2

C. 2.28E-01 rad/s^2

D. 2.46E-01 rad/s^2

E. 2.66E-01 rad/s^2

9. A wind turbine is rotating counterclockwise at 0.286 rev/s and slows to a stop in 7.96 s. Its blades are 18 m in length. What was the magnitude of the angular acceleration of the turbine? [1339]

A. 1.79E-01 rad/s^2

B. 1.94E-01 rad/s^2

C. 2.09E-01 rad/s^2

The next page might contain more answer choices for this question

D. 2.26E-01 rad/s^2

E. 2.44E-01 rad/s^2

10. A wind turbine is rotating counterclockwise at 0.325 rev/s and slows to a stop in 10.1 s. Its blades are 17 m in length. What was the magnitude of the angular acceleration of the turbine? [1340]

A. 1.49E-01 rad/s^2

B. 1.60E-01 rad/s^2

C. 1.73E-01 rad/s^2

D. 1.87E-01 rad/s^2

E. 2.02E-01 rad/s^2

11. A wind turbine is rotating counterclockwise at 0.617 rev/s and slows to a stop in 10.5 s. Its blades are 23 m in length. What was the magnitude of the angular acceleration of the turbine? [1341]

A. 3.42E-01 rad/s^2

B. 3.69E-01 rad/s^2

C. 3.99E-01 rad/s^2

D. 4.31E-01 rad/s^2

E. 4.65E-01 rad/s^2

12. A wind turbine is rotating counterclockwise at 0.709 rev/s and slows to a stop in 9.67 s. Its blades are 17 m in length. What was the magnitude of the angular acceleration of the turbine? [1342]

A. 3.66E-01 rad/s^2

B. 3.95E-01 rad/s^2

C. 4.27E-01 rad/s^2

D. 4.61E-01 rad/s^2

E. 4.98E-01 rad/s^2

13. A wind turbine is rotating counterclockwise at 0.749 rev/s and slows to a stop in 12.1 s. Its blades are 19 m in length. What was the magnitude of the angular acceleration of the turbine? [1343]

A. 3.33E-01 rad/s^2

B. 3.60E-01 rad/s^2

The next page might contain more answer choices for this question

C. 3.89E-01 rad/s^2

D. 4.20E-01 rad/s^2

E. 4.54E-01 rad/s^2

14. A wind turbine is rotating counterclockwise at 0.264 rev/s and slows to a stop in 7.52 s. Its blades are 15 m in length. What was the magnitude of the angular acceleration of the turbine? [1344]

A. 1.89E-01 rad/s^2

B. 2.04E-01 rad/s^2

C. 2.21E-01 rad/s^2

D. 2.38E-01 rad/s^2

E. 2.57E-01 rad/s^2

15. A wind turbine is rotating counterclockwise at 0.837 rev/s and slows to a stop in 10.3 s. Its blades are 21 m in length. What was the magnitude of the angular acceleration of the turbine? [1345]

A. 4.05E-01 rad/s^2

B. 4.38E-01 rad/s^2

C. 4.73E-01 rad/s^2

D. 5.11E-01 rad/s^2

E. 5.51E-01 rad/s^2

16. A wind turbine is rotating counterclockwise at 0.217 rev/s and slows to a stop in 12.5 s. Its blades are 24 m in length. What was the magnitude of the angular acceleration of the turbine? [1346]

A. 9.35E-02 rad/s^2

B. 1.01E-01 rad/s^2

C. 1.09E-01 rad/s^2

D. 1.18E-01 rad/s^2

E. 1.27E-01 rad/s^2

17. A wind turbine is rotating counterclockwise at 0.387 rev/s and slows to a stop in 11.0 s. Its blades are 17 m in length. What was the magnitude of the angular acceleration of the turbine? [1347]

A. 1.90E-01 rad/s^2

The next page might contain more answer choices for this question

B. 2.05E-01 rad/s^2

C. 2.21E-01 rad/s^2

D. 2.39E-01 rad/s^2

E. 2.58E-01 rad/s^2

18. A wind turbine is rotating counterclockwise at 0.95 rev/s and slows to a stop in 9.96 s. Its blades are 21 m in length. What was the magnitude of the angular acceleration of the turbine? [1348]

A. 5.14E-01 rad/s^2

B. 5.55E-01 rad/s^2

C. 5.99E-01 rad/s^2

D. 6.47E-01 rad/s^2

E. 6.99E-01 rad/s^2

19. A wind turbine is rotating counterclockwise at 0.715 rev/s and slows to a stop in 11.9 s. Its blades are 16 m in length. What was the magnitude of the angular acceleration of the turbine? [1349]

A. 3.78E-01 rad/s^2

B. 4.08E-01 rad/s^2

C. 4.40E-01 rad/s^2

D. 4.76E-01 rad/s^2

E. 5.14E-01 rad/s^2

up1-10 Q7

1. A wind turbine is rotating counterclockwise at 0.218 rev/s and slows to a stop in 12.3 s. Its blades are 15 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1350]

A. 2.07E+01 m/s^2

B. 2.23E+01 m/s^2

C. 2.41E+01 m/s^2

D. 2.61E+01 m/s^2

E. 2.81E+01 m/s^2

The next page might contain more answer choices for this question

2. A wind turbine is rotating counterclockwise at 0.772 rev/s and slows to a stop in 7.05 s. Its blades are 21 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1351]

   A. 4.94E+02 m/s^2

   B. 5.34E+02 m/s^2

   C. 5.76E+02 m/s^2

   D. 6.22E+02 m/s^2

   E. 6.72E+02 m/s^2

3. A wind turbine is rotating counterclockwise at 0.98 rev/s and slows to a stop in 9.86 s. Its blades are 22 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1352]

   A. 8.34E+02 m/s^2

   B. 9.01E+02 m/s^2

   C. 9.73E+02 m/s^2

   D. 1.05E+03 m/s^2

   E. 1.13E+03 m/s^2

4. A wind turbine is rotating counterclockwise at 0.229 rev/s and slows to a stop in 7.07 s. Its blades are 18 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1353]

   A. 3.73E+01 m/s^2

   B. 4.02E+01 m/s^2

   C. 4.35E+01 m/s^2

   D. 4.69E+01 m/s^2

   E. 5.07E+01 m/s^2

5. A wind turbine is rotating counterclockwise at 0.275 rev/s and slows to a stop in 11.8 s. Its blades are 18 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1354]

   A. 3.95E+01 m/s^2

   B. 4.27E+01 m/s^2

   C. 4.61E+01 m/s^2

   D. 4.98E+01 m/s^2

The next page might contain more answer choices for this question

E. 5.37E+01 m/s^2

6. A wind turbine is rotating counterclockwise at 0.286 rev/s and slows to a stop in 8.98 s. Its blades are 20 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1355]

A. 5.54E+01 m/s^2

B. 5.98E+01 m/s^2

C. 6.46E+01 m/s^2

D. 6.98E+01 m/s^2

E. 7.53E+01 m/s^2

7. A wind turbine is rotating counterclockwise at 0.994 rev/s and slows to a stop in 7.54 s. Its blades are 22 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1356]

A. 7.95E+02 m/s^2

B. 8.58E+02 m/s^2

C. 9.27E+02 m/s^2

D. 1.00E+03 m/s^2

E. 1.08E+03 m/s^2

8. A wind turbine is rotating counterclockwise at 0.884 rev/s and slows to a stop in 7.07 s. Its blades are 15 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1357]

A. 3.67E+02 m/s^2

B. 3.97E+02 m/s^2

C. 4.28E+02 m/s^2

D. 4.63E+02 m/s^2

E. 5.00E+02 m/s^2

9. A wind turbine is rotating counterclockwise at 0.44 rev/s and slows to a stop in 10.8 s. Its blades are 23 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1358]

A. 1.29E+02 m/s^2

B. 1.40E+02 m/s^2

C. 1.51E+02 m/s^2

The next page might contain more answer choices for this question

D. 1.63E+02 m/s^2

E. 1.76E+02 m/s^2

10. A wind turbine is rotating counterclockwise at 0.56 rev/s and slows to a stop in 10.5 s. Its blades are 24 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1359]

A. 2.18E+02 m/s^2

B. 2.36E+02 m/s^2

C. 2.55E+02 m/s^2

D. 2.75E+02 m/s^2

E. 2.97E+02 m/s^2

11. A wind turbine is rotating counterclockwise at 0.911 rev/s and slows to a stop in 12.5 s. Its blades are 25 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1360]

A. 6.50E+02 m/s^2

B. 7.02E+02 m/s^2

C. 7.58E+02 m/s^2

D. 8.19E+02 m/s^2

E. 8.85E+02 m/s^2

12. A wind turbine is rotating counterclockwise at 0.685 rev/s and slows to a stop in 7.51 s. Its blades are 16 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1361]

A. 2.54E+02 m/s^2

B. 2.74E+02 m/s^2

C. 2.96E+02 m/s^2

D. 3.20E+02 m/s^2

E. 3.46E+02 m/s^2

13. A wind turbine is rotating counterclockwise at 0.365 rev/s and slows to a stop in 8.39 s. Its blades are 20 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1362]

A. 9.02E+01 m/s^2

B. 9.74E+01 m/s^2

The next page might contain more answer choices for this question

C. 1.05E+02 m/s^2

D. 1.14E+02 m/s^2

E. 1.23E+02 m/s^2

14. A wind turbine is rotating counterclockwise at 0.241 rev/s and slows to a stop in 7.29 s. Its blades are 21 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1363]

A. 4.82E+01 m/s^2

B. 5.20E+01 m/s^2

C. 5.62E+01 m/s^2

D. 6.07E+01 m/s^2

E. 6.55E+01 m/s^2

15. A wind turbine is rotating counterclockwise at 0.635 rev/s and slows to a stop in 11.2 s. Its blades are 25 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1364]

A. 3.16E+02 m/s^2

B. 3.41E+02 m/s^2

C. 3.68E+02 m/s^2

D. 3.98E+02 m/s^2

E. 4.30E+02 m/s^2

16. A wind turbine is rotating counterclockwise at 0.503 rev/s and slows to a stop in 8.86 s. Its blades are 15 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1365]

A. 1.19E+02 m/s^2

B. 1.28E+02 m/s^2

C. 1.39E+02 m/s^2

D. 1.50E+02 m/s^2

E. 1.62E+02 m/s^2

17. A wind turbine is rotating counterclockwise at 0.967 rev/s and slows to a stop in 8.72 s. Its blades are 16 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1366]

A. 4.69E+02 m/s^2

The next page might contain more answer choices for this question

B. 5.06E+02 m/s^2

C. 5.47E+02 m/s^2

D. 5.91E+02 m/s^2

E. 6.38E+02 m/s^2

18. A wind turbine is rotating counterclockwise at 0.356 rev/s and slows to a stop in 7.71 s. Its blades are 17 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1367]

A. 7.88E+01 m/s^2

B. 8.51E+01 m/s^2

C. 9.19E+01 m/s^2

D. 9.92E+01 m/s^2

E. 1.07E+02 m/s^2

19. A wind turbine is rotating counterclockwise at 0.436 rev/s and slows to a stop in 9.67 s. Its blades are 16 m in length. What was the magnitude of the centripetal acceleration of the tip of the blades at t = 0s? [1368]

A. 1.11E+02 m/s^2

B. 1.20E+02 m/s^2

C. 1.30E+02 m/s^2

D. 1.40E+02 m/s^2

E. 1.51E+02 m/s^2

up1-10 Q8

1. A wind turbine is rotating counterclockwise at 0.311 rev/s and slows to a stop in 9.03 s. Its blades are 15 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1369]

A. 5.74E+01m/s^2

B. 6.20E+01m/s^2

C. 6.69E+01m/s^2

D. 7.23E+01m/s^2

E. 7.80E+01m/s^2

The next page might contain more answer choices for this question

2. A wind turbine is rotating counterclockwise at 0.232 rev/s and slows to a stop in 10.6 s. Its blades are 17 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1370]

   A. 2.87E+01m/s^2

   B. 3.10E+01m/s^2

   C. 3.35E+01m/s^2

   D. 3.62E+01m/s^2

   E. 3.91E+01m/s^2

3. A wind turbine is rotating counterclockwise at 0.22 rev/s and slows to a stop in 10.1 s. Its blades are 23 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1371]

   A. 4.41E+01m/s^2

   B. 4.76E+01m/s^2

   C. 5.14E+01m/s^2

   D. 5.55E+01m/s^2

   E. 5.99E+01m/s^2

4. A wind turbine is rotating counterclockwise at 0.806 rev/s and slows to a stop in 11.3 s. Its blades are 16 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1372]

   A. 3.52E+02m/s^2

   B. 3.80E+02m/s^2

   C. 4.10E+02m/s^2

   D. 4.43E+02m/s^2

   E. 4.79E+02m/s^2

5. A wind turbine is rotating counterclockwise at 0.402 rev/s and slows to a stop in 9.72 s. Its blades are 17 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1373]

   A. 1.09E+02m/s^2

   B. 1.17E+02m/s^2

   C. 1.27E+02m/s^2

   D. 1.37E+02m/s^2

The next page might contain more answer choices for this question

E. 1.48E+02m/s^2

6. A wind turbine is rotating counterclockwise at 0.334 rev/s and slows to a stop in 8.0 s. Its blades are 21 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1374]

A. 7.94E+01m/s^2

B. 8.58E+01m/s^2

C. 9.26E+01m/s^2

D. 1.00E+02m/s^2

E. 1.08E+02m/s^2

7. A wind turbine is rotating counterclockwise at 0.291 rev/s and slows to a stop in 8.77 s. Its blades are 20 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1375]

A. 5.74E+01m/s^2

B. 6.20E+01m/s^2

C. 6.70E+01m/s^2

D. 7.24E+01m/s^2

E. 7.81E+01m/s^2

8. A wind turbine is rotating counterclockwise at 0.412 rev/s and slows to a stop in 9.79 s. Its blades are 15 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1376]

A. 8.62E+01m/s^2

B. 9.31E+01m/s^2

C. 1.01E+02m/s^2

D. 1.09E+02m/s^2

E. 1.17E+02m/s^2

9. A wind turbine is rotating counterclockwise at 0.279 rev/s and slows to a stop in 10.9 s. Its blades are 18 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1377]

A. 4.07E+01m/s^2

B. 4.40E+01m/s^2

C. 4.75E+01m/s^2

The next page might contain more answer choices for this question

D. 5.13E+01m/s^2

E. 5.54E+01m/s^2

10. A wind turbine is rotating counterclockwise at 0.464 rev/s and slows to a stop in 8.31 s. Its blades are 22 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1378]

A. 1.38E+02m/s^2

B. 1.49E+02m/s^2

C. 1.60E+02m/s^2

D. 1.73E+02m/s^2

E. 1.87E+02m/s^2

11. A wind turbine is rotating counterclockwise at 0.261 rev/s and slows to a stop in 10.9 s. Its blades are 15 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1379]

A. 2.97E+01m/s^2

B. 3.21E+01m/s^2

C. 3.46E+01m/s^2

D. 3.74E+01m/s^2

E. 4.04E+01m/s^2

12. A wind turbine is rotating counterclockwise at 0.817 rev/s and slows to a stop in 9.99 s. Its blades are 22 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1380]

A. 4.26E+02m/s^2

B. 4.60E+02m/s^2

C. 4.97E+02m/s^2

D. 5.37E+02m/s^2

E. 5.80E+02m/s^2

13. A wind turbine is rotating counterclockwise at 0.784 rev/s and slows to a stop in 11.0 s. Its blades are 22 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1381]

A. 5.34E+02m/s^2

B. 5.77E+02m/s^2

The next page might contain more answer choices for this question

C. 6.23E+02m/s^2

D. 6.73E+02m/s^2

E. 7.26E+02m/s^2

14. A wind turbine is rotating counterclockwise at 0.24 rev/s and slows to a stop in 12.5 s. Its blades are 20 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1382]

A. 3.90E+01m/s^2

B. 4.22E+01m/s^2

C. 4.55E+01m/s^2

D. 4.92E+01m/s^2

E. 5.31E+01m/s^2

15. A wind turbine is rotating counterclockwise at 0.838 rev/s and slows to a stop in 9.8 s. Its blades are 17 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1383]

A. 4.71E+02m/s^2

B. 5.09E+02m/s^2

C. 5.50E+02m/s^2

D. 5.94E+02m/s^2

E. 6.41E+02m/s^2

16. A wind turbine is rotating counterclockwise at 0.58 rev/s and slows to a stop in 9.97 s. Its blades are 19 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1384]

A. 2.34E+02m/s^2

B. 2.52E+02m/s^2

C. 2.73E+02m/s^2

D. 2.94E+02m/s^2

E. 3.18E+02m/s^2

17. A wind turbine is rotating counterclockwise at 0.715 rev/s and slows to a stop in 7.86 s. Its blades are 24 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1385]

A. 4.49E+02m/s^2

The next page might contain more answer choices for this question

B. 4.85E+02m/s^2

C. 5.23E+02m/s^2

D. 5.65E+02m/s^2

E. 6.10E+02m/s^2

18. A wind turbine is rotating counterclockwise at 0.755 rev/s and slows to a stop in 9.71 s. Its blades are 17 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1386]

A. 3.28E+02m/s^2

B. 3.54E+02m/s^2

C. 3.83E+02m/s^2

D. 4.13E+02m/s^2

E. 4.46E+02m/s^2

19. A wind turbine is rotating counterclockwise at 0.305 rev/s and slows to a stop in 8.1 s. Its blades are 16 m in length. What was the magnitudeof the total linear acceleration of the tip of the blades at t = 0 s? [1387]

A. 5.89E+01m/s^2

B. 6.36E+01m/s^2

C. 6.87E+01m/s^2

D. 7.42E+01m/s^2

E. 8.01E+01m/s^2

up1-10 Q9

1. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 13-kg motorcycle wheel if its angular velocity is 1.350E+02 rad/s and its inner radius is 0.274 m and outer radius is 0.336 m. [1388]

A. 1.65E+03 J

B. 1.78E+03 J

C. 1.92E+03 J

D. 2.07E+03 J

E. 2.24E+03 J

The next page might contain more answer choices for this question

2. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 17-kg motorcycle wheel if its angular velocity is 84 rad/s and its inner radius is 0.278 m and outer radius is 0.331 m. [1389]

   A. 7.68E+02 J

   B. 8.30E+02 J

   C. 8.96E+02 J

   D. 9.68E+02 J

   E. 1.05E+03 J

3. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 18-kg motorcycle wheel if its angular velocity is 1.340E+02 rad/s and its inner radius is 0.288 m and outer radius is 0.309 m. [1390]

   A. 1.01E+03 J

   B. 1.09E+03 J

   C. 1.18E+03 J

   D. 1.28E+03 J

   E. 1.38E+03 J

4. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 17-kg motorcycle wheel if its angular velocity is 1.400E+02 rad/s and its inner radius is 0.29 m and outer radius is 0.349 m. [1391]

   A. 2.31E+03 J

   B. 2.49E+03 J

   C. 2.69E+03 J

   D. 2.91E+03 J

   E. 3.14E+03 J

5. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 15-kg motorcycle wheel if its angular velocity is 1.050E+02 rad/s and its inner radius is 0.307 m and outer radius is 0.358 m. [1392]

   A. 1.30E+03 J

The next page might contain more answer choices for this question

B. 1.40E+03 J

C. 1.51E+03 J

D. 1.64E+03 J

E. 1.77E+03 J

6. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 16-kg motorcycle wheel if its angular velocity is 1.560E+02 rad/s and its inner radius is 0.303 m and outer radius is 0.346 m. [1393]

A. 2.52E+03 J

B. 2.72E+03 J

C. 2.93E+03 J

D. 3.17E+03 J

E. 3.42E+03 J

7. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 20-kg motorcycle wheel if its angular velocity is 1.040E+02 rad/s and its inner radius is 0.289 m and outer radius is 0.368 m. [1394]

A. 2.41E+03 J

B. 2.60E+03 J

C. 2.81E+03 J

D. 3.03E+03 J

E. 3.27E+03 J

8. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 13-kg motorcycle wheel if its angular velocity is 1.580E+02 rad/s and its inner radius is 0.266 m and outer radius is 0.336 m. [1395]

A. 3.17E+03 J

B. 3.42E+03 J

C. 3.69E+03 J

D. 3.99E+03 J

E. 4.31E+03 J

The next page might contain more answer choices for this question

9. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 16-kg motorcycle wheel if its angular velocity is 80 rad/s and its inner radius is 0.318 m and outer radius is 0.327 m. [1396]

   A. 1.49E+02 J

   B. 1.60E+02 J

   C. 1.73E+02 J

   D. 1.87E+02 J

   E. 2.02E+02 J

10. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 14-kg motorcycle wheel if its angular velocity is 1.200E+02 rad/s and its inner radius is 0.275 m and outer radius is 0.338 m. [1397]

   A. 1.43E+03 J

   B. 1.55E+03 J

   C. 1.67E+03 J

   D. 1.80E+03 J

   E. 1.95E+03 J

11. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 13-kg motorcycle wheel if its angular velocity is 1.400E+02 rad/s and its inner radius is 0.266 m and outer radius is 0.321 m. [1398]

   A. 1.51E+03 J

   B. 1.63E+03 J

   C. 1.76E+03 J

   D. 1.90E+03 J

   E. 2.06E+03 J

12. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 18-kg motorcycle wheel if its angular velocity is 1.100E+02 rad/s and its inner radius is 0.286 m and outer radius is 0.351 m. [1399]

   A. 1.79E+03 J

The next page might contain more answer choices for this question

B. 1.93E+03 J

C. 2.09E+03 J

D. 2.25E+03 J

E. 2.43E+03 J

13. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 18-kg motorcycle wheel if its angular velocity is 1.360E+02 rad/s and its inner radius is 0.296 m and outer radius is 0.355 m. [1400]

A. 2.35E+03 J

B. 2.54E+03 J

C. 2.74E+03 J

D. 2.96E+03 J

E. 3.20E+03 J

14. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 18-kg motorcycle wheel if its angular velocity is 97 rad/s and its inner radius is 0.263 m and outer radius is 0.349 m. [1401]

A. 2.06E+03 J

B. 2.23E+03 J

C. 2.41E+03 J

D. 2.60E+03 J

E. 2.81E+03 J

15. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 20-kg motorcycle wheel if its angular velocity is 1.000E+02 rad/s and its inner radius is 0.296 m and outer radius is 0.315 m. [1402]

A. 4.27E+02 J

B. 4.61E+02 J

C. 4.98E+02 J

D. 5.37E+02 J

E. 5.80E+02 J

The next page might contain more answer choices for this question

16. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 16-kg motorcycle wheel if its angular velocity is 1.160E+02 rad/s and its inner radius is 0.294 m and outer radius is 0.309 m. [1403]

A. 4.51E+02 J

B. 4.87E+02 J

C. 5.26E+02 J

D. 5.68E+02 J

E. 6.13E+02 J

17. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 16-kg motorcycle wheel if its angular velocity is 1.270E+02 rad/s and its inner radius is 0.267 m and outer radius is 0.314 m. [1404]

A. 1.76E+03 J

B. 1.90E+03 J

C. 2.05E+03 J

D. 2.22E+03 J

E. 2.40E+03 J

18. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 19-kg motorcycle wheel if its angular velocity is 81 rad/s and its inner radius is 0.258 m and outer radius is 0.307 m. [1405]

A. 7.40E+02 J

B. 7.99E+02 J

C. 8.63E+02 J

D. 9.32E+02 J

E. 1.01E+03 J

19. The moment of inertia of a solid disk is $I = \frac{1}{2}MR^2$ where M is mass and R is radius. Use this to model a wheel as a disk with a concentric hole and calculate the rotational kinetic energy of a 14-kg motorcycle wheel if its angular velocity is 1.030E+02 rad/s and its inner radius is 0.292 m and outer radius is 0.335 m. [1406]

A. 1.00E+03 J

The next page might contain more answer choices for this question

B. 1.08E+03 J

C. 1.17E+03 J

D. 1.26E+03 J

E. 1.36E+03 J

up1-10 Q10

1. When opening a door, you push on it perperndicularlywith a force of 57.5 N at a distance of 0.578 m from thehinges. What torque are you exerting relative to the hinges? [1407]

   A. 3.08E+01Nm

   B. 3.32E+01Nm

   C. 3.59E+01Nm

   D. 3.88E+01Nm

   E. 4.19E+01Nm

2. When opening a door, you push on it perperndicularlywith a force of 51.7 N at a distance of 0.781 m from thehinges. What torque are you exerting relative to the hinges? [1408]

   A. 3.21E+01Nm

   B. 3.46E+01Nm

   C. 3.74E+01Nm

   D. 4.04E+01Nm

   E. 4.36E+01Nm

3. When opening a door, you push on it perperndicularlywith a force of 72.4 N at a distance of 1.05 m from thehinges. What torque are you exerting relative to the hinges? [1409]

   A. 7.60E+01Nm

   B. 8.21E+01Nm

   C. 8.87E+01Nm

   D. 9.58E+01Nm

   E. 1.03E+02Nm

4. When opening a door, you push on it perperndicularlywith a force of 50.4 N at a distance of 0.644 m from thehinges. What torque are you exerting relative to the hinges? [1410]

   A. 3.25E+01Nm

The next page might contain more answer choices for this question

B. 3.51E+01Nm

C. 3.79E+01Nm

D. 4.09E+01Nm

E. 4.42E+01Nm

5. When opening a door, you push on it perperndicularlywith a force of 63.7 N at a distance of 1.08 m from thehinges. What torque are you exerting relative to the hinges? [1411]

A. 5.46E+01Nm

B. 5.90E+01Nm

C. 6.37E+01Nm

D. 6.88E+01Nm

E. 7.43E+01Nm

6. When opening a door, you push on it perperndicularlywith a force of 68.0 N at a distance of 0.782 m from thehinges. What torque are you exerting relative to the hinges? [1412]

A. 4.56E+01Nm

B. 4.92E+01Nm

C. 5.32E+01Nm

D. 5.74E+01Nm

E. 6.20E+01Nm

7. When opening a door, you push on it perperndicularlywith a force of 52.8 N at a distance of 1.11 m from thehinges. What torque are you exerting relative to the hinges? [1413]

A. 4.65E+01Nm

B. 5.02E+01Nm

C. 5.43E+01Nm

D. 5.86E+01Nm

E. 6.33E+01Nm

8. When opening a door, you push on it perperndicularlywith a force of 67.5 N at a distance of 0.581 m from thehinges. What torque are you exerting relative to the hinges? [1414]

A. 3.92E+01Nm

B. 4.24E+01Nm

C. 4.57E+01Nm

The next page might contain more answer choices for this question

D. 4.94E+01Nm

E. 5.34E+01Nm

9. When opening a door, you push on it perperndicularlywith a force of 50.5 N at a distance of 0.564 m from thehinges. What torque are you exerting relative to the hinges? [1415]

A. 2.09E+01Nm

B. 2.26E+01Nm

C. 2.44E+01Nm

D. 2.64E+01Nm

E. 2.85E+01Nm

10. When opening a door, you push on it perperndicularlywith a force of 63.4 N at a distance of 0.801 m from thehinges. What torque are you exerting relative to the hinges? [1416]

A. 5.08E+01Nm

B. 5.48E+01Nm

C. 5.92E+01Nm

D. 6.40E+01Nm

E. 6.91E+01Nm

11. When opening a door, you push on it perperndicularlywith a force of 73.1 N at a distance of 0.529 m from thehinges. What torque are you exerting relative to the hinges? [1417]

A. 3.07E+01Nm

B. 3.32E+01Nm

C. 3.58E+01Nm

D. 3.87E+01Nm

E. 4.18E+01Nm

12. When opening a door, you push on it perperndicularlywith a force of 74.7 N at a distance of 0.975 m from thehinges. What torque are you exerting relative to the hinges? [1418]

A. 5.78E+01Nm

B. 6.24E+01Nm

C. 6.74E+01Nm

D. 7.28E+01Nm

E. 7.87E+01Nm

The next page might contain more answer choices for this question

13. When opening a door, you push on it perperndicularlywith a force of 73.4 N at a distance of 0.556 m from thehinges. What torque are you exerting relative to the hinges? [1419]

    A. 3.24E+01Nm

    B. 3.50E+01Nm

    C. 3.78E+01Nm

    D. 4.08E+01Nm

    E. 4.41E+01Nm

14. When opening a door, you push on it perperndicularlywith a force of 61.3 N at a distance of 1.04 m from thehinges. What torque are you exerting relative to the hinges? [1420]

    A. 5.06E+01Nm

    B. 5.47E+01Nm

    C. 5.90E+01Nm

    D. 6.38E+01Nm

    E. 6.89E+01Nm

15. When opening a door, you push on it perperndicularlywith a force of 64.4 N at a distance of 1.15 m from thehinges. What torque are you exerting relative to the hinges? [1421]

    A. 6.35E+01Nm

    B. 6.86E+01Nm

    C. 7.41E+01Nm

    D. 8.00E+01Nm

    E. 8.64E+01Nm

16. When opening a door, you push on it perperndicularlywith a force of 50.6 N at a distance of 0.648 m from thehinges. What torque are you exerting relative to the hinges? [1422]

    A. 2.81E+01Nm

    B. 3.04E+01Nm

    C. 3.28E+01Nm

    D. 3.54E+01Nm

    E. 3.82E+01Nm

17. When opening a door, you push on it perperndicularlywith a force of 61.9 N at a distance of 0.615 m from thehinges. What torque are you exerting relative to the hinges? [1423]

The next page might contain more answer choices for this question

A. 3.26E+01Nm

B. 3.52E+01Nm

C. 3.81E+01Nm

D. 4.11E+01Nm

E. 4.44E+01Nm

18. When opening a door, you push on it perperndicularlywith a force of 59.2 N at a distance of 0.64 m from thehinges. What torque are you exerting relative to the hinges? [1424]

A. 2.78E+01Nm

B. 3.01E+01Nm

C. 3.25E+01Nm

D. 3.51E+01Nm

E. 3.79E+01Nm

19. When opening a door, you push on it perperndicularlywith a force of 56.4 N at a distance of 0.574 m from thehinges. What torque are you exerting relative to the hinges? [1425]

A. 2.57E+01Nm

B. 2.78E+01Nm

C. 3.00E+01Nm

D. 3.24E+01Nm

E. 3.50E+01Nm

up1-10 Q11

1. Suppose you exert a force of 1.260E+02 N tangentialto a 0.308-m-radius, 87.1-kg grindstone (a solid disc).What torque is exerted? [1426]

A. 3.33E+01Nm

B. 3.59E+01Nm

C. 3.88E+01Nm

D. 4.19E+01Nm

E. 4.53E+01Nm

2. Suppose you exert a force of 1.820E+02 N tangentialto a 0.245-m-radius, 88.9-kg grindstone (a solid disc).What torque is exerted? [1427]

The next page might contain more answer choices for this question

A. 3.54E+01Nm

B. 3.82E+01Nm

C. 4.13E+01Nm

D. 4.46E+01Nm

E. 4.82E+01Nm

3. Suppose you exert a force of 2.160E+02 N tangentialto a 0.425-m-radius, 67.4-kg grindstone (a solid disc).What torque is exerted? [1428]

A. 8.50E+01Nm

B. 9.18E+01Nm

C. 9.91E+01Nm

D. 1.07E+02Nm

E. 1.16E+02Nm

4. Suppose you exert a force of 2.020E+02 N tangentialto a 0.342-m-radius, 55.4-kg grindstone (a solid disc).What torque is exerted? [1429]

A. 6.91E+01Nm

B. 7.46E+01Nm

C. 8.06E+01Nm

D. 8.70E+01Nm

E. 9.40E+01Nm

5. Suppose you exert a force of 2.140E+02 N tangentialto a 0.379-m-radius, 78.0-kg grindstone (a solid disc).What torque is exerted? [1430]

A. 7.51E+01Nm

B. 8.11E+01Nm

C. 8.76E+01Nm

D. 9.46E+01Nm

E. 1.02E+02Nm

6. Suppose you exert a force of 1.290E+02 N tangentialto a 0.188-m-radius, 52.8-kg grindstone (a solid disc).What torque is exerted? [1431]

A. 1.93E+01Nm

B. 2.08E+01Nm

The next page might contain more answer choices for this question

C. 2.25E+01Nm

D. 2.43E+01Nm

E. 2.62E+01Nm

7. Suppose you exert a force of 2.050E+02 N tangentialto a 0.178-m-radius, 85.6-kg grindstone (a solid disc).What torque is exerted? [1432]

A. 2.68E+01Nm

B. 2.90E+01Nm

C. 3.13E+01Nm

D. 3.38E+01Nm

E. 3.65E+01Nm

8. Suppose you exert a force of 2.080E+02 N tangentialto a 0.231-m-radius, 63.1-kg grindstone (a solid disc).What torque is exerted? [1433]

A. 3.81E+01Nm

B. 4.12E+01Nm

C. 4.45E+01Nm

D. 4.80E+01Nm

E. 5.19E+01Nm

9. Suppose you exert a force of 1.520E+02 N tangentialto a 0.206-m-radius, 82.5-kg grindstone (a solid disc).What torque is exerted? [1434]

A. 3.13E+01Nm

B. 3.38E+01Nm

C. 3.65E+01Nm

D. 3.94E+01Nm

E. 4.26E+01Nm

10. Suppose you exert a force of 1.830E+02 N tangentialto a 0.344-m-radius, 65.0-kg grindstone (a solid disc).What torque is exerted? [1435]

A. 5.83E+01Nm

B. 6.30E+01Nm

C. 6.80E+01Nm

D. 7.34E+01Nm

The next page might contain more answer choices for this question

E. 7.93E+01Nm

11. Suppose you exert a force of 2.020E+02 N tangentialto a 0.224-m-radius, 78.4-kg grindstone (a solid disc).What torque is exerted? [1436]

A. 4.19E+01Nm

B. 4.52E+01Nm

C. 4.89E+01Nm

D. 5.28E+01Nm

E. 5.70E+01Nm

12. Suppose you exert a force of 2.040E+02 N tangentialto a 0.21-m-radius, 69.8-kg grindstone (a solid disc).What torque is exerted? [1437]

A. 3.40E+01Nm

B. 3.67E+01Nm

C. 3.97E+01Nm

D. 4.28E+01Nm

E. 4.63E+01Nm

13. Suppose you exert a force of 1.940E+02 N tangentialto a 0.307-m-radius, 62.0-kg grindstone (a solid disc).What torque is exerted? [1438]

A. 5.11E+01Nm

B. 5.51E+01Nm

C. 5.96E+01Nm

D. 6.43E+01Nm

E. 6.95E+01Nm

14. Suppose you exert a force of 1.580E+02 N tangentialto a 0.22-m-radius, 88.3-kg grindstone (a solid disc).What torque is exerted? [1439]

A. 2.55E+01Nm

B. 2.76E+01Nm

C. 2.98E+01Nm

D. 3.22E+01Nm

E. 3.48E+01Nm

The next page might contain more answer choices for this question

15. Suppose you exert a force of 2.180E+02 N tangentialto a 0.371-m-radius, 64.0-kg grindstone (a solid disc).What torque is exerted? [1440]

