A comparison of the revised Stanford-Binet scale and the Terman-McNemar test of mental ability with respect to the prediction of scholastic achievement

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A COMPARISON OF THE REVISED STANFORD-BINET SCALE AND THE
TERMAN-MONEMAR TEST OF MENTAL ABILITY WITH RESPECT
TO THE PREDICTION OF SCHOLASTIC ACHIEVEMENT

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S. L. McD.
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CHAPTER I

INTRODUCTION

Although more than fifty years have passed since the Frenchmen Alfred Binet and Theophile Simon published the first effective intelligence test, psychological testing has evolved through many stages since that time. There are many different types of psychological tests now, with numerous methods of interpretation. However, through all of this evolution the basic purpose of the tests has remained the same—to measure individual differences. Just as Binet and Simon's first intelligence test succeeded in differentiating between children of various age and grade levels and made possible the prediction of the child's progress in school, so psychological tests are still used for this purpose in our schools today.

In the Omaha Public Schools, psychological testing is utilized to measure each student's intellectual capacity and growth throughout his school career. As soon as each student enters the first grade, some form of psychological testing is administered to him for the purpose of predicting his scholastic achievement.

This thesis was concerned with the psychological testing completed on every eighth grade student in the Omaha Public Schools.

THE PROBLEM

Background of the Problem

Although many intelligence tests have been formulated since the time of Binet and Simon, few psychologists, especially the test-makers themselves, have ever agreed upon a definition of "intelligence." In the early years of testing, most psychologists felt that intelligence was a general capacity. Stern stated in 1914, 2 "It (intelligence) is a general capacity of the individual consciously to adjust his thinking to new requirements." Binet was one of the important figures of the time who held a global approach to intelligence.

Due to the boost given the testing movement by the United States Army's use of intelligence tests to screen inductees in World War I, much research was undertaken in the area of intelligence and intelligence testing during the 1920's. Most noteworthy among these investigators was L. L. Thurstone. Thurstone and others arrived at the

2Ibid., p. 96.
conclusion that intelligence test results showed intelligence to be the expression of a number of relatively independent factors rather than of just one general capacity. Thurstone was responsible for the publication of several well-known intelligence tests based on this theory. Recent research by such outstanding men as Cyril Burt, in England, has tended to support the factorial theory.

Regardless of which one of the many definitions of intelligence may be preferred, certain basic concepts appear to be common to almost all of them. According to H. B. English, author of *A Comprehensive Dictionary of Psychological and Psychoanalytical Terms*, they are "that of ability to deal effectively with tasks dealing with abstractions; that of ability to learn; and that of ability to deal with new situations." For the purpose of this thesis, these three points will serve to define the usage of the term "intelligence."

An intelligence test is generally a series of tasks administered to an individual for the purpose of measuring his performance on these tasks. The results obtained by any given individual on such a test are compared to the

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results obtained earlier by others. In this way, it is possible to determine how well an individual can perform on a given series of tasks as compared with others. An intelligence test is generally administered to a specific group of individuals to obtain data on how this given group performs on the test before it is administered to others for the purpose of measuring their performances. For example, a test may be administered to a group of grade school students in order to determine how well they perform on the test as a group. Later, it may be administered to any given grade school student for the purpose of determining how well he performs on given tasks in relationship to his peers. Most intelligence tests have been administered to the general population for the purpose of gathering this normative data. This process is known as standardization of the test.

There are many types of intelligence tests. The two major classifications into which all intelligence tests fall are those tests which are administered to one individual at a time, called individual intelligence tests, and those tests which may be administered to a group of persons at one time, called group intelligence tests. The two subgroups into which each of these two major classifications is divided are verbal type tests and performance, or non-verbal, type tests.

Both the individual intelligence test and the group intelligence test have specific advantages when compared to
one another. The major advantages of the individual test are the following:

1. It allows the examiner to make close observation of the testee's behavior during the examination. This may be of marked importance in cases where a physical or emotional impairment may be interfering with the testee's performances. This type of observation is impractical, if not entirely impossible, in group administrations due to the number of subjects tested at one time by one examiner.

2. The individual intelligence test can contain certain types of tasks that can be administered to only one individual at a time. An example of this type of task is the form board, such as is used at the lower age levels of the Revised Stanford-Binet Scale. Many of these tasks yield valuable information about an individual's intellectual functioning which is unobtainable from the data obtained from a group intelligence test.

The major advantages of the group intelligence test are as follows:

1. Its cost of administration is significantly lower than that of administering an individual intelligence test. One examiner is able to administer a group test to any given number of individuals in the same time period required by another examiner to administer an individual test to a single subject. This time factor is, almost without exception, also true of the scoring.

2. A school teacher, and in some cases a person with no training in test administration whatever, can administer and score a group intelligence test, while a highly skilled and well-trained examiner is always required to administer an individual intelligence test.
Both the individual and the group intelligence tests are divided into distinct subgroups. These are the verbal type tests and the performance, or non-verbal, type tests. The basic difference between these two types is that the verbal test requires the use of language in response to an administered task, while the performance test requires a motor response in reply to an administered task.

Scope of the Problem

It has been the practice in the Omaha Public Schools to administer the Terman-McNemar Test of Mental Ability, a group intelligence test, to every student as soon as he enters the eighth grade. The results of this test are used in helping to predict the scholastic achievement of each student during the ensuing school year. When the results reported by this test appear to deviate too far from the teacher's expectation or from other available material, such as the previous year's grades, the teacher may request a re-test by a school psychometrist, using the individually administered Revised Stanford-Binet Scale as a check on the results of the first testing.

