

-2, -5) (10) (4, 3; -3, -4)(3, 1;  $\frac{1}{2}$ , 6) (11) (6, -3; 3, -6), (5, 3; 3, 5), (12) (3, 2), (3, 5)

## (76)

(1) 0, 0, 0; 7, 3, 2; -7, -3, -2 (2) 0, 0, 0; 1, 3, 2; 3, 1, 2 (3) 1, 2, 3; -1, -2, -3 (4) -2, 2, 3 (5) 5, -3, 8; -5, 3, -8 (6) 0, 2, 3; 0, -2, -3 (7) 4, 1, 7; -4, -1, -7 (8) 2, -1, 3; -2, 1, -3 (9) 3, -2, 1; -3, 2, -1 (10) 35, 21, 14; 5, 3, 2 (11) 0, 0, 1; 0, 1, 0; 1, 0, 0 (12) 2, 1, 0; -2, -1, 0 (13) 4, 3, 2, 1; 7, 0, 1, 2 (14) 8, 3, 6, 1;  $\frac{21}{2}$ ,  $\frac{16}{7}$ ,  $\frac{7}{2}$ ,  $\frac{12}{7}$

## (77)

(1)  $\sqrt{5} - \sqrt{3}$ ,  $\sqrt{7} + 1$ ,  $\sqrt{7} - \sqrt{2}$ ,  $\sqrt{7} + \sqrt{3}$  (2)  $\sqrt{5} + \sqrt{2}$ ,  $\sqrt{6} - 1$ ,  $\sqrt{10} + 1$ ,  $\sqrt{11} - \sqrt{2}$  (3)  $2 + \sqrt{2}$ ,  $2 - \sqrt{3}$ ,  $\sqrt{6} - \sqrt{2}$ ,  $2 + \sqrt{7}$ , (4)  $2\sqrt{2} - \sqrt{3}$ ,  $3 + \sqrt{2}$ ,  $2\sqrt{2} - \sqrt{5}$ ,  $2\sqrt{3} + 1$  (5)  $\frac{\sqrt{2} + \sqrt{10}}{2}$ ,  $\frac{\sqrt{6} + \sqrt{10}}{2}$ ,  $\frac{\sqrt{14} - \sqrt{2}}{2}$ ,  $\frac{\sqrt{14} - \sqrt{6}}{2}$  (6)  $\frac{3\sqrt{2} - \sqrt{6}}{2}$ ,  $\frac{3\sqrt{2} + \sqrt{10}}{2}$ ,  $\frac{\sqrt{14} - \sqrt{10}}{2}$ ,  $\frac{\sqrt{34} + 3\sqrt{2}}{2}$  (7)  $\sqrt[4]{3}(\sqrt{2} - 1)$ ,  $\sqrt[4]{2}(\sqrt{3} + 1)$ ,  $\sqrt[4]{5}(\sqrt{3} -$

$\sqrt{2}$ )  $\sqrt[4]{3}(2 + \sqrt{2})$  (8)  $\sqrt{a} - \sqrt{b}$  (9)  $\sqrt{x+3y} + \sqrt{x-3y}$  (10)  $\sqrt{2a} + \sqrt{b}$  (11)  $\sqrt{2x-1} + \sqrt{x-1}$  (12) (4)  $\sqrt{2} + 1$ ,  $4\sqrt{2} + 2\sqrt{3} - 1$  (5)  $\sqrt{3} - 2$  (6) 1,  $\frac{\sqrt{2} + 2}{2}$  (7)  $\sqrt{11} + 2$  (13) 17, 12, 24, 25

## (78)

(1) 9, 4, 無, 12, 50 (2) 2, 1, 9 (3) 無, 11 (4) 9, 3, 1 (5) 9, 9 (6) 0, 9 (7) 15, 14, 3 (8) 10, 1 (9) 5, 10 (10)  $5 - 2\sqrt{6}$ ,  $4 - 2\sqrt{3}$ ,  $17 + 12\sqrt{2}$  (11) 7, 13 (12) 16, 1, 19 (13) 17, 23 (14) 4, 10 (15) 11, 13 (16) 8, 27, 10 (17) 10, 7 (18) (3, 4), (9, 4) (19) (19, 6)  $(\frac{716}{289}, \frac{579}{289})$ ,

## (79)

(1)  $\pm 12$ , 2 (2)  $\frac{1}{9}$ , 4; 4, 1 (3) 8, 16; 13 (4) 6, 13 (5) 2, 3 (6) 2, 7; 3 (7) 9, -1; 0, 1 (8) 1, -4; 1 (9) 無,  $\frac{27 - \sqrt{401}}{32}$  (10) -3, 5 (11)  $\pm 49$ ; 1 (12) (14, 2; 9, 7), (-1, 4; 4, -1)

## (80)

(1)  $x > 4$ ,  $3 > x$ ,  $2 > x$  (2)  $x > \frac{3}{2}$ ,  $-2 > x$ ,  $x > \frac{-5}{3}$  (3)  $2 > x$ ,  $x > 3$ ,  $x > 30$  (4)  $6 > x$ ,  $x > 1$  (5)  $-10 > x$ ,  $x > -3$  (6)

$\frac{3}{2} > x, -1 > x$  [7]  $\frac{1}{2} > x$  [8] (4)  $x > 3, x > 2, x > -3,$   
 $x > -2\frac{1}{3}$  (□)  $1 > x, -1 > x, -2 > x, -2 > x$  (ハ)  $2 < x < 3,$   
 無, 無,  $-3 < x < -1$  (ニ)  $x > 5, x > \frac{13}{2}, x > -\frac{1}{3}$  [9]  
 $9 > x > 3, x > 1$  及  $-\frac{1}{5} > x$  [10]  $1 > x > -3, -1 > x$  及  
 $x > 3$  [11]  $-2 + \sqrt{3} > x > -2 - \sqrt{3}, 1 - \sqrt{3} > x$  及  $x > 1$   
 $+ \sqrt{3}$  [12] 無, 總ての實數値 [13]  $\frac{9}{4} > x > 1, x > 5$  及  
 $3 > x$  [16] (4)  $-3 \geq y$  にして  $x > 2 - 2y$ , 及び  $-3 < y$  に  
 して  $x > \frac{7-3y}{2}$  (□)  $9 \geq y$  にして  $x > \frac{23-y}{2}$ , 及び  $9 < y$   
 にして  $x > \frac{19+y}{4}$  (ハ)  $y > 2$  にして  $\frac{2y+5}{3} > x > \frac{13-2y}{3}$   
 (ニ)  $y > 5$  にして  $\frac{9y+7}{4} < x < 3y-2$

