

# A PRACTICAL GUIDE FOR THE ADMINISTRATION OF THE BINET-SIMON SCALE FOR MEASURING INTELLIGENCE.

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Various considerations have constrained me to prepare this guide. First, the Binet-Simon scale is coming into wider and wider use in institutions for defectives (feeble-minded, epileptic, insane, criminal, juvenile delinquents) and in the public schools throughout the country. Such varied application of the tests should in time yield valuable comparative knowledge of various classes of individuals. It is evident, however, that the results will have no comparative, scientific value unless uniformity is observed in the administration of the tests. Discrepancies in the results of different experimenters are often entirely traceable to departures or differences in the method of giving the tests. Naturally some methods will be bad, some good and some indifferent; in any case, the results will generally hinge on the particular method used, and they will have absolutely no comparative value unless a standardized procedure has been followed. In the simpler tests the standardization will often not need to be elaborate, but a minimum amount is always essential.

Secondly, it is my experience that uniformity in experimental procedure is out of the question in any branch of psychological research unless the conditions, method, and procedure are definitely and fully formulated. There is a peculiarly urgent need for explicit directions in the administration of the Binet-Simon scale, because the tests are being given by persons with little if any scientific (and particularly any psychological) training, and who therefore are in no position to formulate a correct procedure for themselves, nor to foresee or circumvent the methodological pitfalls which lurk in all kinds of scientific work. Hence to be of practical value the directions for handling the Binet-Simon scale should be given in the form of a compact, condensed guide, instead of being scattered throughout a bulky text; and the procedure, the questions or directions, should be so formulated that they can be used verbatim.

Thirdly, some of the tests have not as yet been sufficiently detailed, conditioned or standardized, obviously because this can-

not be satisfactorily done *a priori*, but only after extensive testing. The scale has now been used and criticised somewhat freely, so that we are in a position to improve the procedure at various points and to offer various suggestions. In doing this it is advisable to proceed along conservative lines and disregard such suggestions as have not been subjected to the test of experience.

Fourthly, a number of studies<sup>1</sup> have demonstrated that the scale itself, aside from the procedure, is imperfect at various points. While these imperfections are not such as to render the 1908 scale worthless, there is imperative need to carry forward the work of revision and improvement, so that we may eventually obtain a maximally reliable scale. But this work (with normal children, of course,) cannot be satisfactorily done unless a fairly uniform and standardized procedure is followed; without this we can expect nothing but conflict and discrepancy. Nor does it seem advisable to revise the 1908 scale for American use until it has been more extensively tried out in accordance with a standardized procedure.

It is in the hope of aiding the work of standardizing the experimental procedure that the following guide has been prepared—not as a finality but as a practical pathfinder. The attempt has been made to outline the procedure which I have found most satisfactory, but advantage has also been taken of the suggestions of other writers. To explain why one form of procedure should be used and another avoided, or to enter upon an explanation or justification of the tests themselves, would require more space than is here available. It is intended to make this guide supplement, rather than supplant, the statements or texts already extant. It may reasonably be expected that anyone who intends to use the scale should familiarize himself with at least the English versions.<sup>2</sup>

I have followed the 1908 series, except that the tests for idiocy, 1 to 6, have been added from the 1905 series. Tests 17a and 50a have also been added. The order in which the tests appear corresponds closely with the originals.

<sup>1</sup> For certain general criticisms, and a program of work in the psycho-clinical field, see "The New Clinical Psychology and the Psycho-Clinicist," *Journal of Educational Psychology*, March and April, 1911. "Human Efficiency," *Pedagogical Seminary*, 1911, 74 ff.

<sup>2</sup> Cf. Binet et Simon, *Le Développement de l'intelligence chez les enfants. Année Psychologique*, Tome XIV. Otto Bobertag, *Ueber Intelligenzprüfungen* (nach der Methode von Binet und Simon), *Zeitschrift für angewandte Psychologie*, V, 1911, pp. 105-203. Henry H. Goddard, *Binet's Measuring Scale for Intelligence, The Training School*, VI, No. 11, 1910. E. B. Huey, *The Binet Scale for Measuring Intelligence and Retardation. The Journal of Educational Psychology*, I, 1910, 435f. Katherine L. Johnston, *An English Version of M. Binet's Tests for the Measurement of Intelligence. Training School Record*, London, November, 1910. Guy M. Whipple, *Manual of Mental and Physical Tests*, Baltimore, 1910, Chapter 13).

*The Binet-Simon Diagnostic Tests of Mental Age (Intellectual Development).*

(Abbreviations: S = subject. E = experimenter. + = passed. — = failed.)

Name	Born	Place of birth	Nationality
Sex	Health	Physical defects	School grade
School standing	(years pedagogically retarded or accelerated)		
Examined	By	Mental condition	
during test	GENERAL RESULTS: passed tests of mental age		
Chronological (actual) age	Years retarded	intellectually	
DEGREE OF MENTALITY: SUPERNORMAL, NORMAL, SUBNORMAL, BACKWARD, FEEBLE-MINDED (LOW, MIDDLE OR HIGH IDIOT; L., M., OR H. IMBECILE; L., M., OR H. MORON).			

**Tests for Idiocy—Mental Age 1 to 2 Years.****Age 1.**

1. Move lighted match slowly before S.'s eyes (or ring bell from behind S.). Mark + if eyes follow or S. listens. Watch for incoordinated eye movements.

