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FOR THE
PEABODY PICTURE VOCABULARY TEST*

BY

LLOYD M. DUNN, Coordinator
EDUCATION FOR EXCEPTIONAL CHILDREN
GEORGE PEABODY COLLEGE FOR TEACHERS
NASHVILLE 5, TENNESSEE



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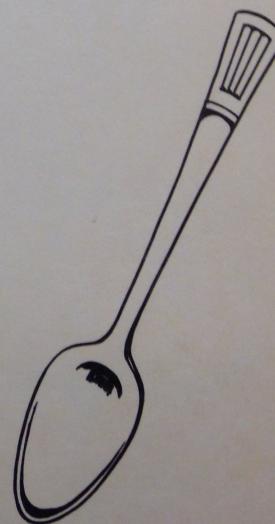
EXAMPLE A



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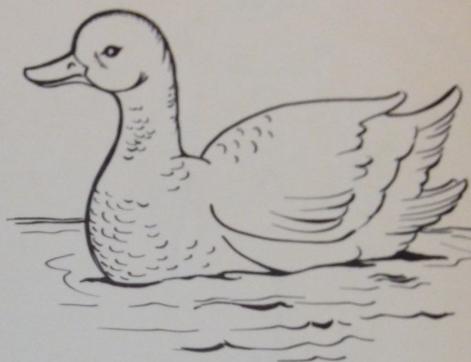


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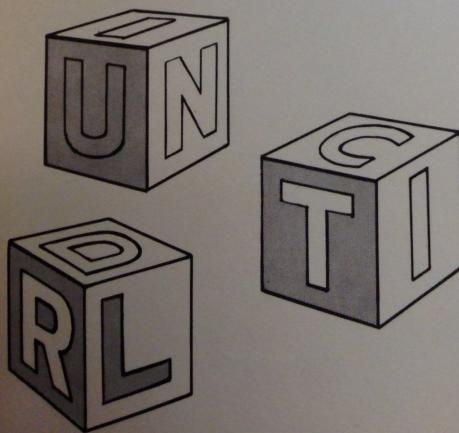




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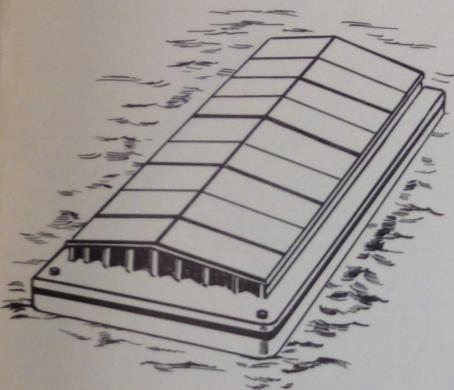


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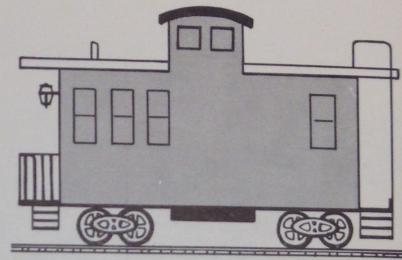


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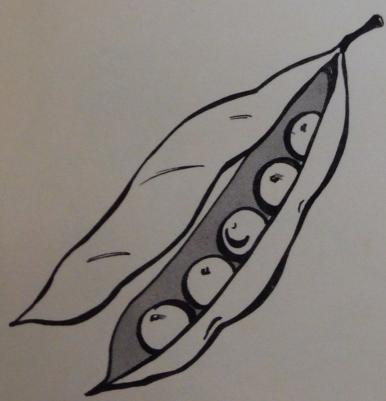
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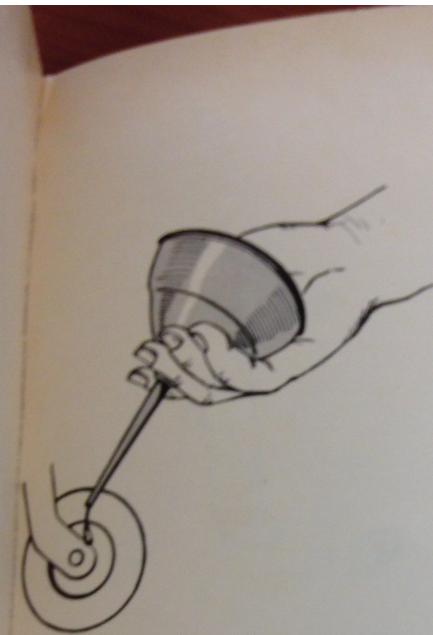
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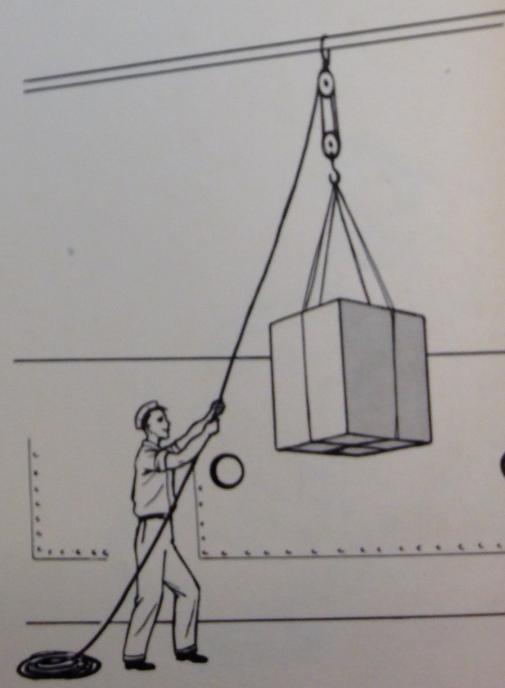
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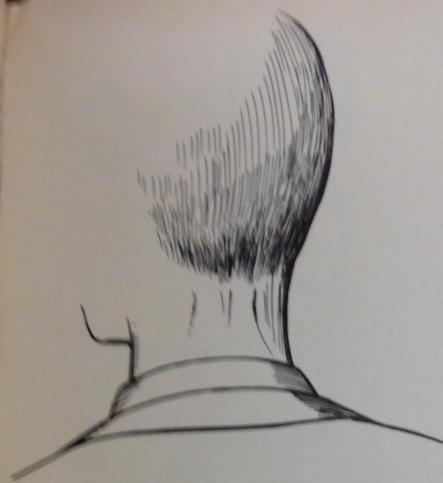


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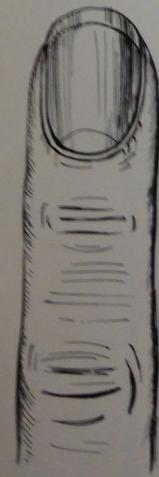




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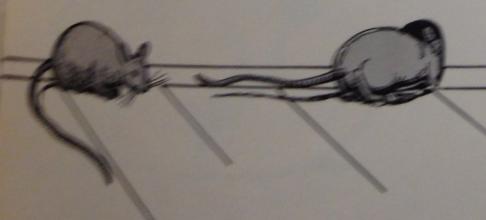
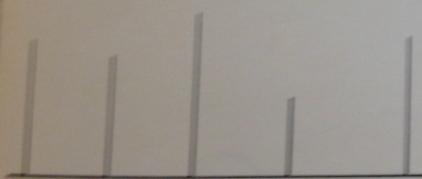




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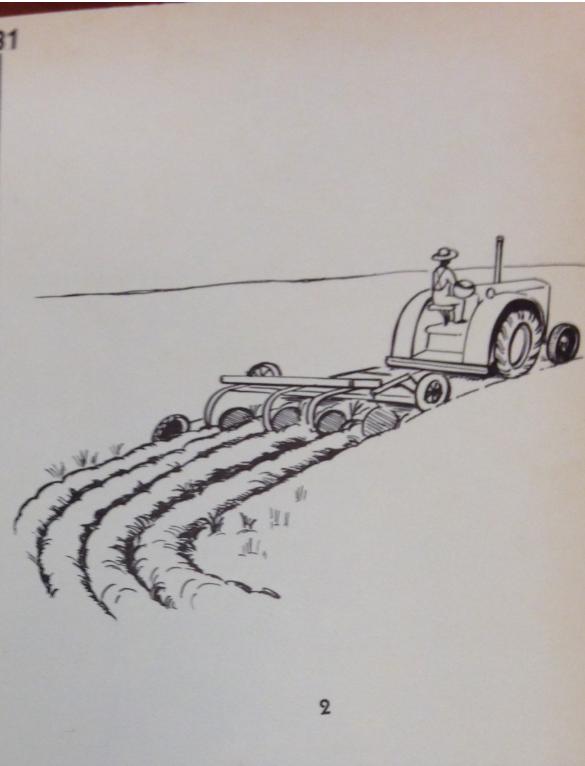


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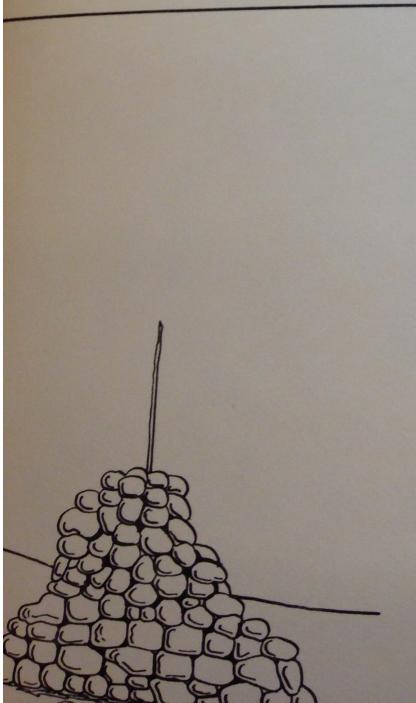