## (81)

[1] (□) (ニ) [2] (4) 實 (□) 虚 (ハ) 實 (ニ) 等 [3]  $\frac{9}{4} > k$   
 ならば相異なる實根,  $\frac{9}{4} = k$  ならば實數の等根  $\frac{9}{4} < k$  な  
 らば虚根 [4]  $-\frac{1}{3}, 1$  [5]  $-7, 5$  [6] 判別式が常に正で  
 あるから [13] (4) 二根共正 (□) 二根共負 (ハ) 正の方大  
 (ニ) 負の方大

## (82)

[1] (4)  $(3, 2), (5, -4), (-7, -1)$ , (□)  $(\frac{3}{2}, -\frac{1}{2}), (2, \frac{10}{3}),$   
 $(-2, -6)$  (ハ)  $(-2, -\frac{4}{5}), (-\frac{3}{7}, \frac{2}{7})$  (ニ)  $(\frac{5}{3}, 0), (0, -\frac{8}{5}),$   
 $(0, \frac{5}{2})$  (ホ)  $(a+b, ab), (\frac{-2a}{a-b}, -1)$  [2] (4)  $x^2 - 3x + 2$   
 $= 0, x^2 + 5x + 6 = 0, x^2 - x - 6 = 0, x^2 + 3x - 10 = 0, x^2 - 3x = 0,$   
 $x^2 + x = 0$  (□)  $2x^2 - 7x + 3 = 0, 3x^2 - 10x - 8 = 0, 6x^2 + 7x - 5$   
 $= 0, 12x^2 + 41x + 35 = 0, 4x^2 + 3x = 0$  (ハ)  $x^2 - 5ax + 6a^2 = 0,$   
 $15x^2 + 2ax - a^2 = 0, x^2 - (2a - 7b)x - 14ab = 0, 10x^2 + (6b + 5a)x$   
 $+ 3ab = 0$  (ニ)  $x^2 - 2ax + a^2 - b^2 = 0, (a^2 - b^2)x^2 + 4abx - (a^2 - b^2)$   
 $= 0, 2a^2x^2 + 7abx + 3b^2 = 0$  (ホ)  $x^2 - 6x + 7 = 0, x^2 + 2x - 4 = 0,$   
 $x^2 - 5x + 3 = 0, 6x^2 - 14x - 6 = 0$  (ハ)  $x^2 + 4 = 0, x^2 - 6x + 14$   
 $= 0, x^2 - 4x + 7 = 0, x^2 - x + 1 = 0$  [3] (4) 19, 80, 343 (□  
 $\frac{61}{9}, -\frac{469}{27}, \frac{3649}{81}$  [4] (4) 28,  $\frac{17}{4}$  (□) 12,  $-\frac{3}{4}$  (ハ)  
 $\frac{100}{3}, -\frac{27}{4}$  (ニ)  $-\frac{1}{3}, -\frac{9}{2}$  [5] (4)  $x^2 + 11x + 27 = 0$  (□)  $x^2$   
 $+ x - 3 = 0$  (ハ)  $x^2 + 25x + 75 = 0$  (ニ)  $x^2 - 10x + 12 = 0$  (ホ)  $x^2$   
 $- 13 = 0$  (ハ)  $x^2 + 20x + 87 = 0$  (ト)  $x^2 + 5x - 75 = 0$  (チ)  $x^2 +$   
 $5x + 3 = 0$  (リ)  $x^2 - 3x - 1 = 0$  (ヌ)  $53x^2 - 16x + 87 = 0$  (ル)  $x^2$   
 $- 35x + 147 = 0$  (7)  $9x^2 + 80x + 3 = 0$  [6] 2 [7]  $a = c$

[8]  $\pm 4$  [9]  $p^2h = q(h+1)^2$  [10]  $0, -\frac{170}{121}$  [11]  $p^2 - k^2 = 4q$

[12]  $b=0$  [13]  $5$  [14]  $\frac{p(b+aq)^2}{a^2(p+1)^2} - \frac{q(b+aq)}{a(p+1)} = \frac{c}{a}$

(83)

[1] (4)  $(x=2, \text{小極値 } -2), (x=3, \text{小極値 } -1), (x=\frac{1}{2}, \text{小極値 } \frac{7}{4})$  (□)  $(x=-1, \text{小極値 } -1), (x=\frac{2}{3}, \text{小極値 } -2), (x=\frac{3}{4}, \text{小極値 } -\frac{17}{8})$  [2] (4)  $(x=-1, \text{大極値 } 2), (x=4, \text{大極値 } 36), (x=\frac{3}{2}, \text{大極値 } \frac{1}{4})$  (□)  $(x=\frac{5}{3}, \text{大極値 } \frac{16}{3}), (x=\frac{6}{5}, \text{大極値 } \frac{16}{5}), (x=1, \text{大極値 } -6)$

(84)