    A. 6.42E+01Nm

    B. 6.93E+01Nm

    C. 7.49E+01Nm

    D. 8.09E+01Nm

    E. 8.73E+01Nm

16. Suppose you exert a force of 1.960E+02 N tangentialto a 0.241-m-radius, 79.7-kg grindstone (a solid disc).What torque is exerted? [1441]

    A. 4.72E+01Nm

    B. 5.10E+01Nm

    C. 5.51E+01Nm

    D. 5.95E+01Nm

    E. 6.43E+01Nm

17. Suppose you exert a force of 1.620E+02 N tangentialto a 0.229-m-radius, 73.1-kg grindstone (a solid disc).What torque is exerted? [1442]

    A. 3.71E+01Nm

    B. 4.01E+01Nm

    C. 4.33E+01Nm

    D. 4.67E+01Nm

    E. 5.05E+01Nm

18. Suppose you exert a force of 1.640E+02 N tangentialto a 0.361-m-radius, 69.3-kg grindstone (a solid disc).What torque is exerted? [1443]

    A. 5.08E+01Nm

    B. 5.48E+01Nm

    C. 5.92E+01Nm

    D. 6.39E+01Nm

    E. 6.91E+01Nm

19. Suppose you exert a force of 2.080E+02 N tangentialto a 0.323-m-radius, 60.8-kg grindstone (a solid disc).What torque is exerted? [1444]

The next page might contain more answer choices for this question

A. 5.76E+01Nm

B. 6.22E+01Nm

C. 6.72E+01Nm

D. 7.26E+01Nm

E. 7.84E+01Nm

up1-10 Q12

1. Suppose you exert a force of 1.620E+02 N tangentialto a 0.248-m-radius, 85.1-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1445]

   A. 1.54E+01rad/s^2

   B. 1.66E+01rad/s^2

   C. 1.79E+01rad/s^2

   D. 1.93E+01rad/s^2

   E. 2.09E+01rad/s^2

2. Suppose you exert a force of 1.500E+02 N tangentialto a 0.273-m-radius, 90.7-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1446]

   A. 1.21E+01rad/s^2

   B. 1.31E+01rad/s^2

   C. 1.41E+01rad/s^2

   D. 1.53E+01rad/s^2

   E. 1.65E+01rad/s^2

3. Suppose you exert a force of 2.150E+02 N tangentialto a 0.181-m-radius, 63.6-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1447]

   A. 3.74E+01rad/s^2

   B. 4.03E+01rad/s^2

   C. 4.36E+01rad/s^2

   D. 4.71E+01rad/s^2

   E. 5.08E+01rad/s^2

The next page might contain more answer choices for this question

4. Suppose you exert a force of 1.700E+02 N tangentialto a 0.404-m-radius, 87.7-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1448]

   A. 8.89E+00rad/s^2

   B. 9.60E+00rad/s^2

   C. 1.04E+01rad/s^2

   D. 1.12E+01rad/s^2

   E. 1.21E+01rad/s^2

5. Suppose you exert a force of 1.300E+02 N tangentialto a 0.376-m-radius, 92.3-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1449]

   A. 5.51E+00rad/s^2

   B. 5.95E+00rad/s^2

   C. 6.42E+00rad/s^2

   D. 6.94E+00rad/s^2

   E. 7.49E+00rad/s^2

6. Suppose you exert a force of 1.430E+02 N tangentialto a 0.231-m-radius, 61.9-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1450]

   A. 1.47E+01rad/s^2

   B. 1.59E+01rad/s^2

   C. 1.71E+01rad/s^2

   D. 1.85E+01rad/s^2

   E. 2.00E+01rad/s^2

7. Suppose you exert a force of 2.240E+02 N tangentialto a 0.415-m-radius, 71.4-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1451]

   A. 1.11E+01rad/s^2

   B. 1.20E+01rad/s^2

   C. 1.30E+01rad/s^2

   D. 1.40E+01rad/s^2

The next page might contain more answer choices for this question

E. 1.51E+01rad/s^2

8. Suppose you exert a force of 2.220E+02 N tangentialto a 0.192-m-radius, 97.4-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1452]

   A. 2.37E+01rad/s^2

   B. 2.56E+01rad/s^2

   C. 2.77E+01rad/s^2

   D. 2.99E+01rad/s^2

   E. 3.23E+01rad/s^2

9. Suppose you exert a force of 1.310E+02 N tangentialto a 0.236-m-radius, 66.6-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1453]

   A. 1.67E+01rad/s^2

   B. 1.80E+01rad/s^2

   C. 1.94E+01rad/s^2

   D. 2.10E+01rad/s^2

   E. 2.27E+01rad/s^2

10. Suppose you exert a force of 1.560E+02 N tangentialto a 0.178-m-radius, 51.2-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1454]

    A. 2.72E+01rad/s^2

    B. 2.94E+01rad/s^2

    C. 3.17E+01rad/s^2

    D. 3.42E+01rad/s^2

    E. 3.70E+01rad/s^2

11. Suppose you exert a force of 1.610E+02 N tangentialto a 0.393-m-radius, 88.3-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1455]

    A. 8.59E+00rad/s^2

    B. 9.28E+00rad/s^2

    C. 1.00E+01rad/s^2

The next page might contain more answer choices for this question

D. 1.08E+01rad/s^2

E. 1.17E+01rad/s^2

12. Suppose you exert a force of 1.480E+02 N tangentialto a 0.325-m-radius, 86.7-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1456]

A. 7.72E+00rad/s^2

B. 8.34E+00rad/s^2

C. 9.01E+00rad/s^2

D. 9.73E+00rad/s^2

E. 1.05E+01rad/s^2

13. Suppose you exert a force of 1.400E+02 N tangentialto a 0.305-m-radius, 71.3-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1457]

A. 9.46E+00rad/s^2

B. 1.02E+01rad/s^2

C. 1.10E+01rad/s^2

D. 1.19E+01rad/s^2

E. 1.29E+01rad/s^2

14. Suppose you exert a force of 1.340E+02 N tangentialto a 0.21-m-radius, 87.9-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1458]

A. 1.07E+01rad/s^2

B. 1.15E+01rad/s^2

C. 1.24E+01rad/s^2

D. 1.34E+01rad/s^2

E. 1.45E+01rad/s^2

15. Suppose you exert a force of 1.480E+02 N tangentialto a 0.339-m-radius, 87.0-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1459]

A. 7.38E+00rad/s^2

B. 7.97E+00rad/s^2

The next page might contain more answer choices for this question

C. 8.60E+00rad/s^2

D. 9.29E+00rad/s^2

E. 1.00E+01rad/s^2

16. Suppose you exert a force of 1.360E+02 N tangentialto a 0.157-m-radius, 61.1-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1460]

A. 2.43E+01rad/s^2

B. 2.63E+01rad/s^2

C. 2.84E+01rad/s^2

D. 3.06E+01rad/s^2

E. 3.31E+01rad/s^2

17. Suppose you exert a force of 1.850E+02 N tangentialto a 0.312-m-radius, 66.7-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1461]

A. 1.65E+01rad/s^2

B. 1.78E+01rad/s^2

C. 1.92E+01rad/s^2

D. 2.07E+01rad/s^2

E. 2.24E+01rad/s^2

18. Suppose you exert a force of 1.790E+02 N tangentialto a 0.446-m-radius, 72.5-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1462]

A. 1.11E+01rad/s^2

B. 1.20E+01rad/s^2

C. 1.29E+01rad/s^2

D. 1.39E+01rad/s^2

E. 1.51E+01rad/s^2

19. Suppose you exert a force of 1.640E+02 N tangentialto a 0.169-m-radius, 71.0-kg grindstone (a solid disc).What is the angular acceleration assuming negligible opposing friction? [1463]

A. 2.17E+01rad/s^2

The next page might contain more answer choices for this question

B. 2.34E+01rad/s^2

C. 2.53E+01rad/s^2

D. 2.73E+01rad/s^2

E. 2.95E+01rad/s^2

up1-10 Q13

1. Suppose you exert a force of 16.9 N tangentialto a 0.365-m-radius, 80.0-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 4.08+ N exerted 29.1 1.50-cm from the axis? [1464]

   A. 8.01E-01 rad/s^2

   B. 8.65E-01 rad/s^2

   C. 9.35E-01 rad/s^2

   D. 1.01E+00 rad/s^2

   E. 1.09E+00 rad/s^2

2. Suppose you exert a force of 18.2 N tangentialto a 0.317-m-radius, 98.2-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.75+ N exerted 27.3 1.50-cm from the axis? [1465]

   A. 8.91E-01 rad/s^2

   B. 9.62E-01 rad/s^2

   C. 1.04E+00 rad/s^2

   D. 1.12E+00 rad/s^2

   E. 1.21E+00 rad/s^2

3. Suppose you exert a force of 11.6 N tangentialto a 0.299-m-radius, 58.1-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 5.27+ N exerted 29.1 1.50-cm from the axis? [1466]

   A. 6.90E-01 rad/s^2

   B. 7.45E-01 rad/s^2

   C. 8.05E-01 rad/s^2

   D. 8.69E-01 rad/s^2

   E. 9.38E-01 rad/s^2

The next page might contain more answer choices for this question

4. Suppose you exert a force of 19.6 N tangentialto a 0.292-m-radius, 76.0-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.16+ N exerted 27.9 1.50-cm from the axis? [1467]

   A. 1.28E+00 rad/s^2

   B. 1.38E+00 rad/s^2

   C. 1.49E+00 rad/s^2

   D. 1.61E+00 rad/s^2

   E. 1.74E+00 rad/s^2

5. Suppose you exert a force of 15.9 N tangentialto a 0.359-m-radius, 95.7-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 5.68+ N exerted 31.1 1.50-cm from the axis? [1468]

   A. 4.70E-01 rad/s^2

   B. 5.07E-01 rad/s^2

   C. 5.48E-01 rad/s^2

   D. 5.92E-01 rad/s^2

   E. 6.39E-01 rad/s^2

6. Suppose you exert a force of 19.5 N tangentialto a 0.386-m-radius, 66.3-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 4.88+ N exerted 25.9 1.50-cm from the axis? [1469]

   A. 1.09E+00 rad/s^2

   B. 1.17E+00 rad/s^2

   C. 1.27E+00 rad/s^2

   D. 1.37E+00 rad/s^2

   E. 1.48E+00 rad/s^2

7. Suppose you exert a force of 17.5 N tangentialto a 0.38-m-radius, 81.3-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.95+ N exerted 31.1 1.50-cm from the axis? [1470]

   A. 8.55E-01 rad/s^2

   B. 9.24E-01 rad/s^2

   C. 9.98E-01 rad/s^2

   D. 1.08E+00 rad/s^2

The next page might contain more answer choices for this question

E. 1.16E+00 rad/s^2

8. Suppose you exert a force of 14.1 N tangentialto a 0.297-m-radius, 57.2-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.83+ N exerted 35.3 1.50-cm from the axis? [1471]

A. 1.04E+00 rad/s^2

B. 1.12E+00 rad/s^2

C. 1.21E+00 rad/s^2

D. 1.31E+00 rad/s^2

E. 1.42E+00 rad/s^2

9. Suppose you exert a force of 18.5 N tangentialto a 0.386-m-radius, 96.7-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.4+ N exerted 27.7 1.50-cm from the axis? [1472]

A. 7.97E-01 rad/s^2

B. 8.61E-01 rad/s^2

C. 9.29E-01 rad/s^2

D. 1.00E+00 rad/s^2

E. 1.08E+00 rad/s^2

10. Suppose you exert a force of 10.7 N tangentialto a 0.318-m-radius, 90.1-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 4.11+ N exerted 26.9 1.50-cm from the axis? [1473]

A. 3.71E-01 rad/s^2

B. 4.00E-01 rad/s^2

C. 4.32E-01 rad/s^2

D. 4.67E-01 rad/s^2

E. 5.04E-01 rad/s^2

11. Suppose you exert a force of 16.6 N tangentialto a 0.282-m-radius, 56.3-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 5.65+ N exerted 28.2 1.50-cm from the axis? [1474]

A. 1.18E+00 rad/s^2

B. 1.28E+00 rad/s^2

C. 1.38E+00 rad/s^2

The next page might contain more answer choices for this question

D. 1.49E+00 rad/s^2

E. 1.61E+00 rad/s^2

12. Suppose you exert a force of 14.4 N tangentialto a 0.387-m-radius, 92.2-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 5.68+ N exerted 30.7 1.50-cm from the axis? [1475]

A. 5.14E-01 rad/s^2

B. 5.55E-01 rad/s^2

C. 5.99E-01 rad/s^2

D. 6.47E-01 rad/s^2

E. 6.99E-01 rad/s^2

13. Suppose you exert a force of 10.7 N tangentialto a 0.303-m-radius, 80.3-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.47+ N exerted 31.8 1.50-cm from the axis? [1476]

A. 5.37E-01 rad/s^2

B. 5.80E-01 rad/s^2

C. 6.27E-01 rad/s^2

D. 6.77E-01 rad/s^2

E. 7.31E-01 rad/s^2

14. Suppose you exert a force of 19.3 N tangentialto a 0.307-m-radius, 89.9-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.48+ N exerted 28.3 1.50-cm from the axis? [1477]

A. 1.08E+00 rad/s^2

B. 1.17E+00 rad/s^2

C. 1.26E+00 rad/s^2

D. 1.36E+00 rad/s^2

E. 1.47E+00 rad/s^2

15. Suppose you exert a force of 17.0 N tangentialto a 0.304-m-radius, 56.5-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 4.78+ N exerted 31.1 1.50-cm from the axis? [1478]

A. 1.12E+00 rad/s^2

B. 1.21E+00 rad/s^2

The next page might contain more answer choices for this question

C. 1.31E+00 rad/s^2

D. 1.41E+00 rad/s^2

E. 1.52E+00 rad/s^2

16. Suppose you exert a force of 16.6 N tangentialto a 0.357-m-radius, 95.4-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 4.35+ N exerted 30.4 1.50-cm from the axis? [1479]

A. 6.49E-01 rad/s^2

B. 7.01E-01 rad/s^2

C. 7.57E-01 rad/s^2

D. 8.18E-01 rad/s^2

E. 8.83E-01 rad/s^2

17. Suppose you exert a force of 12.4 N tangentialto a 0.282-m-radius, 68.3-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 3.12+ N exerted 29.0 1.50-cm from the axis? [1480]

A. 7.02E-01 rad/s^2

B. 7.58E-01 rad/s^2

C. 8.18E-01 rad/s^2

D. 8.84E-01 rad/s^2

E. 9.54E-01 rad/s^2

18. Suppose you exert a force of 16.0 N tangentialto a 0.36-m-radius, 74.6-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 5.12+ N exerted 32.7 1.50-cm from the axis? [1481]

A. 7.83E-01 rad/s^2

B. 8.45E-01 rad/s^2

C. 9.13E-01 rad/s^2

D. 9.86E-01 rad/s^2

E. 1.06E+00 rad/s^2

19. Suppose you exert a force of 11.7 N tangentialto a 0.314-m-radius, 56.3-kg grindstone (a solid disc).What is the angular acceleration if there is an opposing frictionalforce of 5.36+ N exerted 31.5 1.50-cm from the axis? [1482]

A. 6.62E-01 rad/s^2

The next page might contain more answer choices for this question

B. 7.15E-01 rad/s^2

C. 7.73E-01 rad/s^2

D. 8.34E-01 rad/s^2

E. 9.01E-01 rad/s^2

up1-10 Q14

1. A propeller is accelerated from rest to an angular velocity of 1.450E+03 rev/min over a period of 8.52 seconds by a constant torque of 2.800E+03 Nm. What is the moment of inertia on the propeller? [1483]

   A. 1.15E+02 $kg \cdot m^2$

   B. 1.25E+02 $kg \cdot m^2$

   C. 1.35E+02 $kg \cdot m^2$

   D. 1.45E+02 $kg \cdot m^2$

   E. 1.57E+02 $kg \cdot m^2$

2. A propeller is accelerated from rest to an angular velocity of 1.140E+03 rev/min over a period of 8.68 seconds by a constant torque of 1.300E+03 Nm. What is the moment of inertia on the propeller? [1484]

   A. 7.50E+01 $kg \cdot m^2$

   B. 8.10E+01 $kg \cdot m^2$

   C. 8.75E+01 $kg \cdot m^2$

   D. 9.45E+01 $kg \cdot m^2$

   E. 1.02E+02 $kg \cdot m^2$

3. A propeller is accelerated from rest to an angular velocity of 1.370E+03 rev/min over a period of 7.6 seconds by a constant torque of 1.910E+03 Nm. What is the moment of inertia on the propeller? [1485]

   A. 7.44E+01 $kg \cdot m^2$

   B. 8.03E+01 $kg \cdot m^2$

   C. 8.67E+01 $kg \cdot m^2$

   D. 9.37E+01 $kg \cdot m^2$

   E. 1.01E+02 $kg \cdot m^2$

The next page might contain more answer choices for this question

4. A propeller is accelerated from rest to an angular velocity of 1.380E+03 rev/min over a period of 8.65 seconds by a constant torque of 2.280E+03 Nm. What is the moment of inertia on the propeller? [1486]

   A. 1.08E+02 $kg \cdot m^2$

   B. 1.17E+02 $kg \cdot m^2$

   C. 1.26E+02 $kg \cdot m^2$

   D. 1.36E+02 $kg \cdot m^2$

   E. 1.47E+02 $kg \cdot m^2$

5. A propeller is accelerated from rest to an angular velocity of 1.370E+03 rev/min over a period of 5.55 seconds by a constant torque of 1.590E+03 Nm. What is the moment of inertia on the propeller? [1487]

   A. 5.27E+01 $kg \cdot m^2$

   B. 5.70E+01 $kg \cdot m^2$

   C. 6.15E+01 $kg \cdot m^2$

   D. 6.64E+01 $kg \cdot m^2$

   E. 7.17E+01 $kg \cdot m^2$

6. A propeller is accelerated from rest to an angular velocity of 1.870E+03 rev/min over a period of 6.09 seconds by a constant torque of 1.270E+03 Nm. What is the moment of inertia on the propeller? [1488]

   A. 3.14E+01 $kg \cdot m^2$

   B. 3.39E+01 $kg \cdot m^2$

   C. 3.66E+01 $kg \cdot m^2$

   D. 3.95E+01 $kg \cdot m^2$

   E. 4.27E+01 $kg \cdot m^2$

7. A propeller is accelerated from rest to an angular velocity of 1.470E+03 rev/min over a period of 7.94 seconds by a constant torque of 1.290E+03 Nm. What is the moment of inertia on the propeller? [1489]

   A. 6.65E+01 $kg \cdot m^2$

   B. 7.19E+01 $kg \cdot m^2$

   C. 7.76E+01 $kg \cdot m^2$

   D. 8.38E+01 $kg \cdot m^2$

The next page might contain more answer choices for this question

E. 9.05E+01 $kg \cdot m^2$

8. A propeller is accelerated from rest to an angular velocity of 1.180E+03 rev/min over a period of 6.25 seconds by a constant torque of 1.750E+03 Nm. What is the moment of inertia on the propeller? [1490]

A. 6.51E+01 $kg \cdot m^2$

B. 7.03E+01 $kg \cdot m^2$

C. 7.59E+01 $kg \cdot m^2$

D. 8.20E+01 $kg \cdot m^2$

E. 8.85E+01 $kg \cdot m^2$

9. A propeller is accelerated from rest to an angular velocity of 1.210E+03 rev/min over a period of 7.75 seconds by a constant torque of 2.100E+03 Nm. What is the moment of inertia on the propeller? [1491]

A. 1.02E+02 $kg \cdot m^2$

B. 1.10E+02 $kg \cdot m^2$

C. 1.19E+02 $kg \cdot m^2$

D. 1.28E+02 $kg \cdot m^2$

E. 1.39E+02 $kg \cdot m^2$

10. A propeller is accelerated from rest to an angular velocity of 7.630E+02 rev/min over a period of 8.44 seconds by a constant torque of 2.580E+03 Nm. What is the moment of inertia on the propeller? [1492]

A. 2.00E+02 $kg \cdot m^2$

B. 2.16E+02 $kg \cdot m^2$

C. 2.34E+02 $kg \cdot m^2$

D. 2.52E+02 $kg \cdot m^2$

E. 2.73E+02 $kg \cdot m^2$

11. A propeller is accelerated from rest to an angular velocity of 1.960E+03 rev/min over a period of 8.87 seconds by a constant torque of 1.370E+03 Nm. What is the moment of inertia on the propeller? [1493]

A. 5.92E+01 $kg \cdot m^2$

B. 6.39E+01 $kg \cdot m^2$

C. 6.91E+01 $kg \cdot m^2$

The next page might contain more answer choices for this question

D. 7.46E+01 $kg \cdot m^2$

E. 8.05E+01 $kg \cdot m^2$

12. A propeller is accelerated from rest to an angular velocity of 1.340E+03 rev/min over a period of 5.46 seconds by a constant torque of 1.830E+03 Nm. What is the moment of inertia on the propeller? [1494]

A. 5.23E+01 $kg \cdot m^2$

B. 5.65E+01 $kg \cdot m^2$

C. 6.10E+01 $kg \cdot m^2$

D. 6.59E+01 $kg \cdot m^2$

E. 7.12E+01 $kg \cdot m^2$

13. A propeller is accelerated from rest to an angular velocity of 1.280E+03 rev/min over a period of 5.7 seconds by a constant torque of 2.680E+03 Nm. What is the moment of inertia on the propeller? [1495]

A. 9.05E+01 $kg \cdot m^2$

B. 9.77E+01 $kg \cdot m^2$

C. 1.06E+02 $kg \cdot m^2$

D. 1.14E+02 $kg \cdot m^2$

E. 1.23E+02 $kg \cdot m^2$

14. A propeller is accelerated from rest to an angular velocity of 1.510E+03 rev/min over a period of 8.46 seconds by a constant torque of 1.880E+03 Nm. What is the moment of inertia on the propeller? [1496]

A. 7.39E+01 $kg \cdot m^2$

B. 7.98E+01 $kg \cdot m^2$

C. 8.62E+01 $kg \cdot m^2$

D. 9.31E+01 $kg \cdot m^2$

E. 1.01E+02 $kg \cdot m^2$

15. A propeller is accelerated from rest to an angular velocity of 1.980E+03 rev/min over a period of 7.53 seconds by a constant torque of 2.760E+03 Nm. What is the moment of inertia on the propeller? [1497]

A. 7.37E+01 $kg \cdot m^2$

B. 7.96E+01 $kg \cdot m^2$

The next page might contain more answer choices for this question

C. 8.59E+01 $kg \cdot m^2$

D. 9.28E+01 $kg \cdot m^2$

E. 1.00E+02 $kg \cdot m^2$

16. A propeller is accelerated from rest to an angular velocity of 7.270E+02 rev/min over a period of 7.92 seconds by a constant torque of 1.540E+03 Nm. What is the moment of inertia on the propeller? [1498]

A. 1.27E+02 $kg \cdot m^2$

B. 1.37E+02 $kg \cdot m^2$

C. 1.48E+02 $kg \cdot m^2$

D. 1.60E+02 $kg \cdot m^2$

E. 1.73E+02 $kg \cdot m^2$

17. A propeller is accelerated from rest to an angular velocity of 1.460E+03 rev/min over a period of 8.03 seconds by a constant torque of 2.320E+03 Nm. What is the moment of inertia on the propeller? [1499]

A. 1.13E+02 $kg \cdot m^2$

B. 1.22E+02 $kg \cdot m^2$

C. 1.32E+02 $kg \cdot m^2$

D. 1.42E+02 $kg \cdot m^2$

E. 1.53E+02 $kg \cdot m^2$

18. A propeller is accelerated from rest to an angular velocity of 1.680E+03 rev/min over a period of 7.04 seconds by a constant torque of 2.340E+03 Nm. What is the moment of inertia on the propeller? [1500]

A. 8.03E+01 $kg \cdot m^2$

B. 8.67E+01 $kg \cdot m^2$

C. 9.36E+01 $kg \cdot m^2$

D. 1.01E+02 $kg \cdot m^2$

E. 1.09E+02 $kg \cdot m^2$

19. A propeller is accelerated from rest to an angular velocity of 5.640E+02 rev/min over a period of 8.15 seconds by a constant torque of 1.080E+03 Nm. What is the moment of inertia on the propeller? [1501]

A. 1.18E+02 $kg \cdot m^2$

The next page might contain more answer choices for this question

B. 1.28E+02 $kg \cdot m^2$

C. 1.38E+02 $kg \cdot m^2$

D. 1.49E+02 $kg \cdot m^2$

E. 1.61E+02 $kg \cdot m^2$

up1-10 Q15

1. A propeller is accelerated from rest to an angular velocity of 1.920E+03 rev/min over a period of 6.32 seconds by a constant torque of 1.410E+03 Nm. What power is being provided to the propeller 3.73 s after it starts rotating? [1502]

   A. 1.55E+05 W

   B. 1.67E+05 W

   C. 1.81E+05 W

   D. 1.95E+05 W

   E. 2.11E+05 W

2. A propeller is accelerated from rest to an angular velocity of 6.450E+02 rev/min over a period of 5.79 seconds by a constant torque of 1.360E+03 Nm. What power is being provided to the propeller 2.76 s after it starts rotating? [1503]

   A. 3.22E+04 W

   B. 3.48E+04 W

   C. 3.75E+04 W

   D. 4.05E+04 W

   E. 4.38E+04 W

3. A propeller is accelerated from rest to an angular velocity of 7.810E+02 rev/min over a period of 6.9 seconds by a constant torque of 1.930E+03 Nm. What power is being provided to the propeller 3.02 s after it starts rotating? [1504]

   A. 5.08E+04 W

   B. 5.48E+04 W

   C. 5.92E+04 W

   D. 6.40E+04 W

   E. 6.91E+04 W

The next page might contain more answer choices for this question

4. A propeller is accelerated from rest to an angular velocity of 8.910E+02 rev/min over a period of 6.39 seconds by a constant torque of 2.670E+03 Nm. What power is being provided to the propeller 2.91 s after it starts rotating? [1505]

   A. 9.01E+04 W

   B. 9.73E+04 W

   C. 1.05E+05 W

   D. 1.13E+05 W

   E. 1.23E+05 W

5. A propeller is accelerated from rest to an angular velocity of 1.190E+03 rev/min over a period of 7.52 seconds by a constant torque of 2.890E+03 Nm. What power is being provided to the propeller 2.83 s after it starts rotating? [1506]

   A. 9.96E+04 W

   B. 1.08E+05 W

   C. 1.16E+05 W

   D. 1.25E+05 W

   E. 1.36E+05 W

6. A propeller is accelerated from rest to an angular velocity of 1.010E+03 rev/min over a period of 7.28 seconds by a constant torque of 1.860E+03 Nm. What power is being provided to the propeller 3.37 s after it starts rotating? [1507]

   A. 7.81E+04 W

   B. 8.43E+04 W

   C. 9.11E+04 W

   D. 9.84E+04 W

   E. 1.06E+05 W

7. A propeller is accelerated from rest to an angular velocity of 1.970E+03 rev/min over a period of 7.49 seconds by a constant torque of 2.440E+03 Nm. What power is being provided to the propeller 3.26 s after it starts rotating? [1508]

   A. 2.19E+05 W

   B. 2.37E+05 W

   C. 2.56E+05 W

   D. 2.76E+05 W

The next page might contain more answer choices for this question

E. 2.98E+05 W

8. A propeller is accelerated from rest to an angular velocity of 1.190E+03 rev/min over a period of 7.13 seconds by a constant torque of 2.400E+03 Nm. What power is being provided to the propeller 2.25 s after it starts rotating? [1509]

A. 7.49E+04 W

B. 8.09E+04 W

C. 8.74E+04 W

D. 9.44E+04 W

E. 1.02E+05 W

9. A propeller is accelerated from rest to an angular velocity of 7.620E+02 rev/min over a period of 5.78 seconds by a constant torque of 2.330E+03 Nm. What power is being provided to the propeller 2.37 s after it starts rotating? [1510]

A. 6.05E+04 W

B. 6.54E+04 W

C. 7.06E+04 W

D. 7.62E+04 W

E. 8.23E+04 W

10. A propeller is accelerated from rest to an angular velocity of 7.160E+02 rev/min over a period of 7.67 seconds by a constant torque of 2.740E+03 Nm. What power is being provided to the propeller 2.77 s after it starts rotating? [1511]

A. 6.87E+04 W

B. 7.42E+04 W

C. 8.01E+04 W

D. 8.65E+04 W

E. 9.35E+04 W

11. A propeller is accelerated from rest to an angular velocity of 1.970E+03 rev/min over a period of 7.43 seconds by a constant torque of 2.570E+03 Nm. What power is being provided to the propeller 2.87 s after it starts rotating? [1512]

A. 1.63E+05 W

B. 1.76E+05 W

C. 1.90E+05 W

The next page might contain more answer choices for this question

D. 2.05E+05 W

E. 2.21E+05 W

12. A propeller is accelerated from rest to an angular velocity of 5.960E+02 rev/min over a period of 7.29 seconds by a constant torque of 1.910E+03 Nm. What power is being provided to the propeller 3.55 s after it starts rotating? [1513]

A. 4.61E+04 W

B. 4.98E+04 W

C. 5.38E+04 W

D. 5.81E+04 W

E. 6.27E+04 W

13. A propeller is accelerated from rest to an angular velocity of 9.380E+02 rev/min over a period of 6.56 seconds by a constant torque of 1.450E+03 Nm. What power is being provided to the propeller 2.42 s after it starts rotating? [1514]

A. 4.50E+04 W

B. 4.87E+04 W

C. 5.25E+04 W

D. 5.67E+04 W

E. 6.13E+04 W

14. A propeller is accelerated from rest to an angular velocity of 1.650E+03 rev/min over a period of 5.96 seconds by a constant torque of 2.530E+03 Nm. What power is being provided to the propeller 2.13 s after it starts rotating? [1515]

A. 1.24E+05 W

B. 1.34E+05 W

C. 1.45E+05 W

D. 1.56E+05 W

E. 1.69E+05 W

15. A propeller is accelerated from rest to an angular velocity of 2.000E+03 rev/min over a period of 7.37 seconds by a constant torque of 2.350E+03 Nm. What power is being provided to the propeller 2.57 s after it starts rotating? [1516]

A. 1.47E+05 W

B. 1.59E+05 W

The next page might contain more answer choices for this question

C. 1.72E+05 W

D. 1.85E+05 W

E. 2.00E+05 W

16. A propeller is accelerated from rest to an angular velocity of 1.160E+03 rev/min over a period of 6.95 seconds by a constant torque of 2.900E+03 Nm. What power is being provided to the propeller 3.85 s after it starts rotating? [1517]

A. 1.67E+05 W

B. 1.81E+05 W

C. 1.95E+05 W

D. 2.11E+05 W

E. 2.28E+05 W

17. A propeller is accelerated from rest to an angular velocity of 7.440E+02 rev/min over a period of 6.15 seconds by a constant torque of 1.140E+03 Nm. What power is being provided to the propeller 2.61 s after it starts rotating? [1518]

A. 3.77E+04 W

B. 4.07E+04 W

C. 4.40E+04 W

D. 4.75E+04 W

E. 5.13E+04 W

18. A propeller is accelerated from rest to an angular velocity of 9.860E+02 rev/min over a period of 7.56 seconds by a constant torque of 2.130E+03 Nm. What power is being provided to the propeller 3.48 s after it starts rotating? [1519]

A. 9.37E+04 W

B. 1.01E+05 W

C. 1.09E+05 W

D. 1.18E+05 W

E. 1.28E+05 W

19. A propeller is accelerated from rest to an angular velocity of 7.570E+02 rev/min over a period of 5.58 seconds by a constant torque of 1.940E+03 Nm. What power is being provided to the propeller 3.24 s after it starts rotating? [1520]

A. 7.09E+04 W

The next page might contain more answer choices for this question

B. 7.66E+04 W
C. 8.27E+04 W
D. 8.93E+04 W
E. 9.64E+04 W

7 up1-11

1. A marble rolls down an incline at 30 degrees from rest. What is its acceleration? [1521]
   A. 3.24E+00 m/s^2
   B. 3.50E+00 m/s^2
   C. 3.78E+00 m/s^2
   D. 4.08E+00 m/s^2
   E. 4.41E+00 m/s^2

2. An airplane of mass 4.000E+04 kg flies horizontally at an altitude of 10 km with a constant speed of 2.500E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 15 km away from the observer? [1522]
   A. 7.94E+10 kg/m^2
   B. 8.57E+10 kg/m^2
   C. 9.26E+10 kg/m^2
   D. 1.00E+11 kg/m^2
   E. 1.08E+11 kg/m^2

3. A boulder of mass 20 kg and radius 20 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1523]
   A. 1.70E+01 $kg \cdot m^2/s$
   B. 1.84E+01 $kg \cdot m^2/s$
   C. 1.99E+01 $kg \cdot m^2/s$
   D. 2.15E+01 $kg \cdot m^2/s$
   E. 2.32E+01 $kg \cdot m^2/s$

4. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.1kg,R=0.1m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 10 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1524]

The next page might contain more answer choices for this question

A. 1.03E+01rad/s

B. 1.11E+01rad/s

C. 1.20E+01rad/s

D. 1.30E+01rad/s

E. 1.40E+01rad/s

5. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.000E+02$kg \cdot m^2$. A boy of mass 50 kg runs tangent to the rim at a speed of 4 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on? [1525]

A. 6.86E-01rad/sec

B. 7.41E-01rad/sec

C. 8.00E-01rad/sec

D. 8.64E-01rad/sec

E. 9.33E-01rad/sec

6. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.5 $kg \cdot m^2$ and her spin rate is 0.5 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.4 $kg \cdot m^2$ and she has 2 s to do the flips in the air. [1526]

A. 3.97E+00 flips

B. 4.29E+00 flips

C. 4.63E+00 flips

D. 5.00E+00 flips

E. 5.40E+00 flips

7. A gyroscope has a 0.5-kg disk that spins at 40 rev/s. The center of mass of the disk is 10 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1527]

A. 6.19E-01 rad/s

B. 6.69E-01 rad/s

C. 7.22E-01 rad/s

D. 7.80E-01 rad/s

E. 8.42E-01 rad/s

The next page might contain more answer choices for this question

7.1 Renditions

up1-11 Q1

1. A marble rolls down an incline at 39.7 degrees from rest. What is its acceleration? [1528]
   A. 3.29E+00 m/s^2
   B. 3.55E+00 m/s^2
   C. 3.83E+00 m/s^2
   D. 4.14E+00 m/s^2
   E. 4.47E+00 m/s^2

2. A marble rolls down an incline at 24.1 degrees from rest. What is its acceleration? [1529]
   A. 2.45E+00 m/s^2
   B. 2.65E+00 m/s^2
   C. 2.86E+00 m/s^2
   D. 3.09E+00 m/s^2
   E. 3.33E+00 m/s^2

3. A marble rolls down an incline at 32.2 degrees from rest. What is its acceleration? [1530]
   A. 2.74E+00 m/s^2
   B. 2.96E+00 m/s^2
   C. 3.20E+00 m/s^2
   D. 3.45E+00 m/s^2
   E. 3.73E+00 m/s^2