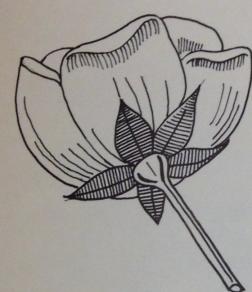


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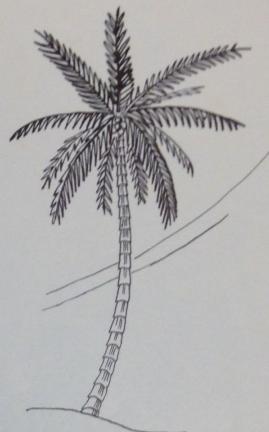


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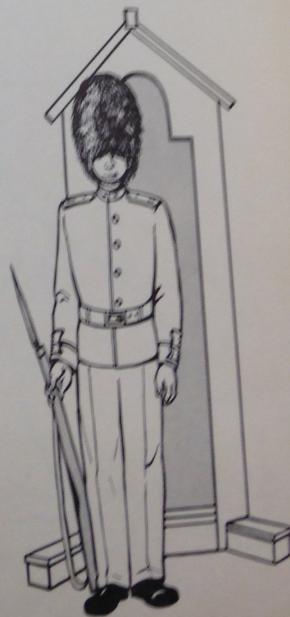
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2



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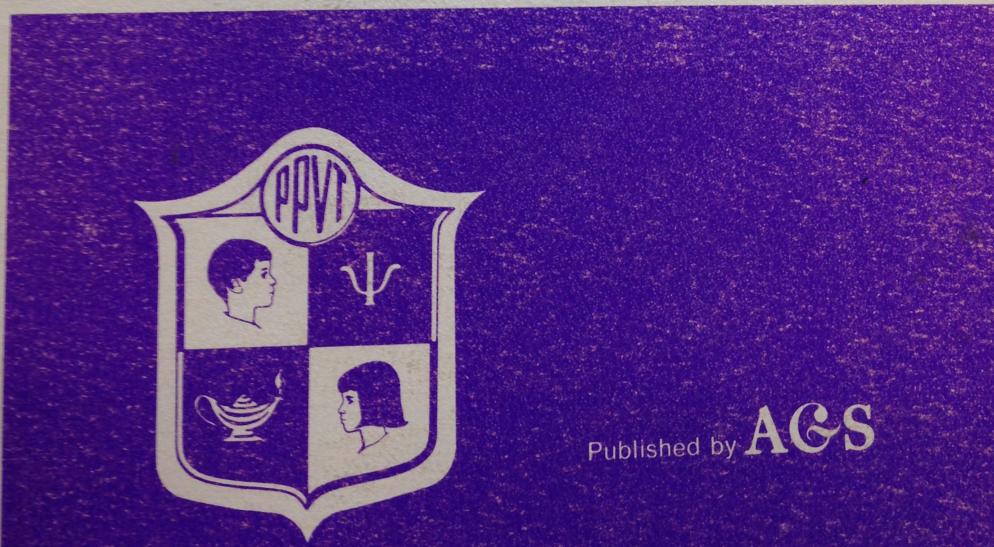


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Peabody Picture Vocabulary Test

by Lloyd M. Dunn, Ph.D.

MANUAL



Published by AGS

the test is administered only over the critical range for a particular subject. However, if the examiner deems it desirable he may return to easier items below the basal, after the ceiling has been established to leave the subject with a success experience; these responses are *not* to enter into the calculation of the total raw score. With some older and brighter subjects it may be impossible to establish a ceiling. In such cases the norms do not apply, and derived scores should not be recorded.

RECORDING RESPONSES

For each item administered, write the *picture number* (1, 2, 3, or 4) which the subject indicated in the appropriate space on the Individual Test Record. There are at least two reasons for *not* just indicating correct and incorrect responses with check marks: (1) the record of the *picture number* selected will enable the examiner to recheck his scoring; and (2) the subject may see the examiner recording plus and minus, and the negative scores may result in a reduction of motivation and rapport.

To establish easily the basal, ceiling, and errors, indicate *incorrect* responses by drawing a *line* through the *geometric figures*. (See Table 1.)

SCORING THE TEST

The *total raw score* is the number of *correct responses*. All items below the basal point are assumed correct; all items above the ceiling item are assumed incorrect. To get the total raw score, subtract the errors from the number of the last item presented, or ceiling item. This can be done conveniently in the spaces provided on page 3 of the Individual Test Record.

To compute the subject's chronological age, use the appropriate space on the Individual Test Record. The days are dropped unless they are more than 15, in which case an extra month is added to the age.

FINDING DERIVED SCORES

By use of the tables which follow, the raw score can be converted to three types of derived scores: (1) an age equivalent (mental age); (2) a standard score equivalent (intelligence quotient); and (3) a percentile equivalent (%ile). The procedures by which these norms were established are outlined in Part II of this manual.

USING DIFFERENT DERIVED SCORES

Age norms for converting raw scores on the PPVT to mental age scores are given in Table 2 and extend from 1 year 9 months through 18 years. Age equivalents provide an *index of the level of development* for a given subject. For example, 75 is the

mean raw score on Form A for children who have chronological ages of 10-0. Therefore, regardless of the subject's chronological age, if he obtained a raw score of 75 on Form A of the PPVT, he is said to possess a mental age of ten years since his ability to score on the PPVT is like that of the average ten year old. Approximate grade equivalents are derived from age equivalents by the rule of five. Thus child with a mental age of 11-0 would have a grade equivalent of six (subtract five from the M.A.), indicating he has accumulated the capacity to achieve at the beginning grade six level. Age norms have a number of advantages. They provide an easily understood index of a subject's developmental level. They are useful in comparing mental age with chronological age, achievement age, social age, and so on.

Standard score norms for converting raw scores to intelligence quotients are shown in Table 3 for Form A and Table 4 for Form B. Smoothed and extrapolated I.Q. scores below 55 and above 145 will be found in the appendix in Tables 9, 10, 11, and 12. (See page 29 for a description of how these values were computed.) The 18 year norms will need to be used for adults. Intelligence quotient scores provide an *index of brightness* for a given subject in comparison with other individuals of the same age. An I.Q. of 100 on the PPVT was arbitrarily assigned to the mean raw score for subjects at each age level. The standard deviation was set at 15 I.Q. points. This provided the following classification:

INTELLIGENCE QUOTIENTS	PERCENTAGES INCLUDED	CLASSIFICATIONS
125 and above	5	very rapid learners
110 to 124	20	rapid learners
90 to 109	50	average learners
75 to 89	20	slow learners
below 75	5	very slow learners

Standard scores have the advantage of enabling the examiner to compare a subject's test score with scores made by other individuals in his age group. They provide scores which can be handled easily by statistics. Too, they are not based on assumptions of linearity of increase in mental age with chronological age as would have been the case had I.Q.'s been derived by the formula $I.Q. = M.A./C.A.$ Further, the problem of keeping M.A. units equal with adolescents and adults did not have to be encountered. Finally, since the standard deviation was kept constant from year to year, a subject's I.Q. would not be expected to vary unless his score on the test relative to others of his own age changes.

Percentile norms for converting raw scores to percentiles are shown in Table 5 for Form A and Table 6 for Form B. Percentile norms (*%iles*) provide an *index of brightness* as do I.Q.'s, indicating how a given individual compares with others of his own age. Thus a person at the 50 *%ile* has scored in such a fashion that, for every 100 persons at a given age level on whom the test was standardized, 50 scored above and 50 scored below him. A person at the 25 *%ile* has 25 individuals of his age scoring below him for every 75 scoring higher than he did. Percentiles have the disadvantage (as compared with standard score norms) of providing unequal units. Thus the difference between the 5th and 10th percentile is far greater than between the 55th and 60th percentile. An advantage over standard score norms is that no assumption is made about the normality of distribution of scores at any age level. Too, percentiles are the most easily understood derived scores for persons unsophisticated about the nature of psychological tests.

TABLE 2
MENTAL AGES for Raw Scores on FORMS A and B
 (SHADeD AREAS ARE EXTRAPOLATED NORMS)

Raw Scores	Mental Ages Form A	Mental Ages Form B	Raw Scores	Mental Ages Form A	Mental Ages Form B
111	-	18-0	57	6-3	6-4
110	-	17-10	56	6-1	6-2
109	18-0	17-7	55	5-11	5-11
108	17-9	17-3	54	5-9	5-10
107	17-6	17-1	53	5-7	5-8
106	17-2	16-10	52	5-5	5-6
105	16-11	16-7	51	5-2	5-4
104	16-7	16-5	50	5-1	5-3
103	16-3	16-1	49	4-11	5-1
102	15-11	15-9	48	4-10	4-11
101	15-9	15-6	47	4-8	4-9
100	15-7	15-3	46	4-7	4-7
99	15-5	14-11	45	4-5	4-6
98	15-3	14-8	44	4-3	4-4 →
97	15-1	14-5	43	4-1	4-2
96	14-10	14-2	42	4-0	4-0
95	14-6	13-11	41	3-11	3-11
94	14-3	13-8	40	3-10	3-10
93	13-11	13-4	39	3-9	3-9
92	13-7	13-0	38	3-8	3-8
91	13-2	12-10	37	3-7	3-8
90	12-11	12-8	36	3-6	3-7
89	12-9	12-6	35	3-5	3-6
88	12-7	12-4	34	3-4	3-5
87	12-5	12-2	33	3-3	3-4
86	12-3	11-11	32	3-3	3-2
85	12-1	11-7	31	3-2	3-1
84	11-9	11-3	30	3-1	3-0
83	11-4	11-0	29	3-0	3-0
82	11-0	10-10	28	2-11	2-11
81	10-10	10-9	27	2-11	2-10
80	10-8	10-7	26	2-10	2-10
79	10-7	10-5	25	2-9	2-9
78	10-5	10-4	24	2-8	2-8
77	10-4	10-2	23	2-8	2-8
76	10-2	10-1	22	2-7	2-7
75	10-0	9-10	21	2-6	2-6
74	9-8	9-6	20	2-6	2-6
73	9-5	9-4	19	2-5	2-5
72	9-2	9-1	18	2-5	2-5
71	8-11	8-11	17	2-4	2-4
70	8-9	8-9	16	2-4	2-4
69	8-7	8-6	15	2-3	2-3
68	8-5	8-4	14	2-3	2-3
67	8-3	8-2	13	2-2	2-2
66	8-1	8-0	12	2-2	2-2
65	7-10	7-10	11	2-1	2-1
64	7-8	7-7	10	2-1	2-1
63	7-6	7-5	9	2-0	2-0
62	7-3	7-3	8	1-11	1-11
61	7-1	7-0	7	1-11	1-11
60	6-10	6-10	6	1-10	1-10
59	6-8	6-8	5	1-9	1-9
58	6-6	6-6			