[3] (4)  $11, -3$  (□)  $2, 1$  (ハ)  $-7, 2$  (ニ)  $-3, -1$  (ホ)  $0.4, 1$  (ヘ)  $(1.7, -6)$  (ト)  $-0.5, 1$  (チ)  $-2, 0.5$  (リ)  $2$  (ヌ) 無 [4] (4)  $4, -2.5$  の時零,  $x=0.7$  のとき小極で其値  $-21$  (□)  $1$  のとき零,  $x=1$  のとき小極で其値零 (ハ) 零とならず  $x=-0.5$  のとき小極で其値  $1.8$  (ニ)  $-2, 2.7$  のとき零となり  $x=0.3$  のとき大極で其値  $16.3$  (ホ)  $-0.5$  のとき零,  $x=0.5$  のとき大極で其値零 (ヘ) 零とならず,  $x=1$  のとき大極で其値  $-2$  [6] (4)  $-3 < x < 8$  (□)  $-5 < x < -3$  (ハ)  $2 < x$

(ニ)  $-4 < x < 2$  (ホ)  $-2 < x < 5$  (ヘ)  $5 < x < 10$  [7]  $(3, 5), (-2.5, -6)$  [8] (4)  $(5, 7), (7, 5), (-5, -7), (-7, -5)$  (□)  $(7, 5), (-5, -7)$  [9] (4)  $(5, 7), (5, -7), (-5, 7), (-5, -7)$  (□)  $(5, 7), (7, 5), (-5, -7), (-7, -5)$  (ハ)  $(5, 7), (-6.4, -4.4)$  [10] 此直線の上方 [11] 此直線の下方, 前者の上方と後者の下方との共通部分

(85)

[1] 7里 [2] 24日 [3] 5 [4] 9, 3 [5] 9錢 [6] 25個 [7] 3錢 [8] 150錢 [9] 91人 [10] 18秆, 12秆 [11] 8裡 [12]  $(18, 12), (13, 17)$

(86)

[1] 10分, 6分40秒 [2] 15種, 12種 [3] 29行32字 [4] 300人 0.7リットル [5] 1:種, 5種, 13種 [6] 34種, 30種, 16種 [7] A8種, B種 [8] 2.5米, 3米 [9] 90種, 4種, 5種 [10] 2600圓5分 [11] 甲2000圓8分, 乙1600圓1割 [12] 5錢或は7錢

(87)

[1] (4)  $47, -7$  (□)  $-56, 20$  (ハ)  $19x, -26a$  (ニ)  $7.6, 49.8$  (ホ)  $a+27d, x+6y$  (ヘ)  $11a-31b$  (ト)  $-5a+8b$  [2] (4)  $\frac{44}{3}, \frac{40}{3}, 12$  (□)  $7, 12, 17$  (ハ)  $2, 1\frac{2}{3}, 1\frac{1}{3}$  (ニ)  $a-b, 2a+b, 3a+3b$  (ホ)  $-x+2y, y, x$  [3] (4)  $2r-1, 2r$  (□)  $2r+3, 2r+4$

- (ハ)  $(5r-4)a, -(2r-3)x+(r-1)y$  (ニ)  $3r-8$  [4] 8 [5] 2  
 [6] (4)  $-15$  (ロ)  $2, 1$  (ハ)  $2\frac{1}{2}$  (ニ)  $-3a$  (ホ)  $-(a+2b)$   
 [7] (4) 799 (ロ)  $-9$  (ハ) 2470 (ニ) 211 (ホ)  $\frac{n(n+1)r}{2}$  (ヘ)  
 $\frac{r(12m-n-2rm-rn)}{2}$  [8] 3925 [9] 15, 74 [10] 40, 239  
 [11] (4) 18 (ロ) 23 (ハ) 31 (ニ) 4 或は 6 (ホ) 12 或は 14 [12]  
 5, [13]  $-\frac{5}{2}$  [14] 10日 [15] 6日 [16] 5,  $-2$  [18]  $x =$   
 $\frac{3a+b}{4}, y = \frac{a+b}{2}, z = \frac{a+3b}{4}$  [19]  $-1, 2, 5, 8; 1, -2, -$   
 $5, -8$ , [20]  $a=2, b=26$  [21]  $-5, 2$  [22]  $-3, -1, 1, 3;$   
 $3, 1, -1, -3$  [23] 441, 232

## (88)

- [1] (4)  $3\frac{3}{4}$  (ロ)  $-2\frac{6}{7}$  (ハ)  $\frac{2}{a+b}$  (ニ)  $\frac{2xy}{x^2+y^2}$  [2] (4)  $\frac{1}{7},$   
 $\frac{1}{11}, \frac{1}{15}$  (ロ)  $\frac{11}{9}, \frac{11}{7}, \frac{11}{5}, \frac{11}{3}$  [3] (4)  $\frac{1}{44}$  (ロ)  $\frac{5}{22}$  [4]  
 $\frac{1}{18}$  [5]  $\frac{6}{149}$  [6]  $x = \frac{3pq}{p+2q}, y = \frac{3pq}{2p+q}$

## (89)

- [1] (4)  $3^7$  (ロ)  $\frac{25000}{729}$  (ハ)  $\frac{64}{243}$  (ニ) 76.8 (ホ)  $\frac{2916}{15625}$  (ヘ)  
 $8\sqrt{6}$  (ト)  $\frac{27}{1+\sqrt{3}}$  [2] (4)  $\pm 4$  (ロ)  $\pm 15$  (ハ)  $\pm 18ab^2$