4. A marble rolls down an incline at 16.2 degrees from rest. What is its acceleration? [1531]
   A. 1.81E+00 m/s^2
   B. 1.95E+00 m/s^2
   C. 2.11E+00 m/s^2
   D. 2.28E+00 m/s^2
   E. 2.46E+00 m/s^2

5. A marble rolls down an incline at 22.9 degrees from rest. What is its acceleration? [1532]
   A. 2.34E+00 m/s^2
   B. 2.52E+00 m/s^2

The next page might contain more answer choices for this question

C. 2.72E+00 m/s^2

D. 2.94E+00 m/s^2

E. 3.18E+00 m/s^2

6. A marble rolls down an incline at 22.3 degrees from rest. What is its acceleration? [1533]

A. 2.28E+00 m/s^2

B. 2.46E+00 m/s^2

C. 2.66E+00 m/s^2

D. 2.87E+00 m/s^2

E. 3.10E+00 m/s^2

7. A marble rolls down an incline at 26.3 degrees from rest. What is its acceleration? [1534]

A. 2.46E+00 m/s^2

B. 2.66E+00 m/s^2

C. 2.87E+00 m/s^2

D. 3.10E+00 m/s^2

E. 3.35E+00 m/s^2

8. A marble rolls down an incline at 36.5 degrees from rest. What is its acceleration? [1535]

A. 3.31E+00 m/s^2

B. 3.57E+00 m/s^2

C. 3.86E+00 m/s^2

D. 4.16E+00 m/s^2

E. 4.50E+00 m/s^2

9. A marble rolls down an incline at 18.4 degrees from rest. What is its acceleration? [1536]

A. 2.21E+00 m/s^2

B. 2.39E+00 m/s^2

C. 2.58E+00 m/s^2

D. 2.78E+00 m/s^2

E. 3.01E+00 m/s^2

10. A marble rolls down an incline at 35.1 degrees from rest. What is its acceleration? [1537]

A. 4.03E+00 m/s^2

The next page might contain more answer choices for this question

B. 4.35E+00 m/s^2

C. 4.69E+00 m/s^2

D. 5.07E+00 m/s^2

E. 5.48E+00 m/s^2

11. A marble rolls down an incline at 15.2 degrees from rest. What is its acceleration? [1538]

A. 1.84E+00 m/s^2

B. 1.98E+00 m/s^2

C. 2.14E+00 m/s^2

D. 2.31E+00 m/s^2

E. 2.50E+00 m/s^2

12. A marble rolls down an incline at 20.0 degrees from rest. What is its acceleration? [1539]

A. 2.05E+00 m/s^2

B. 2.22E+00 m/s^2

C. 2.39E+00 m/s^2

D. 2.59E+00 m/s^2

E. 2.79E+00 m/s^2

13. A marble rolls down an incline at 32.2 degrees from rest. What is its acceleration? [1540]

A. 3.45E+00 m/s^2

B. 3.73E+00 m/s^2

C. 4.03E+00 m/s^2

D. 4.35E+00 m/s^2

E. 4.70E+00 m/s^2

14. A marble rolls down an incline at 16.5 degrees from rest. What is its acceleration? [1541]

A. 1.70E+00 m/s^2

B. 1.84E+00 m/s^2

C. 1.99E+00 m/s^2

D. 2.15E+00 m/s^2

E. 2.32E+00 m/s^2

15. A marble rolls down an incline at 32.1 degrees from rest. What is its acceleration? [1542]

The next page might contain more answer choices for this question

A. 2.73E+00 m/s^2

B. 2.95E+00 m/s^2

C. 3.19E+00 m/s^2

D. 3.44E+00 m/s^2

E. 3.72E+00 m/s^2

16. A marble rolls down an incline at 32.1 degrees from rest. What is its acceleration? [1543]

A. 3.72E+00 m/s^2

B. 4.02E+00 m/s^2

C. 4.34E+00 m/s^2

D. 4.69E+00 m/s^2

E. 5.06E+00 m/s^2

17. A marble rolls down an incline at 18.7 degrees from rest. What is its acceleration? [1544]

A. 1.92E+00 m/s^2

B. 2.08E+00 m/s^2

C. 2.24E+00 m/s^2

D. 2.42E+00 m/s^2

E. 2.62E+00 m/s^2

18. A marble rolls down an incline at 18.6 degrees from rest. What is its acceleration? [1545]

A. 1.64E+00 m/s^2

B. 1.77E+00 m/s^2

C. 1.91E+00 m/s^2

D. 2.07E+00 m/s^2

E. 2.23E+00 m/s^2

19. A marble rolls down an incline at 18.7 degrees from rest. What is its acceleration? [1546]

A. 1.65E+00 m/s^2

B. 1.78E+00 m/s^2

C. 1.92E+00 m/s^2

D. 2.08E+00 m/s^2

E. 2.24E+00 m/s^2

The next page might contain more answer choices for this question

up1-11 Q2

1. An airplane of mass 4.720E+04 kg flies horizontally at an altitude of 25.3 km with a constant speed of 2.680E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 42.2 km away from the observer? [1547]

   A. 2.54E+11 kg/m^2

   B. 2.74E+11 kg/m^2

   C. 2.96E+11 kg/m^2

   D. 3.20E+11 kg/m^2

   E. 3.46E+11 kg/m^2

2. An airplane of mass 4.760E+04 kg flies horizontally at an altitude of 27.6 km with a constant speed of 2.020E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 40.9 km away from the observer? [1548]

   A. 2.11E+11 kg/m^2

   B. 2.28E+11 kg/m^2

   C. 2.46E+11 kg/m^2

   D. 2.65E+11 kg/m^2

   E. 2.87E+11 kg/m^2

3. An airplane of mass 4.920E+04 kg flies horizontally at an altitude of 27.1 km with a constant speed of 2.660E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 45.1 km away from the observer? [1549]

   A. 3.04E+11 kg/m^2

   B. 3.28E+11 kg/m^2

   C. 3.55E+11 kg/m^2

   D. 3.83E+11 kg/m^2

   E. 4.14E+11 kg/m^2

4. An airplane of mass 4.530E+04 kg flies horizontally at an altitude of 28.5 km with a constant speed of 2.570E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 45.9 km away from the observer? [1550]

The next page might contain more answer choices for this question

A. 2.44E+11 kg/m^2

B. 2.63E+11 kg/m^2

C. 2.84E+11 kg/m^2

D. 3.07E+11 kg/m^2

E. 3.32E+11 kg/m^2

5. An airplane of mass 4.210E+04 kg flies horizontally at an altitude of 20.5 km with a constant speed of 2.950E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 41.1 km away from the observer? [1551]

A. 2.18E+11 kg/m^2

B. 2.36E+11 kg/m^2

C. 2.55E+11 kg/m^2

D. 2.75E+11 kg/m^2

E. 2.97E+11 kg/m^2

6. An airplane of mass 3.110E+04 kg flies horizontally at an altitude of 23.7 km with a constant speed of 2.000E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 46.7 km away from the observer? [1552]

A. 1.26E+11 kg/m^2

B. 1.36E+11 kg/m^2

C. 1.47E+11 kg/m^2

D. 1.59E+11 kg/m^2

E. 1.72E+11 kg/m^2

7. An airplane of mass 4.750E+04 kg flies horizontally at an altitude of 23.1 km with a constant speed of 2.080E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 44.1 km away from the observer? [1553]

A. 1.96E+11 kg/m^2

B. 2.11E+11 kg/m^2

C. 2.28E+11 kg/m^2

D. 2.46E+11 kg/m^2

E. 2.66E+11 kg/m^2

The next page might contain more answer choices for this question

8. An airplane of mass 3.140E+04 kg flies horizontally at an altitude of 28.2 km with a constant speed of 2.320E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 45.4 km away from the observer? [1554]

    A. 1.76E+11 kg/m^2

    B. 1.90E+11 kg/m^2

    C. 2.05E+11 kg/m^2

    D. 2.22E+11 kg/m^2

    E. 2.40E+11 kg/m^2

9. An airplane of mass 4.940E+04 kg flies horizontally at an altitude of 24.1 km with a constant speed of 2.710E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 43.2 km away from the observer? [1555]

    A. 2.99E+11 kg/m^2

    B. 3.23E+11 kg/m^2

    C. 3.48E+11 kg/m^2

    D. 3.76E+11 kg/m^2

    E. 4.06E+11 kg/m^2

10. An airplane of mass 3.010E+04 kg flies horizontally at an altitude of 23.2 km with a constant speed of 2.740E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 43.6 km away from the observer? [1556]

    A. 1.52E+11 kg/m^2

    B. 1.64E+11 kg/m^2

    C. 1.77E+11 kg/m^2

    D. 1.91E+11 kg/m^2

    E. 2.07E+11 kg/m^2

11. An airplane of mass 3.950E+04 kg flies horizontally at an altitude of 25.9 km with a constant speed of 2.480E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 45.9 km away from the observer? [1557]

    A. 2.54E+11 kg/m^2

The next page might contain more answer choices for this question

B. 2.74E+11 kg/m^2

C. 2.96E+11 kg/m^2

D. 3.20E+11 kg/m^2

E. 3.45E+11 kg/m^2

12. An airplane of mass 3.970E+04 kg flies horizontally at an altitude of 26.1 km with a constant speed of 2.130E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 42.8 km away from the observer? [1558]

A. 1.75E+11 kg/m^2

B. 1.89E+11 kg/m^2

C. 2.04E+11 kg/m^2

D. 2.21E+11 kg/m^2

E. 2.38E+11 kg/m^2

13. An airplane of mass 4.010E+04 kg flies horizontally at an altitude of 20.8 km with a constant speed of 2.660E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 44.2 km away from the observer? [1559]

A. 2.22E+11 kg/m^2

B. 2.40E+11 kg/m^2

C. 2.59E+11 kg/m^2

D. 2.79E+11 kg/m^2

E. 3.02E+11 kg/m^2

14. An airplane of mass 4.180E+04 kg flies horizontally at an altitude of 24.2 km with a constant speed of 2.510E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 43.8 km away from the observer? [1560]

A. 2.54E+11 kg/m^2

B. 2.74E+11 kg/m^2

C. 2.96E+11 kg/m^2

D. 3.20E+11 kg/m^2

E. 3.45E+11 kg/m^2

The next page might contain more answer choices for this question

15. An airplane of mass 4.800E+04 kg flies horizontally at an altitude of 26.5 km with a constant speed of 2.850E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 42.2 km away from the observer? [1561]

    A. 3.36E+11 kg/m^2

    B. 3.63E+11 kg/m^2

    C. 3.92E+11 kg/m^2

    D. 4.23E+11 kg/m^2

    E. 4.57E+11 kg/m^2

16. An airplane of mass 3.900E+04 kg flies horizontally at an altitude of 27.0 km with a constant speed of 2.070E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 44.5 km away from the observer? [1562]

    A. 2.02E+11 kg/m^2

    B. 2.18E+11 kg/m^2

    C. 2.35E+11 kg/m^2

    D. 2.54E+11 kg/m^2

    E. 2.75E+11 kg/m^2

17. An airplane of mass 4.870E+04 kg flies horizontally at an altitude of 22.8 km with a constant speed of 2.790E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 42.4 km away from the observer? [1563]

    A. 2.66E+11 kg/m^2

    B. 2.87E+11 kg/m^2

    C. 3.10E+11 kg/m^2

    D. 3.35E+11 kg/m^2

    E. 3.61E+11 kg/m^2

18. An airplane of mass 4.400E+04 kg flies horizontally at an altitude of 21.7 km with a constant speed of 2.130E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 44.6 km away from the observer? [1564]

    A. 2.03E+11 kg/m^2

The next page might contain more answer choices for this question

B. 2.20E+11 kg/m^2

C. 2.37E+11 kg/m^2

D. 2.56E+11 kg/m^2

E. 2.77E+11 kg/m^2

19. An airplane of mass 3.570E+04 kg flies horizontally at an altitude of 22.7 km with a constant speed of 2.660E+02 m/s relative to Earth. What is the magnitude of the airplane's angular momentum relative to a ground observer at the moment the plane is 41.9 km away from the observer? [1565]

A. 2.00E+11 kg/m^2

B. 2.16E+11 kg/m^2

C. 2.33E+11 kg/m^2

D. 2.51E+11 kg/m^2

E. 2.72E+11 kg/m^2

up1-11 Q3

1. A boulder of mass 23 kg and radius 25 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1566]

A. 2.45E+01 $kg \cdot m^2/s$

B. 2.65E+01 $kg \cdot m^2/s$

C. 2.86E+01 $kg \cdot m^2/s$

D. 3.09E+01 $kg \cdot m^2/s$

E. 3.33E+01 $kg \cdot m^2/s$

2. A boulder of mass 20 kg and radius 20 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1567]

A. 2.32E+01 $kg \cdot m^2/s$

B. 2.50E+01 $kg \cdot m^2/s$

C. 2.70E+01 $kg \cdot m^2/s$

D. 2.92E+01 $kg \cdot m^2/s$

E. 3.15E+01 $kg \cdot m^2/s$

3. A boulder of mass 24 kg and radius 20 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1568]

The next page might contain more answer choices for this question

A. 2.78E+01 $kg \cdot m^2/s$

B. 3.00E+01 $kg \cdot m^2/s$

C. 3.25E+01 $kg \cdot m^2/s$

D. 3.50E+01 $kg \cdot m^2/s$

E. 3.79E+01 $kg \cdot m^2/s$

4. A boulder of mass 22 kg and radius 22 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1569]

A. 2.41E+01 $kg \cdot m^2/s$

B. 2.60E+01 $kg \cdot m^2/s$

C. 2.81E+01 $kg \cdot m^2/s$

D. 3.03E+01 $kg \cdot m^2/s$

E. 3.27E+01 $kg \cdot m^2/s$

5. A boulder of mass 15 kg and radius 20 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1570]

A. 1.74E+01 $kg \cdot m^2/s$

B. 1.88E+01 $kg \cdot m^2/s$

C. 2.03E+01 $kg \cdot m^2/s$

D. 2.19E+01 $kg \cdot m^2/s$

E. 2.37E+01 $kg \cdot m^2/s$

6. A boulder of mass 15 kg and radius 24 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1571]

A. 2.09E+01 $kg \cdot m^2/s$

B. 2.25E+01 $kg \cdot m^2/s$

C. 2.43E+01 $kg \cdot m^2/s$

D. 2.63E+01 $kg \cdot m^2/s$

E. 2.84E+01 $kg \cdot m^2/s$

7. A boulder of mass 18 kg and radius 15 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1572]

A. 1.57E+01 $kg \cdot m^2/s$

B. 1.69E+01 $kg \cdot m^2/s$

The next page might contain more answer choices for this question

C. 1.83E+01 $kg \cdot m^2/s$

D. 1.97E+01 $kg \cdot m^2/s$

E. 2.13E+01 $kg \cdot m^2/s$

8. A boulder of mass 17 kg and radius 18 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1573]

A. 1.64E+01 $kg \cdot m^2/s$

B. 1.77E+01 $kg \cdot m^2/s$

C. 1.92E+01 $kg \cdot m^2/s$

D. 2.07E+01 $kg \cdot m^2/s$

E. 2.23E+01 $kg \cdot m^2/s$

9. A boulder of mass 18 kg and radius 15 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1574]

A. 1.34E+01 $kg \cdot m^2/s$

B. 1.45E+01 $kg \cdot m^2/s$

C. 1.57E+01 $kg \cdot m^2/s$

D. 1.69E+01 $kg \cdot m^2/s$

E. 1.83E+01 $kg \cdot m^2/s$

10. A boulder of mass 22 kg and radius 16 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1575]

A. 1.89E+01 $kg \cdot m^2/s$

B. 2.04E+01 $kg \cdot m^2/s$

C. 2.20E+01 $kg \cdot m^2/s$

D. 2.38E+01 $kg \cdot m^2/s$

E. 2.57E+01 $kg \cdot m^2/s$

11. A boulder of mass 19 kg and radius 17 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1576]

A. 1.61E+01 $kg \cdot m^2/s$

B. 1.73E+01 $kg \cdot m^2/s$

C. 1.87E+01 $kg \cdot m^2/s$

D. 2.02E+01 $kg \cdot m^2/s$

The next page might contain more answer choices for this question

E. 2.18E+01 $kg \cdot m^2/s$

12. A boulder of mass 25 kg and radius 19 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1577]

A. 2.75E+01 $kg \cdot m^2/s$

B. 2.97E+01 $kg \cdot m^2/s$

C. 3.21E+01 $kg \cdot m^2/s$

D. 3.47E+01 $kg \cdot m^2/s$

E. 3.75E+01 $kg \cdot m^2/s$

13. A boulder of mass 15 kg and radius 20 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1578]

A. 1.38E+01 $kg \cdot m^2/s$

B. 1.49E+01 $kg \cdot m^2/s$

C. 1.61E+01 $kg \cdot m^2/s$

D. 1.74E+01 $kg \cdot m^2/s$

E. 1.88E+01 $kg \cdot m^2/s$

14. A boulder of mass 18 kg and radius 16 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1579]

A. 1.23E+01 $kg \cdot m^2/s$

B. 1.33E+01 $kg \cdot m^2/s$

C. 1.43E+01 $kg \cdot m^2/s$

D. 1.55E+01 $kg \cdot m^2/s$

E. 1.67E+01 $kg \cdot m^2/s$

15. A boulder of mass 19 kg and radius 25 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1580]

A. 2.02E+01 $kg \cdot m^2/s$

B. 2.19E+01 $kg \cdot m^2/s$

C. 2.36E+01 $kg \cdot m^2/s$

D. 2.55E+01 $kg \cdot m^2/s$

E. 2.75E+01 $kg \cdot m^2/s$

The next page might contain more answer choices for this question

16. A boulder of mass 16 kg and radius 25 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1581]

    A. 1.70E+01 $kg \cdot m^2/s$

    B. 1.84E+01 $kg \cdot m^2/s$

    C. 1.99E+01 $kg \cdot m^2/s$

    D. 2.15E+01 $kg \cdot m^2/s$

    E. 2.32E+01 $kg \cdot m^2/s$

17. A boulder of mass 18 kg and radius 20 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1582]

    A. 1.66E+01 $kg \cdot m^2/s$

    B. 1.79E+01 $kg \cdot m^2/s$

    C. 1.93E+01 $kg \cdot m^2/s$

    D. 2.09E+01 $kg \cdot m^2/s$

    E. 2.25E+01 $kg \cdot m^2/s$

18. A boulder of mass 21 kg and radius 18 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1583]

    A. 1.88E+01 $kg \cdot m^2/s$

    B. 2.03E+01 $kg \cdot m^2/s$

    C. 2.19E+01 $kg \cdot m^2/s$

    D. 2.37E+01 $kg \cdot m^2/s$

    E. 2.56E+01 $kg \cdot m^2/s$

19. A boulder of mass 22 kg and radius 18 cm rolls down a hill 15 m high from rest. What is the angular momentum at the bottom of the hill? [1584]

    A. 1.69E+01 $kg \cdot m^2/s$

    B. 1.82E+01 $kg \cdot m^2/s$

    C. 1.97E+01 $kg \cdot m^2/s$

    D. 2.13E+01 $kg \cdot m^2/s$

    E. 2.30E+01 $kg \cdot m^2/s$

The next page might contain more answer choices for this question

up1-11 Q4

1. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0849kg,R=0.0519m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 6 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1585]

   A. 7.01E+00rad/s

   B. 7.57E+00rad/s

   C. 8.17E+00rad/s

   D. 8.83E+00rad/s

   E. 9.53E+00rad/s

2. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0519kg,R=0.114m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 10 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1586]

   A. 1.30E+01rad/s

   B. 1.41E+01rad/s

   C. 1.52E+01rad/s

   D. 1.64E+01rad/s

   E. 1.77E+01rad/s

3. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.103kg,R=0.0598m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 7 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1587]

   A. 7.14E+00rad/s

   B. 7.71E+00rad/s

   C. 8.33E+00rad/s

   D. 9.00E+00rad/s

   E. 9.72E+00rad/s

4. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.103kg,R=0.104m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 15 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1588]

The next page might contain more answer choices for this question

A. 1.53E+01rad/s

B. 1.65E+01rad/s

C. 1.79E+01rad/s

D. 1.93E+01rad/s

E. 2.08E+01rad/s

5. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.13kg,R=0.0535m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 7 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1589]

A. 8.48E+00rad/s

B. 9.15E+00rad/s

C. 9.89E+00rad/s

D. 1.07E+01rad/s

E. 1.15E+01rad/s

6. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.12kg,R=0.0684m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 8 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1590]

A. 9.14E+00rad/s

B. 9.88E+00rad/s

C. 1.07E+01rad/s

D. 1.15E+01rad/s

E. 1.24E+01rad/s

7. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.083kg,R=0.144m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 6 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1591]

A. 7.62E+00rad/s

B. 8.23E+00rad/s

C. 8.89E+00rad/s

D. 9.60E+00rad/s

E. 1.04E+01rad/s

The next page might contain more answer choices for this question

8. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.138kg,R=0.128m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 13 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1592]

    A. 1.23E+01rad/s

    B. 1.33E+01rad/s

    C. 1.44E+01rad/s

    D. 1.55E+01rad/s

    E. 1.68E+01rad/s

9. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0549kg,R=0.0873m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 15 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1593]

    A. 2.40E+01rad/s

    B. 2.59E+01rad/s

    C. 2.80E+01rad/s

    D. 3.02E+01rad/s

    E. 3.27E+01rad/s

10. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.12kg,R=0.109m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 15 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1594]

    A. 1.71E+01rad/s

    B. 1.85E+01rad/s

    C. 2.00E+01rad/s

    D. 2.16E+01rad/s

    E. 2.33E+01rad/s

11. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0991kg,R=0.0718m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 11 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1595]

    A. 1.32E+01rad/s

The next page might contain more answer choices for this question

B. 1.43E+01rad/s

C. 1.54E+01rad/s

D. 1.67E+01rad/s

E. 1.80E+01rad/s

12. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0889kg,R=0.0734m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 5 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1596]

A. 5.76E+00rad/s

B. 6.22E+00rad/s

C. 6.71E+00rad/s

D. 7.25E+00rad/s

E. 7.83E+00rad/s

13. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.138kg,R=0.111m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 9 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1597]

A. 9.22E+00rad/s

B. 9.95E+00rad/s

C. 1.07E+01rad/s

D. 1.16E+01rad/s

E. 1.25E+01rad/s

14. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0711kg,R=0.14m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 12 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1598]

A. 1.49E+01rad/s

B. 1.61E+01rad/s

C. 1.74E+01rad/s

D. 1.88E+01rad/s

E. 2.03E+01rad/s

The next page might contain more answer choices for this question

15. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.0869kg,R=0.142m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 6 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1599]

    A. 8.11E+00rad/s

    B. 8.76E+00rad/s

    C. 9.46E+00rad/s

    D. 1.02E+01rad/s

    E. 1.10E+01rad/s

16. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.111kg,R=0.135m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 6 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1600]

    A. 6.00E+00rad/s

    B. 6.48E+00rad/s

    C. 7.00E+00rad/s

    D. 7.56E+00rad/s

    E. 8.16E+00rad/s

17. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.124kg,R=0.118m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 14 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1601]

    A. 1.85E+01rad/s

    B. 2.00E+01rad/s

    C. 2.16E+01rad/s

    D. 2.33E+01rad/s

    E. 2.52E+01rad/s

18. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.101kg,R=0.0816m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 13 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1602]

    A. 1.56E+01rad/s

The next page might contain more answer choices for this question

B. 1.68E+01rad/s

C. 1.81E+01rad/s

D. 1.96E+01rad/s

E. 2.12E+01rad/s

19. A bug of mass 0.020 kg is at rest on the edge of a solid cylindrical disk (M=0.128kg,R=0.123m) rotating in a horizontal plane around the vertical axis through its center. The disk is rotating at 13 rad/s. The bug crawls to the center of the disk. What is the new angular velocity of the disk? [1603]

A. 1.58E+01rad/s

B. 1.71E+01rad/s

C. 1.84E+01rad/s

D. 1.99E+01rad/s

E. 2.15E+01rad/s

up1-11 Q5

1. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.950E+02$kg \cdot m^2$. A boy of mass 42.6 kg runs tangent to the rim at a speed of 5.07 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on? [1604]

A. 7.87E-01rad/sec

B. 8.50E-01rad/sec

C. 9.18E-01rad/sec

D. 9.92E-01rad/sec

E. 1.07E+00rad/sec

2. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.230E+02$kg \cdot m^2$. A boy of mass 41.4 kg runs tangent to the rim at a speed of 4.55 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on? [1605]

A. 6.42E-01rad/sec

B. 6.94E-01rad/sec

C. 7.49E-01rad/sec

D. 8.09E-01rad/sec

The next page might contain more answer choices for this question

E. 8.74E-01rad/sec

3. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.100E+02$kg \cdot m^2$. A boy of mass 37.5 kg runs tangent to the rim at a speed of 4.89 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1606

A. 5.99E-01rad/sec

B. 6.47E-01rad/sec

C. 6.99E-01rad/sec

D. 7.55E-01rad/sec

E. 8.15E-01rad/sec

4. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.140E+02$kg \cdot m^2$. A boy of mass 37.1 kg runs tangent to the rim at a speed of 4.64 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1607

A. 5.64E-01rad/sec

B. 6.10E-01rad/sec

C. 6.58E-01rad/sec

D. 7.11E-01rad/sec

E. 7.68E-01rad/sec

5. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.160E+02$kg \cdot m^2$. A boy of mass 41.5 kg runs tangent to the rim at a speed of 4.91 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1608

A. 6.43E-01rad/sec

B. 6.94E-01rad/sec

C. 7.50E-01rad/sec

D. 8.10E-01rad/sec

E. 8.75E-01rad/sec

6. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.870E+02$kg \cdot m^2$. A boy of mass 38.5 kg runs tangent to the rim at a speed of 4.18 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1609

The next page might contain more answer choices for this question

A. 5.63E-01rad/sec

B. 6.08E-01rad/sec

C. 6.56E-01rad/sec

D. 7.09E-01rad/sec

E. 7.66E-01rad/sec

7. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.130E+02$kg \cdot m^2$. A boy of mass 44.6 kg runs tangent to the rim at a speed of 5.63 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1610

A. 9.72E-01rad/sec

B. 1.05E+00rad/sec

C. 1.13E+00rad/sec

D. 1.22E+00rad/sec

E. 1.32E+00rad/sec

8. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.030E+02$kg \cdot m^2$. A boy of mass 36.9 kg runs tangent to the rim at a speed of 5.9 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1611

A. 7.72E-01rad/sec

B. 8.34E-01rad/sec

C. 9.01E-01rad/sec

D. 9.73E-01rad/sec

E. 1.05E+00rad/sec

9. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.820E+02$kg \cdot m^2$. A boy of mass 42.8 kg runs tangent to the rim at a speed of 4.4 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1612

A. 5.88E-01rad/sec

B. 6.35E-01rad/sec

C. 6.85E-01rad/sec

D. 7.40E-01rad/sec

E. 7.99E-01rad/sec

The next page might contain more answer choices for this question

10. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.960E+02$kg \cdot m^2$. A boy of mass 42.7 kg runs tangent to the rim at a speed of 5.53 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1613

    A. 8.60E-01rad/sec

    B. 9.29E-01rad/sec

    C. 1.00E+00rad/sec

    D. 1.08E+00rad/sec

    E. 1.17E+00rad/sec

11. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.090E+02$kg \cdot m^2$. A boy of mass 41.0 kg runs tangent to the rim at a speed of 5.53 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1614

    A. 8.38E-01rad/sec

    B. 9.05E-01rad/sec

    C. 9.77E-01rad/sec

    D. 1.06E+00rad/sec

    E. 1.14E+00rad/sec

12. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.920E+02$kg \cdot m^2$. A boy of mass 36.1 kg runs tangent to the rim at a speed of 5.17 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1615

    A. 7.20E-01rad/sec

    B. 7.78E-01rad/sec

    C. 8.40E-01rad/sec

    D. 9.07E-01rad/sec

    E. 9.80E-01rad/sec

13. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.170E+02$kg \cdot m^2$. A boy of mass 41.9 kg runs tangent to the rim at a speed of 5.72 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1616

    A. 7.53E-01rad/sec

The next page might contain more answer choices for this question

B. 8.14E-01rad/sec

C. 8.79E-01rad/sec

D. 9.49E-01rad/sec

E. 1.03E+00rad/sec

14. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.960E+02$kg \cdot m^2$. A boy of mass 36.7 kg runs tangent to the rim at a speed of 4.5 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1617

A. 7.39E-01rad/sec

B. 7.98E-01rad/sec

C. 8.62E-01rad/sec

D. 9.31E-01rad/sec

E. 1.01E+00rad/sec

15. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.970E+02$kg \cdot m^2$. A boy of mass 40.7 kg runs tangent to the rim at a speed of 4.89 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1618

A. 7.96E-01rad/sec

B. 8.60E-01rad/sec

C. 9.29E-01rad/sec

D. 1.00E+00rad/sec

E. 1.08E+00rad/sec

16. A merry-go-round has a radius of 2.0 m and a moment of inertia 2.820E+02$kg \cdot m^2$. A boy of mass 41.4 kg runs tangent to the rim at a speed of 4.61 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on?
1619

A. 6.51E-01rad/sec

B. 7.03E-01rad/sec

C. 7.59E-01rad/sec

D. 8.20E-01rad/sec

E. 8.85E-01rad/sec

The next page might contain more answer choices for this question

17. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.230E+02$kg \cdot m^2$. A boy of mass 40.7 kg runs tangent to the rim at a speed of 4.68 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on? [1620]

    A. 7.62E-01rad/sec
    B. 8.23E-01rad/sec
    C. 8.89E-01rad/sec
    D. 9.60E-01rad/sec
    E. 1.04E+00rad/sec

18. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.040E+02$kg \cdot m^2$. A boy of mass 38.9 kg runs tangent to the rim at a speed of 4.87 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on? [1621]

    A. 7.13E-01rad/sec
    B. 7.70E-01rad/sec
    C. 8.32E-01rad/sec
    D. 8.98E-01rad/sec
    E. 9.70E-01rad/sec

19. A merry-go-round has a radius of 2.0 m and a moment of inertia 3.210E+02$kg \cdot m^2$. A boy of mass 36.3 kg runs tangent to the rim at a speed of 4.28 m/s and jumps on. If the merry-go-round is initially at rest, what is the angular velocity after the boy jumps on? [1622]

    A. 6.46E-01rad/sec
    B. 6.98E-01rad/sec
    C. 7.54E-01rad/sec
    D. 8.14E-01rad/sec
    E. 8.79E-01rad/sec

up1-11 Q6

1. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.3 $kg \cdot m^2$ and her spin rate is 0.734 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.89 $kg \cdot m^2$ and she has 2.11 s to do the flips in the air. [1623]

The next page might contain more answer choices for this question

A. 4.54E+00 flips

B. 4.90E+00 flips

C. 5.30E+00 flips

D. 5.72E+00 flips

E. 6.18E+00 flips

2. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.3 $kg \cdot m^2$ and her spin rate is 0.544 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.78 $kg \cdot m^2$ and she has 2.74 s to do the flips in the air. [1624]

A. 3.57E+00 flips

B. 3.85E+00 flips

C. 4.16E+00 flips

D. 4.49E+00 flips

E. 4.85E+00 flips

3. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.0 $kg \cdot m^2$ and her spin rate is 0.337 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.88 $kg \cdot m^2$ and she has 2.63 s to do the flips in the air. [1625]

A. 2.01E+00 flips

B. 2.18E+00 flips

C. 2.35E+00 flips

D. 2.54E+00 flips

E. 2.74E+00 flips

4. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.4 $kg \cdot m^2$ and her spin rate is 0.702 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.75 $kg \cdot m^2$ and she has 1.15 s to do the flips in the air. [1626]

A. 2.67E+00 flips

B. 2.88E+00 flips

The next page might contain more answer choices for this question

C. 3.12E+00 flips

D. 3.36E+00 flips

E. 3.63E+00 flips

5. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.7 $kg \cdot m^2$ and her spin rate is 0.613 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.69 $kg \cdot m^2$ and she has 2.0 s to do the flips in the air. [1627]

A. 3.10E+00 flips

B. 3.35E+00 flips

C. 3.62E+00 flips

D. 3.91E+00 flips

E. 4.22E+00 flips

6. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.0 $kg \cdot m^2$ and her spin rate is 0.3 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.53 $kg \cdot m^2$ and she has 1.23 s to do the flips in the air. [1628]

A. 9.22E-01 flips

B. 9.96E-01 flips

C. 1.08E+00 flips

D. 1.16E+00 flips

E. 1.25E+00 flips

7. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.3 $kg \cdot m^2$ and her spin rate is 0.498 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.57 $kg \cdot m^2$ and she has 1.58 s to do the flips in the air. [1629]

A. 2.71E+00 flips

B. 2.93E+00 flips

C. 3.16E+00 flips

D. 3.42E+00 flips

The next page might contain more answer choices for this question

E. 3.69E+00 flips

8. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.7 $kg \cdot m^2$ and her spin rate is 0.543 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.88 $kg \cdot m^2$ and she has 1.99 s to do the flips in the air. [1630]

A. 3.82E+00 flips

B. 4.12E+00 flips

C. 4.45E+00 flips

D. 4.81E+00 flips

E. 5.19E+00 flips

9. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.3 $kg \cdot m^2$ and her spin rate is 0.659 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.76 $kg \cdot m^2$ and she has 2.61 s to do the flips in the air. [1631]

A. 5.63E+00 flips

B. 6.08E+00 flips

C. 6.56E+00 flips

D. 7.09E+00 flips

E. 7.65E+00 flips

10. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.4 $kg \cdot m^2$ and her spin rate is 0.489 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.51 $kg \cdot m^2$ and she has 2.46 s to do the flips in the air. [1632]

A. 4.25E+00 flips

B. 4.59E+00 flips

C. 4.96E+00 flips

D. 5.36E+00 flips

E. 5.79E+00 flips

The next page might contain more answer choices for this question

11. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.8 $kg \cdot m^2$ and her spin rate is 0.526 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.6 $kg \cdot m^2$ and she has 1.8 s to do the flips in the air. [1633]

    A. 2.47E+00 flips

    B. 2.67E+00 flips

    C. 2.89E+00 flips

    D. 3.12E+00 flips

    E. 3.37E+00 flips

12. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.7 $kg \cdot m^2$ and her spin rate is 0.72 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.84 $kg \cdot m^2$ and she has 2.47 s to do the flips in the air. [1634]

    A. 5.04E+00 flips

    B. 5.44E+00 flips

    C. 5.87E+00 flips

    D. 6.34E+00 flips

    E. 6.85E+00 flips

13. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.1 $kg \cdot m^2$ and her spin rate is 0.742 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.86 $kg \cdot m^2$ and she has 1.86 s to do the flips in the air. [1635]