TABLE 3
INTELLIGENCE QUOTIENTS for Raw Scores on FORM A

Raw Scores	Chronological Ages																		Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 4-2	2-9 to 3-2	
150	141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	150
149	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	149
148	139	146	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148
147	138	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	147
146	137	143	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	146
145	136	142	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	145
144	135	141	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	144
143	134	140	143	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	143
142	133	139	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	142
141	132	138	141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	141
140	131	137	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140
139	130	136	139	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	139
138	129	135	138	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	138
137	128	134	137	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	137
136	127	133	135	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	136
135	126	132	134	143	—	—	—	—	—	—	—	—	—	—	—	—	—	—	135
134	125	131	133	141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	134
133	124	130	132	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	133
132	123	129	131	139	—	—	—	—	—	—	—	—	—	—	—	—	—	—	132
131	122	127	130	138	—	—	—	—	—	—	—	—	—	—	—	—	—	—	131
130	121	126	129	137	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130
129	120	125	128	136	145	—	—	—	—	—	—	—	—	—	—	—	—	—	129
128	119	124	127	135	143	—	—	—	—	—	—	—	—	—	—	—	—	—	128
127	118	123	126	134	142	—	—	—	—	—	—	—	—	—	—	—	—	—	127
126	117	122	125	132	141	145	—	—	—	—	—	—	—	—	—	—	—	—	126
125	116	121	124	131	140	144	—	—	—	—	—	—	—	—	—	—	—	—	125
124	115	120	123	130	138	143	—	—	—	—	—	—	—	—	—	—	—	—	124
123	114	119	122	129	137	142	—	—	—	—	—	—	—	—	—	—	—	—	123
122	113	118	121	128	136	140	—	—	—	—	—	—	—	—	—	—	—	—	122
121	112	117	120	127	135	139	—	—	—	—	—	—	—	—	—	—	—	—	121
120	111	116	119	126	133	138	—	—	—	—	—	—	—	—	—	—	—	—	120
119	110	115	118	125	132	136	—	—	—	—	—	—	—	—	—	—	—	—	119
118	109	114	117	124	131	135	—	—	—	—	—	—	—	—	—	—	—	—	118
117	108	113	116	122	130	134	—	—	—	—	—	—	—	—	—	—	—	—	117
116	107	112	114	121	128	133	—	—	—	—	—	—	—	—	—	—	—	—	116
115	106	110	113	120	127	131	145	—	—	—	—	—	—	—	—	—	—	—	115
114	105	109	112	119	126	130	143	—	—	—	—	—	—	—	—	—	—	—	114
113	104	108	111	118	125	129	142	—	—	—	—	—	—	—	—	—	—	—	113
112	103	107	110	117	123	127	140	145	—	—	—	—	—	—	—	—	—	—	112
111	102	106	109	116	122	126	139	143	—	—	—	—	—	—	—	—	—	—	111
110	101	105	108	115	121	125	137	142	—	—	—	—	—	—	—	—	—	—	110
109	100	104	107	114	120	124	136	140	—	—	—	—	—	—	—	—	—	—	109
108	99	103	106	112	118	122	134	139	—	—	—	—	—	—	—	—	—	—	108
107	98	102	105	111	117	121	133	137	—	—	—	—	—	—	—	—	—	—	107
106	97	101	104	110	116	120	131	136	—	—	—	—	—	—	—	—	—	—	106
105	96	100	103	109	115	118	130	134	146	—	—	—	—	—	—	—	—	—	105
104	95	99	102	108	113	117	128	133	144	—	—	—	—	—	—	—	—	—	104
103	94	98	101	107	112	116	127	131	143	—	—	—	—	—	—	—	—	—	103
102	93	97	100	106	111	115	126	130	141	—	—	—	—	—	—	—	—	—	102
101	92	96	99	105	110	113	124	128	140	—	—	—	—	—	—	—	—	—	101

TABLE 3 (cont'd)

INTELLIGENCE QUOTIENTS for Raw Scores on FORM A

Raw Scores	Chronological Ages																			Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2		
100	91	95	98	103	108	112	123	127	138	—	—	—	—	—	—	—	—	—	100	
99	90	94	97	102	107	111	121	125	137	146	—	—	—	—	—	—	—	—	99	
98	89	92	96	101	106	109	120	124	135	144	—	—	—	—	—	—	—	—	98	
97	88	91	94	100	105	108	118	122	133	143	—	—	—	—	—	—	—	—	97	
96	87	90	93	99	103	107	117	121	132	141	—	—	—	—	—	—	—	—	96	
95	86	89	92	98	102	106	115	119	130	139	—	—	—	—	—	—	—	—	95	
94	85	88	91	97	101	104	114	118	129	138	—	—	—	—	—	—	—	—	94	
93	84	87	90	96	100	103	112	116	127	136	—	—	—	—	—	—	—	—	93	
92	83	86	89	95	98	102	111	115	126	134	146	—	—	—	—	—	—	—	92	
91	82	85	88	93	97	100	109	113	124	144	—	—	—	—	—	—	—	—	91	
90	81	84	87	92	96	99	108	112	123	131	142	—	—	—	—	—	—	—	90	
89	80	83	86	91	95	98	106	110	121	129	140	—	—	—	—	—	—	—	89	
88	79	82	85	90	93	97	105	109	119	128	139	—	—	—	—	—	—	—	88	
87	78	81	84	89	92	95	103	107	118	126	137	—	—	—	—	—	—	—	87	
86	77	80	83	88	91	94	102	106	116	124	135	—	—	—	—	—	—	—	86	
85	76	79	82	87	90	93	101	104	115	122	133	—	—	—	—	—	—	—	85	
84	75	78	81	86	88	91	99	103	113	121	132	145	—	—	—	—	—	—	84	
83	74	77	80	85	87	90	98	101	112	119	130	143	—	—	—	—	—	—	83	
82	73	76	79	83	86	89	96	100	110	118	128	141	—	—	—	—	—	—	82	
81	72	74	78	82	85	88	95	98	109	116	126	139	—	—	—	—	—	—	81	
80	71	73	77	81	83	86	93	97	107	114	125	137	—	—	—	—	—	—	80	
79	70	72	76	80	82	85	92	95	105	113	123	135	—	—	—	—	—	—	79	
78	69	71	75	79	81	84	90	94	104	111	121	133	145	—	—	—	—	—	—	78
77	68	70	73	78	80	82	89	92	102	109	120	131	143	—	—	—	—	—	—	77
76	67	69	72	77	78	81	87	91	101	108	118	129	141	—	—	—	—	—	—	76
75	66	68	71	76	77	80	86	89	99	106	116	127	139	145	—	—	—	—	—	75
74	65	67	70	74	76	79	84	88	98	105	114	125	137	144	—	—	—	—	—	74
73	64	66	69	73	75	77	83	86	96	103	113	124	135	142	—	145	—	—	—	73
72	63	65	68	72	73	76	81	85	95	101	111	122	133	140	146	143	—	—	—	72
71	62	64	67	71	72	75	80	83	93	100	109	120	131	138	144	142	—	—	—	71
70	61	63	66	70	71	73	79	82	91	98	107	118	129	136	142	141	—	—	—	70
69	60	62	65	69	70	72	77	80	90	96	106	116	127	134	141	139	—	—	—	69
68	59	61	64	68	68	71	76	79	88	95	104	114	125	133	139	138	—	—	—	68
67	58	60	63	67	67	70	74	77	87	93	102	112	123	131	137	136	—	—	—	67
66	57	58	62	66	66	68	73	76	85	91	100	110	121	129	135	135	—	—	—	66
65	56	57	61	64	65	67	71	74	84	90	99	108	119	127	134	133	145	—	—	65
64	55	56	60	63	63	66	70	73	82	88	97	106	117	125	132	144	—	—	—	64
63	—	55	59	62	62	64	68	71	81	86	95	104	115	123	130	142	—	—	—	63
62	—	—	58	61	61	63	67	69	79	85	93	102	113	122	129	141	—	—	—	62
61	—	—	57	60	60	62	65	68	77	83	92	100	111	120	127	139	—	—	—	61
60	—	—	56	59	58	61	64	66	76	81	90	98	109	118	125	126	138	—	—	60
59	—	—	55	58	57	59	62	65	74	80	88	96	107	116	123	125	136	—	—	59
58	—	—	—	57	56	58	61	63	73	78	86	95	105	114	122	123	134	145	—	58
57	—	—	—	56	55	57	59	62	71	76	85	93	103	112	120	122	133	143	—	57
56	—	—	—	—	—	55	58	60	70	75	83	91	101	111	118	120	131	141	—	56
55	—	—	—	—	—	—	56	59	68	73	81	89	99	109	116	119	130	140	—	55
54	—	—	—	—	—	—	55	57	67	71	79	87	97	107	115	117	128	138	—	54
53	—	—	—	—	—	—	—	56	65	70	78	85	95	105	113	116	127	137	—	53
52	—	—	—	—	—	—	—	—	63	68	76	83	93	103	111	114	125	135	—	52
51	—	—	—	—	—	—	—	—	62	66	74	81	91	101	109	113	124	134	—	51