- [3] (4)  $\frac{1}{2}, \frac{3}{8}, \frac{9}{32}; -\frac{1}{2}, \frac{3}{8}, -\frac{9}{32}$  (ロ)  $-6, +3, -$   
 $\frac{3}{2}; 6, -3, \frac{3}{2}$  (ハ)  $\frac{1}{2-\sqrt{2}}, \frac{1}{2}, \frac{2-\sqrt{2}}{4}; \frac{-1}{2-\sqrt{2}}, \frac{1}{2},$   
 $\frac{-2+\sqrt{2}}{4}$  [4] (4)  $+\frac{9}{16}, \pm\frac{2}{3}$  (ロ)  $2\sqrt[3]{4}, \frac{3}{2\sqrt[3]{4}}$  [5]  
 (4) 59048 (ロ)  $\frac{8191}{64}$  (ハ)  $\frac{1-5^4}{1-\sqrt{5}}$  [6] (4)  $\frac{a^{11}-b^{11}}{a-b}$  (ロ)  
 $\frac{\sqrt[3]{a^8}-\sqrt[3]{b^8}}{\sqrt[3]{a}-\sqrt[3]{b}}$  [7] (4)  $\frac{3-3^{2n+1}}{4}$  (ロ)  $3^{n+1}-3$   
 (ハ)  $\frac{(a+b)^n(-b)-(a-b)^{n+1}}{(a+b)^{n+1}-(a-b)(a+b)^n}$  [8] (4) 14 (ロ)  $\frac{3}{5}$  (ハ)  $\frac{(x+1)^2}{x^2}$   
 (ニ)  $\frac{3+\sqrt{3}}{2}$  (ホ) 10 [10]  $\frac{3}{5}, -\frac{5}{9}$  [11] 初項は任意, 公比  
 $\frac{1}{4}$  [12] 初項任意, 公比  $\frac{1}{5}$  及び  $\frac{1}{n+1}$  [13] (4)  $\left|\frac{y}{x}\right| < 1$   
 (ロ)  $|b| > 1$  [14] (4)  $\frac{4^{20}-3^{20}}{3^{19}}$  (ロ)  $\left(1+\frac{5}{4}+\frac{7}{4^2}\right) \times \frac{1}{1-\frac{1}{4^3}}$   
 (ハ)  $\frac{1-x^{10}}{1-x^2} + \frac{2x-2x^{11}}{1-x^2}$  (ニ)  $\frac{1+3x+2x^2}{1-x^3}$  (ホ)  $\frac{2(x-x^{n+1})}{1-x}$   
 $-(2n-1)x^{n+1}$  (ヘ)  $\frac{1+3x}{(1-x)^2}$  [15] (4)  $\frac{4}{9}, \frac{17}{33}, \frac{89}{111}, \frac{2}{7}$  (ロ)  
 $\frac{37}{990}, \frac{1}{270}, \frac{3837}{370}$  [16] (4)  $\frac{2}{81}, \frac{53}{297}$  (ロ)  $\frac{11}{16^2}, \frac{143}{12}$   
 (ハ)  $2\frac{4}{9}$  (ニ)  $\frac{20}{91}$  [17]  $\sqrt{2}$  [18] 初項  $= \frac{b^2-ab^{13}}{b^0-a^{20}}$ , 公比

$$= \frac{a}{b} \text{ (19) 初項} = \frac{a^2 \left(1 \pm \sqrt{\frac{b}{a}}\right)}{a-b}, \text{ 公比} = \pm \sqrt{\frac{b}{a}} \text{ (20) } 24, 12, 6, 3 \text{ 或は } 3, 6, 12, 24 \text{ (21) } 1, 2, 4 \text{ 或は } 4, 2, 1 \text{ (22)}$$

$$50 \text{ ヲットル (23) (4) } \frac{h}{2} \text{ (□) } \pi h \text{ (△) } \frac{\pi h^2}{8} \text{ (24) } \sqrt{3} a^2 \text{ (25)}$$

$$2\pi r^2 \text{ (26) } 10 \text{ 時間}$$

(90)

$$\text{(1) } 9, 49 \text{ (2) } 6, 150 \frac{150}{13} \text{ (3) } x=4, y=4; x=+1, y=-2 \text{ (4) } x=4, y=4; y=-2, y=-8 \text{ (5) } x=4, y=4; x=16, y=-8 \text{ (6) (4) } 498 \frac{16383}{16384} \text{ (□) } \frac{n(n+1)}{2} + \frac{1}{9} \left(1 - \frac{1}{10^n}\right) \text{ (△) } 2n + \frac{3^n - 1}{2} \text{ (二) } 2^{n+2} - 4 - 2n \text{ (7) } \frac{5n(n+1)}{2} - n, n + 2^{n-1} - \frac{1}{2} \text{ (8) } 60, 30 \text{ (10) } 3, 4 \text{ (19) } \frac{(n+1)a}{1-r} - \frac{a-ar^{n+1}}{(1-r)^2} \text{ (20) } \frac{1}{3} n(n+1)(2n+1) - n(n+1) \text{ (21) } \frac{n(n+1)}{2} - \frac{n^2(n+1)^2}{4} \text{ (22) (4) } \frac{3}{2} n(n+1)(2n+1) - \frac{3}{2} n(n+1) - 2n \text{ (□) } \frac{3}{2} n(n+1)(2n+1) + \frac{3}{2} n(n+1) - 2n \text{ (△) } 2n^2(n+1)^2 + 2n(n+1)(2n+1) - n(n+1) - 3n \text{ (二) } \frac{27}{4} n^2(n+1)^2 + \frac{135}{6} n(n+1)(2n+1) + 99n(n+1) + 80n \text{ (23) (4) } \frac{1}{3} - \frac{1}{3(3n+1)} \text{ (□) } \frac{1}{6} - \frac{1}{3(3n+2)} \text{ (△) } \frac{1}{12}$$

$$-\frac{1}{4(2n+1)(2n+3)} \text{ (二) } \frac{1}{240} - \frac{1}{6(3n+5)(3n+8)}$$