2. Place small block (cube) in palm of S.'s hand, with statement, "Here is something for you." + if S. grasps and handles. Prehension from tactual stimulation.

3. Move colored ball or cylinder, suspended by string, slowly before S.'s face (eyes) or hands, without touching. + if S. grasps and handles.

**Age 2.**

4. Hold before S., or place within S.'s reach a piece each of candy (or cookie) and wood of equal size. Avoid favored position for either. + if candy is chosen.

5. Wrap paper about candy in S.'s sight, and hand packet to S. + if S. removes paper before eating.

6. IMITATIONS: E. extends hand for greeting as S. enters room. "Do as I do"; or: "Do this way." E. claps hands; hands in front, on head or shoulders; rises on toes, etc.

COMMANDS (by gestures or words): "Sit down," "Stand up," "Shake hands," "Pick up" (object purposely dropped by E.), "Give me that book." + if S. imitates simple movements or executes simple commands. Watch out for failure through negativism or stubbornness.

## Tests for Imbecility—Age 3 to 8 Years.

## Age 3.

7. "Where are your eyes?" "Nose?" "Mouth?" "Hair?"  
Or: "Open your mouth," "Close your eyes," Touch your nose."  
+ if S. correctly points to parts.

8. "Repeat" (alternative forms): "Say after me," or: "See if you can say just what I say without making a single mistake."  
Or: "I'm going to read a sentence (or tell a little story). When I get through I want you to say it word for word, just as I did, without a single mistake. Now listen carefully":—

"'It is cold and snowing.' (Say that.)" Or: 'My dog's name is Fido.' Or: 'In summer it is warm.' E. speaks slowly (not too slowly, or haltingly), distinctly, with expression, while there is *no noise* and S. is *attentive*. Shield sentences from S.'s eyes. No repetitions allowed. E. records reproduction verbatim.

Six syllables in *one* sentence. Use other six syllables in single complete, easy, concrete sentences if above become familiar. + if S. reproduces one of the three absolutely correctly.

9. Repeat ("I'm going to say some numbers. Listen carefully, because as soon as I get through, I want you to say them just as I did. Now listen"): "7 2." ('Say that.' Or: 'What did I say?'): Or: '9 1.'" See directions under 8. If necessary illustrate thus: "so when I say '8 5' you must also say '8 5.'" Pronounce digits distinctly *once*, as single, detached units, without accent, one-half second apart. No consecutive numbers. Shield numbers from S.'s eyes. Two digits. One out of three absolutely correct, passes.

10. "What do you see in this picture?" "What is it about?"  
Or: "Look at this picture carefully and tell me what you see, what it is about." If necessary urge; "anything else?" Show S. only familiar pictures in colors of people and situations, *strongly suggestive of action*. Of the Jingleman Jack pictures (these and all the other supplies for the Binet-Simon tests can be secured from C. H. Stoelting Co., 121 N. Green Street, Chicago, Ill.) the best are probably the pictures of a man chasing children from the steps, of the plumber and the defective water pipe, of carpenters building a house, of a man mowing grass, and of a man cutting hair. All these are admirable for purposes of simple enumeration and description, but not so good for eliciting an interpretative response. Pictures equally good for all three purposes are needed. Simple ENUMERATION of objects passes (row of substantives). (Cf. test 32.)

11. "What is your name?" Preferably asked at beginning of sitting. *Family* name required.

#### Age 4.

12. "Are you a boy or a girl?" (asked of boys). "Are you a girl or a boy?" (for girls).

13. Show successively a *key*, *penny*, *knife*, (*pencil*). "You know what that is. Well, what is it?" Correct naming or interpretative actions pass.

14. "Repeat: '7 4 8.' Or: '5 9 7.' Or: '1 6 3.'" Follow directions in tests 8 and 9. THREE digits.

15. "Which of these two lines (pointing to them) is the longer?"

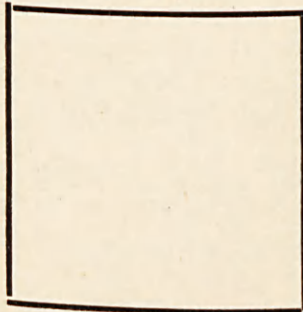
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Do not point to longer last if each is pointed to separately. Cover balance of paper when necessary. Hesitation = —.

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#### Age 5.

16. "Here are a couple of boxes, which look alike, don't they?" "But they don't weigh the same. One is heavier than the other. Now I want you to lift the one after the other, this way, and give me the one which feels the heavier. Feel carefully." E. takes each box successively between two fingers, or the thumb and finger, of the right hand, and lifts it about 1 cm. Use *similar* metal pill boxes of the same size. Filling must not rattle. + if 2 are right in 3 trials, with 3 and 12 grams (or repeat with 6 and 15 grams).



17. "Draw a figure like this (as nearly like this as you can)": + if figure is not round, or if right angles are fairly well preserved, or if figure has squared appearance, it is recognized as an approximate square. Proportions thus need not be exactly correct. S. must use *pen*. Record time. E., non-committal, asks after S. has finished: "Is it good?" "Is it like this?"

'I heard a bird singing in the treetops.' Or: 'we should starve  
'I heard a bird singing in the treetops.' Or: 'We should starve

if we had nothing to eat.'” TEN syllables. Follow directions in test 8.