Toward the end of the school year, each teacher administers the Intermediate Battery of the California Achievement Test Series to the students who had previously taken the Terman-McNemar. The California Achievement Test
Series is used to measure the scholastic achievement of these students during their eighth grade year.

**Statement of the Problem**

This thesis was an attempt to determine whether there was any difference between the ability of the Terman-McNemar Test of Mental Ability, a group intelligence test, and the ability of the individually administered Revised Stanford-Binet Scale to predict scholastic achievement as measured by the California Reading Test and the California Language Test.

In other words, this was a study to determine whether an economical, easily administered group intelligence test (the Terman-McNemar) was as successful in the prediction of scholastic achievement as measured by standardized achievement tests (the California Reading Test and the California Language Test) as a more expensive, relatively difficult to administer individual intelligence test (the Stanford-Binet).
CHAPTER II

RELATED RESEARCH

A survey of the educational and psychological literature published since the publication in 1940 of the more recent of the two intelligence tests used in this study, the Terman-McNemar Test of Mental Ability, revealed few studies which were directly related to the present problem. Several studies were available which were concerned with the prediction of scholastic achievement in pre-school children through the use of individual intelligence tests. Many other studies were available which were concerned with the prediction of scholastic achievement at the college and professional school levels through the use of group intelligence tests which were designed primarily for that purpose. The inadequacies of these studies in answering the question of the value of group intelligence tests in predicting scholastic achievement at the eighth grade level, as compared to the value of individual intelligence tests used for the same purpose, were apparent.

Bennett designed two interesting studies for the purpose of measuring the influence of factors generally thought to affect subjects' performances on group and individual intelligence tests. Her first study was
concerned with the subjects' rate of work. She administered the Terman Group Test of Mental Ability (old form) to two hundred boys and girls in the lower seventh grade. She administered both Form A and Form B to each child, one form without time limits and the other form with the standard time limits. Her purpose was to determine whether the "slow but able thinker" is penalized by time limits. Her findings were as follows:

Neither the validity nor the reliability of the Terman Group Test, as determined by the present investigation, is affected by administering the examination without time limits. It may be concluded that the validity and reliability of this particular "speed" test of intelligence is not adversely influenced by the fact that it is administered with time restrictions.

Bennett's second study was concerned with the influence of a group situation on an individual's test results. She administered the Terman Group Test of Mental Ability (old form) to one hundred sixteen boys and to one hundred thirty-two girls in the lower seventh grades of three junior high schools. These students were divided into

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two matched groups. The students in one of the two groups were examined individually on two separate occasions spaced several days apart, then as a group after an interval of two years. The students in the other group were examined in a group situation on two separate occasions spaced several days apart, then individually after an interval of two years. The purpose of her study was to determine whether the influence of a group environment resulted in "better and more consistent performance on the part of the subjects." She referred to Allport in the statement, "In situations in which people are working together, 'the sight and sound of others doing the same thing' constitute the social stimuli which set off this response (social facilitation)."

Her findings were as follows:

(1) Comparison of mean scores obtained on the Terman Group Test by children examined individually and by those tested in groups shows no advantage for the latter;

(2) The reliability of the Terman Group Test is in general the same for children tested individually as for a matched sample tested as a group;

(3) The validity of the Terman Group Test, administered . . . as an individual examination and to the same subjects two years later as a group test, shows no change when other intelligence test scores are the criterion.

She summarized thus:
There is no indication from the present study that the "sight and sound of others doing the same thing" has a facilitating effect on the average performance of those who work in a group. Argument for the use of either type of examination must rest on other grounds.

In 1942, Walther reported to the Eighth American Science Congress on a study he had undertaken which compared the Terman Group Test of Mental Ability (old form) with the Revised Stanford-Binet relative to their ability to predict scholastic achievement. As the proceedings of this congress were not available, the abstract written by C. G. Mueller for Psychological Abstracts is quoted here:

Using the Stanford-Binet individual test and the group test designed by Terman for 13 to 18 years, a comparison of the individual and group tests was made, and the validity of the group test verified. Teachers' ratings were used as a criterion of validity. A better correlation exists between the Terman Group Test and efficiency of the students (as rated by the teachers) than between the latter and the individual test.

A similarity exists between the study reported by Mueller and the present study, but it was felt that Walther's study was not capable of answering the present problem. First, the form of the Terman Group Test used in his study was published in 1920; and the present test, the Terman-McNemar Test of Mental Ability, "was completely revised in

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Second, it was felt that standardized achievement tests are statistically more accurate than "teachers' ratings" in measuring the "efficiency of students."

Sartain administered two individual intelligence tests, including the Stanford-Binet, and several group intelligence tests, not including the Terman-McNemar, to a group of fifty college students. His purpose was to compare these tests to determine how well each predicted scholastic achievement. For the purpose of the present study, one of his findings was noteworthy. Although he found a correlation of only .581 between the Revised Stanford-Binet and college grades, the Stanford-Binet correlated higher with college grades than did any of the other intelligence tests administered. However, he reported no significant differences between the correlations in any case.

Bolton administered the Terman-McNemar Test of Mental Ability, the Otis Quick Scoring Mental Abilities Tests, and the California Short Form Test of Mental Maturity.