(91)

$$\text{(1) (4) } m^{\frac{1}{2}}, m^{\frac{3}{2}}, m^{\frac{5}{2}} \text{ (□) } p^{\frac{3}{2}}, a^{\frac{5}{2}}, b^{\frac{3}{2}} \text{ (△) } (a+b)^{\frac{1}{2}}, (a-b)^{\frac{3}{2}}$$

$$(ax+b)^{\frac{m}{n}} \text{ (2) (4) } \sqrt[3]{a^2}, \sqrt[4]{b^3}, \sqrt{c}, \sqrt[5]{d} \text{ (□) } \sqrt[4]{m^2}, \sqrt[5]{n^3}, \sqrt[3]{p^7}, \sqrt[5]{q^9} \text{ (△) } a^2\sqrt{a}, b^2\sqrt[3]{b}, c\sqrt[5]{c}, d^4\sqrt[4]{d^3} \text{ (二) } \sqrt{x}, x\sqrt[5]{x}, \sqrt[4]{x}, x\sqrt[4]{x^2} \text{ (※) } \sqrt[3]{a-b}, \sqrt[4]{(ax-b)^3}, \sqrt[7]{(px-q)^9}, (a+b)^p \sqrt[4]{(a+b)^9} \text{ (3) (4) } 6, 3, 2, 2 \text{ (□) } 32, 4, 81, 32 \text{ (△) } 2, 7, 2, 27 \text{ (4) (4) } a^{-2}, b^{-3}, c^{-5}, d^{-7} \text{ (□) } a^{-\frac{1}{2}}, b^{-\frac{1}{3}}, c^{-\frac{1}{5}}, d^{-\frac{1}{7}} \text{ (△) } (ax+b)^{-\frac{1}{2}}, (x+3)^{-\frac{1}{3}}, (x-1)^{-\frac{1}{5}}, (a-b)^{-\frac{1}{7}} \text{ (5) (4) } \frac{1}{a^3}, \frac{1}{b^5}, \frac{1}{c^2}, \frac{1}{d^n} \text{ (□) } \frac{1}{\sqrt[3]{x^2}}, \frac{1}{\sqrt[4]{y^3}}, \frac{1}{\sqrt{z^5}}, \frac{1}{\sqrt[3]{t^7}} \text{ (△) } \frac{1}{\sqrt[3]{b^3-b^3}}, \frac{1}{\sqrt{(x^2+3x-5)^3}}, \frac{1}{\sqrt[4]{m-n}} \text{ (6) } \frac{a^2}{b^3}, \frac{x^{\frac{3}{2}}}{y^{\frac{1}{2}}} \text{ (7) (4) } 2, 3, 0 \text{ (□) } 1, \frac{1}{3}, \frac{1}{4} \text{ (△) } 16, 10, 4, 4 \text{ (二) } \frac{1}{6}, \frac{1}{9}, \frac{5}{2}, \frac{64}{27}$$

(92)

$$\text{(1) (4) } a^2, b^{-11}, c^{-1}, p^3 \text{ (□) } x^{m-n}, y^{m-3}, z^{n-4} \text{ (△) } a^{\frac{5}{2}}, b^{\frac{1}{2}}, c^{\frac{1}{2}}, d^{\frac{3}{2}} \text{ (二) } m^{\frac{1}{2}}, p^{\frac{3}{2}}, q^{-\frac{1}{2}} \text{ (※) } a^{\frac{1}{2}}, a^{-\frac{1}{2}}, 1, (\wedge) a, b^{-\frac{1}{2}}, a^2, y^{\frac{1}{2}} \text{ (ト) } x, 1, x^{\frac{3}{2}} \text{ (チ) } \frac{5}{3} x^2 y^{-1}, -28ab^{-1}x^{-1} \text{ (リ) } \frac{5}{2} a^{-1} b^{-2}, (x+y)^{-2} p^2 q^n \text{ (ヌ)}$$

$a^{\frac{1}{2}}b^{\frac{1}{3}}c^{\frac{1}{4}}, ac^{\frac{1}{2}}d$  (ル)  $x^{-\frac{1}{2}}y^{\frac{1}{3}}z^{-\frac{1}{4}}, x^{\frac{1}{2}}y^{-\frac{1}{3}}$  (ヲ)  $a^{11}, b^5, a^{-16}$  (ウ)  $b^8,$   
 $x^{10}, b^{n+2}, x^{2-2n}$  (カ)  $a^{\frac{1}{2}}, b^{\frac{1}{3}}, d^{\frac{1}{5}}, m^{\frac{1}{2}}$  (コ)  $x^{\frac{1}{2}}, y^{\frac{1}{3}}, z^{\frac{1}{5}}, a^{\frac{1}{20}}, q^{-\frac{1}{5}}$   
(ク)  $a^{-\frac{1}{2}}, x^{\frac{1}{2}}, a^{-\frac{1}{3}}$  (ケ)  $a^{-2}b^3x^{-4}y^5, ab^{-4}x, a^{-3}b^{-7}x^4y^n, \frac{2}{3}b^{-1}c^{-2}$   
 $yz^2$  (ク)  $\frac{9}{7}x^5yz^8, \frac{3}{4}x^{-1}y^{-8}z^2, \frac{3}{5}xy^{-1}z$  (ツ)  $-(x-y)^{-1}, (x-y)^{-5}$   
(チ)  $-(a-x)^{n+3}, -(x-1)^{n+3}, x+y$  (2) (4)  $a^{-6}, a^6, 1$  (ロ)  $-a^{-10}, a^{-10}, a^{10}$  (ハ)  $a^{6n}, -a^{-6n+3}, a^{-2n+1}$  (ニ)  $a^3, a^2, b^5, b^3$   
(ホ)  $a^{-1}, a^{-1}, a^{-1}, a^{-1}$  (ヘ)  $a^{\frac{1}{2}}, a^{\frac{1}{2}}, a, a$  (ト)  $m^{-\frac{1}{5}}, m^{-\frac{1}{5}}, m^{\frac{1}{2}},$   
 $m^{\frac{1}{2}}$  (3) (4) 2, 4 (ロ) 1, 96 (4) (4)  $a^{-4}b^5, b^{-6}, a^{-3}b^3$  (ロ)  $\frac{a^3x^7}{b^3y^5}, \frac{a^4x^8}{y^2}, \frac{a^8y^4}{b^5y^6}$  (ハ)  $\frac{(a-b)^3}{(a+b)^3}, \frac{(c+d)^2}{(a-b)^2}, \frac{(c+d)^2}{(a+b)^2}$  (ニ)  $\frac{(x-y)^2}{(x+y)^2},$   
 $(x+y)^3, \frac{1}{(x-y)^2}$  (ホ)  $\frac{1}{(1+x)^2}, (1-x)^7, \frac{(x+1)^6}{(x-1)^6}$  (ヘ)  $a^{\frac{1}{2}}b^{\frac{1}{2}}, a^{\frac{1}{2}}b^4,$   
 $a^{-1}d^{\frac{1}{2}}$  (ト)  $x^5y^{-18}, x^{-\frac{1}{2}}y^{-1}$  (5) (4)  $a+bx+cx^2+dx^3+ex^4$  (ロ)  $ax^4+bx^3+cx^2+dx+e$  (ハ)  $x^2-x^{-2}, x^4-x^{-4}$  (ニ)  $4x^2-9x^{-2},$   
 $15x^2-26+8x^{-3}$  (ホ)  $x^2+2+x^{-2}, 4x^2+9x^{-2}-13$  (ヘ)  $24x^4-$   
 $31x^2+2+37x^{-2}-20x^{-4}$  (ト)  $a^{\frac{1}{2}}+a^{\frac{3}{2}}-2, 9c-(c^{\frac{1}{2}}+1), x+2x^{\frac{1}{2}}$   
 $-8$  (チ)  $x^{\frac{1}{2}}+2, x+a^{\frac{1}{2}}x^{\frac{1}{2}}+a, (ウ) 7x^{\frac{2}{3}}-2x^{\frac{1}{3}}+1$  (ヌ)  $a+a^{\frac{1}{2}}b^{\frac{1}{2}}+2b^{\frac{2}{3}}$   
(ル)  $2x^{\frac{1}{2}}-1+x^{-\frac{1}{2}}$  (ヲ)  $3x^{\frac{1}{2}}-2+x^{-\frac{1}{2}}$  (6)  $(\sqrt{a}+2)(\sqrt{a}+3), (x^{\frac{1}{2}}$   
 $-5)(x^{\frac{1}{2}}+2), (x^{-a}+2)(x^{-a}+1)$  (7) (4)  $(\frac{1}{9}, 4), (\frac{9}{4}, 25)$  (ロ)