18. Place on table before S. a rectangular visiting card, about 4.5 by 7.5 cm., and triangular pieces cut diagonally from a similar card and placed thus:



“Put these two pieces (pointing to the triangles) together so that the two will look like this one (pointing to the rectangle).” If necessary: “Change them about until you get them right. Now quickly.” Repeat instructions if necessary, encourage and restore triangles to original position if they get turned over. At close: “Are you done?” or: “Is it right?” E. does not indicate approval or disapproval by manner or word. Record time.

19. Place four bright pennies, heads up,  $\frac{1}{2}$  cm. apart, in a row. “You know what these are, don’t you.” If not, E. informs S. “How many pennies are there? Point to each one as you count them aloud.” Cf. test 33.

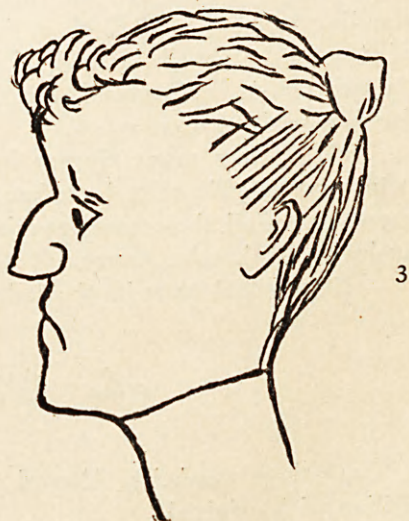
#### Age 6.

20. “Hold up your right hand.” “Touch your left ear.” A mistake rapidly corrected = +. The slightest doubt if not removed by a further question (left eye, right leg) = —. E. gives no hint by word or manner.

21. “Repeat: ‘In the summer time we like to take long morning walks in the park.’ Or: ‘When we get up in the morning we dress and then we have our breakfast.’ Or: ‘I saw two horses pulling a wagon on a very steep road.’” See directions in test 9. SIXTEEN syllables.

22. Show the pretty and ugly faces in pairs. “Which of these two faces is the prettier (or uglier)?” Or: “Which is the good looking one?” 1 2 3 All three must be correct. Both are pretty = —.

23. “You know what a fork is, don’t you?” (“You have seen a fork.”) “Well, tell me, what is a FORK?” If necessary repeat and urge. Similarly for CHAIR, TABLE, HORSE, HOUSE.



THE PSYCHOLOGICAL CLINIC is indebted for the loan of these cuts and those on p. 225 to the courtesy of Dr. Oliver P. Cornman, Associate Superintendent of Schools of Philadelphia, and Chairman of Committee on Backward Children Investigation. See Report of Committee, Dec. 31, 1910, appendix.

MAMA. Record replies verbatim. Definition by stating USE, or MATERIAL OR PARTS of object passes 3 out of 5. E.g., A fork is to eat with. A fork is made of wood and iron. A fork has a handle and tines.) CLASSIFICATORY or logical definition (class or superordinate term) passes test 44. In case classificatory definition has not been proffered spontaneously, say, after S. has finished the series: "Good, so we may say that a mama is a —?" And similarly with the other words, proceeding in reverse order (*i. e.* house, horse, table, chair).

24. "Now I want you to do something for me (do me a little favor). Take this key and place it on that chair (pointing); then shut (or open) that door (pointing); and then bring me that box. Remember, first the key on the chair, then shut the door, then bring the box. Now go." Make certain that the child perceives the objects. No aid. Triple order must be entirely correctly executed.

25. "How old are you?" Answer in years passes. Verify by official record. (*Supplementary*: "When is your birthday?")

26. "Is this morning or afternoon"—or: "Is it the morning or afternoon now?" Reverse order in the afternoon. Emphasize both terms equally.

#### Age 7.

27. Show the unfinished pictures one at the time. "What is lacking (or missing) in this face (in this picture, for the standing woman)?" "Look at it carefully." Three correct out of 4 pass. "Eyes" instead of "eye" and "hands" instead of "arms" = +. "One ear" for face without eye, and "one eye" for face without nose = —.

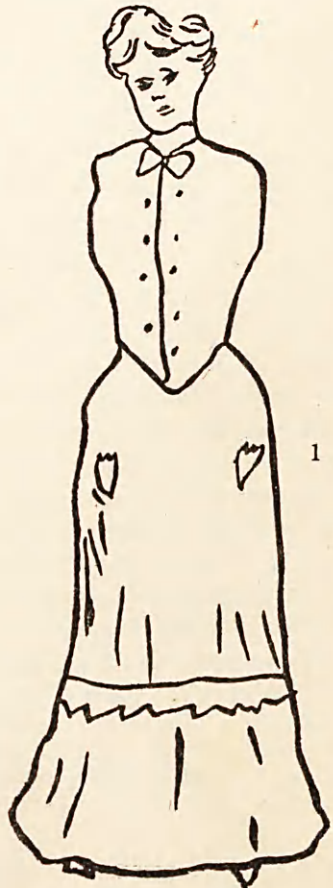
28. "How many fingers have you on your right hand?" "On your left?" "On both hands?" Prompt answers, without counting, in all three cases required. Correct number of fingers, exclusive of thumbs, passes.

29. Ask S. to write the following from copy,

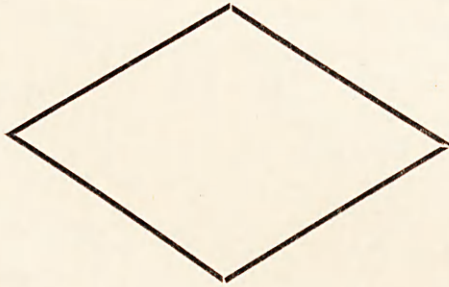
*See little Paul*

("Copy these words.") Record time. + if legible to one unfamiliar with original.