TABLE 3 (cont'd)

INTELLIGENCE QUOTIENTS for Raw Scores on FORM A

Raw Scores	Chronological Ages																			Raw Scores
	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2	2-3 to 2-8		
50	—	—	—	—	—	—	—	60	65	72	79	89	100	108	111	122	132	—	50	
49	—	—	—	—	—	—	—	59	63	71	77	87	98	106	110	121	131	—	49	
48	—	—	—	—	—	—	—	57	61	69	75	85	96	104	109	119	129	—	48	
47	—	—	—	—	—	—	—	56	60	67	73	83	94	102	107	117	128	—	47	
46	—	—	—	—	—	—	—	—	58	65	71	81	92	101	106	116	126	145	46	
45	—	—	—	—	—	—	—	56	64	69	79	90	99	104	114	124	144	45		
44	—	—	—	—	—	—	—	55	62	68	77	89	97	103	113	123	142	44		
43	—	—	—	—	—	—	—	—	60	66	75	87	96	101	111	121	140	43		
42	—	—	—	—	—	—	—	—	58	64	73	85	94	100	110	120	138	42		
41	—	—	—	—	—	—	—	—	57	62	71	83	92	98	108	118	137	41		
40	—	—	—	—	—	—	—	—	55	60	69	81	90	97	107	117	135	40		
39	—	—	—	—	—	—	—	—	58	67	79	89	96	105	115	133	39			
38	—	—	—	—	—	—	—	—	56	65	78	87	94	104	114	131	38			
37	—	—	—	—	—	—	—	—	—	63	76	85	93	102	112	129	37			
36	—	—	—	—	—	—	—	—	—	61	74	83	91	101	110	128	36			
35	—	—	—	—	—	—	—	—	—	59	72	82	90	99	109	126	35			
34	—	—	—	—	—	—	—	—	57	70	80	88	97	107	124	34				
33	—	—	—	—	—	—	—	—	55	68	78	87	96	106	122	33				
32	—	—	—	—	—	—	—	—	—	67	76	85	94	104	121	32				
31	—	—	—	—	—	—	—	—	—	65	75	84	93	103	119	31				
30	—	—	—	—	—	—	—	—	—	63	73	82	91	101	117	30				
29	—	—	—	—	—	—	—	—	—	61	71	81	90	100	115	29				
28	—	—	—	—	—	—	—	—	—	59	69	80	88	98	114	28				
27	—	—	—	—	—	—	—	—	—	57	68	78	87	96	112	27				
26	—	—	—	—	—	—	—	—	—	56	66	77	85	95	110	26				
25	—	—	—	—	—	—	—	—	—	—	64	75	84	93	108	25				
24	—	—	—	—	—	—	—	—	—	—	63	74	82	92	106	24				
23	—	—	—	—	—	—	—	—	—	—	61	72	80	90	105	23				
22	—	—	—	—	—	—	—	—	—	—	59	71	79	89	103	22				
21	—	—	—	—	—	—	—	—	—	—	57	69	77	87	101	21				
20	—	—	—	—	—	—	—	—	—	—	56	68	76	86	99	20				
19	—	—	—	—	—	—	—	—	—	—	67	74	84	98	98	19				
18	—	—	—	—	—	—	—	—	—	—	65	73	82	96	96	18				
17	—	—	—	—	—	—	—	—	—	—	64	71	81	94	104	17				
16	—	—	—	—	—	—	—	—	—	—	62	70	79	92	101	16				
15	—	—	—	—	—	—	—	—	—	—	—	61	68	78	90	108	15			
14	—	—	—	—	—	—	—	—	—	—	—	59	67	76	89	106	14			
13	—	—	—	—	—	—	—	—	—	—	—	58	65	75	87	103	13			
12	—	—	—	—	—	—	—	—	—	—	—	56	63	73	85	101	12			
11	—	—	—	—	—	—	—	—	—	—	—	55	62	72	83	101	11			
10	—	—	—	—	—	—	—	—	—	—	—	—	60	70	82	98	108	10		
9	—	—	—	—	—	—	—	—	—	—	—	—	59	69	80	90	98	9		
8	—	—	—	—	—	—	—	—	—	—	—	—	57	67	78	88	98	8		
7	—	—	—	—	—	—	—	—	—	—	—	—	56	65	76	86	96	7		
6	—	—	—	—	—	—	—	—	—	—	—	—	—	64	74	84	94	104	6	
5	—	—	—	—	—	—	—	—	—	—	—	—	—	62	73	83	93	103	5	

TABLE 4
INTELLIGENCE QUOTIENTS for Raw Scores on FORM B

Raw Scores	Chronological Ages																			Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2		
	17-5	16-5	15-5	14-5	13-5	12-5	11-5	10-5	9-5	8-5	7-5	6-5	5-5	4-8	4-2	3-8	3-2			
150	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	150	
149	139	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	149	
148	138	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	
147	137	143	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	147	
146	136	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	146	
145	135	141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	145	
144	134	140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	144	
143	133	139	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	143	
142	132	138	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	142	
141	131	137	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	141	
140	130	136	143	145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	
139	129	135	142	144	—	—	—	—	—	—	—	—	—	—	—	—	—	—	139	
138	128	134	140	143	—	—	—	—	—	—	—	—	—	—	—	—	—	—	138	
137	127	133	139	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	137	
136	126	132	138	141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	136	
135	125	130	137	139	145	—	—	—	—	—	—	—	—	—	—	—	—	—	135	
134	124	129	136	138	144	—	—	—	—	—	—	—	—	—	—	—	—	—	134	
133	123	128	135	137	143	—	—	—	—	—	—	—	—	—	—	—	—	—	133	
132	122	127	134	136	142	—	—	—	—	—	—	—	—	—	—	—	—	—	132	
131	121	126	132	135	140	—	—	—	—	—	—	—	—	—	—	—	—	—	131	
130	120	125	131	134	139	145	—	—	—	—	—	—	—	—	—	—	—	—	130	
129	119	124	130	133	138	144	—	—	—	—	—	—	—	—	—	—	—	—	129	
128	118	123	129	132	137	143	—	—	—	—	—	—	—	—	—	—	—	—	128	
127	117	122	128	131	136	141	—	—	—	—	—	—	—	—	—	—	—	—	127	
126	116	121	127	130	135	140	—	—	—	—	—	—	—	—	—	—	—	—	126	
125	115	120	126	128	134	139	—	—	—	—	—	—	—	—	—	—	—	—	125	
124	114	119	124	127	133	138	—	—	—	—	—	—	—	—	—	—	—	—	124	
123	113	118	123	126	131	137	—	—	—	—	—	—	—	—	—	—	—	—	123	
122	112	117	122	125	130	135	—	—	—	—	—	—	—	—	—	—	—	—	122	
121	111	115	121	124	129	134	—	—	—	—	—	—	—	—	—	—	—	—	121	
120	110	114	120	123	128	133	—	—	—	—	—	—	—	—	—	—	—	—	120	
119	109	113	119	122	127	132	146	—	—	—	—	—	—	—	—	—	—	—	119	
118	108	112	118	121	126	131	144	—	—	—	—	—	—	—	—	—	—	—	118	
117	107	111	116	120	125	130	143	—	—	—	—	—	—	—	—	—	—	—	117	
116	106	110	115	119	124	128	141	145	—	—	—	—	—	—	—	—	—	—	116	
115	105	109	114	117	122	127	140	144	—	—	—	—	—	—	—	—	—	—	115	
114	103	108	113	116	121	126	139	142	—	—	—	—	—	—	—	—	—	—	114	
113	102	107	112	115	120	125	137	141	—	—	—	—	—	—	—	—	—	—	113	
112	101	106	111	114	119	124	136	140	—	—	—	—	—	—	—	—	—	—	112	
111	100	105	110	113	118	122	134	138	—	—	—	—	—	—	—	—	—	—	111	
110	99	104	108	112	117	121	133	137	—	—	—	—	—	—	—	—	—	—	110	
109	98	103	107	111	116	120	132	135	—	—	—	—	—	—	—	—	—	—	109	
108	97	102	106	110	115	119	130	134	—	—	—	—	—	—	—	—	—	—	108	
107	96	100	105	109	113	118	129	133	—	—	—	—	—	—	—	—	—	—	107	
106	95	99	104	108	112	117	127	131	—	—	—	—	—	—	—	—	—	—	106	
105	94	98	103	106	111	115	126	130	—	—	—	—	—	—	—	—	—	—	105	
104	93	97	101	105	110	114	125	129	145	—	—	—	—	—	—	—	—	—	104	
103	92	96	100	104	109	113	123	127	143	—	—	—	—	—	—	—	—	—	103	
102	91	95	99	103	108	112	122	126	142	—	—	—	—	—	—	—	—	—	102	
101	90	94	98	102	107	111	121	124	140	—	—	—	—	—	—	—	—	—	101	