$(\frac{1}{8}, 1), (0, 1, 8)$  (ハ)  $(0, 64, 1), (0, 625)$

(93)

(1) (4) 8, 5, 3, 3 (ロ) -5, -7, -3 (ハ)  $\frac{1}{2}, \frac{1}{3}, -\frac{1}{2}$   
(ニ)  $\frac{4}{3}, \frac{3}{4}, \frac{5}{3}$  (2) 2.3, 3.3, 14, 20 (3)  $\log 3 + \log a + \log x$   
 $+ \log(x+y), 2 \log a + 2 \log b, \frac{1}{2} \log a + \frac{1}{2} \log b$  (ロ)  $\log(a$   
 $+ b) + \log(a-b), \log 7 + \log x + \frac{1}{4} \log a + \frac{3}{4} \log b$  (ハ)  $\log 8$   
 $+ 2 \log a + \log b + 2 \log(6c-d), \log 9 + \log x + 3 \log y + \frac{1}{2} \log(a^2$   
 $+ b^2) + \frac{1}{2} \log x$  (ニ)  $2 \log a + \frac{1}{3} \log x - \log 5 - \log c - 3 \log,$   
 $5 \log(a-b) - 5 \log(x-y)$  (ホ)  $\log(a-b) - \log(c-d) + \frac{1}{3} \log(cx-$   
 $d) - \frac{1}{3} \log(ax-b), -\log a - \frac{1}{5} \log(c-x)$  (4) (4) 1.079, 2.158  
(ロ) 0.528, 0.551 (ハ) 0.761, 1.192 (5) (4)  $\log \frac{ad}{bc}$  (ロ)  
 $\log \frac{a^3b^2}{c^4}$  (ハ)  $\log \frac{a^2\sqrt[3]{x}}{\sqrt{b}y^3}$  (ニ)  $\log \frac{(a+b)^2\sqrt{x}}{\sqrt[5]{(a-b)^2}y^4}, \log \frac{(x-y)^2}{\sqrt{x^3+y^3}}$   
(6) (4) 2, 4 (ロ) 1 (ハ) 4 (ニ) 5 (ホ) 2 (ヘ)  $x=7, y=5$  (7)  
2.58, 3.91 (8)  $\frac{b}{2}, 0.389$

(94)

(1) (4) 4, 3, 1 (ロ) 0, 1, 0 (ハ) -3, -1, -5 (2) (4) 小數

第二位, 小數第五位, 整數第一位 (□) 整數第三位, 整數第五位, 整數第一位 (3) (4) 2.71600,  $\bar{3}.71600$ ,  $\bar{1}.7160$  (□) 0.50106, 4.50106,  $\bar{2}.50106$  (ハ) 1.36173, 0.36173, 5.36173 (4) (4) 0.052, 520000 (□) 31.7, 0.0317 (ハ) 23000, 2.3

## (95)

(1) (4) 3.48487, 1.69897, 0.85285,  $\bar{1}.96298$ ,  $\bar{4}.97772$  (□) 0.99012, 2.63022,  $\bar{2}.50051$  (2) (4) 0.71578, 2.85633, 3.79418 (□) 1.79013, 4.75002,  $\bar{1}.97000$  (3) 708.6, 6.085, 0.007247 (4) (4) 7.2757, 325.63, 0.41753 (□) 234.64, 0.032374, 4.0776

## (96)

(1) (4) 5.75336 (□) 1.78748, 4.43379 (ハ) 0.44580,  $\bar{3}.08170$  (ニ)  $\bar{4}.33821$ ,  $\bar{2}.31831$  (2) (4)  $\bar{1}.24288$ ,  $\bar{2}.24167$  (□)  $\bar{2}.77820$ ,  $\bar{4}.72334$  (ハ) 7.47894, 3.73113 (ニ)  $\bar{4}.68323$ ,  $\bar{4}.71748$  (ホ)  $\bar{2}.79675$ , 1.67931 (3) 12.18460,  $\bar{2}.01358$  (4)  $\bar{1}.51545$ ,  $\bar{1}.42947$