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to a group of high school students for the purpose of determining how well these tests predicted final grades in various courses. One of his conclusions was, "The Terman-McNemar is the best of the four tests (the California Short Form yields both a verbal and a performance score) for predicting scholastic achievement." He further stated that as a result of his study the East Chicago schools have now substituted the Terman-McNemar for the previously used Otis.

Worcester\textsuperscript{10} reported on a study which he undertook in a Nebraska school system to compare students' reading ability with performance on group and individual tests of intelligence. He reported that in several instances when a serious reading handicap existed, group test scores obtained by the individuals were markedly below the test scores obtained on the Revised Stanford-Binet. He concluded that, "The absurdity of giving a mental test involving reading to one who is deficient in reading and the great harm which is likely to result from such a practice should be obvious."

Worcester appeared to infer a direct relationship between achievement and the group test score. This leads one to reflect upon the reason for using a group intelligence test in a school situation. When a student's reading ability is very poor, it follows that in most cases his achievement level is also low. Therefore, it appears that the group intelligence test is a better predictor of scholastic achievement than the individual intelligence test, if the individual test gives a higher score to those students who are poorer readers. It appeared that Worcester's report tended to support the use of the group test as a predictor of scholastic achievement, rather than to deny its value. If the group intelligence test is used strictly as a measure of intellectual capacity, that may be another matter.

It was Coleman and Cureton's contention that group intelligence tests and scholastic achievement tests tended to measure the same thing. They reported that the Stanford Achievement Test correlated highly, .8254 to .8416 (no level of significance or other statistical data were reported), with the Otis Quick Scoring Test. Their data were

gathered from two separate administrations of these tests to a selected group of 117 students. Their conclusion was that the use of the achievement test alone is justified for the purpose of measuring verbal-arithmetical intelligence.

Coleman and Cureton have failed to question whether individual intelligence tests also correlate highly with scholastic achievement, as the present study attempted to do. If such is the case, the correlation between the group intelligence test and the achievement test would appear to be a natural correlation rather than a weakness on the part of the group intelligence test.

Hinkelman set up a study to "discover how verbal intelligence correlates with ten curriculum areas for which teacher grades are given in the Chicago public schools, and to find any variations in correlations for different grade levels." He selected a group of students who had a record of subject grades and Kuhlmann-Anderson quotients for grades 2A, 5A, and 7A. His findings were as follows:

(1) There were no significant differences in the correlations between verbal intelligence and school marks from lower to higher grades with the exceptions of art and penmanship;

(2) Correlations for reading, composition, arithmetic, spelling and social studies were at the 1% level of significance. The correlations for science and music were also significant at the 1% level for the second and fifth grades. . . In . . . art and penmanship the levels of significance were below the 5% level except in the case of second grade art, which was highly significant at the 1% level.

Hinkelman concluded that "verbal-abstract intelligence has an important and consonant relationship to elementary school achievement," and recommended further investigations in this area. It was felt that the present study was to some degree an extension of Hinkelman's study, in that it was concerned with the relationship of scholastic achievement as measured by the California Achievement Tests to verbal intelligence as measured by the Terman-McNemar Test of Mental Ability and, to a lesser degree, as measured by the Revised Stanford-Binet.

Barratt and Baumgarten set up a study to relate scores on the Wechsler Intelligence Scale for Children and the Revised Stanford-Binet to scores on the California Achievement Tests.13 Their purpose was to determine which

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test was the better predictor of reading and arithmetic achievement. They administered the W.I.S.C. and the Stanford-Binet to thirty achievers and to thirty non-achievers in grades four through six. These categories were determined on the basis of teacher ratings. They found that (1) in the case of both achievers and of non-achievers, neither test was a better predictor of reading and arithmetic achievement than was the other; (2) it is difficult to obtain a true measure of arithmetic ability in non-achievers due to their difficulty in using verbal symbolism; and (3) the achievers in this study were relatively high in their verbal ability.

Several points of interest were noted in the above-reviewed studies. First, in no case where the Terman-McNemar Test of Mental Ability or the Revised Stanford-Binet Scale were contrasted with other intelligence tests, either group or individual, did the other intelligence tests exceed either of these two tests in their ability to predict school achievement. Second, many of the studies concerned with the prediction of scholastic achievement through the use of intelligence tests used teachers' ratings or grades as the criterion of achievement. It seemed reasonable to assume that neither teachers' ratings nor grades could be as objective or as statistically accurate in the measurement of achievement as could standardized achievement tests.
The most important fact noted in these studies was that in no case were the two intelligence tests that appeared to predict achievement most accurately, the Terman-McNemar and the Stanford-Binet, contrasted as to their ability to predict scholastic achievement with the criterion of validity being standardized achievement tests. It appeared that such a study would be justified because of the great difference in the cost of administering these two intelligence tests. It will be recalled from Chapter I that the present study was an attempt to determine whether there was any difference between the abilities of these two tests to predict scholastic achievement with the criterion of validity being standardized achievement tests.
CHAPTER III

PROCEDURE

Selection and Description of Subjects

In the fall of 1956, the Child Study Service of the University of Omaha was contacted by two local school principals. These two persons were concerned with the wide use of group intelligence tests in the school system for the prediction of scholastic achievement at the eighth grade level. They were primarily interested in knowing whether the group test used, the Terman-McNemar Test of Mental Ability, was as good a predictor of scholastic achievement as an individual intelligence test. The present study was an outgrowth of that inquiry.