    A. 3.18E+00 flips

    B. 3.43E+00 flips

    C. 3.71E+00 flips

    D. 4.01E+00 flips

    E. 4.33E+00 flips

14. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.1 $kg \cdot m^2$ and her spin rate is 0.584 rev/s, how many

The next page might contain more answer choices for this question

revolutions does she do in the air if her moment of inertia in the tuck is 3.83 $kg \cdot m^2$ and she has 2.05 s to do the flips in the air. [1636]

A. 3.79E+00 flips

B. 4.09E+00 flips

C. 4.42E+00 flips

D. 4.78E+00 flips

E. 5.16E+00 flips

15. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.2 $kg \cdot m^2$ and her spin rate is 0.735 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.7 $kg \cdot m^2$ and she has 2.4 s to do the flips in the air. [1637]

A. 4.99E+00 flips

B. 5.39E+00 flips

C. 5.82E+00 flips

D. 6.28E+00 flips

E. 6.78E+00 flips

16. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.3 $kg \cdot m^2$ and her spin rate is 0.599 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.53 $kg \cdot m^2$ and she has 2.86 s to do the flips in the air. [1638]

A. 5.12E+00 flips

B. 5.53E+00 flips

C. 5.97E+00 flips

D. 6.45E+00 flips

E. 6.96E+00 flips

17. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.1 $kg \cdot m^2$ and her spin rate is 0.324 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.77 $kg \cdot m^2$ and she has 2.58 s to do the flips in the air. [1639]

A. 2.48E+00 flips

The next page might contain more answer choices for this question

B. 2.68E+00 flips

C. 2.90E+00 flips

D. 3.13E+00 flips

E. 3.38E+00 flips

18. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 12.9 $kg \cdot m^2$ and her spin rate is 0.334 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.89 $kg \cdot m^2$ and she has 2.53 s to do the flips in the air. [1640]

A. 2.59E+00 flips

B. 2.80E+00 flips

C. 3.03E+00 flips

D. 3.27E+00 flips

E. 3.53E+00 flips

19. A gymnast does cartwheels along the floor and then launches herself into the air and executes several flips in a tuck while she is airborne. If her moment of inertia when executing the cartwheels is 13.7 $kg \cdot m^2$ and her spin rate is 0.553 rev/s, how many revolutions does she do in the air if her moment of inertia in the tuck is 3.6 $kg \cdot m^2$ and she has 1.54 s to do the flips in the air. [1641]

A. 2.38E+00 flips

B. 2.57E+00 flips

C. 2.78E+00 flips

D. 3.00E+00 flips

E. 3.24E+00 flips

up1-11 Q7

1. A gyroscope has a 0.433-kg disk that spins at 49 rev/s. The center of mass of the disk is 0.142 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1642]

A. 4.48E+01 rad/s

B. 4.84E+01 rad/s

C. 5.23E+01 rad/s

The next page might contain more answer choices for this question

D. 5.65E+01 rad/s

E. 6.10E+01 rad/s

2. A gyroscope has a 0.567-kg disk that spins at 42 rev/s. The center of mass of the disk is 0.193 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1643]

A. 3.56E+01 rad/s

B. 3.85E+01 rad/s

C. 4.16E+01 rad/s

D. 4.49E+01 rad/s

E. 4.85E+01 rad/s

3. A gyroscope has a 0.564-kg disk that spins at 43 rev/s. The center of mass of the disk is 0.126 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1644]

A. 5.76E+01 rad/s

B. 6.22E+01 rad/s

C. 6.72E+01 rad/s

D. 7.25E+01 rad/s

E. 7.83E+01 rad/s

4. A gyroscope has a 0.437-kg disk that spins at 49 rev/s. The center of mass of the disk is 0.0811 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1645]

A. 7.85E+01 rad/s

B. 8.48E+01 rad/s

C. 9.16E+01 rad/s

D. 9.89E+01 rad/s

E. 1.07E+02 rad/s

5. A gyroscope has a 0.525-kg disk that spins at 35 rev/s. The center of mass of the disk is 0.0574 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1646]

A. 1.44E+02 rad/s

B. 1.55E+02 rad/s

The next page might contain more answer choices for this question

C. 1.68E+02 rad/s

D. 1.81E+02 rad/s

E. 1.96E+02 rad/s

6. A gyroscope has a 0.582-kg disk that spins at 37 rev/s. The center of mass of the disk is 0.162 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1647]

A. 4.46E+01 rad/s

B. 4.82E+01 rad/s

C. 5.20E+01 rad/s

D. 5.62E+01 rad/s

E. 6.07E+01 rad/s

7. A gyroscope has a 0.502-kg disk that spins at 42 rev/s. The center of mass of the disk is 0.164 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1648]

A. 3.88E+01 rad/s

B. 4.19E+01 rad/s

C. 4.53E+01 rad/s

D. 4.89E+01 rad/s

E. 5.28E+01 rad/s

8. A gyroscope has a 0.47-kg disk that spins at 38 rev/s. The center of mass of the disk is 0.111 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1649]

A. 6.34E+01 rad/s

B. 6.85E+01 rad/s

C. 7.40E+01 rad/s

D. 7.99E+01 rad/s

E. 8.63E+01 rad/s

9. A gyroscope has a 0.471-kg disk that spins at 34 rev/s. The center of mass of the disk is 0.0586 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1650]

A. 1.57E+02 rad/s

The next page might contain more answer choices for this question

B. 1.69E+02 rad/s

C. 1.83E+02 rad/s

D. 1.97E+02 rad/s

E. 2.13E+02 rad/s

10. A gyroscope has a 0.526-kg disk that spins at 38 rev/s. The center of mass of the disk is 0.108 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1651]

A. 7.04E+01 rad/s

B. 7.60E+01 rad/s

C. 8.21E+01 rad/s

D. 8.87E+01 rad/s

E. 9.58E+01 rad/s

11. A gyroscope has a 0.504-kg disk that spins at 30 rev/s. The center of mass of the disk is 0.177 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1652]

A. 4.66E+01 rad/s

B. 5.04E+01 rad/s

C. 5.44E+01 rad/s

D. 5.87E+01 rad/s

E. 6.34E+01 rad/s

12. A gyroscope has a 0.525-kg disk that spins at 32 rev/s. The center of mass of the disk is 0.2 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1653]

A. 3.58E+01 rad/s

B. 3.87E+01 rad/s

C. 4.18E+01 rad/s

D. 4.51E+01 rad/s

E. 4.87E+01 rad/s

13. A gyroscope has a 0.471-kg disk that spins at 38 rev/s. The center of mass of the disk is 0.111 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1654]

The next page might contain more answer choices for this question

A. 5.87E+01 rad/s

B. 6.34E+01 rad/s

C. 6.85E+01 rad/s

D. 7.40E+01 rad/s

E. 7.99E+01 rad/s

14. A gyroscope has a 0.532-kg disk that spins at 38 rev/s. The center of mass of the disk is 0.177 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1655]

A. 3.98E+01 rad/s

B. 4.29E+01 rad/s

C. 4.64E+01 rad/s

D. 5.01E+01 rad/s

E. 5.41E+01 rad/s

15. A gyroscope has a 0.497-kg disk that spins at 43 rev/s. The center of mass of the disk is 0.122 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1656]

A. 4.72E+01 rad/s

B. 5.10E+01 rad/s

C. 5.51E+01 rad/s

D. 5.95E+01 rad/s

E. 6.42E+01 rad/s

16. A gyroscope has a 0.589-kg disk that spins at 37 rev/s. The center of mass of the disk is 0.184 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1657]

A. 3.64E+01 rad/s

B. 3.93E+01 rad/s

C. 4.24E+01 rad/s

D. 4.58E+01 rad/s

E. 4.95E+01 rad/s

17. A gyroscope has a 0.545-kg disk that spins at 36 rev/s. The center of mass of the disk is 0.144 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1658]

The next page might contain more answer choices for this question

A. 5.16E+01 rad/s

B. 5.57E+01 rad/s

C. 6.02E+01 rad/s

D. 6.50E+01 rad/s

E. 7.02E+01 rad/s

18. A gyroscope has a 0.443-kg disk that spins at 31 rev/s. The center of mass of the disk is 0.0859 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1659]

A. 1.00E+02 rad/s

B. 1.08E+02 rad/s

C. 1.17E+02 rad/s

D. 1.27E+02 rad/s

E. 1.37E+02 rad/s

19. A gyroscope has a 0.415-kg disk that spins at 47 rev/s. The center of mass of the disk is 0.171 cm from a pivot which is also the radius of the disk. What is the precession angular velocity? [1660]

A. 3.33E+01 rad/s

B. 3.59E+01 rad/s

C. 3.88E+01 rad/s

D. 4.19E+01 rad/s

E. 4.53E+01 rad/s

8 up1-12

1. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.650E+02 N at a distance of 0.14 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1661]

A. 2.14E+01N

B. 2.31E+01N

C. 2.49E+01N

D. 2.69E+01N

E. 2.91E+01N

The next page might contain more answer choices for this question

2. When opening a door, you push on it perpendicularly with a force of 55 N at a distance of 0.85 m from the hinges. What torque are you exerting relative to the hinges? [1662]

   A. 3.44E+01N

   B. 3.71E+01N

   C. 4.01E+01N

   D. 4.33E+01N

   E. 4.68E+01N

3. A uniform 40 kg scaffold of length 6 m is supported by two light cables. A 80 kg painter stands 1 from the left end of the scaffold, and his painting equipment is 1.5 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1663]

   A. 4.11E+02 N

   B. 4.44E+02 N

   C. 4.80E+02 N

   D. 5.18E+02 N

   E. 5.60E+02 N

4. A uniform 40 kg scaffold of length 6 m is supported by two light cables. A 80 kg painter stands 1 from the left end of the scaffold, and his painting equipment is 1.5 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1664]

   A. 8.23E+02 N

   B. 8.89E+02 N

   C. 9.60E+02 N

   D. 1.04E+03 N

   E. 1.12E+03 N

5. A uniform 40 kg scaffold of length 6 m is supported by two light cables. A 80 kg painter stands 1 from the left end of the scaffold, and his painting equipment is 1.5 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1665]

   A. 1.24E+02 N

   B. 1.34E+02 N

   C. 1.45E+02 N

The next page might contain more answer choices for this question

D. 1.57E+02 N

E. 1.69E+02 N

6. To get up on the roof, a person (mass 70 kg) places a 6.00-m aluminum ladder (mass 10 kg) against the house on a concrete pad with the base of the ladder 2 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1666]

A. 9.76E+01N

B. 1.05E+02N

C. 1.14E+02N

D. 1.23E+02N

E. 1.33E+02N

7. To get up on the roof, a person (mass 70 kg) places a 6.00-m aluminum ladder (mass 10 kg) against the house on a concrete pad with the base of the ladder 2 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1667]

A. 6.72E+02N

B. 7.26E+02N

C. 7.84E+02N

D. 8.47E+02N

E. 9.14E+02N

8. A 20 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.000E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1668]

A. 5.73E-01 mm

B. 6.19E-01 mm

C. 6.68E-01 mm

D. 7.22E-01 mm

E. 7.80E-01 mm

The next page might contain more answer choices for this question

9. A 90 kg mountain climber hangs from a nylon rope and stretches it by 25 cm. If the rope was originally 30 m long and its diameter is 1 cm, what is Young's modulus for the nylon? [1669]

    A. 1.35E+09Pa

    B. 1.46E+09Pa

    C. 1.57E+09Pa

    D. 1.70E+09Pa

    E. 1.83E+09Pa

10. A copper wire is 1 m long and its diameter is 1 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 3 mm? [1670]

    A. 1.91E+02 N

    B. 2.06E+02 N

    C. 2.22E+02 N

    D. 2.40E+02 N

    E. 2.59E+02 N

8.1 Renditions

up1-12 Q1

1. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.770E+02 N at a distance of 0.14 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1671]

    A. 1.82E+01N

    B. 1.97E+01N

    C. 2.12E+01N

    D. 2.29E+01N

    E. 2.48E+01N

2. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.480E+02 N at a distance of 0.104 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1672]

    A. 1.43E+01N

    B. 1.54E+01N

The next page might contain more answer choices for this question

C. 1.66E+01N

D. 1.80E+01N

E. 1.94E+01N

3. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.370E+02 N at a distance of 0.167 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1673]

A. 1.82E+01N

B. 1.96E+01N

C. 2.12E+01N

D. 2.29E+01N

E. 2.47E+01N

4. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.900E+02 N at a distance of 0.13 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1674]

A. 1.82E+01N

B. 1.96E+01N

C. 2.12E+01N

D. 2.29E+01N

E. 2.47E+01N

5. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.530E+02 N at a distance of 0.111 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1675]

A. 1.70E+01N

B. 1.83E+01N

C. 1.98E+01N

D. 2.14E+01N

E. 2.31E+01N

6. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.800E+02 N at a distance of 0.164 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1676]

A. 2.53E+01N

The next page might contain more answer choices for this question

B. 2.73E+01N

C. 2.95E+01N

D. 3.19E+01N

E. 3.44E+01N

7. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.540E+02 N at a distance of 0.153 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1677]

A. 1.73E+01N

B. 1.87E+01N

C. 2.02E+01N

D. 2.18E+01N

E. 2.36E+01N

8. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.780E+02 N at a distance of 0.163 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1678]

A. 2.30E+01N

B. 2.49E+01N

C. 2.69E+01N

D. 2.90E+01N

E. 3.13E+01N

9. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.860E+02 N at a distance of 0.16 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1679]

A. 2.36E+01N

B. 2.55E+01N

C. 2.76E+01N

D. 2.98E+01N

E. 3.21E+01N

10. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.420E+02 N at a distance of 0.155 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1680]

The next page might contain more answer choices for this question

A. 1.62E+01N

B. 1.75E+01N

C. 1.89E+01N

D. 2.04E+01N

E. 2.20E+01N

11. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.410E+02 N at a distance of 0.113 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1681]

A. 1.37E+01N

B. 1.48E+01N

C. 1.59E+01N

D. 1.72E+01N

E. 1.86E+01N

12. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.610E+02 N at a distance of 0.105 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1682]

A. 1.34E+01N

B. 1.45E+01N

C. 1.57E+01N

D. 1.69E+01N

E. 1.83E+01N

13. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.570E+02 N at a distance of 0.174 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1683]

A. 2.73E+01N

B. 2.95E+01N

C. 3.19E+01N

D. 3.44E+01N

E. 3.72E+01N

14. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.930E+02 N at a distance of 0.106 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1684]

The next page might contain more answer choices for this question

A. 1.75E+01N

B. 1.89E+01N

C. 2.05E+01N

D. 2.21E+01N

E. 2.39E+01N

15. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.460E+02 N at a distance of 0.124 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1685]

A. 1.81E+01N

B. 1.96E+01N

C. 2.11E+01N

D. 2.28E+01N

E. 2.46E+01N

16. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.690E+02 N at a distance of 0.177 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1686]

A. 2.37E+01N

B. 2.56E+01N

C. 2.77E+01N

D. 2.99E+01N

E. 3.23E+01N

17. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.570E+02 N at a distance of 0.157 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1687]

A. 2.28E+01N

B. 2.46E+01N

C. 2.66E+01N

D. 2.88E+01N

E. 3.11E+01N

18. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.510E+02 N at a distance of 0.174 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1688]

The next page might contain more answer choices for this question

A. 2.43E+01N

B. 2.63E+01N

C. 2.84E+01N

D. 3.06E+01N

E. 3.31E+01N

19. When tightening a bolt, you push perpendicularly on a wrench with a force of 1.730E+02 N at a distance of 0.175 m from the center of the bolt. How much torque are you exerting relative to the center of the bolt? [1689]

A. 2.60E+01N

B. 2.80E+01N

C. 3.03E+01N

D. 3.27E+01N

E. 3.53E+01N

up1-12 Q2

1. When opening a door, you push on it perpendicularly with a force of 62 N at a distance of 0.649 m from the hinges. What torque are you exerting relative to the hinges? [1690]

A. 3.73E+01N

B. 4.02E+01N

C. 4.35E+01N

D. 4.69E+01N

E. 5.07E+01N

2. When opening a door, you push on it perpendicularly with a force of 68 N at a distance of 0.873 m from the hinges. What torque are you exerting relative to the hinges? [1691]

A. 4.36E+01N

B. 4.71E+01N

C. 5.09E+01N

D. 5.50E+01N

E. 5.94E+01N

3. When opening a door, you push on it perpendicularly with a force of 44 N at a distance of 0.674 m from the hinges. What torque are you exerting relative to the hinges? [1692]

The next page might contain more answer choices for this question

A. 2.97E+01N

B. 3.20E+01N

C. 3.46E+01N

D. 3.74E+01N

E. 4.03E+01N

4. When opening a door, you push on it perpendicularly with a force of 69 N at a distance of 0.645 m from the hinges. What torque are you exerting relative to the hinges? [1693]

A. 3.53E+01N

B. 3.82E+01N

C. 4.12E+01N

D. 4.45E+01N

E. 4.81E+01N

5. When opening a door, you push on it perpendicularly with a force of 59 N at a distance of 0.577 m from the hinges. What torque are you exerting relative to the hinges? [1694]

A. 2.92E+01N

B. 3.15E+01N

C. 3.40E+01N

D. 3.68E+01N

E. 3.97E+01N

6. When opening a door, you push on it perpendicularly with a force of 50 N at a distance of 0.551 m from the hinges. What torque are you exerting relative to the hinges? [1695]

A. 2.36E+01N

B. 2.55E+01N

C. 2.76E+01N

D. 2.98E+01N

E. 3.21E+01N

7. When opening a door, you push on it perpendicularly with a force of 46 N at a distance of 0.739 m from the hinges. What torque are you exerting relative to the hinges? [1696]

A. 2.50E+01N

B. 2.70E+01N

The next page might contain more answer choices for this question

C. 2.91E+01N

D. 3.15E+01N

E. 3.40E+01N

8. When opening a door, you push on it perpendicularly with a force of 42 N at a distance of 0.762 m from the hinges. What torque are you exerting relative to the hinges? [1697]

A. 2.74E+01N

B. 2.96E+01N

C. 3.20E+01N

D. 3.46E+01N

E. 3.73E+01N

9. When opening a door, you push on it perpendicularly with a force of 43 N at a distance of 0.642 m from the hinges. What torque are you exerting relative to the hinges? [1698]

A. 2.19E+01N

B. 2.37E+01N

C. 2.56E+01N

D. 2.76E+01N

E. 2.98E+01N

10. When opening a door, you push on it perpendicularly with a force of 40 N at a distance of 0.701 m from the hinges. What torque are you exerting relative to the hinges? [1699]

A. 2.40E+01N

B. 2.60E+01N

C. 2.80E+01N

D. 3.03E+01N

E. 3.27E+01N

11. When opening a door, you push on it perpendicularly with a force of 65 N at a distance of 0.628 m from the hinges. What torque are you exerting relative to the hinges? [1700]

A. 3.78E+01N

B. 4.08E+01N

C. 4.41E+01N

D. 4.76E+01N

The next page might contain more answer choices for this question

E. 5.14E+01N

12. When opening a door, you push on it perpendicularly with a force of 60 N at a distance of 0.817 m from the hinges. What torque are you exerting relative to the hinges? [1701]

A. 4.20E+01N

B. 4.54E+01N

C. 4.90E+01N

D. 5.29E+01N

E. 5.72E+01N

13. When opening a door, you push on it perpendicularly with a force of 67 N at a distance of 0.598 m from the hinges. What torque are you exerting relative to the hinges? [1702]

A. 3.18E+01N

B. 3.44E+01N

C. 3.71E+01N

D. 4.01E+01N

E. 4.33E+01N

14. When opening a door, you push on it perpendicularly with a force of 62 N at a distance of 0.887 m from the hinges. What torque are you exerting relative to the hinges? [1703]

A. 4.04E+01N

B. 4.37E+01N

C. 4.71E+01N

D. 5.09E+01N

E. 5.50E+01N

15. When opening a door, you push on it perpendicularly with a force of 52 N at a distance of 0.634 m from the hinges. What torque are you exerting relative to the hinges? [1704]

A. 2.42E+01N

B. 2.62E+01N

C. 2.83E+01N

D. 3.05E+01N

E. 3.30E+01N

The next page might contain more answer choices for this question

16. When opening a door, you push on it perpendicularly with a force of 63 N at a distance of 0.576 m from the hinges. What torque are you exerting relative to the hinges? [1705]

    A. 2.88E+01N

    B. 3.11E+01N

    C. 3.36E+01N

    D. 3.63E+01N

    E. 3.92E+01N

17. When opening a door, you push on it perpendicularly with a force of 68 N at a distance of 0.867 m from the hinges. What torque are you exerting relative to the hinges? [1706]

    A. 4.33E+01N

    B. 4.68E+01N

    C. 5.05E+01N

    D. 5.46E+01N

    E. 5.90E+01N

18. When opening a door, you push on it perpendicularly with a force of 45 N at a distance of 0.596 m from the hinges. What torque are you exerting relative to the hinges? [1707]

    A. 2.68E+01N

    B. 2.90E+01N

    C. 3.13E+01N

    D. 3.38E+01N

    E. 3.65E+01N

19. When opening a door, you push on it perpendicularly with a force of 69 N at a distance of 0.914 m from the hinges. What torque are you exerting relative to the hinges? [1708]

    A. 5.41E+01N

    B. 5.84E+01N

    C. 6.31E+01N

    D. 6.81E+01N

    E. 7.36E+01N

The next page might contain more answer choices for this question

up1-12 Q3

1. A uniform 94 kg scaffold of length 5.84 m is supported by two light cables. A 87 kg painter stands 0.884 from the left end of the scaffold, and his painting equipment is 1.64 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1709]

   A. 4.36E+02 N

   B. 4.70E+02 N

   C. 5.08E+02 N

   D. 5.49E+02 N

   E. 5.93E+02 N

2. A uniform 87 kg scaffold of length 6.02 m is supported by two light cables. A 70 kg painter stands 0.872 from the left end of the scaffold, and his painting equipment is 1.6 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1710]

   A. 3.99E+02 N

   B. 4.31E+02 N

   C. 4.65E+02 N

   D. 5.02E+02 N

   E. 5.42E+02 N

3. A uniform 9.900E+01 kg scaffold of length 5.88 m is supported by two light cables. A 72 kg painter stands 0.804 from the left end of the scaffold, and his painting equipment is 1.73 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1711]

   A. 4.61E+02 N

   B. 4.98E+02 N

   C. 5.38E+02 N

   D. 5.81E+02 N

   E. 6.28E+02 N

4. A uniform 76 kg scaffold of length 6.12 m is supported by two light cables. A 73 kg painter stands 0.836 from the left end of the scaffold, and his painting equipment is 1.79 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1712]

The next page might contain more answer choices for this question

A. 4.30E+02 N

B. 4.64E+02 N

C. 5.02E+02 N

D. 5.42E+02 N

E. 5.85E+02 N

5. A uniform 76 kg scaffold of length 5.96 m is supported by two light cables. A 9.900E+01 kg painter stands 0.888 from the left end of the scaffold, and his painting equipment is 1.68 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1713]

A. 4.55E+02 N

B. 4.91E+02 N

C. 5.31E+02 N

D. 5.73E+02 N

E. 6.19E+02 N

6. A uniform 71 kg scaffold of length 6.18 m is supported by two light cables. A 92 kg painter stands 0.708 from the left end of the scaffold, and his painting equipment is 1.78 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1714]

A. 5.18E+02 N

B. 5.59E+02 N

C. 6.04E+02 N

D. 6.52E+02 N

E. 7.05E+02 N

7. A uniform 94 kg scaffold of length 6.11 m is supported by two light cables. A 92 kg painter stands 0.829 from the left end of the scaffold, and his painting equipment is 1.65 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1715]

A. 4.62E+02 N

B. 4.99E+02 N

C. 5.39E+02 N

D. 5.82E+02 N

E. 6.28E+02 N

The next page might contain more answer choices for this question

8. A uniform 84 kg scaffold of length 5.73 m is supported by two light cables. A 91 kg painter stands 0.712 from the left end of the scaffold, and his painting equipment is 1.73 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1716]

    A. 5.29E+02 N

    B. 5.71E+02 N

    C. 6.17E+02 N

    D. 6.66E+02 N

    E. 7.19E+02 N

9. A uniform 84 kg scaffold of length 6.19 m is supported by two light cables. A 94 kg painter stands 0.816 from the left end of the scaffold, and his painting equipment is 1.69 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1717]

    A. 6.22E+02 N

    B. 6.72E+02 N

    C. 7.26E+02 N

    D. 7.84E+02 N

    E. 8.47E+02 N

10. A uniform 9.900E+01 kg scaffold of length 6.16 m is supported by two light cables. A 70 kg painter stands 0.792 from the left end of the scaffold, and his painting equipment is 1.61 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1718]

    A. 4.95E+02 N

    B. 5.35E+02 N

    C. 5.77E+02 N

    D. 6.24E+02 N

    E. 6.73E+02 N

11. A uniform 84 kg scaffold of length 6.16 m is supported by two light cables. A 84 kg painter stands 0.775 from the left end of the scaffold, and his painting equipment is 1.66 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1719]

    A. 5.34E+02 N

The next page might contain more answer choices for this question

B. 5.77E+02 N

C. 6.23E+02 N

D. 6.73E+02 N

E. 7.27E+02 N

12. A uniform 76 kg scaffold of length 6.32 m is supported by two light cables. A 1.000E+02 kg painter stands 0.841 from the left end of the scaffold, and his painting equipment is 1.78 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1720]

A. 4.68E+02 N

B. 5.06E+02 N

C. 5.46E+02 N

D. 5.90E+02 N

E. 6.37E+02 N

13. A uniform 82 kg scaffold of length 6.14 m is supported by two light cables. A 77 kg painter stands 0.845 from the left end of the scaffold, and his painting equipment is 1.72 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1721]

A. 4.22E+02 N

B. 4.55E+02 N

C. 4.92E+02 N

D. 5.31E+02 N

E. 5.74E+02 N

14. A uniform 82 kg scaffold of length 6.24 m is supported by two light cables. A 92 kg painter stands 0.882 from the left end of the scaffold, and his painting equipment is 1.76 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1722]

A. 5.16E+02 N

B. 5.58E+02 N

C. 6.02E+02 N

D. 6.51E+02 N

E. 7.03E+02 N

The next page might contain more answer choices for this question

15. A uniform 86 kg scaffold of length 5.69 m is supported by two light cables. A 72 kg painter stands 0.779 from the left end of the scaffold, and his painting equipment is 1.69 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1723]

    A. 4.41E+02 N

    B. 4.76E+02 N

    C. 5.14E+02 N

    D. 5.56E+02 N

    E. 6.00E+02 N

16. A uniform 82 kg scaffold of length 5.63 m is supported by two light cables. A 89 kg painter stands 0.891 from the left end of the scaffold, and his painting equipment is 1.79 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1724]

    A. 4.58E+02 N

    B. 4.94E+02 N

    C. 5.34E+02 N

    D. 5.77E+02 N

    E. 6.23E+02 N

17. A uniform 83 kg scaffold of length 6.08 m is supported by two light cables. A 74 kg painter stands 0.788 from the left end of the scaffold, and his painting equipment is 1.61 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1725]

    A. 4.48E+02 N

    B. 4.84E+02 N

    C. 5.23E+02 N

    D. 5.65E+02 N

    E. 6.10E+02 N

18. A uniform 76 kg scaffold of length 6.07 m is supported by two light cables. A 72 kg painter stands 0.732 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1726]

    A. 4.01E+02 N

The next page might contain more answer choices for this question

B. 4.33E+02 N

C. 4.68E+02 N

D. 5.06E+02 N

E. 5.46E+02 N

19. A uniform 86 kg scaffold of length 5.81 m is supported by two light cables. A 71 kg painter stands 0.819 from the left end of the scaffold, and his painting equipment is 1.71 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the right cable. [1727]

A. 3.73E+02 N

B. 4.02E+02 N

C. 4.35E+02 N

D. 4.69E+02 N

E. 5.07E+02 N

up1-12 Q4

1. A uniform 94 kg scaffold of length 5.88 m is supported by two light cables. A 80 kg painter stands 0.868 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1728]

A. 1.04E+03 N

B. 1.12E+03 N

C. 1.21E+03 N

D. 1.31E+03 N

E. 1.41E+03 N

2. A uniform 79 kg scaffold of length 5.87 m is supported by two light cables. A 96 kg painter stands 0.764 from the left end of the scaffold, and his painting equipment is 1.63 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1729]

A. 1.16E+03 N

B. 1.25E+03 N

C. 1.35E+03 N

D. 1.46E+03 N

The next page might contain more answer choices for this question

E. 1.57E+03 N

3. A uniform 85 kg scaffold of length 6.1 m is supported by two light cables. A 85 kg painter stands 0.85 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1730]

A. 1.15E+03 N

B. 1.24E+03 N

C. 1.34E+03 N

D. 1.45E+03 N

E. 1.56E+03 N

4. A uniform 79 kg scaffold of length 6.07 m is supported by two light cables. A 9.900E+01 kg painter stands 0.723 from the left end of the scaffold, and his painting equipment is 1.63 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1731]

A. 1.03E+03 N

B. 1.11E+03 N

C. 1.20E+03 N

D. 1.29E+03 N

E. 1.40E+03 N

5. A uniform 93 kg scaffold of length 5.81 m is supported by two light cables. A 87 kg painter stands 0.749 from the left end of the scaffold, and his painting equipment is 1.79 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1732]

A. 1.22E+03 N

B. 1.32E+03 N

C. 1.42E+03 N

D. 1.53E+03 N

E. 1.66E+03 N

6. A uniform 86 kg scaffold of length 6.14 m is supported by two light cables. A 88 kg painter stands 0.749 from the left end of the scaffold, and his painting equipment is 1.73 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1733]

The next page might contain more answer choices for this question

A. 1.12E+03 N

B. 1.21E+03 N

C. 1.31E+03 N

D. 1.41E+03 N

E. 1.52E+03 N

7. A uniform 72 kg scaffold of length 6.06 m is supported by two light cables. A 76 kg painter stands 0.862 from the left end of the scaffold, and his painting equipment is 1.77 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1734]

A. 8.03E+02 N

B. 8.67E+02 N

C. 9.36E+02 N

D. 1.01E+03 N

E. 1.09E+03 N

8. A uniform 88 kg scaffold of length 6.23 m is supported by two light cables. A 82 kg painter stands 0.888 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1735]

A. 9.66E+02 N

B. 1.04E+03 N

C. 1.13E+03 N

D. 1.22E+03 N

E. 1.31E+03 N

9. A uniform 73 kg scaffold of length 5.82 m is supported by two light cables. A 94 kg painter stands 0.851 from the left end of the scaffold, and his painting equipment is 1.62 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1736]

A. 1.09E+03 N

B. 1.18E+03 N

C. 1.28E+03 N

D. 1.38E+03 N

E. 1.49E+03 N

The next page might contain more answer choices for this question

10. A uniform 9.900E+01 kg scaffold of length 5.62 m is supported by two light cables. A 81 kg painter stands 0.78 from the left end of the scaffold, and his painting equipment is 1.61 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1737]

    A. 8.55E+02 N

    B. 9.23E+02 N

    C. 9.97E+02 N

    D. 1.08E+03 N

    E. 1.16E+03 N

11. A uniform 93 kg scaffold of length 6.04 m is supported by two light cables. A 90 kg painter stands 0.7 from the left end of the scaffold, and his painting equipment is 1.66 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1738]

    A. 9.29E+02 N

    B. 1.00E+03 N

    C. 1.08E+03 N

    D. 1.17E+03 N

    E. 1.26E+03 N

12. A uniform 87 kg scaffold of length 5.61 m is supported by two light cables. A 94 kg painter stands 0.88 from the left end of the scaffold, and his painting equipment is 1.71 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1739]

    A. 9.69E+02 N

    B. 1.05E+03 N

    C. 1.13E+03 N

    D. 1.22E+03 N

    E. 1.32E+03 N

13. A uniform 85 kg scaffold of length 5.72 m is supported by two light cables. A 85 kg painter stands 0.756 from the left end of the scaffold, and his painting equipment is 1.75 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1740]

    A. 1.16E+03 N

The next page might contain more answer choices for this question

B. 1.26E+03 N

C. 1.36E+03 N

D. 1.47E+03 N

E. 1.58E+03 N

14. A uniform 77 kg scaffold of length 5.64 m is supported by two light cables. A 84 kg painter stands 0.756 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1741]

A. 1.04E+03 N

B. 1.12E+03 N

C. 1.21E+03 N

D. 1.31E+03 N

E. 1.41E+03 N

15. A uniform 73 kg scaffold of length 5.73 m is supported by two light cables. A 87 kg painter stands 0.834 from the left end of the scaffold, and his painting equipment is 1.71 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1742]

A. 8.89E+02 N

B. 9.60E+02 N

C. 1.04E+03 N

D. 1.12E+03 N

E. 1.21E+03 N

16. A uniform 91 kg scaffold of length 6.26 m is supported by two light cables. A 77 kg painter stands 0.857 from the left end of the scaffold, and his painting equipment is 1.8 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1743]

A. 8.71E+02 N

B. 9.40E+02 N

C. 1.02E+03 N

D. 1.10E+03 N

E. 1.18E+03 N

The next page might contain more answer choices for this question

17. A uniform 80 kg scaffold of length 5.85 m is supported by two light cables. A 81 kg painter stands 0.738 from the left end of the scaffold, and his painting equipment is 1.61 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1744]

    A. 8.81E+02 N

    B. 9.51E+02 N

    C. 1.03E+03 N

    D. 1.11E+03 N

    E. 1.20E+03 N

18. A uniform 85 kg scaffold of length 6.07 m is supported by two light cables. A 94 kg painter stands 0.829 from the left end of the scaffold, and his painting equipment is 1.6 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1745]

    A. 1.24E+03 N

    B. 1.34E+03 N

    C. 1.45E+03 N

    D. 1.56E+03 N

    E. 1.69E+03 N

19. A uniform 97 kg scaffold of length 5.91 m is supported by two light cables. A 94 kg painter stands 0.892 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the tension in the left cable. [1746]

    A. 1.26E+03 N

    B. 1.37E+03 N

    C. 1.47E+03 N

    D. 1.59E+03 N

    E. 1.72E+03 N

up1-12 Q5

1. A uniform 39 kg scaffold of length 6.06 m is supported by two light cables. A 75 kg painter stands 1.09 from the left end of the scaffold, and his painting equipment is 1.77 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1747]

The next page might contain more answer choices for this question

A. 1.21E+02 N

B. 1.31E+02 N

C. 1.42E+02 N

D. 1.53E+02 N

E. 1.65E+02 N

2. A uniform 43 kg scaffold of length 6.13 m is supported by two light cables. A 77 kg painter stands 0.906 from the left end of the scaffold, and his painting equipment is 1.63 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1748]

A. 1.38E+02 N

B. 1.49E+02 N

C. 1.61E+02 N

D. 1.74E+02 N

E. 1.88E+02 N

3. A uniform 38 kg scaffold of length 6.02 m is supported by two light cables. A 77 kg painter stands 0.925 from the left end of the scaffold, and his painting equipment is 1.75 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1749]