## (97)

(1) (4) 183.0, 0.7730, 8483 (□) 0.4309, 816.8, 78.02 (ハ) 15.22, 0.6812, 7.416, 0.07825, 0.07482 (ニ) 9.307, 0.09622 0.5135 (2) (4) 0.3895, 31.91, 0.3873, 7.2567, 230.42 (□) 1048600, 2037000000, 0.23276, 66.062 (ハ) 37010, 29.127,

55.986 (ニ) 8.5898, 0.075943 (ホ) 424.58, 16.633 (ハ) 2.9538, -1.2771 (ト) 4.4628, 305.27

## (98)

(1) (4) 2, 10, -4 (□) 3, 2, 7 (ハ) 3, 10 (ニ) 11, 8 (ホ)  $\frac{2}{3}$ ,  $-\frac{1}{2}$ , 2 (ハ) -5,  $-\frac{3}{2}$ , 5 (ト)  $x=2, y=1$ ,  $x=3, y=2$  (2) (4) 2.3666, 0.11928, 0.74497 (□) -0.43683, 0.54451 (ハ)  $x=-2.1085$ ,  $y=-0.47712$

## (99)

(1) 3207圓 (2) 210圓 (3) 1000圓 (4) 356圓 (5) 6分 (6) 1割 (7) 24年 (8) 19年

## (100)

(1) 1397圓 (2) 12816圓 (3) 942圓 (4) 2831圓 (5) 157圓 (6) 375圓 (7) 2500圓 (8) 1426圓 (9) 53圓 (10) 4212圓

## (101)

(1) 1193.7圓 (2) 546.07圓 (3) 三月二十六日 (4) 4錢 (5) 七月二十二日 (6) 十一月四日

## (102)

(1) (4) 5:7, 3:8, 10:3, 3:4 (□)  $2a:3x$ ,  $3a:4b$ ,  $3x^2:2y^2$

(ハ)  $9a:2b, 2x:3y, a+b:a-b$  (ニ)  $(x+1)^2:x^2+1, x^2+x+1:x^2-x+1, (a+b)^2:ab$  [2]  $23:2, 21:61, 81:41$  [3] (4)  $3:2, 2:1, 5:3$  (ロ)  $4:1$  或は  $1:4, 5:2$  或は  $2:5, 5:7$  或は  $7:5$  (ハ)  $2:7, 3:2$  [4]  $1$  [5]  $40, 24$  [6]  $3:2$  [7]  $2:1$  [8]  $2:3$  [9]  $600$ 圓,  $400$ 圓 [10]  $9:8$

## (103)

[1] (4)  $\frac{21}{2}, \frac{15}{4}$  (ロ)  $\frac{280}{3}, \frac{10}{7}$  (ハ)  $\frac{b}{d}, 14a^2$  (ニ)  $\frac{1}{3}, \frac{b}{c}$

(ホ)  $1$  (ハ)  $(a-b)^2$  (ト)  $\frac{bc}{a+b}, \frac{a-c}{b-a}$  (チ)  $\frac{c(a+b)}{a-b}, \frac{b(a-c)}{a+c}$

(リ)  $\frac{c(a+b)}{a-b-2c}, \frac{ab}{a-b}$  (ヌ)  $13, -4$  (ル)  $2, 9$  (ヲ)  $\frac{1-ab}{a-b},$

$\frac{a-b}{1-ab}$  [2] (4)  $12$  (ロ)  $\frac{5}{2}c$  (ハ)  $(a-b)^2$  (ニ)  $\frac{a^2+b^2}{ab}$  [3] (4)

$\pm 12$  (ロ)  $\pm a$  (ハ)  $\pm x$  (ニ)  $\pm(a+b)$  [4]  $2:3=4:6$  [5]

$56.25$  斤 [6]  $6$  [7]  $31.8$  糶 [8]  $14$  日 [9]  $24$  米 [10]  $80$  錢

## (104)

[1] (4)  $6:8:9; 8:6:7; 175:160:108$  (ロ)  $24:28:30:31;$

$156:234:335:240$  [2] (4)  $12:28:15$  (ロ)  $5:4:6$  (ハ)

$16:15:18$  [3] (4)  $24:18:20:21$  (ロ)  $32:14:12:15$  (ハ)

$40:48:18:21$  [4] (4)  $12:7:1$  (ロ)  $2:1:1$  (ハ)  $2:1:6$  (ニ)

$8:9:12$  [5]  $\frac{1}{2}, 5$  [6] (4)  $\frac{1}{7}, \frac{2}{7}$  (ロ)  $\frac{5}{9}, \frac{8}{13}$  (ハ)  $\frac{5}{6},$

$\frac{13}{41}$  [7] (4)  $54, 45, 42$  (ロ)  $36, 30, 28$  (ハ)  $90, 75, 70$  [8]

(4)  $50, 20, 16, 18$  (ロ)  $75, 30, 24, 27$  [9]  $20:15:12$  [10]

$96$ 圓,  $108$ 圓,  $63$ 圓 [11]  $360$ 圓,  $315$ 圓,  $330$ 圓 [12]  $550$ 圓,

$750$ 圓,  $500$ 圓 [13]  $300$ 圓,  $225$ 圓,  $180$ 圓 [14] 男 $2$ 圓, 女 $1.5$ 圓

[15]  $29:4:2; 58$ 立,  $8$ 立,  $4$ 立 [16]  $7:6:2; 21$ 立

## (106)

[1]  $k=3, p=\frac{4}{15}$  [2]  $k=5, x=7$  [3]  $k=7, x=27$  [4]

$k=-4, y=-8$  [5]  $k=5, y=15$  [6]  $k=2, a=3, y=20$

[7]  $122.5$ 米 [8]  $310$ 平方糶 [9]  $1.4$ 秒 [10] 價= $k \times$ 平方米數,

$21$ 圓 [11] 價= $k \times$ カラット數 [12]  $6$ 糶

## (107)

[1]  $1$  [2]  $\frac{27}{4}$  [3]  $k=7, y=\frac{7}{12}$  [4]  $k=4, x=\frac{1}{3}$  [5]  $k=3,$