The two schools that contacted the Child Study Service were investigated by the author, and the following noteworthy facts were found. First, one of the schools (henceforth referred to as School A) was located in a neighborhood which consisted of relatively permanently settled, home-owning families. Only one eighth-grade student left School A during the school year in which the study was conducted. In contrast, the second school (henceforth referred to as School B) was located in a district which included a rather large group of transient families and
numerous housing projects. In addition, there appeared to be a rather high rate of delinquency among the children of school age in this neighborhood. For example, three of the eighth grade students in this school were sent to the Boys' Training School at Kearney, Nebraska, during the course of the year that this study was conducted and were necessarily dropped from the study because of incomplete data. In all, four, or 7%, of the students in the eighth grade class of School B left the school during the one year period in which the tests were administered.

Second, in the previous year's achievement testing (seventh grade) School A's scores were approximately at the local norms, while School B's scores were somewhat below the local norms. No intelligence testing was completed on these students during their seventh grade year. The following scores, obtained on the California Reading Test, illustrate this fact.

| TABLE I |
| SEVENTH GRADE CALIFORNIA READING TEST RESULTS (TOTAL READING) |
| | Grade Placement | Q1 | Md | Q3 |
| School A | 7.3 - 7.5 | 8.4 - 8.5 | 9.3 - 9.8 |
| School B | 4.7 - 5.5 | 6.7 - 6.9 | 7.3 - 7.5 |
| City-Wide | 7.0 - 7.2 | 8.0 - 8.3 | 9.1 - 9.3 |
Last, the eighth grade classes in both schools were near the average size for eighth grade classes in the Omaha Public Schools. School A contained 59 eighth grade students at the beginning of this study, and School B contained 57. A total of 58 and 53 eighth grade students, respectively, finished the series of tests used in this study.

Description and Administration of Tests

The Terman-McNemar Test of Mental Ability, a group intelligence test published in 1940, is the latest revision of the Terman Group Tests of Mental Ability, which was published in 1920. "The test is designed primarily for use in Grades 7 through 12, although it may also be used in Grade 6 and with first year college students."¹⁴ There are two forms available, C and D, which use the same norms and are considered completely comparable throughout. There are seven subtests covering the following categories: (1) Information; (2) Synonyms; (3) Logical Selection; (4) Classification; (5) Analogies; (6) Opposites; and (7) Best Answer. The administration of the test can be completed within one fifty-minute class period. For each student, the test yields a deviation intelligence quotient, a corresponding percentile rank, and a standard score. Statistical data on this test are reported in the test manual (see footnote below).

¹⁴Terman and McNemar, loc. cit.
The Revised Stanford-Binet Scale, published in 1937, is a revision of the 1916 Stanford-Binet which was adapted from the Binet-Simon Scales, first published in Paris in 1905. This test has been used as a standard for most intelligence tests appearing since that time. It will be remembered from Chapter I that the 1905 Binet Scale was the first effective intelligence test ever published. There are two forms of the Revised Stanford-Binet Scale, L and M, which are considered interchangeable. The scales are grouped into twenty age levels, ranging from Age II to Superior Adult. At the lower levels, the test consists mainly of performance type tasks, while at the upper levels the tasks are almost entirely verbal. The tasks progress from the manipulative type to the verbal type as the age scale progresses. "The scales have been designed so that approximately 50 minutes are required for the testing of younger children and not more than about 75 minutes for older children."15 The test yields a Mental Age which is converted into an Intelligence Quotient by dividing this obtained Mental Age by the subject's Chronological Age and multiplying the product by 100. Statistical data, together with additional data regarding this test, may be found in the test manual and in almost every text which is concerned with psychological testing.

The California Reading Test is the most recent version (1950) of the "diagnostic-survey instrument" formerly known as the Progressive Reading Test. This instrument is designed to measure scholastic achievement in fundamental reading skills. The test is available at four grade levels, ranging from primary to junior college. The level used for this study was the Intermediate—grades 7 through 9. There are several forms available, all of which are used interchangeably. The test consists of two basic parts, Test 1—Reading Vocabulary, and Test 2—Reading Comprehension. Subtests in Test 1 include Mathematics Vocabulary, Science Vocabulary, Social Science Vocabulary, and General Vocabulary. Subtests in Test 2 include Following Directions, Reference Skills, and Interpretation of Meanings. Administration of the entire test requires approximately one hour (a total of fifty minutes is allowed for the actual completion of the test items). Although each subtest yields a Grade Placement score, the total results of each test yield Grade Placement scores and percentile scores which may be combined to yield a Total Reading score. The Total Reading score is also reported in terms of Grade Placement and percentile scores.

"Standardization has been based on more than 50,000 cases at each test level. Basic information for age-grade
The California Language Test is the most recent version (1950) of the "diagnostic-Survey instrument" formerly known as the Progressive Language Test. This instrument was designed to measure scholastic achievement in fundamental language skills. The forms and the standardization procedure are the same as those reported for the California Reading Test. This test consists of two basic parts, Test 5 - Mechanics of English and Grammar, and Test 6 - Spelling. Subtests in Test 5 include Capitalization, Punctuation, Words and Sentences, and Parts of Speech. There are no subtests in Test 6. Administration of the entire test requires approximately thirty-eight minutes (a total of twenty-eight minutes is allowed for the actual completion of the test items). Scoring is identical to that used in the California Reading Test.