A. 1.96E+02 N

B. 2.11E+02 N

C. 2.28E+02 N

D. 2.46E+02 N

E. 2.66E+02 N

4. A uniform 40 kg scaffold of length 5.91 m is supported by two light cables. A 76 kg painter stands 1.02 from the left end of the scaffold, and his painting equipment is 1.68 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1750]

A. 1.13E+02 N

B. 1.22E+02 N

C. 1.32E+02 N

D. 1.42E+02 N

E. 1.54E+02 N

The next page might contain more answer choices for this question

5. A uniform 39 kg scaffold of length 5.94 m is supported by two light cables. A 80 kg painter stands 1.03 from the left end of the scaffold, and his painting equipment is 1.61 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1751]

   A. 1.34E+02 N

   B. 1.44E+02 N

   C. 1.56E+02 N

   D. 1.68E+02 N

   E. 1.82E+02 N

6. A uniform 41 kg scaffold of length 5.93 m is supported by two light cables. A 77 kg painter stands 1.08 from the left end of the scaffold, and his painting equipment is 1.72 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1752]

   A. 9.20E+01 N

   B. 9.94E+01 N

   C. 1.07E+02 N

   D. 1.16E+02 N

   E. 1.25E+02 N

7. A uniform 39 kg scaffold of length 5.89 m is supported by two light cables. A 80 kg painter stands 1.04 from the left end of the scaffold, and his painting equipment is 1.66 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1753]

   A. 1.22E+02 N

   B. 1.32E+02 N

   C. 1.42E+02 N

   D. 1.54E+02 N

   E. 1.66E+02 N

8. A uniform 39 kg scaffold of length 5.93 m is supported by two light cables. A 75 kg painter stands 0.943 from the left end of the scaffold, and his painting equipment is 1.65 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1754]

   A. 1.66E+02 N

The next page might contain more answer choices for this question

B. 1.79E+02 N

C. 1.93E+02 N

D. 2.09E+02 N

E. 2.26E+02 N

9. A uniform 40 kg scaffold of length 6.0 m is supported by two light cables. A 80 kg painter stands 1.04 from the left end of the scaffold, and his painting equipment is 1.61 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1755]

A. 1.40E+02 N

B. 1.51E+02 N

C. 1.63E+02 N

D. 1.76E+02 N

E. 1.90E+02 N

10. A uniform 40 kg scaffold of length 6.02 m is supported by two light cables. A 78 kg painter stands 1.07 from the left end of the scaffold, and his painting equipment is 1.73 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1756]

A. 1.04E+02 N

B. 1.12E+02 N

C. 1.21E+02 N

D. 1.31E+02 N

E. 1.41E+02 N

11. A uniform 39 kg scaffold of length 5.8 m is supported by two light cables. A 77 kg painter stands 0.915 from the left end of the scaffold, and his painting equipment is 1.65 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1757]

A. 1.80E+02 N

B. 1.94E+02 N

C. 2.10E+02 N

D. 2.27E+02 N

E. 2.45E+02 N

The next page might contain more answer choices for this question

12. A uniform 40 kg scaffold of length 5.85 m is supported by two light cables. A 78 kg painter stands 1.04 from the left end of the scaffold, and his painting equipment is 1.66 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1758]

    A. 1.11E+02 N

    B. 1.20E+02 N

    C. 1.30E+02 N

    D. 1.40E+02 N

    E. 1.51E+02 N

13. A uniform 38 kg scaffold of length 5.95 m is supported by two light cables. A 76 kg painter stands 1.05 from the left end of the scaffold, and his painting equipment is 1.71 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1759]

    A. 1.44E+02 N

    B. 1.56E+02 N

    C. 1.68E+02 N

    D. 1.82E+02 N

    E. 1.96E+02 N

14. A uniform 37 kg scaffold of length 5.91 m is supported by two light cables. A 80 kg painter stands 0.983 from the left end of the scaffold, and his painting equipment is 1.67 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1760]

    A. 1.70E+02 N

    B. 1.84E+02 N

    C. 1.98E+02 N

    D. 2.14E+02 N

    E. 2.31E+02 N

15. A uniform 35 kg scaffold of length 5.96 m is supported by two light cables. A 84 kg painter stands 1.01 from the left end of the scaffold, and his painting equipment is 1.78 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1761]

    A. 1.55E+02 N

The next page might contain more answer choices for this question

B. 1.68E+02 N

C. 1.81E+02 N

D. 1.96E+02 N

E. 2.11E+02 N

16. A uniform 37 kg scaffold of length 5.84 m is supported by two light cables. A 85 kg painter stands 1.04 from the left end of the scaffold, and his painting equipment is 1.76 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1762]

A. 1.39E+02 N

B. 1.50E+02 N

C. 1.62E+02 N

D. 1.75E+02 N

E. 1.89E+02 N

17. A uniform 43 kg scaffold of length 5.89 m is supported by two light cables. A 79 kg painter stands 1.01 from the left end of the scaffold, and his painting equipment is 1.66 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1763]

A. 1.23E+02 N

B. 1.33E+02 N

C. 1.43E+02 N

D. 1.55E+02 N

E. 1.67E+02 N

18. A uniform 41 kg scaffold of length 5.84 m is supported by two light cables. A 85 kg painter stands 0.958 from the left end of the scaffold, and his painting equipment is 1.75 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1764]

A. 1.87E+02 N

B. 2.02E+02 N

C. 2.18E+02 N

D. 2.35E+02 N

E. 2.54E+02 N

The next page might contain more answer choices for this question

19. A uniform 45 kg scaffold of length 5.81 m is supported by two light cables. A 75 kg painter stands 0.926 from the left end of the scaffold, and his painting equipment is 1.78 m from the right end. The tension in the left cable is twice that in the right cable. Find the weight of the equipment. [1765]

    A. 1.20E+02 N

    B. 1.29E+02 N

    C. 1.40E+02 N

    D. 1.51E+02 N

    E. 1.63E+02 N

up1-12 Q6

1. To get up on the roof, a person (mass 42 kg) places a 6.00-m aluminum ladder (mass 17 kg) against the house on a concrete pad with the base of the ladder 1.85 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1766]

    A. 7.84E+01N

    B. 8.47E+01N

    C. 9.15E+01N

    D. 9.88E+01N

    E. 1.07E+02N

2. To get up on the roof, a person (mass 49 kg) places a 6.00-m aluminum ladder (mass 19 kg) against the house on a concrete pad with the base of the ladder 2.09 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1767]

    A. 8.25E+01N

    B. 8.91E+01N

    C. 9.63E+01N

    D. 1.04E+02N

    E. 1.12E+02N

The next page might contain more answer choices for this question

3. To get up on the roof, a person (mass 63 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 1.8 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1768]

   A. 8.19E+01N

   B. 8.85E+01N

   C. 9.56E+01N

   D. 1.03E+02N

   E. 1.11E+02N

4. To get up on the roof, a person (mass 63 kg) places a 6.00-m aluminum ladder (mass 13 kg) against the house on a concrete pad with the base of the ladder 2.07 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1769]

   A. 1.20E+02N

   B. 1.29E+02N

   C. 1.39E+02N

   D. 1.51E+02N

   E. 1.63E+02N

5. To get up on the roof, a person (mass 42 kg) places a 6.00-m aluminum ladder (mass 19 kg) against the house on a concrete pad with the base of the ladder 1.7 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1770]

   A. 5.82E+01N

   B. 6.28E+01N

   C. 6.78E+01N

   D. 7.33E+01N

   E. 7.91E+01N

The next page might contain more answer choices for this question

6. To get up on the roof, a person (mass 54 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 2.21 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1771]

   A. 1.05E+02N

   B. 1.14E+02N

   C. 1.23E+02N

   D. 1.33E+02N

   E. 1.43E+02N

7. To get up on the roof, a person (mass 54 kg) places a 6.00-m aluminum ladder (mass 13 kg) against the house on a concrete pad with the base of the ladder 2.29 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1772]

   A. 9.32E+01N

   B. 1.01E+02N

   C. 1.09E+02N

   D. 1.17E+02N

   E. 1.27E+02N

8. To get up on the roof, a person (mass 64 kg) places a 6.00-m aluminum ladder (mass 19 kg) against the house on a concrete pad with the base of the ladder 1.92 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1773]

   A. 1.09E+02N

   B. 1.17E+02N

   C. 1.27E+02N

   D. 1.37E+02N

   E. 1.48E+02N

The next page might contain more answer choices for this question

9. To get up on the roof, a person (mass 41 kg) places a 6.00-m aluminum ladder (mass 15 kg) against the house on a concrete pad with the base of the ladder 1.71 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1774]

    A. 6.88E+01N

    B. 7.43E+01N

    C. 8.02E+01N

    D. 8.67E+01N

    E. 9.36E+01N

10. To get up on the roof, a person (mass 55 kg) places a 6.00-m aluminum ladder (mass 13 kg) against the house on a concrete pad with the base of the ladder 1.96 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1775]

    A. 7.93E+01N

    B. 8.56E+01N

    C. 9.24E+01N

    D. 9.98E+01N

    E. 1.08E+02N

11. To get up on the roof, a person (mass 48 kg) places a 6.00-m aluminum ladder (mass 19 kg) against the house on a concrete pad with the base of the ladder 2.14 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1776]

    A. 1.05E+02N

    B. 1.13E+02N

    C. 1.23E+02N

    D. 1.32E+02N

    E. 1.43E+02N

The next page might contain more answer choices for this question

12. To get up on the roof, a person (mass 57 kg) places a 6.00-m aluminum ladder (mass 12 kg) against the house on a concrete pad with the base of the ladder 2.18 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1777]

    A. 1.06E+02N

    B. 1.15E+02N

    C. 1.24E+02N

    D. 1.34E+02N

    E. 1.45E+02N

13. To get up on the roof, a person (mass 67 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 2.04 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1778]

    A. 1.25E+02N

    B. 1.35E+02N

    C. 1.46E+02N

    D. 1.58E+02N

    E. 1.70E+02N

14. To get up on the roof, a person (mass 67 kg) places a 6.00-m aluminum ladder (mass 11 kg) against the house on a concrete pad with the base of the ladder 2.01 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1779]

    A. 1.03E+02N

    B. 1.11E+02N

    C. 1.20E+02N

    D. 1.30E+02N

    E. 1.40E+02N

The next page might contain more answer choices for this question

15. To get up on the roof, a person (mass 48 kg) places a 6.00-m aluminum ladder (mass 18 kg) against the house on a concrete pad with the base of the ladder 1.96 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1780]

    A. 1.02E+02N

    B. 1.10E+02N

    C. 1.19E+02N

    D. 1.28E+02N

    E. 1.38E+02N

16. To get up on the roof, a person (mass 56 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 1.76 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1781]

    A. 7.80E+01N

    B. 8.42E+01N

    C. 9.10E+01N

    D. 9.82E+01N

    E. 1.06E+02N

17. To get up on the roof, a person (mass 43 kg) places a 6.00-m aluminum ladder (mass 18 kg) against the house on a concrete pad with the base of the ladder 1.85 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1782]

    A. 6.42E+01N

    B. 6.93E+01N

    C. 7.49E+01N

    D. 8.09E+01N

    E. 8.74E+01N

The next page might contain more answer choices for this question

18. To get up on the roof, a person (mass 42 kg) places a 6.00-m aluminum ladder (mass 11 kg) against the house on a concrete pad with the base of the ladder 2.29 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1783]

    A. 8.56E+01N

    B. 9.24E+01N

    C. 9.98E+01N

    D. 1.08E+02N

    E. 1.16E+02N

19. To get up on the roof, a person (mass 54 kg) places a 6.00-m aluminum ladder (mass 13 kg) against the house on a concrete pad with the base of the ladder 2.08 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder's bottom. Find the friction force on the ladder at its base. [1784]

    A. 9.73E+01N

    B. 1.05E+02N

    C. 1.13E+02N

    D. 1.23E+02N

    E. 1.32E+02N

up1-12 Q7

1. To get up on the roof, a person (mass 42 kg) places a 6.00-m aluminum ladder (mass 13 kg) against the house on a concrete pad with the base of the ladder 2.03 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1785]

    A. 4.62E+02N

    B. 4.99E+02N

    C. 5.39E+02N

    D. 5.82E+02N

The next page might contain more answer choices for this question

E. 6.29E+02N

2. To get up on the roof, a person (mass 67 kg) places a 6.00-m aluminum ladder (mass 17 kg) against the house on a concrete pad with the base of the ladder 1.72 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1786]

   A. 6.53E+02N

   B. 7.06E+02N

   C. 7.62E+02N

   D. 8.23E+02N

   E. 8.89E+02N

3. To get up on the roof, a person (mass 52 kg) places a 6.00-m aluminum ladder (mass 17 kg) against the house on a concrete pad with the base of the ladder 2.19 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1787]

   A. 5.37E+02N

   B. 5.80E+02N

   C. 6.26E+02N

   D. 6.76E+02N

   E. 7.30E+02N

4. To get up on the roof, a person (mass 41 kg) places a 6.00-m aluminum ladder (mass 16 kg) against the house on a concrete pad with the base of the ladder 2.22 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1788]

   A. 5.59E+02N

   B. 6.03E+02N

   C. 6.52E+02N

   D. 7.04E+02N

The next page might contain more answer choices for this question

E. 7.60E+02N

5. To get up on the roof, a person (mass 59 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 1.89 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1789]

   A. 6.13E+02N

   B. 6.62E+02N

   C. 7.15E+02N

   D. 7.73E+02N

   E. 8.34E+02N

6. To get up on the roof, a person (mass 57 kg) places a 6.00-m aluminum ladder (mass 12 kg) against the house on a concrete pad with the base of the ladder 1.92 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1790]

   A. 5.80E+02N

   B. 6.26E+02N

   C. 6.76E+02N

   D. 7.30E+02N

   E. 7.89E+02N

7. To get up on the roof, a person (mass 41 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 2.0 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1791]

   A. 5.39E+02N

   B. 5.82E+02N

   C. 6.29E+02N

   D. 6.79E+02N

The next page might contain more answer choices for this question

E. 7.33E+02N

8. To get up on the roof, a person (mass 42 kg) places a 6.00-m aluminum ladder (mass 14 kg) against the house on a concrete pad with the base of the ladder 2.23 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1792]

   A. 4.03E+02N

   B. 4.36E+02N

   C. 4.71E+02N

   D. 5.08E+02N

   E. 5.49E+02N

9. To get up on the roof, a person (mass 58 kg) places a 6.00-m aluminum ladder (mass 11 kg) against the house on a concrete pad with the base of the ladder 2.25 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1793]

   A. 6.76E+02N

   B. 7.30E+02N

   C. 7.89E+02N

   D. 8.52E+02N

   E. 9.20E+02N

10. To get up on the roof, a person (mass 60 kg) places a 6.00-m aluminum ladder (mass 12 kg) against the house on a concrete pad with the base of the ladder 2.08 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1794]

    A. 6.05E+02N

    B. 6.53E+02N

    C. 7.06E+02N

    D. 7.62E+02N

The next page might contain more answer choices for this question

E. 8.23E+02N

11. To get up on the roof, a person (mass 65 kg) places a 6.00-m aluminum ladder (mass 11 kg) against the house on a concrete pad with the base of the ladder 2.11 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1795]

A. 5.91E+02N

B. 6.39E+02N

C. 6.90E+02N

D. 7.45E+02N

E. 8.04E+02N

12. To get up on the roof, a person (mass 50 kg) places a 6.00-m aluminum ladder (mass 15 kg) against the house on a concrete pad with the base of the ladder 1.99 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1796]

A. 4.68E+02N

B. 5.06E+02N

C. 5.46E+02N

D. 5.90E+02N

E. 6.37E+02N

13. To get up on the roof, a person (mass 46 kg) places a 6.00-m aluminum ladder (mass 17 kg) against the house on a concrete pad with the base of the ladder 2.05 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1797]

A. 5.29E+02N

B. 5.72E+02N

C. 6.17E+02N

D. 6.67E+02N

The next page might contain more answer choices for this question

E. 7.20E+02N

14. To get up on the roof, a person (mass 66 kg) places a 6.00-m aluminum ladder (mass 13 kg) against the house on a concrete pad with the base of the ladder 1.75 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1798]

A. 6.15E+02N

B. 6.64E+02N

C. 7.17E+02N

D. 7.74E+02N

E. 8.36E+02N

15. To get up on the roof, a person (mass 64 kg) places a 6.00-m aluminum ladder (mass 15 kg) against the house on a concrete pad with the base of the ladder 1.76 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1799]

A. 6.15E+02N

B. 6.64E+02N

C. 7.17E+02N

D. 7.74E+02N

E. 8.36E+02N

16. To get up on the roof, a person (mass 59 kg) places a 6.00-m aluminum ladder (mass 17 kg) against the house on a concrete pad with the base of the ladder 1.98 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1800]

A. 6.90E+02N

B. 7.45E+02N

C. 8.04E+02N

D. 8.69E+02N

The next page might contain more answer choices for this question

E. 9.38E+02N

17. To get up on the roof, a person (mass 47 kg) places a 6.00-m aluminum ladder (mass 15 kg) against the house on a concrete pad with the base of the ladder 1.93 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1801]

A. 4.47E+02N

B. 4.82E+02N

C. 5.21E+02N

D. 5.63E+02N

E. 6.08E+02N

18. To get up on the roof, a person (mass 41 kg) places a 6.00-m aluminum ladder (mass 11 kg) against the house on a concrete pad with the base of the ladder 2.14 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1802]

A. 4.05E+02N

B. 4.37E+02N

C. 4.72E+02N

D. 5.10E+02N

E. 5.50E+02N

19. To get up on the roof, a person (mass 42 kg) places a 6.00-m aluminum ladder (mass 15 kg) against the house on a concrete pad with the base of the ladder 2.16 m from the house. The ladder rests against a plastic rain gutter, which we can assume to be frictionless. The center of mass of the ladder is 2.00 m from the bottom of of the ladder. The person is standing 3.00 m from the ladder extquotesingle s bottom. Find the normal force on the ladder at its base. [1803]

A. 4.79E+02N

B. 5.17E+02N

C. 5.59E+02N

D. 6.03E+02N

E. 6.52E+02N

The next page might contain more answer choices for this question

up1-12 Q8

1. A 13 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.160E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1804]

   A. 2.35E-01 mm

   B. 2.54E-01 mm

   C. 2.75E-01 mm

   D. 2.97E-01 mm

   E. 3.20E-01 mm

2. A 13 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.610E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1805]

   A. 1.62E-01 mm

   B. 1.75E-01 mm

   C. 1.89E-01 mm

   D. 2.04E-01 mm

   E. 2.21E-01 mm

3. A 14 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.880E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1806]

   A. 1.69E-01 mm

   B. 1.83E-01 mm

   C. 1.97E-01 mm

   D. 2.13E-01 mm

   E. 2.30E-01 mm

4. A 12 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.360E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1807]

The next page might contain more answer choices for this question

A. 1.61E-01 mm

B. 1.74E-01 mm

C. 1.88E-01 mm

D. 2.03E-01 mm

E. 2.19E-01 mm

5. A 11 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.000E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1808]

A. 1.48E-01 mm

B. 1.60E-01 mm

C. 1.72E-01 mm

D. 1.86E-01 mm

E. 2.01E-01 mm

6. A 15 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.930E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1809]

A. 2.30E-01 mm

B. 2.48E-01 mm

C. 2.68E-01 mm

D. 2.89E-01 mm

E. 3.12E-01 mm

7. A 15 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.910E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1810]

A. 4.21E-01 mm

B. 4.55E-01 mm

C. 4.91E-01 mm

D. 5.30E-01 mm

E. 5.73E-01 mm

The next page might contain more answer choices for this question

8. A 12 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.070E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1811]

    A. 2.63E-01 mm

    B. 2.84E-01 mm

    C. 3.07E-01 mm

    D. 3.31E-01 mm

    E. 3.58E-01 mm

9. A 11 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.460E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1812]

    A. 2.04E-01 mm

    B. 2.21E-01 mm

    C. 2.38E-01 mm

    D. 2.57E-01 mm

    E. 2.78E-01 mm

10. A 13 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.560E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1813]

    A. 1.54E-01 mm

    B. 1.66E-01 mm

    C. 1.79E-01 mm

    D. 1.94E-01 mm

    E. 2.09E-01 mm

11. A 12 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.730E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1814]

    A. 1.48E-01 mm

The next page might contain more answer choices for this question

B. 1.60E-01 mm

C. 1.73E-01 mm

D. 1.86E-01 mm

E. 2.01E-01 mm

12. A 15 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.880E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1815]

A. 1.69E-01 mm

B. 1.83E-01 mm

C. 1.97E-01 mm

D. 2.13E-01 mm

E. 2.30E-01 mm

13. A 10 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.940E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1816]

A. 1.75E-01 mm

B. 1.89E-01 mm

C. 2.04E-01 mm

D. 2.21E-01 mm

E. 2.38E-01 mm

14. A 15 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.280E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1817]

A. 2.86E-01 mm

B. 3.09E-01 mm

C. 3.34E-01 mm

D. 3.60E-01 mm

E. 3.89E-01 mm

The next page might contain more answer choices for this question

15. A 12 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.470E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1818]

    A. 1.45E-01 mm

    B. 1.56E-01 mm

    C. 1.69E-01 mm

    D. 1.82E-01 mm

    E. 1.97E-01 mm

16. A 11 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.610E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1819]

    A. 1.58E-01 mm

    B. 1.70E-01 mm

    C. 1.84E-01 mm

    D. 1.99E-01 mm

    E. 2.15E-01 mm

17. A 13 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.930E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1820]

    A. 2.47E-01 mm

    B. 2.67E-01 mm

    C. 2.88E-01 mm

    D. 3.11E-01 mm

    E. 3.36E-01 mm

18. A 15 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 9.630E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1821]

    A. 1.98E-01 mm

The next page might contain more answer choices for this question

B. 2.14E-01 mm

C. 2.31E-01 mm

D. 2.50E-01 mm

E. 2.70E-01 mm

19. A 12 m tall hollow aluminum flagpole is equivalent in strength to a solid cylinder 4.00 cm in diameter. A strong wind bends the pole as much as a horizontal 8.990E+02 N force on the top would do. How far to the side does the top of the pole flex? The shear modulus is $2 \times 10^{1}0$ [1822]

A. 2.00E-01 mm

B. 2.16E-01 mm

C. 2.34E-01 mm

D. 2.52E-01 mm

E. 2.72E-01 mm

up1-12 Q9

1. A 93 kg mountain climber hangs from a nylon rope and stretches it by 22.9 cm. If the rope was originally 33.8 m long and its diameter is 1.06 cm, what is Young's modulus for the nylon? [1823]

A. 1.21E+09Pa

B. 1.31E+09Pa

C. 1.41E+09Pa

D. 1.52E+09Pa

E. 1.65E+09Pa

2. A 85 kg mountain climber hangs from a nylon rope and stretches it by 22.8 cm. If the rope was originally 33.6 m long and its diameter is 1.06 cm, what is Young's modulus for the nylon? [1824]

A. 1.39E+09Pa

B. 1.50E+09Pa

C. 1.62E+09Pa

D. 1.75E+09Pa

E. 1.89E+09Pa

The next page might contain more answer choices for this question

3. A 89 kg mountain climber hangs from a nylon rope and stretches it by 24.0 cm. If the rope was originally 33.1 m long and its diameter is 1.22 cm, what is Young's modulus for the nylon? [1825]

   A. 8.82E+08Pa

   B. 9.53E+08Pa

   C. 1.03E+09Pa

   D. 1.11E+09Pa

   E. 1.20E+09Pa

4. A 90 kg mountain climber hangs from a nylon rope and stretches it by 24.5 cm. If the rope was originally 31.6 m long and its diameter is 1.14 cm, what is Young's modulus for the nylon? [1826]

   A. 9.56E+08Pa

   B. 1.03E+09Pa

   C. 1.11E+09Pa

   D. 1.20E+09Pa

   E. 1.30E+09Pa

5. A 88 kg mountain climber hangs from a nylon rope and stretches it by 23.2 cm. If the rope was originally 30.5 m long and its diameter is 1.06 cm, what is Young's modulus for the nylon? [1827]

   A. 1.19E+09Pa

   B. 1.28E+09Pa

   C. 1.39E+09Pa

   D. 1.50E+09Pa

   E. 1.62E+09Pa

6. A 94 kg mountain climber hangs from a nylon rope and stretches it by 24.1 cm. If the rope was originally 31.5 m long and its diameter is 1.29 cm, what is Young's modulus for the nylon? [1828]

   A. 9.21E+08Pa

   B. 9.95E+08Pa

   C. 1.07E+09Pa

   D. 1.16E+09Pa

The next page might contain more answer choices for this question

E. 1.25E+09Pa

7. A 92 kg mountain climber hangs from a nylon rope and stretches it by 23.5 cm. If the rope was originally 32.2 m long and its diameter is 1.23 cm, what is Young's modulus for the nylon? [1829]

   A. 8.25E+08Pa

   B. 8.91E+08Pa

   C. 9.63E+08Pa

   D. 1.04E+09Pa

   E. 1.12E+09Pa

8. A 94 kg mountain climber hangs from a nylon rope and stretches it by 22.1 cm. If the rope was originally 31.0 m long and its diameter is 1.26 cm, what is Young's modulus for the nylon? [1830]

   A. 9.60E+08Pa

   B. 1.04E+09Pa

   C. 1.12E+09Pa

   D. 1.21E+09Pa

   E. 1.31E+09Pa

9. A 92 kg mountain climber hangs from a nylon rope and stretches it by 22.9 cm. If the rope was originally 32.8 m long and its diameter is 0.917 cm, what is Young's modulus for the nylon? [1831]

   A. 1.44E+09Pa

   B. 1.55E+09Pa

   C. 1.68E+09Pa

   D. 1.81E+09Pa

   E. 1.96E+09Pa

10. A 90 kg mountain climber hangs from a nylon rope and stretches it by 24.5 cm. If the rope was originally 31.1 m long and its diameter is 1.09 cm, what is Young's modulus for the nylon? [1832]

    A. 8.82E+08Pa

    B. 9.52E+08Pa

    C. 1.03E+09Pa

The next page might contain more answer choices for this question

D. 1.11E+09Pa

E. 1.20E+09Pa

11. A 88 kg mountain climber hangs from a nylon rope and stretches it by 22.9 cm. If the rope was originally 30.6 m long and its diameter is 1.02 cm, what is Young's modulus for the nylon? [1833]

A. 1.41E+09Pa

B. 1.52E+09Pa

C. 1.64E+09Pa

D. 1.78E+09Pa

E. 1.92E+09Pa

12. A 88 kg mountain climber hangs from a nylon rope and stretches it by 22.7 cm. If the rope was originally 31.4 m long and its diameter is 1.2 cm, what is Young's modulus for the nylon? [1834]

A. 8.37E+08Pa

B. 9.04E+08Pa

C. 9.77E+08Pa

D. 1.05E+09Pa

E. 1.14E+09Pa

13. A 93 kg mountain climber hangs from a nylon rope and stretches it by 22.4 cm. If the rope was originally 32.7 m long and its diameter is 0.922 cm, what is Young's modulus for the nylon? [1835]

A. 1.85E+09Pa

B. 1.99E+09Pa

C. 2.15E+09Pa

D. 2.32E+09Pa

E. 2.51E+09Pa

14. A 94 kg mountain climber hangs from a nylon rope and stretches it by 23.6 cm. If the rope was originally 32.0 m long and its diameter is 1.01 cm, what is Young's modulus for the nylon? [1836]

A. 1.24E+09Pa

B. 1.34E+09Pa

The next page might contain more answer choices for this question

C. 1.44E+09Pa

D. 1.56E+09Pa

E. 1.68E+09Pa

15. A 89 kg mountain climber hangs from a nylon rope and stretches it by 23.2 cm. If the rope was originally 31.4 m long and its diameter is 1.1 cm, what is Young's modulus for the nylon? [1837]

A. 1.06E+09Pa

B. 1.15E+09Pa

C. 1.24E+09Pa

D. 1.34E+09Pa

E. 1.45E+09Pa

16. A 86 kg mountain climber hangs from a nylon rope and stretches it by 25.2 cm. If the rope was originally 30.8 m long and its diameter is 1.12 cm, what is Young's modulus for the nylon? [1838]

A. 7.69E+08Pa

B. 8.30E+08Pa

C. 8.96E+08Pa

D. 9.68E+08Pa

E. 1.05E+09Pa

17. A 87 kg mountain climber hangs from a nylon rope and stretches it by 24.8 cm. If the rope was originally 32.4 m long and its diameter is 0.917 cm, what is Young's modulus for the nylon? [1839]

A. 1.24E+09Pa

B. 1.34E+09Pa

C. 1.45E+09Pa

D. 1.56E+09Pa

E. 1.69E+09Pa

18. A 88 kg mountain climber hangs from a nylon rope and stretches it by 22.5 cm. If the rope was originally 31.0 m long and its diameter is 1.05 cm, what is Young's modulus for the nylon? [1840]

A. 1.09E+09Pa

The next page might contain more answer choices for this question

B. 1.18E+09Pa

C. 1.27E+09Pa

D. 1.37E+09Pa

E. 1.48E+09Pa

19. A 86 kg mountain climber hangs from a nylon rope and stretches it by 24.0 cm. If the rope was originally 29.7 m long and its diameter is 1.15 cm, what is Young's modulus for the nylon? [1841]

A. 8.61E+08Pa

B. 9.30E+08Pa

C. 1.00E+09Pa

D. 1.08E+09Pa

E. 1.17E+09Pa

up1-12 Q10

1. A copper wire is 0.983 m long and its diameter is 1.23 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1842]

A. 1.31E+02 N

B. 1.41E+02 N

C. 1.52E+02 N

D. 1.65E+02 N

E. 1.78E+02 N

2. A copper wire is 1.33 m long and its diameter is 1.98 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1843]

A. 3.14E+02 N

B. 3.39E+02 N

C. 3.66E+02 N

D. 3.95E+02 N

E. 4.27E+02 N

3. A copper wire is 0.738 m long and its diameter is 1.09 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 4 mm? [1844]

A. 3.26E+02 N

The next page might contain more answer choices for this question

B. 3.52E+02 N

C. 3.80E+02 N

D. 4.11E+02 N

E. 4.43E+02 N

4. A copper wire is 0.638 m long and its diameter is 1.42 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 2 mm? [1845]

A. 2.56E+02 N

B. 2.77E+02 N

C. 2.99E+02 N

D. 3.23E+02 N

E. 3.48E+02 N

5. A copper wire is 0.633 m long and its diameter is 1.3 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 5 mm? [1846]

A. 5.37E+02 N

B. 5.80E+02 N

C. 6.26E+02 N

D. 6.76E+02 N

E. 7.30E+02 N

6. A copper wire is 1.5 m long and its diameter is 1.25 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 3 mm? [1847]

A. 3.47E+02 N

B. 3.75E+02 N

C. 4.05E+02 N

D. 4.37E+02 N

E. 4.72E+02 N

7. A copper wire is 0.784 m long and its diameter is 1.11 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 2 mm? [1848]

A. 1.56E+02 N

B. 1.69E+02 N

C. 1.83E+02 N

The next page might contain more answer choices for this question

D. 1.97E+02 N

E. 2.13E+02 N

8. A copper wire is 0.938 m long and its diameter is 1.85 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 4 mm? [1849]

A. 8.69E+02 N

B. 9.39E+02 N

C. 1.01E+03 N

D. 1.10E+03 N

E. 1.18E+03 N

9. A copper wire is 0.864 m long and its diameter is 1.7 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 3 mm? [1850]

A. 7.49E+02 N

B. 8.09E+02 N

C. 8.74E+02 N

D. 9.44E+02 N

E. 1.02E+03 N

10. A copper wire is 1.05 m long and its diameter is 0.55 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 2 mm? [1851]

A. 3.84E+01 N

B. 4.15E+01 N

C. 4.48E+01 N

D. 4.84E+01 N

E. 5.23E+01 N

11. A copper wire is 0.936 m long and its diameter is 0.994 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1852]

A. 6.78E+01 N

B. 7.32E+01 N

C. 7.90E+01 N

D. 8.54E+01 N

E. 9.22E+01 N

The next page might contain more answer choices for this question

12. A copper wire is 0.639 m long and its diameter is 1.62 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1853]

    A. 1.94E+02 N

    B. 2.10E+02 N

    C. 2.27E+02 N

    D. 2.45E+02 N

    E. 2.64E+02 N

13. A copper wire is 1.1 m long and its diameter is 0.654 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 3 mm? [1854]

    A. 8.80E+01 N

    B. 9.50E+01 N

    C. 1.03E+02 N

    D. 1.11E+02 N

    E. 1.20E+02 N

14. A copper wire is 0.6 m long and its diameter is 0.99 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 4 mm? [1855]

    A. 3.39E+02 N

    B. 3.66E+02 N

    C. 3.95E+02 N

    D. 4.27E+02 N

    E. 4.61E+02 N

15. A copper wire is 1.49 m long and its diameter is 0.611 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1856]

    A. 2.99E+01 N

    B. 3.23E+01 N

    C. 3.48E+01 N

    D. 3.76E+01 N

    E. 4.06E+01 N

16. A copper wire is 1.44 m long and its diameter is 0.94 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 5 mm? [1857]

The next page might contain more answer choices for this question

A. 3.27E+02 N

B. 3.53E+02 N

C. 3.82E+02 N

D. 4.12E+02 N

E. 4.45E+02 N

17. A copper wire is 0.526 m long and its diameter is 0.672 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 2 mm? [1858]

A. 5.74E+01 N

B. 6.19E+01 N

C. 6.69E+01 N

D. 7.22E+01 N

E. 7.80E+01 N

18. A copper wire is 1.29 m long and its diameter is 0.679 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1859]

A. 3.69E+01 N

B. 3.98E+01 N

C. 4.30E+01 N

D. 4.65E+01 N

E. 5.02E+01 N

19. A copper wire is 0.724 m long and its diameter is 1.31 mm. If the wire hangs vertically, how much weight must be added to its free end in order to stretch it 1 mm? [1860]

A. 1.27E+02 N

B. 1.37E+02 N

C. 1.48E+02 N

D. 1.60E+02 N

E. 1.73E+02 N

9 up1-13

1. Evaluate the magnitude of gravitational force between two 5 kg spherical steel balls separated by a center-to-center distance of 15 cm. [1861]

The next page might contain more answer choices for this question

A. 5.88E-08 N

B. 6.35E-08 N

C. 6.86E-08 N

D. 7.41E-08 N

E. 8.00E-08 N

2. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.500E+02 kg suited astronaut if she is 20 m from the center of mass of the station? [1862]

A. 6.80E-06N

B. 7.35E-06N

C. 7.93E-06N

D. 8.57E-06N

E. 9.25E-06N

3. The mass of a particle is 15 kg. What is its weight on Earth? [1863]

A. 1.59E-02 N

B. 1.56E-01 N

C. 1.53E+00 N

D. 1.50E+01 N

E. 1.47E+02 N

4. The mass of a particle is 15 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1864]

A. 2.40E+01N

B. 3.84E+01N

C. 6.14E+01N

D. 9.83E+01N

E. 1.57E+02N

5. The mass of a particle is 15 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1865]

A. 9.38E+00 N

B. 1.50E+01 N

The next page might contain more answer choices for this question

C. 2.40E+01 N

D. 3.84E+01 N

E. 6.14E+01 N

6. The acceleration due to gravity on the surface of a planet is 3 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1866]