TABLE 4 (cont'd)

INTELLIGENCE QUOTIENTS for Raw Scores on FORM B

Raw Scores	Chronological Ages																		Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2	
100	89	93	97	101	106	109	119	123	139	146	—	—	—	—	—	—	—	—	100
99	88	92	96	100	104	108	118	122	137	144	—	—	—	—	—	—	—	—	99
98	87	91	95	99	103	107	116	120	135	143	—	—	—	—	—	—	—	—	98
97	86	90	93	98	102	106	115	119	134	141	—	—	—	—	—	—	—	—	97
96	85	89	92	97	101	105	114	118	132	140	—	—	—	—	—	—	—	—	96
95	84	88	91	95	100	104	112	116	131	138	—	—	—	—	—	—	—	—	95
94	83	86	90	94	99	102	111	115	129	136	—	—	—	—	—	—	—	—	94
93	82	85	89	93	98	101	109	113	127	135	—	—	—	—	—	—	—	—	93
92	81	84	88	92	97	100	108	112	126	133	145	—	—	—	—	—	—	—	92
91	80	83	87	91	95	99	107	111	124	131	143	—	—	—	—	—	—	—	91
90	79	82	85	90	94	98	105	109	122	130	142	—	—	—	—	—	—	—	90
89	78	81	84	89	93	97	104	108	121	128	140	—	—	—	—	—	—	—	89
88	77	80	83	88	92	95	102	107	119	127	138	—	—	—	—	—	—	—	88
87	76	79	82	87	91	94	101	105	118	125	136	—	—	—	—	—	—	—	87
86	75	78	81	86	90	93	100	104	116	123	135	—	—	—	—	—	—	—	86
85	74	77	80	85	89	92	98	102	114	122	133	—	—	—	—	—	—	—	85
84	73	76	79	83	88	91	97	101	113	120	131	146	—	—	—	—	—	—	84
83	72	75	77	82	86	89	96	100	111	119	129	144	—	—	—	—	—	—	83
82	71	74	76	81	85	88	94	98	110	117	128	142	—	—	—	—	—	—	82
81	70	73	75	80	84	87	93	97	108	115	126	140	—	—	—	—	—	—	81
80	69	71	74	79	83	86	91	96	106	114	124	138	—	—	—	—	—	—	80
79	68	70	73	78	82	85	90	94	105	112	123	136	—	—	—	—	—	—	79
78	67	69	72	77	81	84	89	93	103	110	121	134	—	—	—	—	—	—	78
77	66	68	71	76	80	82	87	91	101	109	119	132	—	—	—	—	—	—	77
76	65	67	69	75	79	81	86	90	100	107	117	130	145	—	—	—	—	—	76
75	64	66	68	74	77	80	84	89	98	106	116	128	142	—	—	—	—	—	75
74	63	65	67	72	76	79	83	87	97	104	114	126	140	145	—	—	—	—	74
73	62	64	66	71	75	78	82	86	95	102	112	124	138	144	—	—	—	—	73
72	61	63	65	70	74	76	80	85	93	101	110	122	136	142	—	—	—	—	72
71	60	62	64	69	73	75	79	83	92	99	109	120	134	140	—	—	—	—	71
70	59	61	63	68	72	74	77	82	90	98	107	118	132	138	—	—	—	—	70
69	58	60	61	67	71	73	76	80	89	96	105	116	130	136	146	146	—	—	69
68	57	59	60	66	70	72	75	79	87	94	104	114	127	134	144	144	—	—	68
67	56	58	59	65	68	71	73	78	85	93	102	112	125	132	143	143	—	—	67
66	55	56	58	64	67	69	72	76	84	91	100	110	123	131	141	141	—	—	66
65	—	55	57	63	66	68	70	75	82	89	98	108	121	129	139	139	—	—	65
64	—	—	56	61	65	67	69	74	80	88	97	106	119	127	137	137	146	—	64
63	—	—	55	60	64	66	68	72	79	86	95	104	117	125	135	136	144	—	63
62	—	—	—	59	63	65	66	71	77	85	93	102	115	123	133	134	143	—	62
61	—	—	—	58	62	63	65	69	76	83	92	100	112	121	131	132	141	—	61
60	—	—	—	57	61	62	64	68	74	81	90	99	110	119	129	131	139	—	60
59	—	—	—	56	59	61	62	67	72	80	88	97	108	117	127	129	138	—	59
58	—	—	—	55	58	60	61	65	71	78	86	95	106	116	125	127	136	—	58
57	—	—	—	—	57	59	59	64	69	77	85	93	104	114	123	126	135	—	57
56	—	—	—	—	56	58	58	63	68	75	83	91	102	112	121	124	133	145	56
55	—	—	—	—	55	56	57	61	66	73	81	89	100	110	119	122	131	143	55
54	—	—	—	—	—	55	55	60	64	72	79	87	97	108	117	120	130	141	54
53	—	—	—	—	—	—	—	58	63	70	78	85	95	106	115	119	128	140	53
52	—	—	—	—	—	—	—	57	61	68	76	83	93	104	113	117	127	138	52
51	—	—	—	—	—	—	—	56	59	67	74	81	91	103	112	115	125	136	51

TABLE 4 (cont'd)

INTELLIGENCE QUOTIENTS for Raw Scores on FORM B

Raw Scores	Chronological Ages																		Raw Scores
	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2	2-3 to 2-8	
50	—	—	—	—	—	—	—	58	65	73	79	89	101	110	114	124	135	—	50
49	—	—	—	—	—	—	—	56	64	71	77	87	99	108	112	122	133	—	49
48	—	—	—	—	—	—	—	55	62	69	75	85	97	106	110	120	131	—	48
47	—	—	—	—	—	—	—	60	67	73	82	95	104	108	119	130	—	47	
46	—	—	—	—	—	—	—	59	66	71	80	93	102	107	117	128	145	46	
45	—	—	—	—	—	—	—	57	64	69	78	91	100	105	116	126	143	45	
44	—	—	—	—	—	—	—	56	62	67	76	90	98	103	114	124	142	44	
43	—	—	—	—	—	—	—	60	65	74	88	96	102	112	122	140	43		
42	—	—	—	—	—	—	—	59	63	72	86	94	100	111	121	138	42		
41	—	—	—	—	—	—	—	57	61	70	84	92	98	109	119	136	41		
40	—	—	—	—	—	—	—	55	59	67	82	90	97	108	118	135	40		
39	—	—	—	—	—	—	—	—	57	65	80	88	95	106	116	133	39		
38	—	—	—	—	—	—	—	55	63	78	86	93	105	114	131	38			
37	—	—	—	—	—	—	—	—	61	76	84	91	103	112	129	37			
36	—	—	—	—	—	—	—	—	59	75	82	90	101	111	128	36			
35	—	—	—	—	—	—	—	—	57	73	81	88	100	109	126	35			
34	—	—	—	—	—	—	—	55	71	79	86	98	107	124	34				
33	—	—	—	—	—	—	—	—	69	77	85	97	106	122	33				
32	—	—	—	—	—	—	—	—	67	75	83	95	104	121	32				
31	—	—	—	—	—	—	—	—	65	73	81	93	102	119	31				
30	—	—	—	—	—	—	—	—	63	71	80	92	101	117	30				
29	—	—	—	—	—	—	—	—	62	69	78	90	99	115	29				
28	—	—	—	—	—	—	—	—	60	67	76	89	97	114	28				
27	—	—	—	—	—	—	—	—	58	65	74	87	95	112	27				
26	—	—	—	—	—	—	—	—	56	63	73	85	94	110	26				
25	—	—	—	—	—	—	—	—	—	61	71	84	92	108	25				
24	—	—	—	—	—	—	—	—	—	59	69	82	90	107	24				
23	—	—	—	—	—	—	—	—	—	57	68	81	89	105	23				
22	—	—	—	—	—	—	—	—	—	55	66	79	87	103	22				
21	—	—	—	—	—	—	—	—	—	64	78	85	101	121	21				
20	—	—	—	—	—	—	—	—	—	62	76	83	100	20					
19	—	—	—	—	—	—	—	—	—	61	74	82	98	19					
18	—	—	—	—	—	—	—	—	—	59	73	80	96	18					
17	—	—	—	—	—	—	—	—	—	57	71	78	94	17					
16	—	—	—	—	—	—	—	—	—	56	70	77	93	16					
15	—	—	—	—	—	—	—	—	—	—	—	68	75	91	15				
14	—	—	—	—	—	—	—	—	—	—	—	66	73	89	14				
13	—	—	—	—	—	—	—	—	—	—	—	65	72	87	13				
12	—	—	—	—	—	—	—	—	—	—	—	63	70	86	12				
11	—	—	—	—	—	—	—	—	—	—	—	62	68	84	11				
10	—	—	—	—	—	—	—	—	—	—	—	60	66	82	10				
9	—	—	—	—	—	—	—	—	—	—	—	58	65	80	9				
8	—	—	—	—	—	—	—	—	—	—	—	57	63	79	8				
7	—	—	—	—	—	—	—	—	—	—	—	55	61	77	7				
6	—	—	—	—	—	—	—	—	—	—	—	—	60	75	6				
5	—	—	—	—	—	—	—	—	—	—	—	—	58	73	5				