The Terman-McNemar Test of Mental Ability was administered to the eighth grade students of both School A and School B in September of the year in which the study was conducted. These tests were administered in group form by graduate

students of the Department of Psychology of the University of Omaha. Following the administration of the Terman-McNemar, the Revised Stanford-Binet was administered individually to the same students who had taken the Terman-McNemar. The Stanford-Binet was administered by a total of four graduate students (including the author) of the Department of Psychology of the University of Omaha, all of whom had previously completed course work in individual mental measurements and were considered to be competent examiners by the Child Study Service. In the spring of the same school year, the California Achievement Tests were administered to all of the original students who were still available. Because the California Tests are of a self-administering type published for use in school rooms by teachers, it was considered unnecessary to have psychological examiners administer the tests; therefore, the achievement tests were administered to the students by their respective teachers.

Statistical Procedure

Statistical treatment of the test data was not begun until all of the test results had been obtained from both School A and School B. The first step was to place the results obtained by each student on each test into ungrouped columns according to schools. The data were left ungrouped in order to insure accuracy. Here, as throughout the study,
the data from each school were treated separately. After the data were recorded, the next step was to compute Pearson product-moment coefficients of correlation between the results obtained by the students of each school on each of the four tests administered. These coefficients of correlation were then placed in a correlation matrix. There were a total of six correlations for each school. The formula

$$r_{xy} = \frac{N\bar{XY} - \bar{X}\bar{Y}}{\sqrt{\left(N\bar{X}^2 - (\bar{X})^2\right)\left(N\bar{Y}^2 - (\bar{Y})^2\right)}}$$

was used in all cases. This formula is convenient for machine computation because the numerator and each of the two terms in the denominator can be obtained in one machine operation.

After the coefficients of correlation were obtained and placed in a correlation matrix, they were converted into corresponding Fisher's $Z$ coefficients in order to insure a normal sampling distribution. The formula for this transformation is $Z = \frac{1}{2} \log_e \frac{1 + r}{1 - r}$, where $\log_e$ refers to the Napierian system of logarithms. A $Z$ transformation table was used for this purpose.17

The significance of differences between Z's within each school was then determined by means of t tests. This was determined by the formula

\[ t = \frac{Z_1 - Z_2}{\sqrt{\frac{2 - 2r_{zz}}{N - 3}}} \]

The denominator \( \sqrt{\frac{2 - 2r_{zz}}{N - 3}} \) was used because the Z's were obtained from the same set of paired measurements given to the same group of individual subjects.\(^{18}\) These t's were then submitted to a table of t in order to determine the significance of differences between the original r's.

It was then determined whether each intelligence test predicted achievement as well as the other in both schools. This was determined by the formula\(^ {19}\)

\[ t = \frac{Z_1 - Z_2}{\sqrt{(Z_1^2 - Z_2^2)}} \]

The denominator \( \sqrt{(Z_1^2 - Z_2^2)} \) was found by the formula

\[ \sqrt{(Z_1^2 - Z_2^2)} = \sqrt{\frac{1}{N_1 - 3} + \frac{1}{N_2 - 3}} \]

\(^{18}\)Ibid., p. 125.

because the $\bar{z}$'s were obtained from the same set of paired measurements given to two different groups of subjects.\footnote{Ibid., p. 297.} The $t$ score was determined for the two $\bar{z}$'s between schools with the greatest difference in order to determine the maximum possible value of $t$. This $t$ was then submitted to a table of $t$ in order to determine the probability of there being a difference in either direction as large or larger than this score.
CHAPTER IV

RESULTS

Report of Findings

Results were first obtained on the Revised Stanford-Binet Scale and the Terman-McNemar Test of Mental Ability, as these were the first tests to be administered to the previously described students. As soon as the results had been received and tallied, statistical analysis was begun. Table II shows the results of this first analysis. It will be noted that the correlations obtained between the two tests in both schools were quite high. This suggested that although there was a difference between the mean scores obtained on the two tests, the difference remained somewhat constant within the samples.

TABLE II

A COMPARISON OF THE RESULTS OBTAINED ON THE REVISED STANFORD-BINET SCALE AND ON THE TERNAN-McNEMAR TEST OF MENTAL ABILITY

<table>
<thead>
<tr>
<th></th>
<th>School A (N=58)</th>
<th>School B (N=53)</th>
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<tr>
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<td>S.D.</td>
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r = .777        r = .807
After the results had been obtained on the California Reading Test and the California Language Test, Pearson product-moment coefficients of correlation were computed between the results of these two tests and each of the other administered tests. These correlation coefficients were then placed in a correlation matrix (Table III). There was a total of six correlations for each school. Before any further statistical treatment was undertaken, the correlations obtained were transformed into Fisher's *z* coefficients in order to insure a normal distribution.

**TABLE III**


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<th>(1) S-B</th>
<th>(2) T-M</th>
<th>(3) C R</th>
<th>(4) C L</th>
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<td>.697</td>
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<td>(3) C R</td>
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The next statistical step was to compute t tests within each school to determine whether the correlations between the Terman-MoNemar and the two achievement tests differed significantly from those of the Stanford-Binet with the same two achievement tests. The results of the t tests are shown in Table IV.