30. "Here is a figure that I want you to draw. Make it as much like this (pointing to the diamond), as you can." Or: "Draw one like it." Record time. Must be recognizable as a diamond. (See test 17.) (*Supplementary* question: "What do you call the drawing?")



31. "Repeat: '4 7 3 9 5.' Or: '1 0 6 2 8.' Or: '4 5 9 3 7.'" See directions in tests 8 and 9. FIVE digits.

32. Same as test 10. DESCRIPTION OF ACTIONS and SCENES passes. S. must tell what is *taking place*, what is *being done*, in the picture. Sentences or phrases instead of disconnected words. Correct *explanation* or *interpretation* of the pictures (S. tells WHY they are doing so and so—subjective interpretation of actor's characters or motives), also passes this age—and possibly entitles him to a credit in age 12.

33. Counts aloud 13 pennies as in test 19. S. must touch each with finger. No omissions or double countings.

34. "What is that?" Display (but not in the order of value) successively the heads of a *bright* PENNY, QUARTER, DIME and NICKEL. No error. Cf. test 48.

### Test of Moronity—Mentality of 8 to 12 Years.

#### Age 8.

35. "I want you to read this piece (or story) aloud." Place the following before S. (53 words):

#### THREE HOUSES BURNED.

New York, September 5th. A fire last night burned three houses in Water street. It took some time to put it out. The loss was fifty thousand dollars, and seventeen families lost their homes. In saving a girl who was asleep in a bed, a fireman was burned on the hands.

A couple of seconds after S. has finished, continue: "Now tell me what you read about." "What did it say?" "Tell me as well as you can in your own words." Later: "Anything else?" No specific questions, no aid (except to pronounce difficult words), allow time. Purpose of test unknown to S. Record time of reading, miscalled words, and verbatim reproduction. Score as follows:

New York,/ September 5th./ A fire/last night/burned/  
three houses/in Water street./ It took some time/to put it out./  
The loss/was fifty thousand dollars,/and seventeen families/lost  
their homes./ In saving/a girl/who was asleep/in a bed,/a fire-  
man/was burned/on the hands./ (20 memories.) One-half credit  
may be scored for the following part unities: September/5th/  
three/houses/Water/street/seventeen/families/thirty / thousand /  
dollars. Unessential words may be omitted without loss. Two  
memories or unities (simple ideas, as above) pass.

36. Show S. 3 one-cent and 3 two-cent stamps, pasted in a row on a card thus: 1 1 1 2 2 2. "You know what these are?" If S. does not know, tell him the value of the stamps. "How much would you have to pay for all of them at the post-office?" Or: "What do they all cost?" "Point to each one, and count them up." **Time: 10 sec.**

37. Place saturated (but not glossy) red, yellow, green, and blue papers (2 by 6 cm.), pasted on a grey cardboard, before S. E. points to each color in succession, beginning with red, as rapidly as possible, saying: "What do you *call* this color?" (Or: "I want you to *name* these colors, as I point to them, as fast as you can.") Don't ask, "What kind of a color is that?" or: "Which color is that?" Must **NAME** all correctly. **Time: 6 sec.**

38. "I want you to count backward from 20 to 0 (or 1) as fast as you can." If necessary: "Begin with 20, then 19, and so on. Now quickly." No prompting. One omission or transposition allowed. **Time: 20 sec.**

39. Give S. a pen. "I want you to write a little sentence (or story) which I shall give you. Now listen carefully: 'The pretty little girl runs.' (Or: 'Cats like to play with rats.'). Now write that." E. may repeat sentence, but don't show copy. Record writing time. Orthography need not be perfect. Tell S., if necessary, to spell the best he can. Must be legible to one unfamiliar with original.

40. "You know what **PAPER** is?" "And **CLOTH**?" "Are they the same (or alike)?" "No, why not?" "What is the dif-

ference?" Same procedure for BUTTERFLY and FLY, WOOD and GLASS. For the latter two the questions may be abbreviated, if S. has secured the idea: "What is the difference between —?" (*Supplementary* pairs: *knife* and *fork*, *sugar* and *salt*.) The distinctions should be made from memory. **Time: 2 minutes for 2 of the 3.**

#### Age 9.

41. "What DATE is it to-day?" If necessary: "What *day* of the week (or: which one of the week days)?" "What *month*?" "What day of the *month* (*number* of the day)?" "What *year*?" Date (day of month) may be three days wrong.

42. "Now tell me the names of all the days of the week (week days) in the right order as fast as you can." "What do we call the week days? Now quickly." May start on any day. No prompting. **Time: 10 sec.** (*Supplementary* questions: "How many days in a week?" "If to-day is Monday (or Thursday, or Saturday) what day was yesterday?")

43. "Suppose that we play store a while. You are the storekeeper and I come to your store to buy 4 cents' worth of candy (or gum, peanuts, etc.), and give you this quarter (or 25-cent piece). How much change (money) would you have to give me back? There is the money, now pick out the change and hand it to me." If S. says 21 cents, reply: "Good, now count out the money." Place on the table, face up, without overlapping, 13 pennies, 5 nickels, and 3 dimes. S. must actually count out the change. The test is in need of standardization. E. may try 25 cents — 6, or 25 cents — 5, or 25 cents — 7 (25 cents — 9 is too hard); or \$1.00 — 80 cents, or two dimes — 4 cents, or 6 cents. The latter is somewhat awkward, since we do not hand out two dimes in a 4-cent or 6-cent purchase.