TABLE 5
PERCENTILES for Raw Scores on FORM A

Raw Scores	Chronological Ages																		Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2	
140	99	99	99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140
139	98	98	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	139
138	97	98	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	138
137	97	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	137
136	96	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	136
135	94	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	135
134	92	96	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	134
133	91	96	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	133
132	91	96	96	99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	132
131	90	95	96	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	131
130	89	94	95	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130
129	88	93	95	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	129
128	88	92	95	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	128
127	87	92	94	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	127
126	86	91	94	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	126
125	85	91	93	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125
124	84	90	93	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	124
123	82	89	92	96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	123
122	81	88	91	96	—	99	—	—	—	—	—	—	—	—	—	—	—	—	122
121	80	87	90	95	—	98	—	—	—	—	—	—	—	—	—	—	—	—	121
120	79	85	89	95	—	98	—	—	—	—	—	—	—	—	—	—	—	—	120
119	77	83	88	94	—	98	—	—	—	—	—	—	—	—	—	—	—	—	119
118	75	82	87	94	99	97	—	—	—	—	—	—	—	—	—	—	—	—	118
117	72	81	85	93	98	97	—	—	—	—	—	—	—	—	—	—	—	—	117
116	69	78	83	91	98	96	—	—	—	—	—	—	—	—	—	—	—	—	116
115	66	76	81	90	97	96	—	—	—	—	—	—	—	—	—	—	—	—	115
114	64	74	79	89	96	96	—	—	—	—	—	—	—	—	—	—	—	—	114
113	62	72	77	89	95	96	—	—	—	—	—	—	—	—	—	—	—	—	113
112	59	69	76	87	95	94	—	—	—	—	—	—	—	—	—	—	—	—	112
111	56	67	73	85	94	94	—	—	—	—	—	—	—	—	—	—	—	—	111
110	53	65	70	83	92	93	99	—	—	—	—	—	—	—	—	—	—	—	110
109	50	62	67	82	91	93	98	—	—	—	—	—	—	—	—	—	—	—	109
108	47	60	65	80	89	92	98	—	—	—	—	—	—	—	—	—	—	—	108
107	44	57	62	78	87	91	98	—	—	—	—	—	—	—	—	—	—	—	107
106	42	54	59	76	85	89	98	—	—	—	—	—	—	—	—	—	—	—	106
105	40	51	56	74	83	87	98	—	—	—	—	—	—	—	—	—	—	—	105
104	37	49	54	72	82	86	96	99	—	—	—	—	—	—	—	—	—	—	104
103	34	47	52	70	80	84	95	98	—	—	—	—	—	—	—	—	—	—	103
102	32	45	50	68	79	83	94	98	99	—	—	—	—	—	—	—	—	—	102
101	31	42	48	65	78	81	93	97	98	—	—	—	—	—	—	—	—	—	101
100	28	40	45	63	77	80	92	96	98	—	—	—	—	—	—	—	—	—	100
99	26	38	42	60	75	79	92	95	98	—	—	—	—	—	—	—	—	—	99
98	23	34	39	58	71	77	90	94	98	—	—	—	—	—	—	—	—	—	98
97	22	32	35	55	67	74	88	92	98	—	—	—	—	—	—	—	—	—	97
96	20	29	33	52	64	72	86	92	97	—	—	—	—	—	—	—	—	—	96

TABLE 5 (cont'd)
PERCENTILES for Raw Scores on FORM A

Raw Scores	Chronological Ages																		Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2	
95	18	26	31	49	61	71	85	90	97	99	99	—	—	—	—	—	—	—	95
94	17	22	29	46	57	68	83	88	96	98	98	—	—	—	—	—	—	—	94
93	16	20	27	42	53	64	80	86	95	98	98	—	—	—	—	—	—	—	93
92	15	18	25	38	50	60	78	84	95	98	98	—	—	—	—	—	—	—	92
91	14	16	23	36	46	56	76	82	93	98	98	—	—	—	—	—	—	—	91
90	13	14	21	33	43	52	75	80	92	98	98	—	—	—	—	—	—	—	90
89	11	13	19	30	41	50	73	78	90	97	98	—	—	—	—	—	—	—	89
88	10	12	17	27	39	45	70	75	90	97	98	—	—	—	—	—	—	—	88
87	8	10	15	23	36	40	66	70	88	96	98	—	—	—	—	—	—	—	87
86	5	8	13	20	32	37	62	67	86	95	97	—	—	—	—	—	—	—	86
85	4	6	12	18	28	34	56	64	84	94	96	—	—	—	—	—	—	—	85
84	3	5	11	16	26	31	50	60	82	93	96	—	—	—	—	—	—	—	84
83	3	3	9	14	24	27	45	57	79	91	96	—	—	—	—	—	—	—	83
82	2	3	7	12	21	23	40	51	75	89	96	—	—	—	—	—	—	—	82
81	2	2	7	10	17	19	36	46	71	87	96	—	—	—	—	—	—	—	81
80	2	2	5	9	14	15	30	41	67	84	94	—	—	—	—	—	—	—	80
79	1	1	4	8	11	13	24	37	62	80	94	99	—	—	—	—	—	—	79
78	—	—	3	7	9	10	22	32	57	75	94	98	—	—	—	—	—	—	78
77	—	—	3	5	7	9	19	28	53	71	92	98	—	—	—	—	—	—	77
76	—	—	2	4	6	7	16	24	48	67	89	96	—	—	—	—	—	—	76
75	—	—	2	4	3	6	13	21	45	63	87	93	—	—	—	—	—	—	75
74	—	—	1	3	3	4	12	19	42	60	84	92	—	—	—	—	—	—	74
73	—	—	—	2	2	3	11	17	38	57	82	92	—	—	—	—	—	—	73
72	—	—	—	2	2	3	9	15	34	53	80	92	99	—	—	—	—	—	72
71	—	—	—	1	1	3	8	13	30	50	76	91	98	—	—	—	—	—	71
70	—	—	—	—	—	3	7	12	28	47	70	88	98	—	—	—	—	—	70
69	—	—	—	—	—	2	6	10	26	44	63	84	97	—	—	—	—	—	69
68	—	—	—	—	—	1	5	9	24	39	58	82	96	—	—	—	—	—	68
67	—	—	—	—	—	—	5	8	22	34	55	78	94	—	—	—	—	—	67
66	—	—	—	—	—	4	6	20	31	53	74	92	99	—	—	—	—	—	66
65	—	—	—	—	—	3	5	18	28	50	70	90	98	—	—	—	—	—	65
64	—	—	—	—	—	3	4	15	24	46	66	88	97	—	—	—	—	—	64
63	—	—	—	—	—	2	3	12	20	42	62	85	97	—	—	—	—	—	63
62	—	—	—	—	—	2	2	10	16	40	58	83	95	99	99	—	—	—	62
61	—	—	—	—	—	2	2	9	12	34	54	79	93	97	97	—	—	—	61
60	—	—	—	—	—	—	1	1	7	10	28	49	76	93	96	96	—	—	60
59	—	—	—	—	—	—	—	4	8	21	44	73	89	94	96	—	—	—	59
58	—	—	—	—	—	—	—	2	6	16	40	68	84	91	96	—	—	—	58
57	—	—	—	—	—	—	—	1	5	12	35	62	79	90	96	99	—	—	57
56	—	—	—	—	—	—	—	4	10	33	54	75	89	96	98	—	—	—	56
55	—	—	—	—	—	—	—	—	3	10	28	47	71	88	94	97	—	—	55
54	—	—	—	—	—	—	—	—	2	8	23	43	65	87	92	96	—	—	54
53	—	—	—	—	—	—	—	—	1	6	18	37	60	83	91	96	—	—	53
52	—	—	—	—	—	—	—	—	5	12	30	56	80	88	95	—	—	—	52
51	—	—	—	—	—	—	—	—	2	8	25	51	78	85	94	—	—	—	51
50	—	—	—	—	—	—	—	—	1	6	24	45	75	82	94	—	—	—	50

TABLE 5 (cont'd)
PERCENTILES for Raw Scores on FORM A

Raw Scores	Chronological Ages																				Raw Scores
	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 4-2	2-9 to 3-8	2-3 to 3-2	2-3 to 2-8		
49	—	—	—	—	—	—	—	—	—	—	—	4	21	38	68	77	92	—	—	49	
48	—	—	—	—	—	—	—	—	—	—	—	2	18	33	61	71	89	—	—	48	
47	—	—	—	—	—	—	—	—	—	—	—	1	16	29	53	66	87	99	—	47	
46	—	—	—	—	—	—	—	—	—	—	—	13	27	44	60	84	98	—	46		
45	—	—	—	—	—	—	—	—	—	—	—	10	23	38	55	82	94	—	45		
44	—	—	—	—	—	—	—	—	—	—	—	8	20	35	51	80	92	—	44		
43	—	—	—	—	—	—	—	—	—	—	—	7	16	32	47	76	89	—	43		
42	—	—	—	—	—	—	—	—	—	—	—	6	12	28	44	70	87	99	42		
41	—	—	—	—	—	—	—	—	—	—	—	4	11	25	42	65	84	98	41		
40	—	—	—	—	—	—	—	—	—	—	—	3	10	21	38	63	82	98	40		
39	—	—	—	—	—	—	—	—	—	—	—	3	10	18	35	60	82	96	39		
38	—	—	—	—	—	—	—	—	—	—	—	3	9	16	32	56	80	95	38		
37	—	—	—	—	—	—	—	—	—	—	—	1	8	14	30	53	76	94	37		
36	—	—	—	—	—	—	—	—	—	—	—	6	12	28	51	72	93	93	36		
35	—	—	—	—	—	—	—	—	—	—	—	5	12	26	49	66	93	93	35		
34	—	—	—	—	—	—	—	—	—	—	—	4	11	23	47	63	92	92	34		
33	—	—	—	—	—	—	—	—	—	—	—	3	11	20	44	60	90	90	33		
32	—	—	—	—	—	—	—	—	—	—	—	2	11	17	41	57	89	89	32		
31	—	—	—	—	—	—	—	—	—	—	—	2	10	15	38	56	88	88	31		
30	—	—	—	—	—	—	—	—	—	—	—	2	8	12	32	55	87	87	30		
29	—	—	—	—	—	—	—	—	—	—	—	2	6	10	29	53	86	86	29		
28	—	—	—	—	—	—	—	—	—	—	—	2	4	8	26	52	86	86	28		
27	—	—	—	—	—	—	—	—	—	—	—	2	2	7	24	50	84	84	27		
26	—	—	—	—	—	—	—	—	—	—	—	1	2	7	21	45	82	82	26		
25	—	—	—	—	—	—	—	—	—	—	—	—	2	5	18	39	80	80	25		
24	—	—	—	—	—	—	—	—	—	—	—	1	4	13	35	74	74	24			
23	—	—	—	—	—	—	—	—	—	—	—	4	6	33	67	67	67	23			
22	—	—	—	—	—	—	—	—	—	—	—	4	5	28	63	63	63	22			
21	—	—	—	—	—	—	—	—	—	—	—	4	4	21	58	58	58	21			
20	—	—	—	—	—	—	—	—	—	—	—	3	2	17	54	54	54	20			
19	—	—	—	—	—	—	—	—	—	—	—	—	2	2	15	52	52	52	19		
18	—	—	—	—	—	—	—	—	—	—	—	—	1	2	13	50	50	50	18		
17	—	—	—	—	—	—	—	—	—	—	—	—	—	1	9	46	46	46	17		
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	38	38	38	16		
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	28	28	28	15		
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	23	23	14		
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	17	17	13		
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	10	10	12		
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5	5	11		
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	4	10		
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	9		
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	8		
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	7		
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	6		