A. 1.50E+00 Earth radii

B. 2.25E+00 Earth radii

C. 3.38E+00 Earth radii

D. 5.06E+00 Earth radii

E. 7.59E+00 Earth radii

7. Evaluate the gravitational potential energy between two 5 kg spherical steel balls separated by a center-to-center distance of 15 cm. [1867]

A. 3.29E-09 J

B. 4.94E-09 J

C. 7.41E-09 J

D. 1.11E-08 J

E. 1.67E-08 J

8. A planet has a mass of 5.970E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 3 hours? [1868]

A. 9.77E+06 m

B. 1.06E+07 m

C. 1.14E+07 m

D. 1.23E+07 m

E. 1.33E+07 m

9. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 3.02 hours at a distance of 2.0 km from the center of the astroid. What is asteroid's mass? [1869]

A. 2.94E+13 kg

B. 3.18E+13 kg

C. 3.43E+13 kg

The next page might contain more answer choices for this question

D. 3.71E+13 kg

E. 4.01E+13 kg

10. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 4 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [1870]

A. 1.02E+07 km

B. 1.10E+07 km

C. 1.19E+07 km

D. 1.28E+07 km

E. 1.39E+07 km

9.1 Renditions

up1-13 Q1

1. Evaluate the magnitude of gravitational force between two 2 kg spherical steel balls separated by a center-to-center distance of 11 cm. [1871]

A. 1.89E-08 N

B. 2.04E-08 N

C. 2.20E-08 N

D. 2.38E-08 N

E. 2.57E-08 N

2. Evaluate the magnitude of gravitational force between two 10 kg spherical steel balls separated by a center-to-center distance of 10 cm. [1872]

A. 5.29E-07 N

B. 5.72E-07 N

C. 6.18E-07 N

D. 6.67E-07 N

E. 7.20E-07 N

3. Evaluate the magnitude of gravitational force between two 10 kg spherical steel balls separated by a center-to-center distance of 20 cm. [1873]

A. 1.67E-07 N

B. 1.80E-07 N

The next page might contain more answer choices for this question

C. 1.94E-07 N

D. 2.10E-07 N

E. 2.27E-07 N

4. Evaluate the magnitude of gravitational force between two 10 kg spherical steel balls separated by a center-to-center distance of 10 cm. [1874]

A. 6.18E-07 N

B. 6.67E-07 N

C. 7.20E-07 N

D. 7.78E-07 N

E. 8.40E-07 N

5. Evaluate the magnitude of gravitational force between two 9 kg spherical steel balls separated by a center-to-center distance of 20 cm. [1875]

A. 9.93E-08 N

B. 1.07E-07 N

C. 1.16E-07 N

D. 1.25E-07 N

E. 1.35E-07 N

6. Evaluate the magnitude of gravitational force between two 9 kg spherical steel balls separated by a center-to-center distance of 16 cm. [1876]

A. 2.11E-07 N

B. 2.28E-07 N

C. 2.46E-07 N

D. 2.66E-07 N

E. 2.87E-07 N

7. Evaluate the magnitude of gravitational force between two 5 kg spherical steel balls separated by a center-to-center distance of 15 cm. [1877]

A. 6.35E-08 N

B. 6.86E-08 N

C. 7.41E-08 N

D. 8.00E-08 N

The next page might contain more answer choices for this question

E. 8.64E-08 N

8. Evaluate the magnitude of gravitational force between two 5 kg spherical steel balls separated by a center-to-center distance of 12 cm. [1878]

A. 1.07E-07 N

B. 1.16E-07 N

C. 1.25E-07 N

D. 1.35E-07 N

E. 1.46E-07 N

9. Evaluate the magnitude of gravitational force between two 3 kg spherical steel balls separated by a center-to-center distance of 16 cm. [1879]

A. 2.17E-08 N

B. 2.34E-08 N

C. 2.53E-08 N

D. 2.74E-08 N

E. 2.95E-08 N

10. Evaluate the magnitude of gravitational force between two 9 kg spherical steel balls separated by a center-to-center distance of 18 cm. [1880]

A. 1.23E-07 N

B. 1.32E-07 N

C. 1.43E-07 N

D. 1.54E-07 N

E. 1.67E-07 N

11. Evaluate the magnitude of gravitational force between two 8 kg spherical steel balls separated by a center-to-center distance of 18 cm. [1881]

A. 1.32E-07 N

B. 1.42E-07 N

C. 1.54E-07 N

D. 1.66E-07 N

E. 1.79E-07 N

The next page might contain more answer choices for this question

12. Evaluate the magnitude of gravitational force between two 2 kg spherical steel balls separated by a center-to-center distance of 15 cm. [1882]

    A. 1.19E-08 N

    B. 1.28E-08 N

    C. 1.38E-08 N

    D. 1.49E-08 N

    E. 1.61E-08 N

13. Evaluate the magnitude of gravitational force between two 8 kg spherical steel balls separated by a center-to-center distance of 16 cm. [1883]

    A. 1.54E-07 N

    B. 1.67E-07 N

    C. 1.80E-07 N

    D. 1.94E-07 N

    E. 2.10E-07 N

14. Evaluate the magnitude of gravitational force between two 4 kg spherical steel balls separated by a center-to-center distance of 14 cm. [1884]

    A. 4.67E-08 N

    B. 5.04E-08 N

    C. 5.44E-08 N

    D. 5.88E-08 N

    E. 6.35E-08 N

15. Evaluate the magnitude of gravitational force between two 10 kg spherical steel balls separated by a center-to-center distance of 18 cm. [1885]

    A. 1.76E-07 N

    B. 1.91E-07 N

    C. 2.06E-07 N

    D. 2.22E-07 N

    E. 2.40E-07 N

16. Evaluate the magnitude of gravitational force between two 4 kg spherical steel balls separated by a center-to-center distance of 18 cm. [1886]

The next page might contain more answer choices for this question

A. 2.82E-08 N

B. 3.05E-08 N

C. 3.29E-08 N

D. 3.56E-08 N

E. 3.84E-08 N

17. Evaluate the magnitude of gravitational force between two 8 kg spherical steel balls separated by a center-to-center distance of 18 cm. [1887]

A. 1.22E-07 N

B. 1.32E-07 N

C. 1.42E-07 N

D. 1.54E-07 N

E. 1.66E-07 N

18. Evaluate the magnitude of gravitational force between two 7 kg spherical steel balls separated by a center-to-center distance of 15 cm. [1888]

A. 1.07E-07 N

B. 1.15E-07 N

C. 1.25E-07 N

D. 1.34E-07 N

E. 1.45E-07 N

19. Evaluate the magnitude of gravitational force between two 9 kg spherical steel balls separated by a center-to-center distance of 15 cm. [1889]

A. 1.91E-07 N

B. 2.06E-07 N

C. 2.22E-07 N

D. 2.40E-07 N

E. 2.59E-07 N

up1-13 Q2

1. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.630E+02 kg suited astronaut if she is 15 m from the center of mass of the station? [1890]

The next page might contain more answer choices for this question

A. 1.31E-05N

B. 1.42E-05N

C. 1.53E-05N

D. 1.66E-05N

E. 1.79E-05N

2. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.000E+02 kg suited astronaut if she is 18 m from the center of mass of the station? [1891]

A. 6.53E-06N

B. 7.05E-06N

C. 7.62E-06N

D. 8.23E-06N

E. 8.88E-06N

3. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.800E+02 kg suited astronaut if she is 20 m from the center of mass of the station? [1892]

A. 9.52E-06N

B. 1.03E-05N

C. 1.11E-05N

D. 1.20E-05N

E. 1.30E-05N

4. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.400E+02 kg suited astronaut if she is 28 m from the center of mass of the station? [1893]

A. 3.78E-06N

B. 4.08E-06N

C. 4.41E-06N

D. 4.76E-06N

E. 5.14E-06N

5. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.800E+02 kg suited astronaut if she is 21 m from the center of mass of the station? [1894]

The next page might contain more answer choices for this question

A. 8.00E-06N

B. 8.64E-06N

C. 9.33E-06N

D. 1.01E-05N

E. 1.09E-05N

6. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.720E+02 kg suited astronaut if she is 30 m from the center of mass of the station? [1895]

A. 3.47E-06N

B. 3.74E-06N

C. 4.04E-06N

D. 4.37E-06N

E. 4.72E-06N

7. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.470E+02 kg suited astronaut if she is 27 m from the center of mass of the station? [1896]

A. 3.66E-06N

B. 3.95E-06N

C. 4.27E-06N

D. 4.61E-06N

E. 4.98E-06N

8. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.660E+02 kg suited astronaut if she is 18 m from the center of mass of the station? [1897]

A. 1.00E-05N

B. 1.08E-05N

C. 1.17E-05N

D. 1.26E-05N

E. 1.37E-05N

9. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.520E+02 kg suited astronaut if she is 19 m from the center of mass of the station? [1898]

The next page might contain more answer choices for this question

A. 8.25E-06N

B. 8.91E-06N

C. 9.62E-06N

D. 1.04E-05N

E. 1.12E-05N

10. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.380E+02 kg suited astronaut if she is 24 m from the center of mass of the station? [1899]

A. 5.91E-06N

B. 6.39E-06N

C. 6.90E-06N

D. 7.45E-06N

E. 8.04E-06N

11. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.310E+02 kg suited astronaut if she is 27 m from the center of mass of the station? [1900]

A. 4.43E-06N

B. 4.79E-06N

C. 5.17E-06N

D. 5.59E-06N

E. 6.03E-06N

12. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.240E+02 kg suited astronaut if she is 16 m from the center of mass of the station? [1901]

A. 8.79E-06N

B. 9.49E-06N

C. 1.02E-05N

D. 1.11E-05N

E. 1.20E-05N

13. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.550E+02 kg suited astronaut if she is 17 m from the center of mass of the station? [1902]

The next page might contain more answer choices for this question

A. 1.13E-05N

B. 1.23E-05N

C. 1.32E-05N

D. 1.43E-05N

E. 1.54E-05N

14. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.260E+02 kg suited astronaut if she is 27 m from the center of mass of the station? [1903]

A. 4.27E-06N

B. 4.61E-06N

C. 4.98E-06N

D. 5.37E-06N

E. 5.80E-06N

15. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.740E+02 kg suited astronaut if she is 20 m from the center of mass of the station? [1904]

A. 7.89E-06N

B. 8.52E-06N

C. 9.20E-06N

D. 9.94E-06N

E. 1.07E-05N

16. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.230E+02 kg suited astronaut if she is 20 m from the center of mass of the station? [1905]

A. 7.59E-06N

B. 8.20E-06N

C. 8.85E-06N

D. 9.56E-06N

E. 1.03E-05N

17. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.580E+02 kg suited astronaut if she is 18 m from the center of mass of the station? [1906]

The next page might contain more answer choices for this question

A. 1.03E-05N

B. 1.11E-05N

C. 1.20E-05N

D. 1.30E-05N

E. 1.40E-05N

18. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.510E+02 kg suited astronaut if she is 30 m from the center of mass of the station? [1907]

A. 4.14E-06N

B. 4.47E-06N

C. 4.83E-06N

D. 5.22E-06N

E. 5.63E-06N

19. The International Space Station has a mass of approximately 370,000 kg. What is the force on a 1.240E+02 kg suited astronaut if she is 27 m from the center of mass of the station? [1908]

A. 3.60E-06N

B. 3.89E-06N

C. 4.20E-06N

D. 4.53E-06N

E. 4.90E-06N

up1-13 Q3

1. The mass of a particle is 35 kg. What is its weight on Earth? [1909]

A. 3.72E-02 N

B. 3.64E-01 N

C. 3.57E+00 N

D. 3.50E+01 N

E. 3.43E+02 N

2. The mass of a particle is 5 kg. What is its weight on Earth? [1910]

The next page might contain more answer choices for this question

A. 5.00E+00 N

B. 4.90E+01 N

C. 4.80E+02 N

D. 4.71E+03 N

E. 4.61E+04 N

3. The mass of a particle is 48 kg. What is its weight on Earth? [1911]

A. 5.10E-02 N

B. 5.00E-01 N

C. 4.90E+00 N

D. 4.80E+01 N

E. 4.70E+02 N

4. The mass of a particle is 14 kg. What is its weight on Earth? [1912]

A. 1.43E+00 N

B. 1.40E+01 N

C. 1.37E+02 N

D. 1.34E+03 N

E. 1.32E+04 N

5. The mass of a particle is 46 kg. What is its weight on Earth? [1913]

A. 4.51E+02 N

B. 4.42E+03 N

C. 4.33E+04 N

D. 4.24E+05 N

E. 4.16E+06 N

6. The mass of a particle is 40 kg. What is its weight on Earth? [1914]

A. 4.00E+01 N

B. 3.92E+02 N

C. 3.84E+03 N

D. 3.76E+04 N

E. 3.69E+05 N

The next page might contain more answer choices for this question

7. The mass of a particle is 8 kg. What is its weight on Earth? [1915]

   A. 8.16E-01 N
   B. 8.00E+00 N
   C. 7.84E+01 N
   D. 7.68E+02 N
   E. 7.53E+03 N

8. The mass of a particle is 30 kg. What is its weight on Earth? [1916]

   A. 3.00E+01 N
   B. 2.94E+02 N
   C. 2.88E+03 N
   D. 2.82E+04 N
   E. 2.77E+05 N

9. The mass of a particle is 8 kg. What is its weight on Earth? [1917]

   A. 8.33E-02 N
   B. 8.16E-01 N
   C. 8.00E+00 N
   D. 7.84E+01 N
   E. 7.68E+02 N

10. The mass of a particle is 32 kg. What is its weight on Earth? [1918]

    A. 3.20E+01 N
    B. 3.14E+02 N
    C. 3.07E+03 N
    D. 3.01E+04 N
    E. 2.95E+05 N

11. The mass of a particle is 43 kg. What is its weight on Earth? [1919]

    A. 4.21E+02 N
    B. 4.13E+03 N
    C. 4.05E+04 N
    D. 3.97E+05 N

The next page might contain more answer choices for this question

E. 3.89E+06 N

12. The mass of a particle is 14 kg. What is its weight on Earth? [1920]

A. 1.43E+00 N

B. 1.40E+01 N

C. 1.37E+02 N

D. 1.34E+03 N

E. 1.32E+04 N

13. The mass of a particle is 48 kg. What is its weight on Earth? [1921]

A. 4.80E+01 N

B. 4.70E+02 N

C. 4.61E+03 N

D. 4.52E+04 N

E. 4.43E+05 N

14. The mass of a particle is 19 kg. What is its weight on Earth? [1922]

A. 1.86E+02 N

B. 1.82E+03 N

C. 1.79E+04 N

D. 1.75E+05 N

E. 1.72E+06 N

15. The mass of a particle is 23 kg. What is its weight on Earth? [1923]

A. 2.30E+01 N

B. 2.25E+02 N

C. 2.21E+03 N

D. 2.16E+04 N

E. 2.12E+05 N

16. The mass of a particle is 7 kg. What is its weight on Earth? [1924]

A. 7.00E+00 N

B. 6.86E+01 N

C. 6.72E+02 N

The next page might contain more answer choices for this question

D. 6.59E+03 N

E. 6.46E+04 N

17. The mass of a particle is 19 kg. What is its weight on Earth? [1925]

A. 2.02E-02 N

B. 1.98E-01 N

C. 1.94E+00 N

D. 1.90E+01 N

E. 1.86E+02 N

18. The mass of a particle is 9 kg. What is its weight on Earth? [1926]

A. 8.82E+01 N

B. 8.64E+02 N

C. 8.47E+03 N

D. 8.30E+04 N

E. 8.14E+05 N

19. The mass of a particle is 39 kg. What is its weight on Earth? [1927]

A. 3.90E+01 N

B. 3.82E+02 N

C. 3.75E+03 N

D. 3.67E+04 N

E. 3.60E+05 N

up1-13 Q4

1. The mass of a particle is 32 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1928]

A. 5.12E+01N

B. 8.19E+01N

C. 1.31E+02N

D. 2.10E+02N

E. 3.36E+02N

The next page might contain more answer choices for this question

2. The mass of a particle is 46 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1929]

   A. 2.88E+01N

   B. 4.60E+01N

   C. 7.36E+01N

   D. 1.18E+02N

   E. 1.88E+02N

3. The mass of a particle is 11 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1930]

   A. 4.30E+00N

   B. 6.88E+00N

   C. 1.10E+01N

   D. 1.76E+01N

   E. 2.82E+01N

4. The mass of a particle is 28 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1931]

   A. 1.09E+01N

   B. 1.75E+01N

   C. 2.80E+01N

   D. 4.48E+01N

   E. 7.17E+01N

5. The mass of a particle is 34 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1932]

   A. 5.44E+01N

   B. 8.70E+01N

   C. 1.39E+02N

   D. 2.23E+02N

   E. 3.57E+02N

6. The mass of a particle is 7 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1933]

The next page might contain more answer choices for this question

A. 1.12E+01N

B. 1.79E+01N

C. 2.87E+01N

D. 4.59E+01N

E. 7.34E+01N

7. The mass of a particle is 27 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1934]

A. 1.69E+01N

B. 2.70E+01N

C. 4.32E+01N

D. 6.91E+01N

E. 1.11E+02N

8. The mass of a particle is 47 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1935]

A. 1.15E+01N

B. 1.84E+01N

C. 2.94E+01N

D. 4.70E+01N

E. 7.52E+01N

9. The mass of a particle is 15 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1936]

A. 1.50E+01N

B. 2.40E+01N

C. 3.84E+01N

D. 6.14E+01N

E. 9.83E+01N

10. The mass of a particle is 35 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1937]

A. 8.54E+00N

B. 1.37E+01N

The next page might contain more answer choices for this question

C. 2.19E+01N

D. 3.50E+01N

E. 5.60E+01N

11. The mass of a particle is 42 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1938]

A. 4.20E+01N

B. 6.72E+01N

C. 1.08E+02N

D. 1.72E+02N

E. 2.75E+02N

12. The mass of a particle is 30 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1939]

A. 3.00E+01N

B. 4.80E+01N

C. 7.68E+01N

D. 1.23E+02N

E. 1.97E+02N

13. The mass of a particle is 23 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1940]

A. 8.98E+00N

B. 1.44E+01N

C. 2.30E+01N

D. 3.68E+01N

E. 5.89E+01N

14. The mass of a particle is 44 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1941]

A. 7.04E+01N

B. 1.13E+02N

C. 1.80E+02N

D. 2.88E+02N

The next page might contain more answer choices for this question

E. 4.61E+02N

15. The mass of a particle is 30 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1942]

A. 1.87E+01N

B. 3.00E+01N

C. 4.80E+01N

D. 7.68E+01N

E. 1.23E+02N

16. The mass of a particle is 30 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1943]

A. 3.00E+01N

B. 4.80E+01N

C. 7.68E+01N

D. 1.23E+02N

E. 1.97E+02N

17. The mass of a particle is 7 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1944]

A. 7.00E+00N

B. 1.12E+01N

C. 1.79E+01N

D. 2.87E+01N

E. 4.59E+01N

18. The mass of a particle is 36 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1945]

A. 5.76E+01N

B. 9.22E+01N

C. 1.47E+02N

D. 2.36E+02N

E. 3.77E+02N

The next page might contain more answer choices for this question

19. The mass of a particle is 6 kg. What is its weight on the Moon (where the acceleration of gravity is $1.6 m/s^2$?) [1946]

    A. 3.75E+00N

    B. 6.00E+00N

    C. 9.60E+00N

    D. 1.54E+01N

    E. 2.46E+01N

up1-13 Q5

1. The mass of a particle is 7 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1947]

    A. 4.38E+00 N

    B. 7.00E+00 N

    C. 1.12E+01 N

    D. 1.79E+01 N

    E. 2.87E+01 N

2. The mass of a particle is 22 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1948]

    A. 2.20E+01 N

    B. 3.52E+01 N

    C. 5.63E+01 N

    D. 9.01E+01 N

    E. 1.44E+02 N

3. The mass of a particle is 27 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1949]

    A. 4.12E+00 N

    B. 6.59E+00 N

    C. 1.05E+01 N

    D. 1.69E+01 N

    E. 2.70E+01 N

The next page might contain more answer choices for this question

4. The mass of a particle is 44 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1950]

   A. 2.75E+01 N

   B. 4.40E+01 N

   C. 7.04E+01 N

   D. 1.13E+02 N

   E. 1.80E+02 N

5. The mass of a particle is 33 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1951]

   A. 8.06E+00 N

   B. 1.29E+01 N

   C. 2.06E+01 N

   D. 3.30E+01 N

   E. 5.28E+01 N

6. The mass of a particle is 23 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1952]

   A. 5.62E+00 N

   B. 8.98E+00 N

   C. 1.44E+01 N

   D. 2.30E+01 N

   E. 3.68E+01 N

7. The mass of a particle is 38 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1953]

   A. 9.28E+00 N

   B. 1.48E+01 N

   C. 2.38E+01 N

   D. 3.80E+01 N

   E. 6.08E+01 N

8. The mass of a particle is 25 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1954]

The next page might contain more answer choices for this question

A. 2.50E+01 N

B. 4.00E+01 N

C. 6.40E+01 N

D. 1.02E+02 N

E. 1.64E+02 N

9. The mass of a particle is 20 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1955]

A. 7.81E+00 N

B. 1.25E+01 N

C. 2.00E+01 N

D. 3.20E+01 N

E. 5.12E+01 N

10. The mass of a particle is 30 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1956]

A. 4.58E+00 N

B. 7.32E+00 N

C. 1.17E+01 N

D. 1.88E+01 N

E. 3.00E+01 N

11. The mass of a particle is 42 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1957]

A. 1.03E+01 N

B. 1.64E+01 N

C. 2.62E+01 N

D. 4.20E+01 N

E. 6.72E+01 N

12. The mass of a particle is 34 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1958]

A. 2.12E+01 N

B. 3.40E+01 N

The next page might contain more answer choices for this question

C. 5.44E+01 N

D. 8.70E+01 N

E. 1.39E+02 N

13. The mass of a particle is 40 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1959]

A. 6.10E+00 N

B. 9.77E+00 N

C. 1.56E+01 N

D. 2.50E+01 N

E. 4.00E+01 N

14. The mass of a particle is 17 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1960]

A. 6.64E+00 N

B. 1.06E+01 N

C. 1.70E+01 N

D. 2.72E+01 N

E. 4.35E+01 N

15. The mass of a particle is 44 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1961]

A. 1.72E+01 N

B. 2.75E+01 N

C. 4.40E+01 N

D. 7.04E+01 N

E. 1.13E+02 N

16. The mass of a particle is 40 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1962]

A. 9.77E+00 N

B. 1.56E+01 N

C. 2.50E+01 N

D. 4.00E+01 N

The next page might contain more answer choices for this question

E. 6.40E+01 N

17. The mass of a particle is 27 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1963]

A. 4.12E+00 N

B. 6.59E+00 N

C. 1.05E+01 N

D. 1.69E+01 N

E. 2.70E+01 N

18. The mass of a particle is 34 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1964]

A. 5.19E+00 N

B. 8.30E+00 N

C. 1.33E+01 N

D. 2.12E+01 N

E. 3.40E+01 N

19. The mass of a particle is 26 kg. What is its mass on the Moon (where the acceleration of gravity is $1.6 m/s^2$)? [1965]

A. 3.97E+00 N

B. 6.35E+00 N

C. 1.02E+01 N

D. 1.62E+01 N

E. 2.60E+01 N

up1-13 Q6

1. The acceleration due to gravity on the surface of a planet is 4.61 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.44 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1966]

A. 1.89E+00 Earth radii

B. 2.83E+00 Earth radii

C. 4.25E+00 Earth radii

D. 6.38E+00 Earth radii

The next page might contain more answer choices for this question

E. 9.56E+00 Earth radii

2. The acceleration due to gravity on the surface of a planet is 4.5 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.54 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1967]

A. 1.77E+00 Earth radii

B. 2.66E+00 Earth radii

C. 3.99E+00 Earth radii

D. 5.98E+00 Earth radii

E. 8.97E+00 Earth radii

3. The acceleration due to gravity on the surface of a planet is 4.66 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.16 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1968]

A. 9.59E-01 Earth radii

B. 1.44E+00 Earth radii

C. 2.16E+00 Earth radii

D. 3.24E+00 Earth radii

E. 4.85E+00 Earth radii

4. The acceleration due to gravity on the surface of a planet is 4.8 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.72 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1969]

A. 1.18E+00 Earth radii

B. 1.76E+00 Earth radii

C. 2.65E+00 Earth radii

D. 3.97E+00 Earth radii

E. 5.96E+00 Earth radii

5. The acceleration due to gravity on the surface of a planet is 4.59 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.77 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1970]

A. 3.27E-01 Earth radii

B. 4.91E-01 Earth radii

C. 7.36E-01 Earth radii

The next page might contain more answer choices for this question

D. 1.10E+00 Earth radii

E. 1.66E+00 Earth radii

6. The acceleration due to gravity on the surface of a planet is 4.77 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.24 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1971]

A. 4.21E-01 Earth radii

B. 6.31E-01 Earth radii

C. 9.46E-01 Earth radii

D. 1.42E+00 Earth radii

E. 2.13E+00 Earth radii

7. The acceleration due to gravity on the surface of a planet is 4.39 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.24 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1972]

A. 3.87E-01 Earth radii

B. 5.81E-01 Earth radii

C. 8.71E-01 Earth radii

D. 1.31E+00 Earth radii

E. 1.96E+00 Earth radii

8. The acceleration due to gravity on the surface of a planet is 4.62 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.12 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1973]

A. 2.18E+00 Earth radii

B. 3.27E+00 Earth radii

C. 4.90E+00 Earth radii

D. 7.35E+00 Earth radii

E. 1.10E+01 Earth radii

9. The acceleration due to gravity on the surface of a planet is 4.64 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.61 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1974]

A. 1.78E+00 Earth radii

B. 2.67E+00 Earth radii

The next page might contain more answer choices for this question

C. 4.00E+00 Earth radii

D. 6.00E+00 Earth radii

E. 9.00E+00 Earth radii

10. The acceleration due to gravity on the surface of a planet is 4.49 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.56 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1975]

A. 5.20E-01 Earth radii

B. 7.80E-01 Earth radii

C. 1.17E+00 Earth radii

D. 1.75E+00 Earth radii

E. 2.63E+00 Earth radii

11. The acceleration due to gravity on the surface of a planet is 4.34 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.44 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1976]

A. 5.27E-01 Earth radii

B. 7.91E-01 Earth radii

C. 1.19E+00 Earth radii

D. 1.78E+00 Earth radii

E. 2.67E+00 Earth radii

12. The acceleration due to gravity on the surface of a planet is 4.34 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.46 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1977]

A. 1.76E+00 Earth radii

B. 2.65E+00 Earth radii

C. 3.97E+00 Earth radii

D. 5.95E+00 Earth radii

E. 8.93E+00 Earth radii

13. The acceleration due to gravity on the surface of a planet is 4.29 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.85 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1978]

A. 2.97E-01 Earth radii

The next page might contain more answer choices for this question

B. 4.46E-01 Earth radii

C. 6.69E-01 Earth radii

D. 1.00E+00 Earth radii

E. 1.51E+00 Earth radii

14. The acceleration due to gravity on the surface of a planet is 4.62 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.76 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1979]

A. 7.44E-01 Earth radii

B. 1.12E+00 Earth radii

C. 1.67E+00 Earth radii

D. 2.51E+00 Earth radii

E. 3.77E+00 Earth radii

15. The acceleration due to gravity on the surface of a planet is 4.48 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.31 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1980]

A. 8.62E-01 Earth radii

B. 1.29E+00 Earth radii

C. 1.94E+00 Earth radii

D. 2.91E+00 Earth radii

E. 4.36E+00 Earth radii

16. The acceleration due to gravity on the surface of a planet is 4.56 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.85 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1981]

A. 3.16E-01 Earth radii

B. 4.74E-01 Earth radii

C. 7.11E-01 Earth radii

D. 1.07E+00 Earth radii

E. 1.60E+00 Earth radii

17. The acceleration due to gravity on the surface of a planet is 4.25 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.42 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1982]

The next page might contain more answer choices for this question

A. 3.47E-01 Earth radii

B. 5.20E-01 Earth radii

C. 7.81E-01 Earth radii

D. 1.17E+00 Earth radii

E. 1.76E+00 Earth radii

18. The acceleration due to gravity on the surface of a planet is 4.18 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.32 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1983]

A. 8.01E-01 Earth radii

B. 1.20E+00 Earth radii

C. 1.80E+00 Earth radii

D. 2.70E+00 Earth radii

E. 4.05E+00 Earth radii

19. The acceleration due to gravity on the surface of a planet is 4.26 times as large as it is on the surface of Earth. The mass density of the planet is known to be 2.38 times that of Earth. What is the radius of this planet in terms of Earth's radius? [1984]

A. 3.54E-01 Earth radii

B. 5.30E-01 Earth radii

C. 7.96E-01 Earth radii

D. 1.19E+00 Earth radii

E. 1.79E+00 Earth radii

up1-13 Q7

1. Evaluate the gravitational potential energy between two 48 kg spherical steel balls separated by a center-to-center distance of 5 cm. [1985]

A. 1.37E-06 J

B. 2.05E-06 J

C. 3.07E-06 J

D. 4.61E-06 J

E. 6.92E-06 J

The next page might contain more answer choices for this question

2. Evaluate the gravitational potential energy between two 46 kg spherical steel balls separated by a center-to-center distance of 7 cm. [1986]

   A. 5.97E-07 J

   B. 8.96E-07 J

   C. 1.34E-06 J

   D. 2.02E-06 J

   E. 3.02E-06 J

3. Evaluate the gravitational potential energy between two 47 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1987]

   A. 1.46E-06 J

   B. 2.18E-06 J

   C. 3.27E-06 J

   D. 4.91E-06 J

   E. 7.37E-06 J

4. Evaluate the gravitational potential energy between two 43 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1988]

   A. 1.83E-06 J

   B. 2.74E-06 J

   C. 4.11E-06 J

   D. 6.17E-06 J

   E. 9.25E-06 J

5. Evaluate the gravitational potential energy between two 37 kg spherical steel balls separated by a center-to-center distance of 6 cm. [1989]

   A. 3.01E-07 J

   B. 4.51E-07 J

   C. 6.76E-07 J

   D. 1.01E-06 J

   E. 1.52E-06 J

6. Evaluate the gravitational potential energy between two 48 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1990]

The next page might contain more answer choices for this question

A. 1.52E-06 J

B. 2.28E-06 J

C. 3.42E-06 J

D. 5.12E-06 J

E. 7.68E-06 J

7. Evaluate the gravitational potential energy between two 36 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1991]

A. 1.28E-06 J

B. 1.92E-06 J

C. 2.88E-06 J

D. 4.32E-06 J

E. 6.48E-06 J

8. Evaluate the gravitational potential energy between two 49 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1992]

A. 3.56E-06 J

B. 5.34E-06 J

C. 8.01E-06 J

D. 1.20E-05 J

E. 1.80E-05 J

9. Evaluate the gravitational potential energy between two 38 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1993]

A. 9.51E-07 J

B. 1.43E-06 J

C. 2.14E-06 J

D. 3.21E-06 J

E. 4.82E-06 J

10. Evaluate the gravitational potential energy between two 42 kg spherical steel balls separated by a center-to-center distance of 5 cm. [1994]

A. 1.05E-06 J

B. 1.57E-06 J

The next page might contain more answer choices for this question

C. 2.35E-06 J

D. 3.53E-06 J

E. 5.29E-06 J

11. Evaluate the gravitational potential energy between two 31 kg spherical steel balls separated by a center-to-center distance of 7 cm. [1995]

A. 4.07E-07 J

B. 6.10E-07 J

C. 9.16E-07 J

D. 1.37E-06 J

E. 2.06E-06 J

12. Evaluate the gravitational potential energy between two 48 kg spherical steel balls separated by a center-to-center distance of 4 cm. [1996]

A. 2.56E-06 J

B. 3.84E-06 J

C. 5.76E-06 J

D. 8.64E-06 J

E. 1.30E-05 J

13. Evaluate the gravitational potential energy between two 42 kg spherical steel balls separated by a center-to-center distance of 7 cm. [1997]

A. 1.68E-06 J

B. 2.52E-06 J

C. 3.78E-06 J

D. 5.67E-06 J

E. 8.51E-06 J

14. Evaluate the gravitational potential energy between two 40 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1998]

A. 1.58E-06 J

B. 2.37E-06 J

C. 3.56E-06 J

D. 5.34E-06 J

The next page might contain more answer choices for this question

E. 8.00E-06 J

15. Evaluate the gravitational potential energy between two 37 kg spherical steel balls separated by a center-to-center distance of 3 cm. [1999]

A. 6.01E-07 J

B. 9.02E-07 J

C. 1.35E-06 J

D. 2.03E-06 J

E. 3.04E-06 J

16. Evaluate the gravitational potential energy between two 32 kg spherical steel balls separated by a center-to-center distance of 3 cm. [2000]

A. 2.28E-06 J

B. 3.42E-06 J

C. 5.12E-06 J

D. 7.68E-06 J

E. 1.15E-05 J

17. Evaluate the gravitational potential energy between two 49 kg spherical steel balls separated by a center-to-center distance of 6 cm. [2001]

A. 1.78E-06 J

B. 2.67E-06 J

C. 4.00E-06 J

D. 6.01E-06 J

E. 9.01E-06 J

18. Evaluate the gravitational potential energy between two 34 kg spherical steel balls separated by a center-to-center distance of 6 cm. [2002]

A. 2.54E-07 J

B. 3.81E-07 J

C. 5.71E-07 J

D. 8.57E-07 J

E. 1.29E-06 J

The next page might contain more answer choices for this question

19. Evaluate the gravitational potential energy between two 34 kg spherical steel balls separated by a center-to-center distance of 3 cm. [2003]