44. Same as test 23. CLASSIFICATORY DEFINITION passes (giving class term or superordinate concept); e.g., a table is a piece of furniture, a chair is a movable seat, a fork is a table or eating utensil, a horse is an animal, or a four-footed animal that pulls, a mama is a mother, or a woman with a child.

45. Same as 35. Six memories pass.

46. Place the boxes fairly near together but out of correct order in a row before S. "Here we have five boxes, all looking alike but none weighing the same. There is a small difference in the weight of all of them. I want you to lift them this way (see test 16), and give me the one that feels the heaviest. Feel

carefully." After S. has selected the heaviest: "Now give me the heaviest one of the four." Then: "Now the heaviest of the three," etc. E. places boxes on table in the order selected by S., and makes a record of each trial, (paste initials of weights on under side: S (six), N, T, F, E). S. may be allowed to revise. ("Are you satisfied?") "If you like, lift them rapidly again"—in the order in which selected). Use 6, 9, 12, 15 and 18 grams. Boxes must be indistinguishable. **Time: 3 minutes for two correct** in three trials if necessary. (*Supplementary*: number of mistakes = the number of changes needed to give the right order, from 2 to 12.)

### Age 10.

47. "Tell me the names of all the months of the year in the right order as fast as you can." "What do we call the months?" May start with any month. No prompting. One omission or inversion allowed. Verbatim record. **Time: 15 sec.**

48. "What is that?" Or: "What do you call this coin (or bill)?" As in test 34. Use 1 cent, 5 cents, 10 cents, 25 cents, 50 cents, \$1., \$2., \$5., and \$10.

49. "I want you to make up a little sentence in which you must use the words, BOY, RIVER and BALL (or *New York, money, river*; or *girl, dollar, lake*). You can make the sentence long or short and you can use any other words that you like, but you must use the three words, boy, river and ball." Or: "Tell me something about a boy, a river and a ball, all in one sentence." If S. stops with two of the words: "But you must also say something about ball (or whichever word is omitted) in the same sentence. Now try again." The sentences need not be real but should not be absurd. A COMPOUND SENTENCE with TWO DISTINCT IDEAS (two co-ordinate phrases) passes: *e.g.*, "The boy crossed the river, and went to a ball." "New York has several rivers, and very much money." Three sentences or three independent clauses count failure; *e.g.*, "the boy is strong; the river is wide; and the ball is round." Cf. 52. **Time: 1 minute.**

50. Ask S. moderately, slowly and distinctly the following questions (one repetition allowed if necessary): "What should you do?" (or: "What ought you to do?"):

(1) "When you miss a train?"

(2) "When a friend hits you without meaning to?"

(3) "When you break something that belongs to somebody else?"

(4) "When you are on the way to school and find that it is later than usual (or notice that you'll be late for school)?"

(5) "Before you take part in something important (or in some important doings)?"

(6) "What should you answer when asked to say what you think (or give your opinion) about someone you don't know very well?"

(7) "Why should we forgive a wrong done by someone when he is angry (or when he is mad) more quickly than when he is not angry?"

(8) "Why should you make up your mind about (judge) a person by his *actions* instead of by his *words* (or by what he *does* instead of what he *says*)?" Record answers. Five correct pass. **Time: 20 sec. each.** Use judgment in marking. Illustrative replies: (1) +: Wait for the next. Take another. —: Hurry. Go to next station. Walk. (2) +: Forgive. Excuse. Don't be angry. Don't cry. Don't do anything to him. Don't tell mother. Say nothing. Tell him to be more careful next time. —: Hit him. Cry. Tell mother or grown ups. Get angry. Avoid him. (3) +: Apologize. Offer to pay, or buy another. Fix it. —: Run away. Let it lie. Let him break something of yours. Weep. It is a shame. (4) +: Hurry, run. If S. says: "Ask pardon of or tell teacher," give chance to correct by emphasizing: "When you are still on the way?" —: Go home. Go the next session. Cry. Think over what to say. Get up earlier. Ask what time it is. (5) +: Prepare. Think it over. Get ready. Practice. Ask someone. —: See if you have time. Ask if you dare. Say you'll do it. (6) +: I don't know. I don't know him. Say nothing. Say what I know. —: I don't know what his name is. Ask what his name is. He is good, or he is bad. (7) +: Because when angry we act without thinking, can't control ourselves, not responsible. —: Because we ought to forgive. The Bible says so. (8) +: Actions speak louder than words. Can see what he does. May not mean what he says. —: Because he is wrong.

*Supplementary* problems: the following may, after trial, be fitted into their proper ages. Some of the above are too easy, others too hard for age 10. "What ought you to do?" (1) "When you feel sleepy?" "Cold?" "Sick?" (2) "When somebody has stolen something (or your pencil, knife, ribbon, etc.) from you?" (3) "When somebody has told a lie on you?" (4) "When the house you are living in catches fire?" (5) "When somebody says he is sorry (begs pardon) because he has hurt (offended you)?" (6) "When you have been punished although you have

done nothing wrong?" (7) "When you want to buy something (cap, ball, dress, doll, etc.) but don't have the money?" (8) "Why is it easier to say that you'll do something than to do it?" The first sets in both series are easier than the second.