TABLE 6
PERCENTILES for Raw Scores on FORM B

Raw Scores	Chronological Ages																			Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2		
140	99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	140	
139	98	99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	139	
138	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	138	
137	96	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	137	
136	94	98	99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	136	
135	93	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	135	
134	92	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	134	
133	92	97	97	99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	133	
132	91	96	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	132	
131	89	95	97	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	131	
130	88	95	96	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	130	
129	87	94	95	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	129	
128	86	93	95	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	128	
127	85	91	95	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	127	
126	83	90	94	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	126	
125	82	90	94	96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	125	
124	81	88	93	95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	124	
123	79	86	93	94	—	99	—	—	—	—	—	—	—	—	—	—	—	—	123	
122	78	85	93	93	—	98	—	—	—	—	—	—	—	—	—	—	—	—	122	
121	76	84	92	93	—	98	—	—	—	—	—	—	—	—	—	—	—	—	121	
120	74	82	91	93	—	98	—	—	—	—	—	—	—	—	—	—	—	—	120	
119	72	81	90	93	99	98	—	—	—	—	—	—	—	—	—	—	—	—	119	
118	69	78	88	93	98	98	—	—	—	—	—	—	—	—	—	—	—	—	118	
117	66	76	88	91	98	97	—	—	—	—	—	—	—	—	—	—	—	—	117	
116	63	74	86	89	98	96	—	—	—	—	—	—	—	—	—	—	—	—	116	
115	61	73	84	88	97	96	99	—	—	—	—	—	—	—	—	—	—	—	115	
114	59	72	82	87	96	95	98	—	—	—	—	—	—	—	—	—	—	—	114	
113	57	70	81	86	94	94	98	—	—	—	—	—	—	—	—	—	—	—	113	
112	54	68	78	84	93	94	98	—	—	—	—	—	—	—	—	—	—	—	112	
111	51	65	75	83	91	93	98	—	—	—	—	—	—	—	—	—	—	—	111	
110	49	61	73	82	89	92	97	99	—	—	—	—	—	—	—	—	—	—	110	
109	46	57	70	81	88	91	97	98	—	—	—	—	—	—	—	—	—	—	109	
108	45	54	67	79	86	90	97	98	—	—	—	—	—	—	—	—	—	—	108	
107	43	52	63	76	83	89	96	97	—	—	—	—	—	—	—	—	—	—	107	
106	41	50	58	73	81	87	96	97	—	—	—	—	—	—	—	—	—	—	106	
105	37	46	54	70	79	84	95	96	99	—	—	—	—	—	—	—	—	—	105	
104	34	43	51	66	76	82	94	95	98	—	—	—	—	—	—	—	—	—	104	
103	31	39	47	62	73	79	93	95	98	—	—	—	—	—	—	—	—	—	103	
102	27	35	44	59	69	76	91	94	97	—	—	—	—	—	—	—	—	—	102	
101	24	32	41	54	66	73	90	93	97	—	—	—	—	—	—	—	—	—	101	
100	23	30	38	50	64	71	89	93	97	—	—	—	—	—	—	—	—	—	100	
99	22	28	36	47	62	69	88	92	97	—	—	—	—	—	—	—	—	—	99	
98	22	27	33	44	59	67	86	91	96	—	—	—	—	—	—	—	—	—	98	
97	21	25	31	41	56	65	83	89	96	—	—	—	—	—	—	—	—	—	97	
96	18	23	29	39	54	63	81	88	96	—	—	—	—	—	—	—	—	—	96	

TABLE 6 (cont'd)
PERCENTILES for Raw Scores on FORM B

Raw Scores	Chronological Ages																			Raw Scores
	17-6 to 18-5	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2		
95	16	22	27	36	52	61	78	86	95	99	—	—	—	—	—	—	—	—	95	
94	15	20	25	34	48	58	77	83	95	98	—	—	—	—	—	—	—	—	94	
93	13	18	24	33	46	56	75	82	95	97	—	—	—	—	—	—	—	—	93	
92	11	17	23	31	44	54	73	81	95	97	—	—	—	—	—	—	—	—	92	
91	11	15	22	30	42	50	70	79	94	97	—	—	—	—	—	—	—	—	91	
90	9	13	19	28	41	48	69	77	93	96	—	—	—	—	—	—	—	—	90	
89	7	11	17	26	40	47	67	76	92	96	—	—	—	—	—	—	—	—	89	
88	6	10	14	25	37	44	64	72	91	96	99	—	—	—	—	—	—	—	88	
87	5	9	12	22	33	41	61	69	89	95	98	—	—	—	—	—	—	—	87	
86	4	8	11	19	30	37	58	64	87	94	98	—	—	—	—	—	—	—	86	
85	3	6	9	16	25	33	55	60	85	93	98	—	—	—	—	—	—	—	85	
84	2	5	7	15	21	30	49	56	82	92	97	—	—	—	—	—	—	—	84	
83	2	4	6	13	18	26	43	53	80	91	97	—	—	—	—	—	—	—	83	
82	1	3	6	11	16	22	37	48	75	89	97	—	—	—	—	—	—	—	82	
81	—	3	4	9	14	18	31	43	71	86	96	—	—	—	—	—	—	—	81	
80	—	3	4	7	12	15	27	38	67	83	95	99	—	—	—	—	—	—	80	
79	—	2	3	6	10	13	22	35	63	79	94	98	—	—	—	—	—	—	79	
78	—	2	3	5	9	11	18	30	58	77	92	98	—	—	—	—	—	—	78	
77	—	1	2	4	8	10	14	26	51	75	90	97	—	—	—	—	—	—	77	
76	—	—	2	4	7	8	12	23	47	72	88	97	—	—	—	—	—	—	76	
75	—	—	1	3	5	7	11	20	43	68	84	96	—	—	—	—	—	—	75	
74	—	—	—	2	5	6	9	18	38	64	82	94	—	—	—	—	—	—	74	
73	—	—	—	2	4	5	7	16	34	59	78	93	—	—	—	—	—	—	73	
72	—	—	—	1	3	4	6	15	30	53	76	92	—	—	—	—	—	—	72	
71	—	—	—	—	2	4	5	13	28	50	72	91	99	—	—	—	—	—	71	
70	—	—	—	—	2	3	4	11	27	46	66	90	98	—	—	—	—	—	70	
69	—	—	—	—	1	2	4	10	25	42	61	86	98	—	—	—	—	—	69	
68	—	—	—	—	—	1	3	9	23	37	58	80	97	—	—	—	—	—	68	
67	—	—	—	—	—	1	3	8	20	32	56	78	96	—	—	—	—	—	67	
66	—	—	—	—	—	—	3	6	16	25	52	74	94	99	—	—	—	—	66	
65	—	—	—	—	—	—	3	4	13	24	47	69	93	98	—	—	—	—	65	
64	—	—	—	—	—	—	2	3	10	20	44	67	91	96	—	—	—	—	64	
63	—	—	—	—	—	—	2	2	7	18	40	64	89	95	—	—	—	—	63	
62	—	—	—	—	—	—	2	2	5	15	36	59	87	95	—	—	—	—	62	
61	—	—	—	—	—	—	1	1	4	12	34	56	84	93	99	—	—	—	61	
60	—	—	—	—	—	—	—	3	10	30	52	81	91	98	98	—	—	—	60	
59	—	—	—	—	—	—	—	2	8	24	46	76	87	98	98	—	—	—	59	
58	—	—	—	—	—	—	—	1	6	18	40	70	85	96	98	—	—	—	58	
57	—	—	—	—	—	—	—	4	16	34	62	81	93	98	—	—	—	—	57	
56	—	—	—	—	—	—	—	2	11	30	54	78	92	96	—	—	—	—	56	
55	—	—	—	—	—	—	—	—	1	8	25	48	76	91	95	—	—	—	55	
54	—	—	—	—	—	—	—	—	6	20	41	73	89	92	99	—	—	—	54	
53	—	—	—	—	—	—	—	—	4	16	35	69	86	90	98	—	—	—	53	
52	—	—	—	—	—	—	—	—	4	13	30	62	84	90	97	—	—	—	52	
51	—	—	—	—	—	—	—	—	3	10	25	56	81	88	96	—	—	—	51	
50	—	—	—	—	—	—	—	—	2	7	20	51	77	84	94	98	—	—	50	