$a=-1$  [6]  $25$ 米 [7]  $4$ リットル [8]  $1$ 米 [9]  $18\frac{1}{2}$  [10]

$$\frac{1+y}{5+2y} = \frac{1}{x}$$

## (108)

[1]  $k=6, y=2$  [2]  $33.6$ 立方糶 [3]  $1:2$  [4]  $64$ ポンド [5]

$23$ 圓 $33$ 錢 [6]  $1.2$ 寸



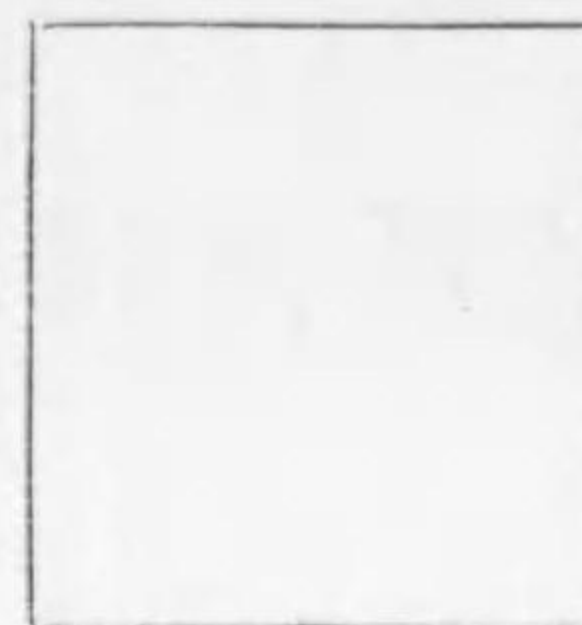
(109)

(1) 約 6.5分 (2) 約 6.6分 (3) 約 7.5分 (4) 約 8.9分

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EXERCISES IN ALGEBRA VOL.B

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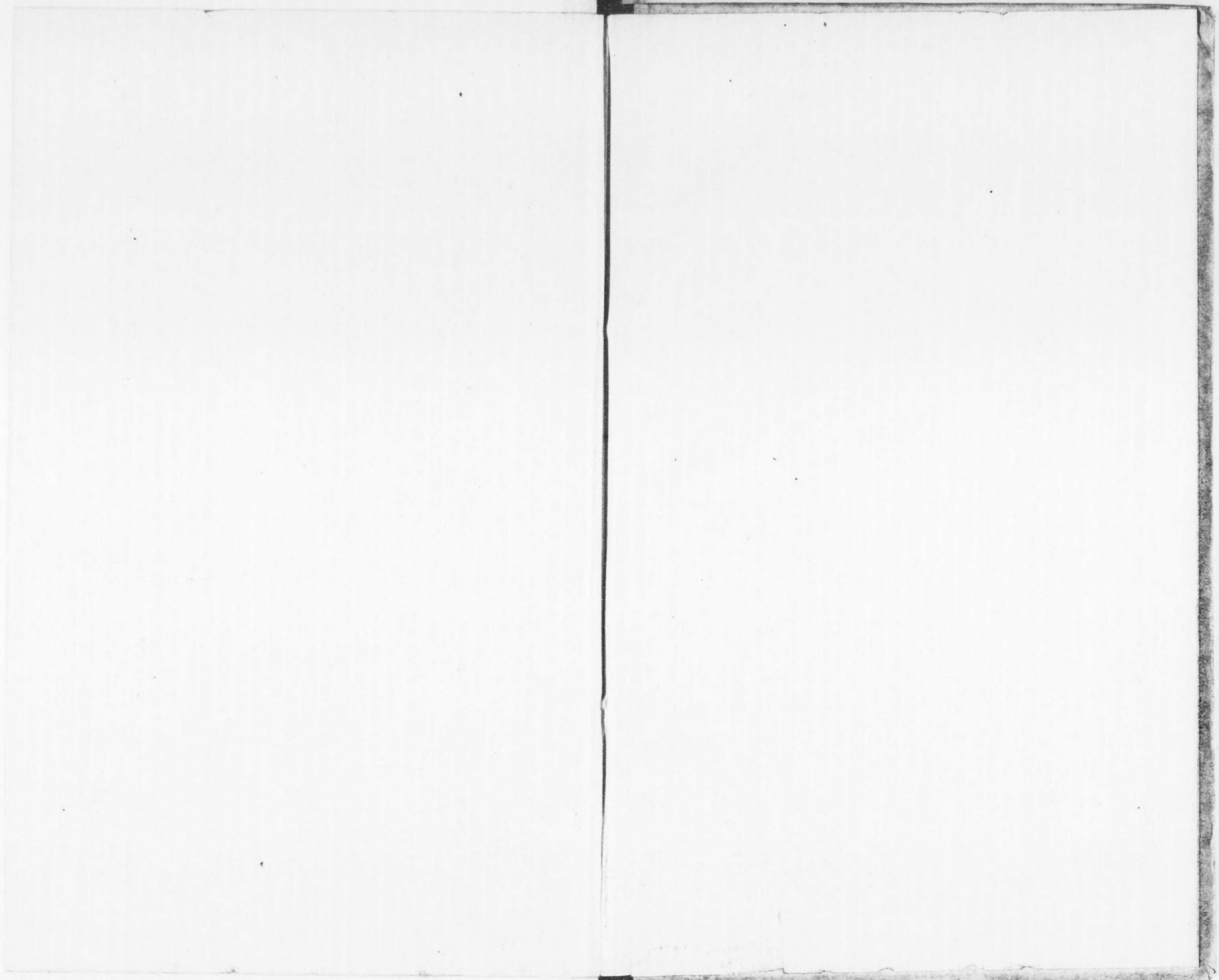
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296  
123



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