### Table IV

| RESULTS OF "t" TESTS COMPUTED BETWEEN THE INTELLIGENCE TESTS AND THE ACHIEVEMENT TESTS |
|---------------------------------|----------|
| School A | $z_1$ 3 vs. $z_2$ 3 | $t = 1.84$ |
| School A | $z_1$ 4 vs. $z_2$ 4 | $t = 1.54$ |
| School B | $z_1$ 3 vs. $z_2$ 3 | $t = 3.99$ |
| School B | $z_1$ 4 vs. $z_2$ 4 | $t = 2.45$ |

Note: Sub-numerals refer to Table III

It was then determined whether each intelligence test predicted achievement as well as the other in both schools. The maximum t score obtained in this case was 1.42. By consulting a table of t, it was found that the probability of obtaining a difference in either direction as large or larger than this score was between .20 and .10.
Interpretation of Data

After the t's had been computed between the Z's obtained on the intelligence tests and the Z's obtained on the achievement tests, the t's were submitted to a table of t in order to determine the significance of difference between Z's. This introduced Hypothesis I: There is no difference in the ability of the Terman-McNemar Test of Mental Ability and the Revised Stanford-Binet Scale in predicting scholastic achievement. Specifically, Hypothesis I required that correlations within each school between the Terman-McNemar and the two achievement tests should not differ significantly from the correlations between the Stanford-Binet and the same two achievement tests.

The table of t shows that the t's must exceed 2.01 to be significant at the .05 level. A check of the t's obtained between the tests used in this study (Table IV) showed that both t's in School B exceeded this level. Therefore, Hypothesis I should be rejected.

The next step was to determine whether each intelligence test predicted achievement as well as the other in both schools. This introduced Hypothesis II: There is no difference between the ability of the two intelligence tests to predict scholastic achievement from school to school. Specifically, Hypothesis II required that the correlations
obtained between each of the pairs of measurements in School A should not differ significantly from the correlations obtained between the same pairs of measurements in School B.

As previously stated, the maximum t score obtained in this case was 1.42. It was then determined from a table of t that the probability of obtaining a difference in either direction as large or larger than this score was between .20 and .10. Therefore, Hypothesis II should not be rejected because the probability was highly indicative that both schools represent a single population (as the probability increases over the .05 level, so does the chance that both samples represent a single homogeneous population), and the t score (1.42) is not significant at the .05 level (1.98).

The original problem was

. . . to determine whether there was any difference between the ability of the Terman-McNemar Test of Mental Ability, a group intelligence test, and the ability of the individually administered Revised Stanford-Binet Scale to predict scholastic achievement as measured by the California Reading Test and the California Language Test.\(^2\)

The results have shown that, as far as this study was concerned, the Terman-McNemar Test of Mental Ability was the better predictor of scholastic achievement, as measured by

\(^{2}\)Cf. ante, p. 7.
the California Reading Test and the California Language Test, of the two intelligence tests (Table III) but not significantly better in School A, and that the predictive effectiveness of the two tests remained essentially the same when administered to two separate groups of students.
CHAPTER V

SUMMARY AND CONCLUSIONS

I. SUMMARY

The present study was an attempt to determine whether there was any difference between the ability of the Terman-McNemar Test of Mental Ability, a group intelligence test, and the ability of the individually administered Revised Stanford-Binet Scale to predict scholastic achievement at the eighth grade level as measured by the California Reading Test and the California Language Test.

A survey of the psychological and educational literature revealed few studies which were directly related to the present problem, and in no case were the two intelligence tests used in this study contrasted. However, two additional points of interest were noted. First, in no case where the Terman-McNemar Test of Mental Ability or the Revised Stanford-Binet Scale were contrasted with other intelligence tests, either group or individual, did the other intelligence tests exceed either of these two tests in their ability to predict scholastic achievement. Second, many of the studies concerned with the prediction of scholastic achievement through the use of intelligence tests used teachers' ratings or grades as the criterion of achievement. It seemed reasonable
to assume that neither teachers' ratings nor grades could be as objective or as statistically accurate in the measurement of achievement as standardized achievement tests.

The present study was based upon Revised Stanford-Binet Scale ratings, Terman-McNemar Test of Mental Ability ratings, and the ratings received on the California Reading Test and the California Language Test. The intelligence tests were administered to two groups of eighth grade students from two differing public schools in the Omaha Public School System in the fall of the year the study was conducted. The following spring, the two achievement tests were administered to the same students. A total of fifty-eight students completed the testing in one school (School A), and a total of fifty-three students completed the testing in the other school (School B).

Statistical treatment of the test data was begun as soon as the test results had been obtained from both School A and School B. The first step was to place the results obtained by each student on each test into ungrouped columns according to schools. After the data were thus recorded, Pearson product-moment coefficients of correlation were computed between the results obtained by the students of each school on each of the four tests administered. There was a total of six correlations for each school.
After the coefficients of correlation were obtained and placed in a correlation matrix, they were converted into Fisher's $Z$ coefficients. Next, the significance of differences between $Z$'s within each school were determined by means of $t$ tests. These $t$'s were then submitted to a table of $t$ in order to determine whether the correlations between the Terman-McNemar and the two achievement tests differed significantly from those of the Stanford-Binet with the same two achievement tests.

It was then determined whether each intelligence test predicted achievement as well as the other in both schools. This was accomplished by determining the maximum $t$ score possible between schools and checking this score against a table of $t$ to determine the probability of obtaining a difference in either direction as large or larger than this score.

The results of the statistical analysis indicated the following: First, both of the $t$'s obtained from School B were significant at the .05 level. Therefore, Hypothesis I: There is no difference in the ability of the Terman-McNemar Test of Mental Ability and the Revised Stanford-Binet Scale in predicting scholastic achievement, was rejected. Second, a check of a table of $t$ revealed that the probability of obtaining a difference in either direction as large or larger than the maximum $t$ score obtaining from this data was between
.20 and .10. Therefore, Hypothesis II: There is no difference between the ability of the two intelligence tests to predict scholastic achievement from school to school, was not rejected because the probability was highly indicative that both schools represent a single population, and the t score obtained was not significant at the .05 level.