    A. 2.57E-06 J

    B. 3.86E-06 J

    C. 5.78E-06 J

    D. 8.67E-06 J

    E. 1.30E-05 J

up1-13 Q8

1. A planet has a mass of 4.460E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 6.88 hours? [2004]

    A. 1.22E+07 m

    B. 1.32E+07 m

    C. 1.43E+07 m

    D. 1.54E+07 m

    E. 1.67E+07 m

2. A planet has a mass of 4.330E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 9.32 hours? [2005]

    A. 1.73E+07 m

    B. 1.87E+07 m

    C. 2.02E+07 m

    D. 2.18E+07 m

    E. 2.36E+07 m

3. A planet has a mass of 3.600E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 11.6 hours? [2006]

    A. 1.74E+07 m

    B. 1.88E+07 m

    C. 2.03E+07 m

    D. 2.20E+07 m

    E. 2.37E+07 m

The next page might contain more answer choices for this question

4. A planet has a mass of 4.190E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 4.45 hours? [2007]

   A. 9.69E+06 m

   B. 1.05E+07 m

   C. 1.13E+07 m

   D. 1.22E+07 m

   E. 1.32E+07 m

5. A planet has a mass of 4.350E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 4.86 hours? [2008]

   A. 1.12E+07 m

   B. 1.21E+07 m

   C. 1.31E+07 m

   D. 1.42E+07 m

   E. 1.53E+07 m

6. A planet has a mass of 3.590E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 10.5 hours? [2009]

   A. 1.90E+07 m

   B. 2.05E+07 m

   C. 2.22E+07 m

   D. 2.40E+07 m

   E. 2.59E+07 m

7. A planet has a mass of 4.530E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 6.41 hours? [2010]

   A. 1.17E+07 m

   B. 1.27E+07 m

   C. 1.37E+07 m

   D. 1.48E+07 m

   E. 1.60E+07 m

8. A planet has a mass of 4.350E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 8.36 hours? [2011]

The next page might contain more answer choices for this question

A. 1.74E+07 m

B. 1.88E+07 m

C. 2.03E+07 m

D. 2.19E+07 m

E. 2.37E+07 m

9. A planet has a mass of 3.640E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 6.46 hours? [2012]

A. 1.28E+07 m

B. 1.38E+07 m

C. 1.49E+07 m

D. 1.61E+07 m

E. 1.74E+07 m

10. A planet has a mass of 4.520E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 9.1 hours? [2013]

A. 1.60E+07 m

B. 1.73E+07 m

C. 1.87E+07 m

D. 2.02E+07 m

E. 2.18E+07 m

11. A planet has a mass of 3.510E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 7.03 hours? [2014]

A. 1.24E+07 m

B. 1.34E+07 m

C. 1.44E+07 m

D. 1.56E+07 m

E. 1.69E+07 m

12. A planet has a mass of 3.100E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 4.14 hours? [2015]

A. 8.35E+06 m

B. 9.02E+06 m

The next page might contain more answer choices for this question

C. 9.74E+06 m

D. 1.05E+07 m

E. 1.14E+07 m

13. A planet has a mass of 4.070E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 9.66 hours? [2016]

A. 1.49E+07 m

B. 1.61E+07 m

C. 1.74E+07 m

D. 1.88E+07 m

E. 2.03E+07 m

14. A planet has a mass of 3.090E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 5.75 hours? [2017]

A. 1.21E+07 m

B. 1.31E+07 m

C. 1.41E+07 m

D. 1.53E+07 m

E. 1.65E+07 m

15. A planet has a mass of 4.450E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 6.38 hours? [2018]

A. 1.26E+07 m

B. 1.36E+07 m

C. 1.47E+07 m

D. 1.58E+07 m

E. 1.71E+07 m

16. A planet has a mass of 3.390E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 7.96 hours? [2019]

A. 1.33E+07 m

B. 1.44E+07 m

C. 1.55E+07 m

D. 1.68E+07 m

The next page might contain more answer choices for this question

E. 1.81E+07 m

17. A planet has a mass of 2.970E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 12.9 hours? [2020]

A. 2.05E+07 m

B. 2.21E+07 m

C. 2.39E+07 m

D. 2.58E+07 m

E. 2.79E+07 m

18. A planet has a mass of 4.730E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 3.98 hours? [2021]

A. 1.18E+07 m

B. 1.27E+07 m

C. 1.38E+07 m

D. 1.49E+07 m

E. 1.60E+07 m

19. A planet has a mass of 3.010E+24 kg. What would be the orbital radius of a satellite or moon that has a period of 6.94 hours? [2022]

A. 1.17E+07 m

B. 1.26E+07 m

C. 1.36E+07 m

D. 1.47E+07 m

E. 1.59E+07 m

up1-13 Q9

1. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.77 hours at a distance of 3.48 km from the center of the astroid. What is asteroid's mass? [2023]

A. 6.22E+13 kg

B. 6.72E+13 kg

C. 7.25E+13 kg

D. 7.83E+13 kg

The next page might contain more answer choices for this question

E. 8.46E+13 kg

2. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.26 hours at a distance of 5.13 km from the center of the astroid. What is asteroid's mass? [2024]

   A. 2.50E+14 kg

   B. 2.70E+14 kg

   C. 2.91E+14 kg

   D. 3.15E+14 kg

   E. 3.40E+14 kg

3. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.84 hours at a distance of 5.75 km from the center of the astroid. What is asteroid's mass? [2025]

   A. 2.94E+14 kg

   B. 3.18E+14 kg

   C. 3.43E+14 kg

   D. 3.71E+14 kg

   E. 4.00E+14 kg

4. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.49 hours at a distance of 4.66 km from the center of the astroid. What is asteroid's mass? [2026]

   A. 1.97E+14 kg

   B. 2.12E+14 kg

   C. 2.29E+14 kg

   D. 2.48E+14 kg

   E. 2.67E+14 kg

5. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.06 hours at a distance of 3.51 km from the center of the astroid. What is asteroid's mass? [2027]

   A. 1.03E+14 kg

   B. 1.11E+14 kg

   C. 1.20E+14 kg

The next page might contain more answer choices for this question

D. 1.29E+14 kg

E. 1.40E+14 kg

6. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.83 hours at a distance of 3.01 km from the center of the astroid. What is asteroid's mass? [2028]

A. 4.24E+13 kg

B. 4.58E+13 kg

C. 4.94E+13 kg

D. 5.34E+13 kg

E. 5.77E+13 kg

7. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.83 hours at a distance of 5.0 km from the center of the astroid. What is asteroid's mass? [2029]

A. 1.80E+14 kg

B. 1.94E+14 kg

C. 2.10E+14 kg

D. 2.27E+14 kg

E. 2.45E+14 kg

8. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 5.09 hours at a distance of 5.66 km from the center of the astroid. What is asteroid's mass? [2030]

A. 2.35E+14 kg

B. 2.54E+14 kg

C. 2.74E+14 kg

D. 2.96E+14 kg

E. 3.20E+14 kg

9. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.75 hours at a distance of 5.39 km from the center of the astroid. What is asteroid's mass? [2031]

A. 2.33E+14 kg

B. 2.52E+14 kg

The next page might contain more answer choices for this question

C. 2.72E+14 kg

D. 2.93E+14 kg

E. 3.17E+14 kg

10. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.24 hours at a distance of 5.83 km from the center of the astroid. What is asteroid's mass? [2032]

A. 4.00E+14 kg

B. 4.32E+14 kg

C. 4.66E+14 kg

D. 5.03E+14 kg

E. 5.44E+14 kg

11. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.08 hours at a distance of 2.57 km from the center of the astroid. What is asteroid's mass? [2033]

A. 3.70E+13 kg

B. 3.99E+13 kg

C. 4.31E+13 kg

D. 4.66E+13 kg

E. 5.03E+13 kg

12. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.91 hours at a distance of 4.76 km from the center of the astroid. What is asteroid's mass? [2034]

A. 1.62E+14 kg

B. 1.75E+14 kg

C. 1.89E+14 kg

D. 2.04E+14 kg

E. 2.21E+14 kg

13. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 5.81 hours at a distance of 5.87 km from the center of the astroid. What is asteroid's mass? [2035]

A. 2.35E+14 kg

The next page might contain more answer choices for this question

B. 2.53E+14 kg

C. 2.74E+14 kg

D. 2.96E+14 kg

E. 3.19E+14 kg

14. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.34 hours at a distance of 2.81 km from the center of the astroid. What is asteroid's mass? [2036]

A. 4.98E+13 kg

B. 5.38E+13 kg

C. 5.81E+13 kg

D. 6.28E+13 kg

E. 6.78E+13 kg

15. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.18 hours at a distance of 4.52 km from the center of the astroid. What is asteroid's mass? [2037]

A. 2.41E+14 kg

B. 2.61E+14 kg

C. 2.82E+14 kg

D. 3.04E+14 kg

E. 3.28E+14 kg

16. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 5.02 hours at a distance of 3.58 km from the center of the astroid. What is asteroid's mass? [2038]

A. 7.70E+13 kg

B. 8.32E+13 kg

C. 8.98E+13 kg

D. 9.70E+13 kg

E. 1.05E+14 kg

17. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 5.6 hours at a distance of 5.41 km from the center of the astroid. What is asteroid's mass? [2039]

The next page might contain more answer choices for this question

A. 1.83E+14 kg

B. 1.98E+14 kg

C. 2.14E+14 kg

D. 2.31E+14 kg

E. 2.49E+14 kg

18. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 5.27 hours at a distance of 4.88 km from the center of the astroid. What is asteroid's mass? [2040]

A. 1.77E+14 kg

B. 1.91E+14 kg

C. 2.06E+14 kg

D. 2.23E+14 kg

E. 2.41E+14 kg

19. In order to keep a small satellite from drifting into a nearby asteroid, it is placed in a circular orbit around the with a period of 4.24 hours at a distance of 2.9 km from the center of the astroid. What is asteroid's mass? [2041]

A. 4.55E+13 kg

B. 4.92E+13 kg

C. 5.31E+13 kg

D. 5.74E+13 kg

E. 6.20E+13 kg

up1-13 Q10

1. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 5 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2042]

A. 1.27E+07 km

B. 1.37E+07 km

C. 1.48E+07 km

D. 1.60E+07 km

E. 1.73E+07 km

The next page might contain more answer choices for this question

2. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 6 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2043]

   A. 1.78E+07 km

   B. 1.92E+07 km

   C. 2.08E+07 km

   D. 2.24E+07 km

   E. 2.42E+07 km

3. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 7 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2044]

   A. 1.65E+07 km

   B. 1.78E+07 km

   C. 1.92E+07 km

   D. 2.08E+07 km

   E. 2.24E+07 km

4. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 8 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2045]

   A. 2.37E+07 km

   B. 2.56E+07 km

   C. 2.77E+07 km

   D. 2.99E+07 km

   E. 3.23E+07 km

5. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 5 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2046]

   A. 1.18E+07 km

   B. 1.27E+07 km

   C. 1.37E+07 km

   D. 1.48E+07 km

   E. 1.60E+07 km

6. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 8 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2047]

The next page might contain more answer choices for this question

A. 2.37E+07 km

B. 2.56E+07 km

C. 2.77E+07 km

D. 2.99E+07 km

E. 3.23E+07 km

7. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 8 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2048]

A. 1.89E+07 km

B. 2.04E+07 km

C. 2.20E+07 km

D. 2.37E+07 km

E. 2.56E+07 km

8. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 6 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2049]

A. 1.41E+07 km

B. 1.53E+07 km

C. 1.65E+07 km

D. 1.78E+07 km

E. 1.92E+07 km

9. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 8 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2050]

A. 1.75E+07 km

B. 1.89E+07 km

C. 2.04E+07 km

D. 2.20E+07 km

E. 2.37E+07 km

10. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 7 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2051]

A. 2.08E+07 km

B. 2.24E+07 km

The next page might contain more answer choices for this question

C. 2.42E+07 km

D. 2.62E+07 km

E. 2.83E+07 km

11. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 5 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2052]

A. 1.48E+07 km

B. 1.60E+07 km

C. 1.73E+07 km

D. 1.87E+07 km

E. 2.02E+07 km

12. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 9 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2053]

A. 2.12E+07 km

B. 2.29E+07 km

C. 2.47E+07 km

D. 2.67E+07 km

E. 2.89E+07 km

13. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 5 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2054]

A. 1.48E+07 km

B. 1.60E+07 km

C. 1.73E+07 km

D. 1.87E+07 km

E. 2.02E+07 km

14. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 6 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2055]

A. 1.53E+07 km

B. 1.65E+07 km

C. 1.78E+07 km

D. 1.92E+07 km

The next page might contain more answer choices for this question

E. 2.08E+07 km

15. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 7 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2056]

A. 1.92E+07 km

B. 2.08E+07 km

C. 2.24E+07 km

D. 2.42E+07 km

E. 2.62E+07 km

16. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 8 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2057]

A. 1.89E+07 km

B. 2.04E+07 km

C. 2.20E+07 km

D. 2.37E+07 km

E. 2.56E+07 km

17. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 8 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2058]

A. 2.37E+07 km

B. 2.56E+07 km

C. 2.77E+07 km

D. 2.99E+07 km

E. 3.23E+07 km

18. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 9 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2059]

A. 1.96E+07 km

B. 2.12E+07 km

C. 2.29E+07 km

D. 2.47E+07 km

E. 2.67E+07 km

The next page might contain more answer choices for this question

19. What is the Schwarzschild radius for the black hole at the center of a galaxy if it has the mass of 5 million solar masses? Take the mass of the Sun to be 2×10^{30} kg. [2060]

    A. 1.37E+07 km

    B. 1.48E+07 km

    C. 1.60E+07 km

    D. 1.73E+07 km

    E. 1.87E+07 km

10 up1-14

1. What is the mass of a deep breath of air having a volumeof 2.0 L? [2061]

    A. 8.16E-02g

    B. 2.58E-01g

    C. 8.16E-01g

    D. 2.58E+00g

    E. 8.16E+00g

2. How tall must a water-filled manometer be to measureblood pressure as high as 3.000E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2062]

    A. 3.78E+00 m

    B. 4.08E+00 m

    C. 4.41E+00 m

    D. 4.76E+00 m

    E. 5.14E+00 m

3. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.100E+03-kg car resting ona second cylinder? The master cylinder has a 2.3-cm diameterand the second cylinder has a 21.0-cm diameter. [2063]

    A. 2.12E+02 N

    B. 2.29E+02 N

    C. 2.47E+02 N

    D. 2.67E+02 N

    E. 2.88E+02 N

The next page might contain more answer choices for this question

4. A certain hydaulic system is designed to exert a force 1.200E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2064]

   A. 4.24E+01
   B. 6.00E+01
   C. 8.49E+01
   D. 1.20E+02
   E. 1.70E+02

5. A certain hydaulic system is designed to exert a force 1.200E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2065]

   A. 7.75E+00
   B. 1.10E+01
   C. 1.55E+01
   D. 2.19E+01
   E. 3.10E+01

6. A certain hydaulic system is designed to exert a force 1.000E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2066]

   A. 5.00E-03
   B. 7.07E-03
   C. 1.00E-02
   D. 1.41E-02
   E. 2.00E-02

7. Water emerges straight down from a faucet with a 1.5-cm diameter at a speed of 0.75 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2067]

   A. 1.33E+01 cm^3/s
   B. 4.19E+01 cm^3/s
   C. 1.33E+02 cm^3/s
   D. 4.19E+02 cm^3/s
   E. 1.33E+03 cm^3/s

The next page might contain more answer choices for this question

10.1 Renditions

up1-14 Q1

1. What is the mass of a deep breath of air having a volumeof 1.94 L? [2068]
   A. 2.50E-01g
   B. 7.91E-01g
   C. 2.50E+00g
   D. 7.91E+00g
   E. 2.50E+01g

2. What is the mass of a deep breath of air having a volumeof 3.96 L? [2069]
   A. 1.62E+00g
   B. 5.11E+00g
   C. 1.62E+01g
   D. 5.11E+01g
   E. 1.62E+02g

3. What is the mass of a deep breath of air having a volumeof 3.43 L? [2070]
   A. 1.40E-01g
   B. 4.42E-01g
   C. 1.40E+00g
   D. 4.42E+00g
   E. 1.40E+01g

4. What is the mass of a deep breath of air having a volumeof 2.39 L? [2071]
   A. 9.75E-02g
   B. 3.08E-01g
   C. 9.75E-01g
   D. 3.08E+00g
   E. 9.75E+00g

5. What is the mass of a deep breath of air having a volumeof 1.02 L? [2072]
   A. 1.32E+00g
   B. 4.16E+00g

The next page might contain more answer choices for this question

C. 1.32E+01g

D. 4.16E+01g

E. 1.32E+02g

6. What is the mass of a deep breath of air having a volumeof 3.75 L? [2073]

A. 4.84E-01g

B. 1.53E+00g

C. 4.84E+00g

D. 1.53E+01g

E. 4.84E+01g

7. What is the mass of a deep breath of air having a volumeof 0.782 L? [2074]

A. 3.19E-01g

B. 1.01E+00g

C. 3.19E+00g

D. 1.01E+01g

E. 3.19E+01g

8. What is the mass of a deep breath of air having a volumeof 0.641 L? [2075]

A. 2.61E-02g

B. 8.27E-02g

C. 2.61E-01g

D. 8.27E-01g

E. 2.61E+00g

9. What is the mass of a deep breath of air having a volumeof 0.734 L? [2076]

A. 2.99E-01g

B. 9.47E-01g

C. 2.99E+00g

D. 9.47E+00g

E. 2.99E+01g

10. What is the mass of a deep breath of air having a volumeof 0.695 L? [2077]

A. 2.84E-02g

The next page might contain more answer choices for this question

B. 8.97E-02g

C. 2.84E-01g

D. 8.97E-01g

E. 2.84E+00g

11. What is the mass of a deep breath of air having a volumeof 3.73 L? [2078]

A. 4.81E-02g

B. 1.52E-01g

C. 4.81E-01g

D. 1.52E+00g

E. 4.81E+00g

12. What is the mass of a deep breath of air having a volumeof 1.1 L? [2079]

A. 4.49E-01g

B. 1.42E+00g

C. 4.49E+00g

D. 1.42E+01g

E. 4.49E+01g

13. What is the mass of a deep breath of air having a volumeof 1.15 L? [2080]

A. 4.69E-02g

B. 1.48E-01g

C. 4.69E-01g

D. 1.48E+00g

E. 4.69E+00g

14. What is the mass of a deep breath of air having a volumeof 0.782 L? [2081]

A. 3.19E-02g

B. 1.01E-01g

C. 3.19E-01g

D. 1.01E+00g

E. 3.19E+00g

15. What is the mass of a deep breath of air having a volumeof 2.6 L? [2082]

The next page might contain more answer choices for this question

A. 1.06E+00g

B. 3.35E+00g

C. 1.06E+01g

D. 3.35E+01g

E. 1.06E+02g

16. What is the mass of a deep breath of air having a volumeof 1.33 L? [2083]

A. 1.72E-02g

B. 5.43E-02g

C. 1.72E-01g

D. 5.43E-01g

E. 1.72E+00g

17. What is the mass of a deep breath of air having a volumeof 3.97 L? [2084]

A. 5.12E+00g

B. 1.62E+01g

C. 5.12E+01g

D. 1.62E+02g

E. 5.12E+02g

18. What is the mass of a deep breath of air having a volumeof 0.763 L? [2085]

A. 3.11E-02g

B. 9.84E-02g

C. 3.11E-01g

D. 9.84E-01g

E. 3.11E+00g

19. What is the mass of a deep breath of air having a volumeof 2.07 L? [2086]

A. 2.67E-01g

B. 8.44E-01g

C. 2.67E+00g

D. 8.44E+00g

E. 2.67E+01g

The next page might contain more answer choices for this question

up1-14 Q2

1. How tall must a water-filled manometer be to measureblood pressure as high as 2.560E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2087]

   A. 2.98E+00 m

   B. 3.22E+00 m

   C. 3.48E+00 m

   D. 3.76E+00 m

   E. 4.06E+00 m

2. How tall must a water-filled manometer be to measureblood pressure as high as 2.690E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2088]

   A. 2.69E+00 m

   B. 2.90E+00 m

   C. 3.14E+00 m

   D. 3.39E+00 m

   E. 3.66E+00 m

3. How tall must a water-filled manometer be to measureblood pressure as high as 3.060E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2089]

   A. 3.06E+00 m

   B. 3.30E+00 m

   C. 3.57E+00 m

   D. 3.85E+00 m

   E. 4.16E+00 m

4. How tall must a water-filled manometer be to measureblood pressure as high as 3.120E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2090]

   A. 3.93E+00 m

   B. 4.24E+00 m

   C. 4.58E+00 m

   D. 4.95E+00 m

   E. 5.35E+00 m

5. How tall must a water-filled manometer be to measureblood pressure as high as 2.990E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2091]

The next page might contain more answer choices for this question

A. 3.49E+00 m

B. 3.77E+00 m

C. 4.07E+00 m

D. 4.39E+00 m

E. 4.74E+00 m

6. How tall must a water-filled manometer be to measureblood pressure as high as 3.330E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2092]

A. 4.19E+00 m

B. 4.53E+00 m

C. 4.89E+00 m

D. 5.28E+00 m

E. 5.70E+00 m

7. How tall must a water-filled manometer be to measureblood pressure as high as 2.840E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2093]

A. 3.31E+00 m

B. 3.58E+00 m

C. 3.86E+00 m

D. 4.17E+00 m

E. 4.51E+00 m

8. How tall must a water-filled manometer be to measureblood pressure as high as 3.220E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2094]

A. 3.22E+00 m

B. 3.48E+00 m

C. 3.75E+00 m

D. 4.05E+00 m

E. 4.38E+00 m

9. How tall must a water-filled manometer be to measureblood pressure as high as 3.500E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2095]

A. 3.78E+00 m

B. 4.08E+00 m

The next page might contain more answer choices for this question

C. 4.41E+00 m

D. 4.76E+00 m

E. 5.14E+00 m

10. How tall must a water-filled manometer be to measureblood pressure as high as 3.420E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2096]

A. 4.65E+00 m

B. 5.02E+00 m

C. 5.43E+00 m

D. 5.86E+00 m

E. 6.33E+00 m

11. How tall must a water-filled manometer be to measureblood pressure as high as 3.230E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2097]

A. 3.77E+00 m

B. 4.07E+00 m

C. 4.39E+00 m

D. 4.74E+00 m

E. 5.12E+00 m

12. How tall must a water-filled manometer be to measureblood pressure as high as 3.020E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2098]

A. 3.80E+00 m

B. 4.11E+00 m

C. 4.44E+00 m

D. 4.79E+00 m

E. 5.17E+00 m

13. How tall must a water-filled manometer be to measureblood pressure as high as 2.850E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2099]

A. 2.85E+00 m

B. 3.08E+00 m

C. 3.32E+00 m

D. 3.59E+00 m

The next page might contain more answer choices for this question

E. 3.88E+00 m

14. How tall must a water-filled manometer be to measureblood pressure as high as 2.850E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2100]

A. 3.88E+00 m

B. 4.19E+00 m

C. 4.52E+00 m

D. 4.88E+00 m

E. 5.27E+00 m

15. How tall must a water-filled manometer be to measureblood pressure as high as 2.600E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2101]

A. 2.81E+00 m

B. 3.03E+00 m

C. 3.27E+00 m

D. 3.54E+00 m

E. 3.82E+00 m

16. How tall must a water-filled manometer be to measureblood pressure as high as 3.200E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2102]

A. 3.20E+00 m

B. 3.45E+00 m

C. 3.73E+00 m

D. 4.03E+00 m

E. 4.35E+00 m

17. How tall must a water-filled manometer be to measureblood pressure as high as 3.240E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2103]

A. 3.24E+00 m

B. 3.50E+00 m

C. 3.78E+00 m

D. 4.08E+00 m

E. 4.41E+00 m

The next page might contain more answer choices for this question

18. How tall must a water-filled manometer be to measureblood pressure as high as 2.630E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2104]

    A. 3.31E+00 m

    B. 3.58E+00 m

    C. 3.86E+00 m

    D. 4.17E+00 m

    E. 4.51E+00 m

19. How tall must a water-filled manometer be to measureblood pressure as high as 2.840E+02 mm Hg? The density of mercury is $13.6 g/cm^3$. [2105]

    A. 2.84E+00 m

    B. 3.07E+00 m

    C. 3.31E+00 m

    D. 3.58E+00 m

    E. 3.86E+00 m

up1-14 Q3

1. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.530E+03-kg car resting ona second cylinder? The master cylinder has a 2.44-cm diameterand the second cylinder has a 24.2-cm diameter. [2106]

    A. 1.31E+02 N

    B. 1.41E+02 N

    C. 1.53E+02 N

    D. 1.65E+02 N

    E. 1.78E+02 N

2. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.420E+03-kg car resting ona second cylinder? The master cylinder has a 2.17-cm diameterand the second cylinder has a 24.8-cm diameter. [2107]

    A. 1.07E+02 N

    B. 1.15E+02 N

    C. 1.24E+02 N

    D. 1.34E+02 N

The next page might contain more answer choices for this question

E. 1.45E+02 N

3. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.750E+03-kg car resting ona second cylinder? The master cylinder has a 2.35-cm diameterand the second cylinder has a 20.1-cm diameter. [2108]

A. 2.17E+02 N

B. 2.35E+02 N

C. 2.53E+02 N

D. 2.74E+02 N

E. 2.96E+02 N

4. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.220E+03-kg car resting ona second cylinder? The master cylinder has a 2.14-cm diameterand the second cylinder has a 23.3-cm diameter. [2109]

A. 1.46E+02 N

B. 1.58E+02 N

C. 1.70E+02 N

D. 1.84E+02 N

E. 1.98E+02 N

5. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.420E+03-kg car resting ona second cylinder? The master cylinder has a 2.36-cm diameterand the second cylinder has a 20.4-cm diameter. [2110]

A. 2.72E+02 N

B. 2.94E+02 N

C. 3.18E+02 N

D. 3.43E+02 N

E. 3.71E+02 N

6. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.560E+03-kg car resting ona second cylinder? The master cylinder has a 2.39-cm diameterand the second cylinder has a 20.6-cm diameter. [2111]

A. 1.64E+02 N

B. 1.77E+02 N

C. 1.91E+02 N

The next page might contain more answer choices for this question

D. 2.06E+02 N

E. 2.22E+02 N

7. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.730E+03-kg car resting ona second cylinder? The master cylinder has a 2.37-cm diameterand the second cylinder has a 22.2-cm diameter. [2112]

A. 1.66E+02 N

B. 1.79E+02 N

C. 1.93E+02 N

D. 2.09E+02 N

E. 2.26E+02 N

8. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.430E+03-kg car resting ona second cylinder? The master cylinder has a 2.12-cm diameterand the second cylinder has a 23.5-cm diameter. [2113]

A. 1.43E+02 N

B. 1.54E+02 N

C. 1.66E+02 N

D. 1.80E+02 N

E. 1.94E+02 N

9. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.400E+03-kg car resting ona second cylinder? The master cylinder has a 1.54-cm diameterand the second cylinder has a 22.6-cm diameter. [2114]

A. 8.68E+01 N

B. 9.37E+01 N

C. 1.01E+02 N

D. 1.09E+02 N

E. 1.18E+02 N

10. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.190E+03-kg car resting ona second cylinder? The master cylinder has a 2.37-cm diameterand the second cylinder has a 24.1-cm diameter. [2115]

A. 8.96E+01 N

B. 9.68E+01 N

The next page might contain more answer choices for this question

C. 1.05E+02 N

D. 1.13E+02 N

E. 1.22E+02 N

11. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.490E+03-kg car resting ona second cylinder? The master cylinder has a 2.23-cm diameterand the second cylinder has a 20.9-cm diameter. [2116]

A. 2.78E+02 N

B. 3.00E+02 N

C. 3.24E+02 N

D. 3.50E+02 N

E. 3.78E+02 N

12. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.200E+03-kg car resting ona second cylinder? The master cylinder has a 2.3-cm diameterand the second cylinder has a 25.5-cm diameter. [2117]

A. 8.21E+01 N

B. 8.87E+01 N

C. 9.58E+01 N

D. 1.03E+02 N

E. 1.12E+02 N

13. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.960E+03-kg car resting ona second cylinder? The master cylinder has a 1.84-cm diameterand the second cylinder has a 21.4-cm diameter. [2118]

A. 1.42E+02 N

B. 1.54E+02 N

C. 1.66E+02 N

D. 1.79E+02 N

E. 1.93E+02 N

14. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 2.200E+03-kg car resting ona second cylinder? The master cylinder has a 2.0-cm diameterand the second cylinder has a 24.2-cm diameter. [2119]

A. 1.36E+02 N

The next page might contain more answer choices for this question

B. 1.47E+02 N

C. 1.59E+02 N

D. 1.72E+02 N

E. 1.86E+02 N

15. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.750E+03-kg car resting ona second cylinder? The master cylinder has a 2.03-cm diameterand the second cylinder has a 25.1-cm diameter. [2120]

A. 1.12E+02 N

B. 1.21E+02 N

C. 1.31E+02 N

D. 1.41E+02 N

E. 1.53E+02 N

16. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.310E+03-kg car resting ona second cylinder? The master cylinder has a 2.16-cm diameterand the second cylinder has a 21.3-cm diameter. [2121]

A. 9.71E+01 N

B. 1.05E+02 N

C. 1.13E+02 N

D. 1.22E+02 N

E. 1.32E+02 N

17. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.860E+03-kg car resting ona second cylinder? The master cylinder has a 1.83-cm diameterand the second cylinder has a 22.4-cm diameter. [2122]

A. 8.95E+01 N

B. 9.67E+01 N

C. 1.04E+02 N

D. 1.13E+02 N

E. 1.22E+02 N

18. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.920E+03-kg car resting ona second cylinder? The master cylinder has a 1.93-cm diameterand the second cylinder has a 22.4-cm diameter. [2123]

The next page might contain more answer choices for this question

A. 1.40E+02 N

B. 1.51E+02 N

C. 1.63E+02 N

D. 1.76E+02 N

E. 1.90E+02 N

19. What force must be exerted on the master cylinder of ahydraulic lift to support the weight of a 1.320E+03-kg car resting ona second cylinder? The master cylinder has a 2.41-cm diameterand the second cylinder has a 23.0-cm diameter. [2124]

A. 1.22E+02 N

B. 1.32E+02 N

C. 1.42E+02 N

D. 1.54E+02 N

E. 1.66E+02 N

up1-14 Q4

1. A certain hydaulic system is designed to exert a force 83 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2125]

A. 2.93E+01

B. 4.15E+01

C. 5.87E+01

D. 8.30E+01

E. 1.17E+02

2. A certain hydaulic system is designed to exert a force 83 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2126]

A. 8.30E+01

B. 1.17E+02

C. 1.66E+02

D. 2.35E+02

E. 3.32E+02

The next page might contain more answer choices for this question

3. A certain hydaulic system is designed to exert a force 9.900E+01 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2127]

   A. 7.00E+01

   B. 9.90E+01

   C. 1.40E+02

   D. 1.98E+02

   E. 2.80E+02

4. A certain hydaulic system is designed to exert a force 89 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2128]

   A. 4.45E+01

   B. 6.29E+01

   C. 8.90E+01

   D. 1.26E+02

   E. 1.78E+02

5. A certain hydaulic system is designed to exert a force 76 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2129]

   A. 3.80E+01

   B. 5.37E+01

   C. 7.60E+01

   D. 1.07E+02

   E. 1.52E+02

6. A certain hydaulic system is designed to exert a force 1.110E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2130]

   A. 1.11E+02

   B. 1.57E+02

   C. 2.22E+02

   D. 3.14E+02

The next page might contain more answer choices for this question

E. 4.44E+02

7. A certain hydaulic system is designed to exert a force 1.230E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2131]

   A. 4.35E+01

   B. 6.15E+01

   C. 8.70E+01

   D. 1.23E+02

   E. 1.74E+02

8. A certain hydaulic system is designed to exert a force 1.170E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2132]

   A. 1.17E+02

   B. 1.65E+02

   C. 2.34E+02

   D. 3.31E+02

   E. 4.68E+02

9. A certain hydaulic system is designed to exert a force 91 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2133]

   A. 9.10E+01

   B. 1.29E+02

   C. 1.82E+02

   D. 2.57E+02

   E. 3.64E+02

10. A certain hydaulic system is designed to exert a force 79 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2134]

    A. 5.59E+01

    B. 7.90E+01

    C. 1.12E+02

The next page might contain more answer choices for this question

D. 1.58E+02

E. 2.23E+02

11. A certain hydaulic system is designed to exert a force 95 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2135]

A. 9.50E+01

B. 1.34E+02

C. 1.90E+02

D. 2.69E+02

E. 3.80E+02

12. A certain hydaulic system is designed to exert a force 1.180E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2136]

A. 1.18E+02

B. 1.67E+02

C. 2.36E+02

D. 3.34E+02

E. 4.72E+02

13. A certain hydaulic system is designed to exert a force 95 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2137]

A. 6.72E+01

B. 9.50E+01

C. 1.34E+02

D. 1.90E+02

E. 2.69E+02

14. A certain hydaulic system is designed to exert a force 1.080E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2138]

A. 2.70E+01

B. 3.82E+01

The next page might contain more answer choices for this question

C. 5.40E+01

D. 7.64E+01

E. 1.08E+02

15. A certain hydaulic system is designed to exert a force 1.140E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2139]

A. 8.06E+01

B. 1.14E+02

C. 1.61E+02

D. 2.28E+02

E. 3.22E+02

16. A certain hydaulic system is designed to exert a force 1.250E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2140]

A. 1.25E+02

B. 1.77E+02

C. 2.50E+02

D. 3.54E+02

E. 5.00E+02

17. A certain hydaulic system is designed to exert a force 1.030E+02 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2141]

A. 7.28E+01

B. 1.03E+02

C. 1.46E+02

D. 2.06E+02

E. 2.91E+02

18. A certain hydaulic system is designed to exert a force 83 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2142]

A. 2.07E+01

The next page might contain more answer choices for this question

B. 2.93E+01

C. 4.15E+01

D. 5.87E+01

E. 8.30E+01

19. A certain hydaulic system is designed to exert a force 83 times as large as the one put on it. What must be the ratio ofthe area of the cylinder that is being controlled to the area of the mastercylinder? [2143]

A. 2.07E+01

B. 2.93E+01

C. 4.15E+01

D. 5.87E+01

E. 8.30E+01

up1-14 Q5

1. A certain hydaulic system is designed to exert a force 75 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2144]

A. 8.66E+00

B. 1.22E+01

C. 1.73E+01

D. 2.45E+01

E. 3.46E+01

2. A certain hydaulic system is designed to exert a force 98 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2145]

A. 2.47E+00

B. 3.50E+00

C. 4.95E+00

D. 7.00E+00

E. 9.90E+00

3. A certain hydaulic system is designed to exert a force 1.110E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2146]

A. 5.27E+00

The next page might contain more answer choices for this question

B. 7.45E+00

C. 1.05E+01

D. 1.49E+01

E. 2.11E+01

4. A certain hydaulic system is designed to exert a force 1.120E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2147]

A. 1.06E+01

B. 1.50E+01

C. 2.12E+01

D. 2.99E+01

E. 4.23E+01

5. A certain hydaulic system is designed to exert a force 82 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2148]

A. 3.20E+00

B. 4.53E+00

C. 6.40E+00

D. 9.06E+00

E. 1.28E+01

6. A certain hydaulic system is designed to exert a force 9.900E+01 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2149]

A. 2.49E+00

B. 3.52E+00

C. 4.97E+00

D. 7.04E+00

E. 9.95E+00

7. A certain hydaulic system is designed to exert a force 1.020E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2150]

A. 1.01E+01

B. 1.43E+01

C. 2.02E+01

The next page might contain more answer choices for this question

D. 2.86E+01

E. 4.04E+01

8. A certain hydaulic system is designed to exert a force 1.230E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2151]