50a. "Repeat: '7 1 9 6 5 3.' Or: '4 8 7 2 5 1.'" Or: '3 7 6 9 8 2.'" See test 9. Six digits.

### Age 11.

51. "I am going to read you some sentences in which there is something silly (foolish, or absurd, or a catch). Listen carefully, and try to tell me what the nonsense is." If necessary: "Can you say that?" "Why not?" If answer is unclear: "How should it read?"

(1) "Yesterday there was an accident on the railroad, but it wasn't serious; there were only forty-eight killed." (2) "The police found yesterday the body of a young girl cut into eighteen pieces; they think that she killed herself." ("Do you think so?") (3) "I have three brothers, Paul, Ernest and myself." ("Who were they then?") (4) "A poor carpenter fell, broke his head and died. They have taken him to the hospital, but do not think that he will recover." ("What did they do that was foolish?") (5) "Someone said: 'If I should kill myself, I wouldn't do it on Friday, because Friday would bring me bad luck.'" Speak clearly, slowly and with expression. **Time: about two minutes for three correct.**

Illustrative marking: (1) +: Forty-eight are many. That was serious. —: It can't be serious. It might have been worse. (2) +: Could not cut herself into eighteen pieces. —: Somebody may have murdered her. She wouldn't kill herself. (3) +: You have only two brothers. You cannot be your own brother. 'Myself' is no brother. Should not say 'myself.' —: Say 'I' instead of 'myself.' Place 'I' before the two brothers. (4) +: He is already dead. A dead man can't recover. Should not have taken a dead man to the hospital. —: They can cure him if he has not hurt himself badly. He cannot live. (5) +: If you kill yourself the day doesn't matter. Friday cannot bring bad luck to a dead man. —: That is superstition. Friday is no more unlucky than any other day. He wouldn't commit suicide.

[*Supplementary list.* After due trial some of the following should prove available at some level: (1) "Last night I saw a man in the street, with his hands in his pockets and twirling a

cane." (2) "Next Christmas was a beautiful day, and we received many presents." (3) "Last Friday two of my friends called upon me. In the evening all four of us went to the theatre." (4) "It would take us all day to walk from New York to Chicago." (5) "Johnny bought a little rubber ball. He paid \$1.00 for it.]

52. Same as test 49. SIMPLE SENTENCE (SINGLE IDEA), or complex co-ordinated sentence, passes, thus: "The boy threw the ball into the river"; "As I was walking in New York, I found money near the river."

53. "I'm going to give you a few minutes in which I want you to speak as many single words as you possibly can; not sentences, but *single* words; any words at all, just as they come, like *school*, or *dog*, or *cap*, or *grass*. Speak aloud. Now, remember: just as fast as you can." If S. stops: "Don't stop." "More yet." Verbatim record. **Sixty words exclusive of duplicates, in three minutes.**

54. "You know what KINDNESS means?" "What does it mean?" "Tell what it is to show kindness." If necessary: "Give an example." Allow time as long as S. reflects. Same for CHARITY and JUSTICE (JEALOUSY). Two correct, with essential idea (phraseology immaterial): *kindness* requires notion of goodness, affection, sympathy, helpfulness; *charity*, of aid rendered unfortunate people; *justice*, of law or rule or treatment according to deserts, fairness. Justice is to be just = —.

55. "Here is a sentence (show the first one) in which the words are all mixed up (or are out of place). I want you to read it through aloud, and then put the words together (orally) in the right order, so that they make sense." Or: "Read these words aloud." After S. is through: "Did they make any sense?" "No, why not?" ("out of order"). "Good, now put them together in the right order." If S. fails on first sentence, E. may arrange it for him, but no further aid. Show sentences singly. Two satisfactory. **Time: 1 minute each.**

a defends dog good to asked paper the I  
his bravely master teacher correct my have  
evening for we last  
park started the early

Age 12.

56. "Repeat: '2 9 6 4 3 7 5.' Or: '1 6 9 5 8 4 7.' Or: '9 2 8 5 1 4 6.'" Directions in test 9. SEVEN digits.



57. "Do you know what a rhyme is?" "No? It's a word that sounds like, or ends like another word; as *cat* like *pat*, or *fat*, or *rat*." "Now give me three words that sound like BALL (or COY, DAY, MILL)." **Time: 1 minute for three rhymes with one word.** Trials with two words.

58. "Repeat: 'The other day I saw in the street a pretty dog who carried in his mouth a basket of strawberries.' Or: 'Johnny likes to go on visits to his grandmother, because she always tells him many funny stories.' Or: 'It should be the wish of every child to grow up to become an honest and useful man or woman.'" See test 8. TWENTY-SIX syllables. One out of 3 correct.