II. CONCLUSIONS

1. This study showed that the Terman-McNemar Test of Mental Ability, an economical, easily administered group intelligence test, was a better predictor of scholastic achievement, as measured by the California Reading Test and the California Language Test, than the more expensive, relatively difficult to administer individual test of intelligence, the Revised Stanford-Binet Scale. However, it was not significantly better in one of the schools studied.

2. This study further showed that the predictive effectiveness of the two tests remained essentially the same when administered to two separate groups of students.

Recommendations for Further Study

1. The present study was concerned with the prediction of scholastic achievement only at the eighth grade level. Although this was sufficient for the purposes of this study, it cannot be inferred that the same results
would be found at other grade levels. Therefore, further research in this area is recommended.

2. The present study was concerned with the use of two specific intelligence tests and two specific achievement tests; therefore, the results found should not be interpreted as indicating what results might be found if other tests were used. Further research using other group and individual tests of intelligence as well as other achievement tests is therefore recommended.
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Hinkelman, Emmet A. "Relationship of Intelligence to Elementary School Achievement," *Educational Administration and Supervision,* XLI (March, 1955), 176-179.


APPENDIX
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### TABLE VI

Test scores obtained by the fifty-three eighth grade students of School "B" on the Revised Stanford-Binet Scale, the Terman-Monemar Test of Mental Ability, the California Reading Test, and the California Language Test.

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</table>
Study the examples below in order to see how the answer spaces should be marked to indicate the correct answers.

1. Steel is made from
   1 lead 2 iron 3 tin 4 copper 5 zinc
   
   The correct answer, iron, is number 2, so the second answer space has been blackened.
   You mark the correct answers for the remaining samples in the same way.

2. A horse always has
   6 rider 7 stable 8 shoes 9 hoofs 10 saddle

3. A quart is one fourth of a
   1 gallon 2 pint 3 bushel 4 barrel 5 keg

In taking this test, you are first to decide which answer is correct, and then blacken with a soft pencil the answer space which is numbered the same as your choice for the correct answer. Make your mark as long as the pair of lines, and move the pencil up and down firmly to make a heavy black line. If you change your mind, erase your first mark completely.
TEST 7. BEST ANSWER

Read each statement and mark the answer space which has the same number as the answer which you think is BEST.

SAMPLE. We should not put a burning match in the wastebasket because

1. Matches cost money.  2. We might need a match later.
3. It might go out.  4. It might start a fire.

1. The saying, "Idle brains are the devil's workhouse," means
   1. The devil is lazy.  2. People who are idle get into trouble.
   3. Many hands make light work.  4. The devil works with his brains.

2. The saying, "It's an ill wind that blows nobody good," means that
   5. Winds bring rain.  6. That which brings misfortune to some may help others.
   7. Trade winds help commerce.  8. It's easy to catch cold in a storm.

3. Farmers rotate crops because
   1. Variety is the spice of life.  2. It confuses the plant pests.
   3. It helps maintain soil fertility.  4. It gives the farmer a balanced diet.

4. The saying, "Little strokes fell great oaks," means
   5. Continued effort brings results.  6. Oak trees are weak.
   7. Little strokes are best.  8. Anyone can fell an oak.

5. The saying, "A miss is as good as a mile," means
   1. A girl can walk just about a mile.  2. Errors are unpardonable.
   3. The evil men do lives after them.  4. A failure is a failure, no matter how small.

6. The saying, "It never rains but it pours," means
   5. Salt stays dry when it rains.  6. Every cloud has a silver lining.
   7. Troubles seldom come singly.  8. Storms are more frequent than showers.

7. The cause of echoes is
   1. Static electricity in the air.  2. The reflection of sound waves.
   3. The absence of anything in the air.  4. Not known.

8. The saying, "Look before you leap," means
   5. Consider first, act afterward.  6. Trust your eyes, but not your feet.
   7. Anything is right which looks right.  8. Never take chances.

9. The saying, "Never ride a free horse to death," means
   1. Never accept free rides.  2. Never abuse privileges granted as favors.
   3. One should prize anything that is free.  4. A horse is to ride, not to kill.

10. The saying, "If the shoe fits, wear it," means
    5. Be sure to buy shoes that fit.  6. Give the devil his due.
    7. Don't take unnecessary steps.  8. Recognize your own faults and virtues.

11. Copper is used for electric wiring because
    1. It is decorative.  2. It is easily bent.
    3. It retains heat.  4. It is a good conductor.

12. The saying, "Don't cross your bridges till you come to them," means
    5. Where there's a will there's a way.  6. Everything comes to him who waits.
    7. Don't anticipate possible troubles.  8. Bridges are dangerous.

Score...
## TEST 1. INFORMATION

Mark the answer space which has the same number as the word that makes the sentence TRUE.