TABLE 6 (cont'd)
PERCENTILES for Raw Scores on FORM B

Raw Scores	Chronological Ages																			Raw Scores
	16-6 to 17-5	15-6 to 16-5	14-6 to 15-5	13-6 to 14-5	12-6 to 13-5	11-6 to 12-5	10-6 to 11-5	9-6 to 10-5	8-6 to 9-5	7-6 to 8-5	6-6 to 7-5	5-6 to 6-5	4-9 to 5-5	4-3 to 4-8	3-9 to 4-2	3-3 to 3-8	2-9 to 3-2	2-3 to 2-8		
49	—	—	—	—	—	—	—	—	2	3	16	46	74	80	92	98	—	—	49	
48	—	—	—	—	—	—	—	—	2	2	13	41	67	76	90	98	—	—	48	
47	—	—	—	—	—	—	—	—	1	1	10	36	59	71	88	98	99	97	47	
46	—	—	—	—	—	—	—	—	—	—	8	30	54	69	86	98	98	98	46	
45	—	—	—	—	—	—	—	—	—	—	6	24	48	65	84	97	98	98	45	
44	—	—	—	—	—	—	—	—	—	—	5	17	42	59	82	97	98	98	44	
43	—	—	—	—	—	—	—	—	—	—	4	15	35	55	79	95	98	98	43	
42	—	—	—	—	—	—	—	—	—	—	3	13	27	51	73	92	97	97	42	
41	—	—	—	—	—	—	—	—	—	—	3	11	24	43	67	90	97	97	41	
40	—	—	—	—	—	—	—	—	—	—	3	9	20	37	64	87	97	97	40	
39	—	—	—	—	—	—	—	—	—	—	3	9	18	30	63	85	96	96	39	
38	—	—	—	—	—	—	—	—	—	2	8	16	23	61	84	95	95	38		
37	—	—	—	—	—	—	—	—	—	2	6	14	21	57	82	94	94	37		
36	—	—	—	—	—	—	—	—	—	1	4	11	19	53	75	93	93	36		
35	—	—	—	—	—	—	—	—	—	—	4	9	16	51	69	92	92	35		
34	—	—	—	—	—	—	—	—	—	—	4	7	14	47	66	92	92	34		
33	—	—	—	—	—	—	—	—	—	—	3	7	12	41	62	91	91	33		
32	—	—	—	—	—	—	—	—	—	—	3	6	12	36	58	89	89	32		
31	—	—	—	—	—	—	—	—	—	—	3	5	11	32	54	88	88	31		
30	—	—	—	—	—	—	—	—	—	—	2	4	10	29	50	88	88	30		
29	—	—	—	—	—	—	—	—	—	—	2	3	9	27	47	88	88	29		
28	—	—	—	—	—	—	—	—	—	—	2	3	7	25	45	87	87	28		
27	—	—	—	—	—	—	—	—	—	—	2	2	7	24	41	86	86	27		
26	—	—	—	—	—	—	—	—	—	—	2	2	6	22	38	84	84	26		
25	—	—	—	—	—	—	—	—	—	—	2	2	5	18	36	82	82	25		
24	—	—	—	—	—	—	—	—	—	—	1	2	5	14	32	77	77	24		
23	—	—	—	—	—	—	—	—	—	—	—	1	4	12	27	71	71	23		
22	—	—	—	—	—	—	—	—	—	—	—	3	10	22	65	65	22	22		
21	—	—	—	—	—	—	—	—	—	—	—	2	7	16	60	60	21	21		
20	—	—	—	—	—	—	—	—	—	—	—	2	5	11	57	57	20	20		
19	—	—	—	—	—	—	—	—	—	—	—	—	2	4	9	50	50	19		
18	—	—	—	—	—	—	—	—	—	—	—	—	1	3	7	43	43	18		
17	—	—	—	—	—	—	—	—	—	—	—	—	2	6	39	39	17	17		
16	—	—	—	—	—	—	—	—	—	—	—	—	1	5	34	34	16	16		
15	—	—	—	—	—	—	—	—	—	—	—	—	4	29	49	49	15	15		
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	24	24	14		
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	19	19	13		
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	16	16	12		
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	11	11	11		
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	6	10		
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	9	9		
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	8	8		
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	7	7		
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	6	6	6		

TEST STANDARDIZATION

The PPVT was standardized on 4,012 cases as follows:

Age Levels	Cases	Age Levels	Cases	Age Levels	Cases
18	227	11	384	4-6	122
17	305	10	319	4-0	110
16	354	9	259	3-6	119
15	307	8	100	3-0	92
14	269	7	100	2-6	92
13	287	6	183		
12	250	5	133		
				Total number	4,012

All subjects were administered both Forms A and B of the final battery during the period April-June, 1958 by four examiners. The alternate forms were counterbalanced for order of presentation. Not less than three and not more than seven days elapsed between administrations. Only white children and youth residing in and around Nashville (Tennessee) were included in the final standardization group. However, certain precautions were taken so as to provide norms which should be useful throughout the United States. Different procedures were used for subject selection and/or test administration at the (1) pre-school; (2) early elementary; and (3) upper-elementary and high school levels.

1. At the pre-school level (2 years 6 months through the lower half of the six year level) the following procedure was used. Kuhlmann-Finch Intelligence Test (American Guidance Service, Inc.) scores were available on all pupils in the Nashville City Schools from the grade three level and above. Four elementary schools were selected which provided a composite normal probability curve of I. Q.'s for the pupils enrolled. The geographical areas served by these four schools were then used to draw the sample of pre-school subjects. A census was made of all pre-school children in these school zones. The examiners then visited each home on two occasions to give Forms A and B of the test individually to the subject.

2. At the lower elementary school level (upper half of the six year level as well as the seven and eight year levels) the following procedure was used. Metropolitan Readiness Test (World Book Co.) scores were available on grades one and two children and Kuhlmann-Finch Intelligence Test scores on grade three children in the Nashville City Schools. Random samples of grade one, two, and three boys and girls were drawn from the classes in four schools until a normal distribution of scores was approximated. These subjects—50 boys and 50 girls at each of the six, seven, and eight year levels—were then given individually both Forms A and B of the test.

3. At the upper elementary and high school levels (ages nine through 18 years) the following procedure was used. Here the PPVT was administered as a *group* test by the use of photographic slides of the series of plates, a semi-automatic projector, a screen, and an especially designed answer sheet. At least three persons proctored each administration: one operated the projector, another read off the words, and the third supervised the subjects. The test was administered over a wide range by the means of slides, and then basals and ceilings were determined for each subject, where necessary, by individual examination. Prior to adopting this procedure, an experiment was conducted to determine if scores obtained on the PPVT would differ significantly under individual and group administrations; no significant or appreciable differences

were found (Norris, Hottel, and Brooks, 1960). Thus the size of the norm sample was increased appreciably, accompanied by a considerable saving of time and expense. Four elementary, two junior high, and two senior high schools in the Nasaville City Schools were used where the pupils approximated a composite normal probability curve of I. Q.'s on Kuhlmann-Finch Intelligence Test.

ESTABLISHING NORMS

AGE EQUIVALENTS (MENTAL AGES):

Age norms were derived by the Mean Test Age method. To accomplish this, separate graphs were constructed for each of Forms A and B wherein all possible PPVT raw scores were distributed along the Y-axis, and all chronological ages from 2-6 through 18 in one-month intervals were distributed along the X-axis. Then the mean raw score for each age level was plotted on this graph. These plots were then connected by straight ruled lines and an age-score curve resulted. Age equivalent scores were then derived by reading chronological ages to the closest month from the point where raw-score lines intersected the age-score curve. To obtain age equivalents below 2-6 the curves were extended and age readings taken from these extrapolations. *Thus age scores below 2-6 should be considered as estimates only.*

STANDARD SCORE EQUIVALENTS (INTELLIGENCE QUOTIENTS):

The standard score norms were derived by preparing separate raw score distributions for each age level in the standardization sample. The mean and standard deviation of raw scores were then found for each distribution and are listed below:

Age Levels	Raw Scores			
	Form A		Form B	
	Mean	S. D.	Mean	S. D.
17-6 to 18-5	108.99	14.97	110.57	14.77
16-6 to 17-5	105.11	14.13	106.60	13.98
15-6 to 16-5	102.25	14.27	102.70	13.09
14-6 to 15-5	96.88	13.45	99.10	13.65
13-6 to 14-5	93.36	11.99	95.03	13.33
12-6 to 13-5	90.69	11.67	91.96	12.70
11-6 to 12-5	84.62	10.20	86.23	10.79
10-6 to 11-5	82.23	9.95	83.22	10.90
9-6 to 10-5	75.49	9.64	76.11	9.29
8-6 to 9-5	71.29	9.03	71.52	9.29
7-6 to 8-5	65.81	8.60	65.92	8.69
6-6 to 7-5	60.82	7.77	60.75	7.61
5-6 to 6-5	55.37	7.52	55.20	7.00
4-9 to 5-5	50.22	8.17	49.62	8.05
4-3 to 4-8	45.58	8.64	45.05	7.74
3-9 to 4-2	42.08	10.34	42.02	8.80
3-3 to 3-8	35.67	9.72	35.16	9.45
2-9 to 3-2	29.28	9.66	29.68	8.80
2-3 to 2-8	20.39	8.45	20.23	8.54