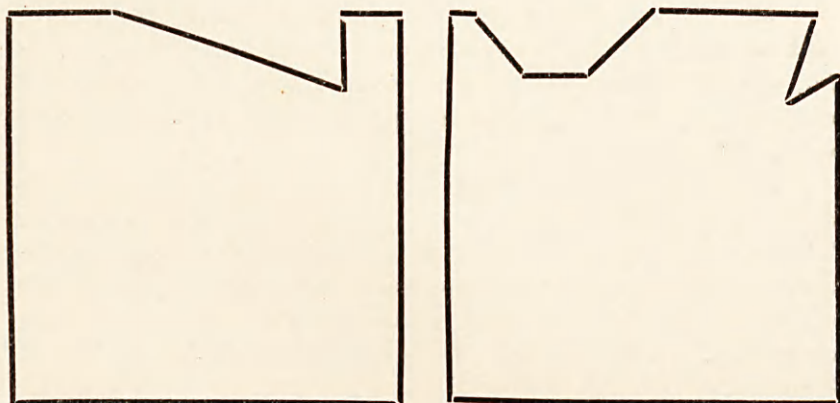
59. "Here are a couple of questions that I want you to try to answer. Now listen. 'A girl who was walking in the woods in a park, saw something hanging from the branch of a tree that made her so much afraid that she ran to the nearest policeman, and told him what she had seen.' What do you think she saw? What was it?"

"'My neighbor has been having strange visitors. First came a doctor, then a lawyer, and then a preacher.' Why did these three go to his house, the one after the other? What happened there?" Both answers must be correct: (1) +: A body. A corpse. A man has hanged himself. (2) +: Some one is dying.

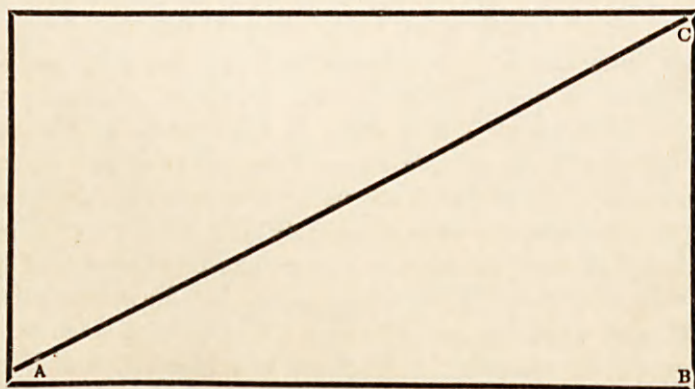
### Age 13.

60. Have on hand a supply of paper sheets, about 5 or 6 inches square. "Watch what I do. Now I fold the paper once this way (into halves). Now once that way (at right angles so that the paper is quarto-folded). Now I cut off a piece here (a triangular hole, about 1 x 1 inch, in the middle of the closed edge), and now I cut off this corner (the partly closed corner on the same edge). How would the paper look now if I should open it like this (demonstrate with a similarly folded but uncut paper)? Try to imagine that you can see it open like this paper, and draw it the way you think it will look open (or draw the holes as they will look when the paper is open)." Cut with scissors. Do not show excised triangle, nor indicate how many diamonds there are. I have given + on one diamond.

As children who mingle are likely to coach one another, it is advisable to supplement the test, when used in the same school or district, by using one or the other of the following variant forms, cut similarly in the closed edge of the twice folded paper:



61. "Suppose I should turn this lower half (pointing to ABC) around, and place it against the upper half (pointing), so that this corner (pointing to C) would touch that corner (B), and so that this edge (BC) would touch this edge (BA); what would the new card (form) look like then? Now I'll remove this lower part (place it a short distance from the other, in the original position), and I want you to try to imagine that you see it placed as I have said, and draw the new form. Begin by drawing the upper half the way it is lying." "Good, now the other half the way I said." Speak clearly. One repetition allowed. No further aid. + if angle at B is approximately correct and if AB is longer than BC.



62. "I'm going to give you pairs of words which either mean pretty much the same thing, or which sound somewhat alike, but have a different meaning. I want you to tell me how they differ. What is the difference between?" PLEASURE and HONOR.

EVOLUTION and REVOLUTION. POVERTY and MISERY. EVENT and ADVENT. PRIDE and PRETENSION.

+ if 3 of 5 are correctly distinguished (if some legitimate difference is pointed out, however crude the language, or if the difference is satisfactorily illustrated).

*Suggestions and General Directions for Administering the Tests.*

1. Make yourself thoroughly familiar with the tests, their intent and technique, before attempting to administer them. Best of all, attend a demonstration clinic by a psycho-clinician who has become expert in their use. The fact that the tests do not require delicate instruments of precision, does not obviate trained skill in their administration.

2. Attempt to win S.'s confidence and set him at ease at the very outset. A kindly greeting, a cheerful manner, a sympathetic glance, an assuring smile, a pat on the shoulder, will melt the icy barrier with most children.

3. Encourage S., whether he does well or poorly, to do his best, by rather fulsome praise or lavish evidences of appreciation. Nothing equals liberal expressions of approbation for inciting a child to put forth his best efforts. These are *tests, not teaching exercises*. Do not criticise, blame, intimidate or arouse obstinacy. Be tactful and patient, and, above all, adaptable. Dispositions differ. There are some subjects who cannot be won by the arts of praise or cajolery; these must be aroused out of their state of unresponsiveness by other expedients. But it is only seldom that any subjects need to be prodded or threatened.

4. Give no aid other than such as is permitted in the various tests.

5. Adhere unvaryingly to the conditions laid down in each test. Eventually the conditions will be multiplied and improved. The *supplementary tests*, which are extraneous to the Binet-Simon scale, may be given at the discretion of E.