A. 1.11E+01

B. 1.57E+01

C. 2.22E+01

D. 3.14E+01

E. 4.44E+01

9. A certain hydaulic system is designed to exert a force 85 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2152]

A. 4.61E+00

B. 6.52E+00

C. 9.22E+00

D. 1.30E+01

E. 1.84E+01

10. A certain hydaulic system is designed to exert a force 1.250E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2153]

A. 2.80E+00

B. 3.95E+00

C. 5.59E+00

D. 7.91E+00

E. 1.12E+01

11. A certain hydaulic system is designed to exert a force 1.240E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2154]

A. 7.87E+00

B. 1.11E+01

C. 1.57E+01

D. 2.23E+01

E. 3.15E+01

The next page might contain more answer choices for this question

12. A certain hydaulic system is designed to exert a force 1.140E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2155]

    A. 2.67E+00

    B. 3.77E+00

    C. 5.34E+00

    D. 7.55E+00

    E. 1.07E+01

13. A certain hydaulic system is designed to exert a force 1.010E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2156]

    A. 5.02E+00

    B. 7.11E+00

    C. 1.00E+01

    D. 1.42E+01

    E. 2.01E+01

14. A certain hydaulic system is designed to exert a force 86 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2157]

    A. 3.28E+00

    B. 4.64E+00

    C. 6.56E+00

    D. 9.27E+00

    E. 1.31E+01

15. A certain hydaulic system is designed to exert a force 97 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2158]

    A. 4.92E+00

    B. 6.96E+00

    C. 9.85E+00

    D. 1.39E+01

    E. 1.97E+01

16. A certain hydaulic system is designed to exert a force 1.160E+02 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2159]

The next page might contain more answer choices for this question

A. 3.81E+00

B. 5.39E+00

C. 7.62E+00

D. 1.08E+01

E. 1.52E+01

17. A certain hydaulic system is designed to exert a force 83 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2160]

A. 2.28E+00

B. 3.22E+00

C. 4.56E+00

D. 6.44E+00

E. 9.11E+00

18. A certain hydaulic system is designed to exert a force 75 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2161]

A. 3.06E+00

B. 4.33E+00

C. 6.12E+00

D. 8.66E+00

E. 1.22E+01

19. A certain hydaulic system is designed to exert a force 84 times as large as the one put on it. What must be the ratio ofthe ratio of their diameters? [2162]

A. 9.17E+00

B. 1.30E+01

C. 1.83E+01

D. 2.59E+01

E. 3.67E+01

up1-14 Q6

1. A certain hydaulic system is designed to exert a force 1.010E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2163]

The next page might contain more answer choices for this question

A. 7.00E-03

B. 9.90E-03

C. 1.40E-02

D. 1.98E-02

E. 2.80E-02

2. A certain hydaulic system is designed to exert a force 86 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2164]

A. 5.81E-03

B. 8.22E-03

C. 1.16E-02

D. 1.64E-02

E. 2.33E-02

3. A certain hydaulic system is designed to exert a force 9.900E+01 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2165]

A. 3.57E-03

B. 5.05E-03

C. 7.14E-03

D. 1.01E-02

E. 1.43E-02

4. A certain hydaulic system is designed to exert a force 93 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2166]

A. 3.80E-03

B. 5.38E-03

C. 7.60E-03

D. 1.08E-02

E. 1.52E-02

The next page might contain more answer choices for this question

5. A certain hydaulic system is designed to exert a force 1.120E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2167]

   A. 3.16E-03

   B. 4.46E-03

   C. 6.31E-03

   D. 8.93E-03

   E. 1.26E-02

6. A certain hydaulic system is designed to exert a force 76 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2168]

   A. 6.58E-03

   B. 9.30E-03

   C. 1.32E-02

   D. 1.86E-02

   E. 2.63E-02

7. A certain hydaulic system is designed to exert a force 90 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2169]

   A. 3.93E-03

   B. 5.56E-03

   C. 7.86E-03

   D. 1.11E-02

   E. 1.57E-02

8. A certain hydaulic system is designed to exert a force 93 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2170]

   A. 5.38E-03

The next page might contain more answer choices for this question

B. 7.60E-03

C. 1.08E-02

D. 1.52E-02

E. 2.15E-02

9. A certain hydaulic system is designed to exert a force 1.230E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2171]

A. 5.75E-03

B. 8.13E-03

C. 1.15E-02

D. 1.63E-02

E. 2.30E-02

10. A certain hydaulic system is designed to exert a force 84 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2172]

A. 2.98E-03

B. 4.21E-03

C. 5.95E-03

D. 8.42E-03

E. 1.19E-02

11. A certain hydaulic system is designed to exert a force 1.160E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2173]

A. 8.62E-03

B. 1.22E-02

C. 1.72E-02

D. 2.44E-02

E. 3.45E-02

The next page might contain more answer choices for this question

12. A certain hydaulic system is designed to exert a force 93 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2174]

    A. 1.08E-02

    B. 1.52E-02

    C. 2.15E-02

    D. 3.04E-02

    E. 4.30E-02

13. A certain hydaulic system is designed to exert a force 1.150E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2175]

    A. 8.70E-03

    B. 1.23E-02

    C. 1.74E-02

    D. 2.46E-02

    E. 3.48E-02

14. A certain hydaulic system is designed to exert a force 9.900E+01 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2176]

    A. 2.53E-03

    B. 3.57E-03

    C. 5.05E-03

    D. 7.14E-03

    E. 1.01E-02

15. A certain hydaulic system is designed to exert a force 1.200E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2177]

    A. 4.17E-03

The next page might contain more answer choices for this question

B. 5.89E-03

C. 8.33E-03

D. 1.18E-02

E. 1.67E-02

16. A certain hydaulic system is designed to exert a force 79 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2178]

A. 3.16E-03

B. 4.48E-03

C. 6.33E-03

D. 8.95E-03

E. 1.27E-02

17. A certain hydaulic system is designed to exert a force 1.210E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2179]

A. 2.92E-03

B. 4.13E-03

C. 5.84E-03

D. 8.26E-03

E. 1.17E-02

18. A certain hydaulic system is designed to exert a force 83 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2180]

A. 1.20E-02

B. 1.70E-02

C. 2.41E-02

D. 3.41E-02

E. 4.82E-02

The next page might contain more answer choices for this question

19. A certain hydaulic system is designed to exert a force 1.210E+02 times as large as the one put on it. By what factor is the distance through which the output force moves reduced relative to the distance through which the input force moves? Assume no losses due to friction. [2181]

    A. 5.84E-03

    B. 8.26E-03

    C. 1.17E-02

    D. 1.65E-02

    E. 2.34E-02

up1-14 Q7

1. Water emerges straight down from a faucet with a 2.26-cm diameter at a speed of 0.444 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2182]

    A. 1.78E+01 cm^3/s

    B. 5.63E+01 cm^3/s

    C. 1.78E+02 cm^3/s

    D. 5.63E+02 cm^3/s

    E. 1.78E+03 cm^3/s

2. Water emerges straight down from a faucet with a 1.64-cm diameter at a speed of 0.338 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2183]

    A. 7.14E+01 cm^3/s

    B. 2.26E+02 cm^3/s

    C. 7.14E+02 cm^3/s

    D. 2.26E+03 cm^3/s

    E. 7.14E+03 cm^3/s

3. Water emerges straight down from a faucet with a 2.01-cm diameter at a speed of 0.609 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2184]

    A. 6.11E+01 cm^3/s

    B. 1.93E+02 cm^3/s

The next page might contain more answer choices for this question

C. 6.11E+02 cm^3/s

D. 1.93E+03 cm^3/s

E. 6.11E+03 cm^3/s

4. Water emerges straight down from a faucet with a 1.75-cm diameter at a speed of 0.426 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2185]

A. 1.02E+00 cm^3/s

B. 3.24E+00 cm^3/s

C. 1.02E+01 cm^3/s

D. 3.24E+01 cm^3/s

E. 1.02E+02 cm^3/s

5. Water emerges straight down from a faucet with a 1.36-cm diameter at a speed of 0.598 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2186]

A. 8.69E+01 cm^3/s

B. 2.75E+02 cm^3/s

C. 8.69E+02 cm^3/s

D. 2.75E+03 cm^3/s

E. 8.69E+03 cm^3/s

6. Water emerges straight down from a faucet with a 1.53-cm diameter at a speed of 0.404 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2187]

A. 2.35E+00 cm^3/s

B. 7.43E+00 cm^3/s

C. 2.35E+01 cm^3/s

D. 7.43E+01 cm^3/s

E. 2.35E+02 cm^3/s

7. Water emerges straight down from a faucet with a 1.59-cm diameter at a speed of 0.352 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2188]

A. 6.99E+01 cm^3/s

The next page might contain more answer choices for this question

B. 2.21E+02 cm^3/s

C. 6.99E+02 cm^3/s

D. 2.21E+03 cm^3/s

E. 6.99E+03 cm^3/s

8. Water emerges straight down from a faucet with a 2.06-cm diameter at a speed of 0.594 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2189]

A. 1.98E+00 cm^3/s

B. 6.26E+00 cm^3/s

C. 1.98E+01 cm^3/s

D. 6.26E+01 cm^3/s

E. 1.98E+02 cm^3/s

9. Water emerges straight down from a faucet with a 1.77-cm diameter at a speed of 0.301 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2190]

A. 7.41E+01 cm^3/s

B. 2.34E+02 cm^3/s

C. 7.41E+02 cm^3/s

D. 2.34E+03 cm^3/s

E. 7.41E+03 cm^3/s

10. Water emerges straight down from a faucet with a 2.13-cm diameter at a speed of 0.392 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2191]

A. 1.40E+00 cm^3/s

B. 4.42E+00 cm^3/s

C. 1.40E+01 cm^3/s

D. 4.42E+01 cm^3/s

E. 1.40E+02 cm^3/s

11. Water emerges straight down from a faucet with a 2.23-cm diameter at a speed of 0.661 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2192]

The next page might contain more answer choices for this question

A. 8.16E+00 cm^3/s

B. 2.58E+01 cm^3/s

C. 8.16E+01 cm^3/s

D. 2.58E+02 cm^3/s

E. 8.16E+02 cm^3/s

12. Water emerges straight down from a faucet with a 1.4-cm diameter at a speed of 0.413 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2193]

A. 6.36E+01 cm^3/s

B. 2.01E+02 cm^3/s

C. 6.36E+02 cm^3/s

D. 2.01E+03 cm^3/s

E. 6.36E+03 cm^3/s

13. Water emerges straight down from a faucet with a 2.09-cm diameter at a speed of 0.397 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2194]

A. 4.31E+00 cm^3/s

B. 1.36E+01 cm^3/s

C. 4.31E+01 cm^3/s

D. 1.36E+02 cm^3/s

E. 4.31E+02 cm^3/s

14. Water emerges straight down from a faucet with a 1.85-cm diameter at a speed of 0.739 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2195]

A. 6.28E+01 cm^3/s

B. 1.99E+02 cm^3/s

C. 6.28E+02 cm^3/s

D. 1.99E+03 cm^3/s

E. 6.28E+03 cm^3/s

15. Water emerges straight down from a faucet with a 1.79-cm diameter at a speed of 0.374 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2196]

The next page might contain more answer choices for this question

A. 9.41E-01 cm^3/s

B. 2.98E+00 cm^3/s

C. 9.41E+00 cm^3/s

D. 2.98E+01 cm^3/s

E. 9.41E+01 cm^3/s

16. Water emerges straight down from a faucet with a 1.78-cm diameter at a speed of 0.438 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2197]

A. 1.09E+00 cm^3/s

B. 3.45E+00 cm^3/s

C. 1.09E+01 cm^3/s

D. 3.45E+01 cm^3/s

E. 1.09E+02 cm^3/s

17. Water emerges straight down from a faucet with a 2.26-cm diameter at a speed of 0.518 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2198]

A. 2.08E+01 cm^3/s

B. 6.57E+01 cm^3/s

C. 2.08E+02 cm^3/s

D. 6.57E+02 cm^3/s

E. 2.08E+03 cm^3/s

18. Water emerges straight down from a faucet with a 1.71-cm diameter at a speed of 0.526 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2199]

A. 1.21E+00 cm^3/s

B. 3.82E+00 cm^3/s

C. 1.21E+01 cm^3/s

D. 3.82E+01 cm^3/s

E. 1.21E+02 cm^3/s

19. Water emerges straight down from a faucet with a 1.45-cm diameter at a speed of 0.568 m/s. (Because of the construction of the faucet, there is no variation in speed across the stream.) What is the flow rate in cm^3/s? [2200]

The next page might contain more answer choices for this question

A. 2.97E+00 cm^3/s

B. 9.38E+00 cm^3/s

C. 2.97E+01 cm^3/s

D. 9.38E+01 cm^3/s

E. 2.97E+02 cm^3/s

11 Attribution

Notes

[1]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[2]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[3]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[4]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[5]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[6]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[7]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[8]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[9]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[10]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[11]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[12]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[13]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[14]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[15]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[16]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[17]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[18]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[19]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[20]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[21]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[22]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[23]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[24]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[25]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[26]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[27]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[28]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[29]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[30]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[31]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[32]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[33]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[34]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[35]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[36]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[37]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[38]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[39]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[40]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[41]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[42]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[43]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[44]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[45]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[46]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[47]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[48]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[49]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[50]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[51]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[52]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[53]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[54]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[55]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[56]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[57]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[58]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[59]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[60]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[61]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[62]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[63]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[64]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[65]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[66]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[67]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[68]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[69]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[70]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[71]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[72]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[73]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[74]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[75]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[76]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[77]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[78]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[79]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[80]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[81]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[82]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[83]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[84]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[85]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[86]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[87]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[88]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[89]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[90]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[91]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[92]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[93]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[94]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[95]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[96]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[97]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[98]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[99]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[100]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[101]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[102]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[103]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[104]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[105]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[106]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[107]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[108]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[109]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[110]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[111]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[112]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[113]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[114]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[115]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[116]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[117]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[118]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[119]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[120]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[121]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[122]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[123]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[124]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[125]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[126]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[127]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[128]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[129]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[130]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[131]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[132]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[133]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[134]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[135]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[136]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[137]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[138]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[139]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[140]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[141]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[142]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[143]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[144]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[145]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[146]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[147]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[148]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[149]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[150]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[151]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[152]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[153]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[154]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[155]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[156]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[157]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[158]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[159]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[160]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[161]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[162]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[163]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[164]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[165]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[166]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[167]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[168]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[169]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[170]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[171]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[172]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[173]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[174]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[175]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[176]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[177]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[178]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[179]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[180]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[181]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[182]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[183]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[184]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[185]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[186]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[187]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[188]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[189]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[190]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[191]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[192]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[193]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[194]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[195]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[196]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[197]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[198]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[199]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[200]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[201]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[202]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[203]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[204]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[205]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[206]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[207]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[208]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[209]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[210]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[211]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[212]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[213]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[214]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[215]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[216]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[217]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[218]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[219]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[220]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[221]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[222]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[223]Question licensed by OpenStax College University Physics Prob. 5.101 under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[224]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[225]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[226]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[227]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[228]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[229]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[230]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L

The next page might contain more answer choices for this question

G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[231]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[232]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[233]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[234]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[235]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[236]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[237]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[238]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[239]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY
copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface
[240]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY

The next page might contain more answer choices for this question

copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface

[241]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface

[242]Question licensed by OpenStax College University Physics Prob. 5.103 under Creative Commons CC-BY copyright information available at
https://urldefense.proofpoint.com/v2/url?u=https-3A__cnx.org_contents_1Q9uMg&d=DwIGAg&c=3buyMx9JlH1z22L
G5pM28wz_Ru6WjhVHwo-vpeS0Gk&r=GEmPL7dF--wlfVyGipYRbK0todJiePNS35oD8Q67Gkk&m=G-mBQ2zUpsXtInao4Gz9UkY5LLO
s=r7msijURpMxPd0aZaqlxe5mkVGsCN7YxVT8mcmNIscA&e=_a@12.3:Gofkr9Oy@20/Preface

[243]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[244]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[245]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[246]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[247]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[248]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[249]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[250]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[251]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[252]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

[253]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[254]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[255]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[256]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[257]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[258]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[259]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[260]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[261]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[262]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[263]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[264]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[265]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[266]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[267]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[268]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[269]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[270]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[271]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[272]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[273]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[274]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[275]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[276]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[277]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[278]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[279]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[280]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[281]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[282]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[283]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[284]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[285]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[286]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[287]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[288]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[289]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[290]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[291]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[292]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[293]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[294]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[295]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[296]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[297]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[298]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[299]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[300]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[301]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[302]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[303]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[304]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[305]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[306]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[307]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[308]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[309]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[310]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[311]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[312]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[313]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[314]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[315]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[316]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[317]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[318]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[319]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[320]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[321]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[322]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[323]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[324]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[325]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[326]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[327]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[328]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[329]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[330]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[331]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[332]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[333]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[334]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[335]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[336]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[337]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[338]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[339]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[340]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[341]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[342]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[343]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[344]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[345]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[346]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[347]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[348]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[349]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[350]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[351]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[352]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[353]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[354]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[355]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[356]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[357]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[358]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[359]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[360]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[361]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[362]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[363]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[364]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[365]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[366]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[367]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[368]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[369]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[370]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[371]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[372]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[373]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[374]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[375]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[376]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[377]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[378]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[379]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[380]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[381]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[382]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[383]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[384]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[385]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[386]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[387]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[388]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[389]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[390]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[391]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[392]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[393]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[394]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[395]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[396]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[397]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[398]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[399]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[400]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[401]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[402]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[403]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[404]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[405]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[406]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[407]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[408]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[409]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[410]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[411]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[412]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[413]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[414]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[415]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[416]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[417]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[418]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[419]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[420]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[421]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[422]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[423]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[424]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[425]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[426]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[427]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[428]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[429]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[430]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[431]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[432]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[433]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[434]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[435]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[436]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[437]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[438]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[439]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[440]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[441]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[442]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[443]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[444]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[445]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[446]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[447]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[448]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[449]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[450]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[451]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[452]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[453]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[454]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[455]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[456]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[457]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[458]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[459]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[460]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[461]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[462]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[463]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[464]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[465]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[466]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[467]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[468]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[469]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[470]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[471]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[472]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[473]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[474]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[475]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[476]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[477]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[478]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[479]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[480]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[481]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[482]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[483]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[484]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[485]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[486]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[487]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[488]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[489]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[490]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[491]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[492]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[493]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[494]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[495]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[496]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[497]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[498]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[499]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[500]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[501]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[502]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[503]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[504]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[505]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[506]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[507]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[508]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[509]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[510]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[511]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[512]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[513]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[514]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[515]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[516]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[517]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[518]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[519]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[520]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[521]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[522]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[523]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[524]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[525]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[526]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[527]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[528]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[529]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[530]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[531]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[532]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[533]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[534]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[535]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[536]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[537]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[538]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[539]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[540]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[541]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[542]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[543]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[544]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[545]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[546]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[547]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[548]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[549]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[550]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[551]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[552]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[553]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[554]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[555]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[556]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[557]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[558]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[559]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[560]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[561]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[562]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[563]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[564]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[565]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[566]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[567]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[568]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[569]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[570]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[571]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[572]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[573]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[574]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[575]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[576]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[577]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[578]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[579]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[580]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[581]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[582]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[583]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[584]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[585]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[586]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[587]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[588]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[589]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[590]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[591]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[592]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[593]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[594]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[595]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[596]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[597]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[598]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[599]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[600]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[601]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[602]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[603]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[604]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[605]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[606]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[607]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[608]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[609]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[610]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[611]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[612]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[613]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[614]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[615]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[616]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[617]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[618]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[619]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[620]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[621]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[622]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[623]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[624]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[625]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[626]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[627]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[628]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[629]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[630]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[631]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[632]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[633]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[634]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[635]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[636]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[637]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[638]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[639]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[640]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[641]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[642]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[643]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[644]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[645]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[646]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[647]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[648]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[649]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[650]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[651]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[652]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[653]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[654]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[655]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[656]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[657]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[658]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[659]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[660]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[661]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[662]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[663]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[664]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[665]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[666]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[667]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[668]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[669]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[670]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[671]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[672]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[673]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[674]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[675]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[676]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[677]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[678]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[679]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[680]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[681]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[682]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[683]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[684]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[685]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[686]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[687]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[688]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[689]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[690]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[691]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[692]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[693]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[694]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[695]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[696]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[697]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[698]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[699]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[700]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[701]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[702]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[703]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[704]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[705]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[706]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[707]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[708]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[709]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[710]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[711]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[712]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[713]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[714]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[715]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[716]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[717]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[718]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[719]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[720]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[721]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[722]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[723]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[724]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[725]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[726]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[727]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[728]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[729]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[730]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[731]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[732]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[733]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[734]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[735]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[736]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[737]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[738]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[739]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[740]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[741]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[742]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[743]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[744]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[745]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[746]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[747]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[748]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[749]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[750]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[751]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[752]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[753]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[754]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[755]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[756]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[757]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[758]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[759]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[760]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[761]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[762]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[763]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[764]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[765]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[766]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[767]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[768]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[769]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[770]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[771]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[772]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[773]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[774]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[775]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[776]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[777]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[778]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[779]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[780]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[781]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[782]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[783]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[784]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[785]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[786]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[787]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[788]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[789]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[790]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[791]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[792]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[793]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[794]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[795]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[796]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[797]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[798]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[799]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[800]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[801]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[802]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[803]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[804]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[805]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[806]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[807]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[808]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[809]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[810]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[811]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[812]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[813]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[814]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[815]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[816]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[817]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[818]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[819]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[820]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[821]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[822]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[823]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[824]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[825]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[826]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[827]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[828]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[829]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[830]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[831]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[832]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[833]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[834]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[835]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[836]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[837]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[838]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[839]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[840]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[841]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[842]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[843]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[844]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[845]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[846]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[847]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[848]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[849]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[850]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[851]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[852]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[853]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[854]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[855]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[856]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[857]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[858]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[859]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[860]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[861]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[862]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[863]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[864]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[865]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[866]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[867]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[868]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[869]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[870]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[871]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[872]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[873]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[874]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[875]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[876]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[877]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[878]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[879]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[880]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[881]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[882]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[883]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[884]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[885]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[886]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[887]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[888]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[889]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[890]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[891]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[892]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[893]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[894]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[895]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[896]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[897]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[898]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[899]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[900]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[901]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[902]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[903]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[904]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[905]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[906]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[907]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[908]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[909]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[910]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[911]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[912]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[913]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[914]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[915]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[916]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[917]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[918]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[919]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[920]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[921]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[922]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[923]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[924]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[925]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[926]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[927]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[928]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[929]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[930]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[931]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[932]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[933]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[934]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[935]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[936]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[937]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[938]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[939]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[940]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[941]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[942]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[943]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[944]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[945]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[946]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[947]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[948]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[949]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[950]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[951]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[952]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[953]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[954]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[955]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[956]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[957]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[958]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[959]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[960]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[961]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[962]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[963]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[964]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[965]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[966]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[967]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[968]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[969]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[970]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[971]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[972]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[973]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[974]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[975]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[976]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[977]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[978]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[979]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[980]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[981]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[982]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[983]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[984]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[985]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[986]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[987]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[988]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[989]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[990]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[991]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[992]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[993]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[994]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[995]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[996]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[997]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[998]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[999]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1000]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1001]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1002]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1003]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1004]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1005]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1006]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1007]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1008]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1009]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1010]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1011]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1012]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1013]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1014]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1015]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1016]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1017]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1018]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1019]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1020]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1021]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1022]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1023]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1024]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1025]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1026]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1027]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1028]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1029]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1030]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1031]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1032]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1033]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1034]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1035]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1036]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1037]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1038]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1039]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1040]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1041]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1042]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1043]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1044]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1045]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1046]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1047]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1048]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1049]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1050]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1051]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1052]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1053]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1054]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1055]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1056]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1057]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1058]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1059]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1060]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1061]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1062]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1063]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1064]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1065]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1066]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1067]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1068]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1069]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1070]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1071]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1072]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1073]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1074]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1075]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1076]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1077]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1078]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1079]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1080]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1081]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1082]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1083]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1084]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1085]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1086]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1087]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1088]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1089]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1090]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1091]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1092]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1093]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1094]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1095]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1096]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1097]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1098]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1099]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1100]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1101]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1102]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1103]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1104]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1105]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1106]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1107]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1108]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1109]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1110]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1111]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1112]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1113]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1114]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1115]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1116]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1117]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1118]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1119]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1120]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1121]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1122]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1123]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1124]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1125]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1126]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1127]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1128]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1129]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1130]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1131]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1132]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1133]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1134]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1135]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1136]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1137]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1138]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1139]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1140]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1141]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1142]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1143]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1144]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1145]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1146]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1147]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1148]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1149]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1150]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1151]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1152]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1153]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1154]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1155]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1156]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1157]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1158]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1159]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1160]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1161]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1162]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1163]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1164]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1165]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1166]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1167]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1168]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1169]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1170]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1171]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1172]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1173]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1174]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1175]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1176]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1177]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1178]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1179]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1180]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1181]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1182]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1183]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1184]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1185]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1186]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1187]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1188]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1189]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1190]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1191]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1192]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1193]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1194]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1195]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1196]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1197]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1198]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1199]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1200]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1201]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1202]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1203]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1204]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1205]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1206]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1207]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1208]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1209]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1210]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1211]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1212]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1213]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1214]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1215]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1216]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1217]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1218]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1219]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1220]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1221]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1222]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1223]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1224]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1225]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1226]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1227]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1228]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1229]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1230]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1231]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1232]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1233]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1234]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1235]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1236]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1237]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1238]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1239]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1240]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1241]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1242]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1243]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1244]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1245]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1246]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1247]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1248]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1249]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1250]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1251]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1252]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1253]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1254]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1255]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1256]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1257]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1258]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1259]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1260]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1261]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1262]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1263]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1264]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1265]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1266]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1267]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1268]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1269]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1270]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1271]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1272]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1273]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1274]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1275]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1276]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1277]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1278]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1279]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1280]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1281]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1282]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1283]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1284]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1285]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1286]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1287]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1288]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1289]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1290]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1291]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1292]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1293]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1294]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1295]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1296]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1297]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1298]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1299]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1300]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1301]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1302]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1303]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1304]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1305]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1306]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1307]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1308]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1309]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1310]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1311]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1312]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1313]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1314]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1315]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1316]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1317]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1318]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1319]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1320]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1321]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1322]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1323]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1324]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1325]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1326]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1327]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1328]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1329]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1330]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1331]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1332]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1333]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1334]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1335]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1336]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1337]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1338]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1339]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1340]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1341]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1342]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1343]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1344]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1345]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1346]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1347]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1348]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1349]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1350]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1351]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1352]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1353]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1354]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1355]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1356]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1357]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1358]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1359]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1360]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1361]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1362]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1363]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1364]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1365]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1366]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1367]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1368]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1369]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1370]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1371]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1372]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1373]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1374]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1375]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1376]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1377]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1378]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1379]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1380]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1381]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1382]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1383]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1384]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1385]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1386]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1387]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1388]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1389]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1390]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1391]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1392]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1393]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1394]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1395]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1396]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1397]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1398]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1399]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1400]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1401]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1402]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1403]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1404]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1405]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1406]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1407]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1408]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1409]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1410]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1411]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1412]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1413]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1414]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1415]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1416]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1417]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1418]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1419]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1420]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1421]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1422]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1423]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1424]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1425]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1426]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1427]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1428]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1429]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1430]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1431]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1432]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1433]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1434]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1435]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1436]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1437]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1438]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1439]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1440]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1441]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1442]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1443]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1444]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1445]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1446]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1447]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1448]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1449]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1450]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1451]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1452]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1453]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1454]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1455]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1456]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1457]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1458]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1459]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1460]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1461]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1462]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1463]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1464]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1465]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1466]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1467]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1468]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1469]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1470]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1471]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1472]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1473]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1474]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1475]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1476]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1477]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1478]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1479]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1480]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1481]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1482]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1483]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1484]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1485]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1486]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1487]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1488]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1489]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1490]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1491]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1492]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1493]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1494]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1495]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1496]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1497]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1498]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1499]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1500]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1501]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1502]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1503]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1504]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1505]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1506]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1507]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1508]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1509]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1510]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1511]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1512]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1513]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1514]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1515]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1516]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1517]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1518]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1519]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1520]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1521]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1522]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1523]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1524]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1525]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1526]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1527]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1528]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1529]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1530]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1531]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1532]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1533]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1534]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1535]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1536]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1537]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1538]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1539]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1540]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1541]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1542]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1543]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1544]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1545]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1546]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1547]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1548]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1549]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1550]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1551]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1552]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1553]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1554]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1555]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1556]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1557]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1558]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1559]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1560]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1561]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1562]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1563]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1564]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1565]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1566]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1567]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1568]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1569]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1570]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1571]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1572]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1573]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1574]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1575]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1576]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1577]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1578]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1579]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1580]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1581]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1582]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1583]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1584]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1585]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1586]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1587]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1588]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1589]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1590]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1591]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1592]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1593]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1594]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1595]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1596]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1597]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1598]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1599]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1600]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1601]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1602]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1603]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1604]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1605]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1606]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1607]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1608]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1609]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1610]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1611]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1612]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1613]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1614]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1615]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1616]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1617]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1618]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1619]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1620]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1621]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1622]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1623]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1624]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1625]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1626]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1627]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1628]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1629]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1630]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1631]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1632]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1633]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1634]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1635]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1636]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1637]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1638]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1639]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1640]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1641]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1642]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1643]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1644]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1645]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1646]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1647]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1648]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1649]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1650]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1651]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1652]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1653]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1654]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1655]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1656]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1657]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1658]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1659]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1660]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1661]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1662]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1663]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1664]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1665]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1666]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1667]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1668]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1669]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1670]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1671]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1672]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1673]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1674]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1675]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1676]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1677]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1678]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1679]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1680]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1681]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1682]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1683]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1684]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1685]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1686]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1687]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1688]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1689]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1690]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1691]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1692]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1693]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1694]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1695]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1696]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1697]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1698]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1699]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1700]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1701]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1702]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1703]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1704]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1705]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1706]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1707]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1708]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1709]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1710]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1711]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1712]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1713]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1714]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1715]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1716]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1717]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1718]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1719]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1720]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1721]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1722]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1723]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1724]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1725]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1726]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1727]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1728]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1729]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1730]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1731]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1732]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1733]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1734]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1735]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1736]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1737]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1738]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1739]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1740]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1741]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1742]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1743]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1744]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1745]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1746]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1747]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1748]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1749]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1750]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1751]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1752]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1753]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1754]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1755]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1756]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1757]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1758]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1759]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1760]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1761]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1762]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1763]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1764]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1765]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1766]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1767]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1768]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1769]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1770]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1771]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1772]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1773]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1774]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1775]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1776]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1777]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1778]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1779]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1780]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1781]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1782]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1783]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1784]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1785]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1786]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1787]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1788]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1789]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1790]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1791]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1792]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1793]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1794]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1795]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1796]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1797]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1798]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1799]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1800]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1801]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1802]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1803]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1804]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1805]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1806]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1807]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1808]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1809]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1810]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1811]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1812]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1813]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1814]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1815]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1816]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1817]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1818]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1819]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1820]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1821]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1822]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1823]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1824]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1825]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1826]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1827]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1828]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1829]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1830]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1831]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1832]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1833]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1834]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1835]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1836]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1837]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1838]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1839]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1840]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1841]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1842]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1843]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1844]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1845]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1846]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1847]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1848]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1849]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1850]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1851]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1852]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1853]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1854]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1855]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1856]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1857]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1858]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1859]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1860]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1861]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1862]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1863]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1864]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1865]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1866]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1867]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1868]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1869]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1870]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1871]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1872]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1873]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1874]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1875]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1876]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1877]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1878]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1879]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1880]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1881]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1882]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1883]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1884]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1885]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1886]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1887]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1888]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1889]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1890]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1891]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1892]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1893]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1894]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1895]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1896]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1897]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1898]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1899]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1900]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1901]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1902]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1903]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1904]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1905]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1906]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1907]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1908]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1909]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1910]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1911]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1912]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1913]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1914]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1915]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1916]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1917]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1918]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1919]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1920]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1921]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1922]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1923]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1924]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1925]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1926]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1927]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1928]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1929]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1930]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1931]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1932]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1933]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1934]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1935]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1936]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1937]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1938]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1939]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1940]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1941]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1942]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1943]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1944]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1945]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1946]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1947]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1948]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1949]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1950]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1951]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1952]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1953]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1954]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1955]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1956]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1957]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1958]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1959]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1960]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1961]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1962]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1963]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1964]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1965]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1966]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1967]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1968]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1969]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1970]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1971]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1972]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1973]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1974]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1975]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1976]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1977]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1978]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1979]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1980]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1981]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1982]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1983]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1984]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1985]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1986]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1987]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1988]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1989]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1990]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1991]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1992]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1993]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1994]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1995]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1996]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1997]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[1998]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[1999]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2000]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2001]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2002]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2003]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2004]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2005]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2006]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2007]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2008]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2009]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2010]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2011]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2012]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2013]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2014]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2015]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2016]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2017]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2018]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2019]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2020]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2021]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2022]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2023]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2024]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2025]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2026]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2027]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2028]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2029]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2030]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2031]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2032]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2033]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2034]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2035]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2036]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2037]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2038]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2039]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2040]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2041]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2042]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2043]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2044]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2045]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2046]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2047]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2048]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2049]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2050]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2051]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2052]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2053]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2054]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2055]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2056]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2057]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2058]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2059]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2060]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2061]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2062]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2063]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2064]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2065]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2066]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2067]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2068]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2069]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2070]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2071]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2072]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2073]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2074]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2075]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2076]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2077]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2078]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2079]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2080]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2081]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2082]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2083]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2084]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2085]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2086]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2087]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2088]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2089]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2090]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2091]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2092]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2093]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2094]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2095]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2096]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2097]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2098]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2099]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2100]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2101]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2102]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2103]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2104]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2105]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2106]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2107]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2108]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2109]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2110]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2111]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2112]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2113]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2114]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2115]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2116]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2117]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2118]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2119]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2120]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2121]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2122]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2123]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2124]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2125]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2126]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2127]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2128]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2129]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2130]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2131]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2132]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2133]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2134]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2135]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2136]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2137]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2138]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2139]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2140]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2141]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2142]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2143]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2144]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2145]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2146]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2147]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2148]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2149]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2150]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2151]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2152]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2153]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2154]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2155]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2156]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2157]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2158]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2159]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2160]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2161]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2162]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2163]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2164]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2165]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2166]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2167]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2168]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2169]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2170]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2171]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2172]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2173]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2174]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2175]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2176]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2177]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2178]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2179]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2180]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2181]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2182]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2183]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2184]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2185]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2186]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2187]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2188]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2189]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question

[2190]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2191]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2192]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2193]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2194]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2195]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2196]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2197]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2198]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2199]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface
[2200]Question licensed by OpenStax College University Physics under Creative Commons CC-BY copyright information available at
https://cnx.org/contents/1Q9uMg_a@12.3:Gofkr9Oy@20/Preface

The next page might contain more answer choices for this question