6. It is not necessary to follow any invariable order in giving the different tests. But it is better to start with tests beneath rather than above S.'s mental level. Initial impressions count for much. Difficult tests at the outset tend to discourage S. at the beginning, and thus affect adversely the later tests. The following order is suggested for medium or high grade S's.: numbers 35 (45), 10 (32), 46, 42, 41, 47, 34 (48), 43, 49 (52), 50, 51, 54, 23 (44), 55, 31, 14, 50a, or 56, 58, 21, 17a, 53, and 57. It is inadvisable to give 57 *immediately* before 53, as some fall

into the error of supposing that only rhymes are wanted or groups of words in triplets; or 10 *immediately* before 35 as some S's. confuse what was read with what was seen in the pictures, (otherwise 10 makes a good initial test); or 43 before 34 for obvious reasons.

7. Test S. extensively both below and above the mental age which he passes, particularly above. Give *all* the higher tests unless it is obvious beyond question that the tests are too difficult. Do not fall into the error of taking things for granted, nor acquire the habit of omitting difficult tests because of indolence. Only by wide-range testing shall we be able to arrive at a satisfactory individual diagnosis or be able satisfactorily to criticise or revise the scale.

8. Never examine S's. in groups; the work is clinical. Ordinarily do not examine in the presence of spectators; S. should be alone with the examiner, or with the examiner and his assistant.

9. The tests should be carried out in a room that is well-lighted and free from interruptions or noise. Some tests require absolute quiet.

10. Always record as many details of S.'s verbal or other reactions, as time permits; they may eventually attain a significance not contemplated in the tests themselves. Verbatim records are the ideal to be approximated.

11. In timing measure the actual time of the *act of execution*. This assumes that S. begins to respond as soon as the test has been explained, particularly in tests 36, 37, 38, 42 and 47. But if S. reacts very slowly, it is advisable to record both the time required to *start* and the time required to *perform*. It is well to avoid a too pedantic insistence on the time conditions. Some S's. are slow but thorough. With such, a slight overstepping of the time limits is immaterial.

12. E. may read the selection in 35 at the normal rate for such S's. who are unable to read because of defective vision, but whose intelligence justifies the belief that they could read if they had good eyes.

13. The attempt has been made to standardize the sentences in 8, 17a, 21 and 58 by using only single, simple concrete sentences with a familiar context.

14. The following tests are probably *too easy* for the age standards to which they are assigned: 25, 33, 37, 42, 47, 48, 50, (first set), and 57. The following are probably *too difficult*: 18, 21, 39, 43 (as 25 cents — 9), 44, 45, 46, 53, 54, 55, 58-62. The

need to verify these probabilities, and to fit all the tests to their proper ages, is urgent.

15. The following test, given in connection with 33 or 43, proved suggestive among feebleminded epileptics: "Which would you rather have, 73 cents or 59 cents (or 62 cents or 48 cents)?" Possibly it is adapted to some age standard.

16. The following symbols may be used in *marking* the records: plus sign (+), passed; minus sign (—), failed;  $\frac{1}{2}$ , one-half credit (in rare instances in which the responses are not entirely wrong); ?, evaluation of response uncertain; !, absurd response; I, ignorance or inability to comprehend the question or test; T, timidity; R, resistance; In, inattentive. Credit the examinee (S.) with the age in which all the tests, or all but one, are passed.

Credit one year for every (additional) five tests passed at higher levels, or .2 year for each advance point (*i.e.*, multiply the advance points by two and express as a decimal. Thus 5 3-5 = 5.6). Record the chronological ages in years and months (thus 8<sup>5</sup>), and the mental ages in years and tenths (decimals). The record should be made on a specially prepared record form.

*Personal, Hereditary and Environmental Data.*

It is particularly important to secure the following data in the study of defectives.

**Personal Factors (and Anamnesis).**

Full name	Sex	Born	Birthplace
Nationality	Grade	Degree and character of education: schools attended months attended	
Years in each grade	Years retarded	Nature of reported school capacities	
Character of school work at present		Incapacities	
Infant and childhood diseases and accidents		Present health	
Vaccination	<i>Stigmata of degeneration: Anatomical</i>		
(anomalies of head, face, teeth, ears, limbs, genital organs, skin, body in general)			

*Physiological* (anomalies of sensory, motor, genito-urinary, speech and instinctive functions, and pubertal retardation)

*Psychic* (feeblemindedness, aberrations, disequilibrium, one-sided talents, sexual perversion, moral delinquency, eccentricity, delusions, imperative ideas, illusions, psychoses)

Visual acuity	Auditory acuity	Manometry	Vital
capacity	Height	Nutrition	Circulation
	Pulse	Temperature	
Reflexes	Temperament and disposition		Attitude
toward others	Deportment		Mental and
physical habits, good	bad	Complexion	
Color of eyes	of hair		

#### Hereditary Factors.

Birthplace of father	of mother	Num-
ber of brothers	of sisters	ber of
conditions of brothers and sisters	Mental and physical con-	ditions
	Order of birth	
Weight at birth	Condition at birth	Premature
delivery	Condition of mother at birth	delivery
age at birth	Father's age	Mother's
The following data regard-		
ing father, mother and blood relatives: longevity, diseases, de-		
formities, neuroses, psychoses, dependency, vagrancy, drug and		
alcoholic habits, criminal tendencies, sex perversions, age at death,		
causes of death		

#### Environmental Factors.

Home conditions	sanitary	economic
moral	Father's occupation	Mother's occupa-
tion	Character of community, hygienically, morally,	tion
educationally	Of street influences	
	Of amusement resorts	
mates and associates		Of play-