**Example.** Our first President was 

| 1 Adams | 2 Washington | 3 Lincoln | 4 Jefferson | 5 Monroe | 1 | 2 | 3 | 4 | 5 |

1. Polo is a kind of 

| 1 disease | 2 work | 3 bear | 4 game | 5 language | 1 | 2 | 3 | 4 | 5 |

2. Herring is a kind of 

| 6 wig | 7 flower | 8 pattern | 9 jewel | 10 fish | 6 | 7 | 8 | 9 | 10 |

3. The lyre was an early instrument used in 

| 1 music | 2 writing | 3 mining | 4 farming | 5 sculpturing | 1 | 2 | 3 | 4 | 5 |

4. Linen is made from 

| 6 hair | 7 jute | 8 flax | 9 rayon | 10 latex | 6 | 7 | 8 | 9 | 10 |

5. Burlap is a kind of 

| 1 lumber | 2 stone | 3 hood | 4 fabric | 5 comedy | 1 | 2 | 3 | 4 | 5 |

6. Quicksilver is another name for 

| 6 chromium | 7 tin | 8 mercury | 9 aluminum | 10 lead | 6 | 7 | 8 | 9 | 10 |

7. The number of pounds in a ton is 

| 1 (1000) | 2 (2000) | 3 (3000) | 4 (4000) | 5 (5280) | 1 | 2 | 3 | 4 | 5 |

8. Chinchilla is a kind of 

| 6 fur | 7 seasoning | 8 chemical | 9 malady | 10 furniture | 6 | 7 | 8 | 9 | 10 |

9. The fathom is a measure of 

| 1 weight | 2 curvature | 3 hardness | 4 depth | 5 strength | 1 | 2 | 3 | 4 | 5 |

10. Larceny is a term used in 

| 6 forestry | 7 medicine | 8 theology | 9 pedagogy | 10 law | 6 | 7 | 8 | 9 | 10 |

1. Napoleon’s final defeat was at 

| 1 Waterloo | 2 Paris | 3 Verdun | 4 Elba | 5 Leipzig | 1 | 2 | 3 | 4 | 5 |

2. The dynamo produces 

| 6 dynamite | 7 powder | 8 electricity | 9 gas | 10 steam | 6 | 7 | 8 | 9 | 10 |

3. Pasteur was a famous 

| 1 traveler | 2 boxer | 3 artist | 4 bacteriologist | 5 physicist | 1 | 2 | 3 | 4 | 5 |

4. The Pharaohs were kings of 

| 6 Babylon | 7 Jerusalem | 8 Syria | 9 Greece | 10 Egypt | 6 | 7 | 8 | 9 | 10 |

5. Sonata is a term used in 

| 1 drawing | 2 drama | 3 music | 4 poetry | 5 phonetics | 1 | 2 | 3 | 4 | 5 |

6. The Colosseum was an 

| 6 amphitheater | 7 aqueduct | 8 aquarium | 9 archway | 10 army | 6 | 7 | 8 | 9 | 10 |

7. The larynx is in the 

| 1 abdomen | 2 throat | 3 head | 4 ear | 5 pelvis | 1 | 2 | 3 | 4 | 5 |

8. Among birds that migrate are 

| 6 eagles | 7 hawks | 8 owls | 9 robins | 10 quail | 6 | 7 | 8 | 9 | 10 |

9. Emeralds are usually 

| 1 red | 2 yellow | 3 green | 4 purple | 5 blue | 1 | 2 | 3 | 4 | 5 |

10. Sirloin is a cut of 

| 6 mutton | 7 beef | 8 veal | 9 lamb | 10 pork | 6 | 7 | 8 | 9 | 10 |

1. The head of a museum is called a 

| 1 musician | 2 curator | 3 mortician | 4 pastor | 5 collector | 1 | 2 | 3 | 4 | 5 |

2. A six-sided figure is called a 

| 6 pentagon | 7 hexagon | 8 sextet | 9 helix | 10 scholium | 6 | 7 | 8 | 9 | 10 |

3. The bat is most closely related to the 

| 1 butterfly | 2 swallow | 3 owl | 4 mouse | 5 moth | 1 | 2 | 3 | 4 | 5 |

4. A character in “David Copperfield” is 

| 6 Tiny Tim | 7 Uriah Heep | 8 Scrooge | 9 Goliath | 10 Darnell | 6 | 7 | 8 | 9 | 10 |

5. Quinine comes from 

| 1 leaves | 2 roots | 3 medicine | 4 minerals | 5 bark | 1 | 2 | 3 | 4 | 5 |
## TEST 6. OPPOSITES

Mark the answer space which has the same number as the word which is OPPOSITE, or most nearly opposite, in meaning to the beginning word of each line.

**Example:** north — 1 hot 2 east 3 west 4 down 5 south

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<td>entrance</td>
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**Score...**
# TEST 2. SYNONYMS

Mark the answer space which has the same number as the word which has the SAME or most nearly the same meaning as the beginning word of each line.

**SAMPLE.** correct — 1 neat 2 fair 3 right 4 poor 5 good ................................................

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<td>1 entreat 2 console 3 pity 4 anger 5 discourage</td>
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<td>6 decorate 7 establish 8 surround 9 load 10 furnish</td>
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<td>4</td>
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<td>1 social 2 advisory 3 transitory 4 preliminary 5 internal</td>
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<td>6 squeal 7 twist 8 split 9 hurt 10 crawl</td>
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<td>1 amusing 2 rare 3 unimportant 4 detailed 5 uneven</td>
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<td>6 vacate 7 invade 8 shun 9 hide 10 desist</td>
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<tr>
<td>17. quell —</td>
<td>1 inquire 2 dispel 3 instill 4 quest 5 subdue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. abandon —</td>
<td>6 flee 7 escape 8 refuse 9 forsake 10 refrain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. jubilant —</td>
<td>1 exultant 2 judicious 3 playful 4 pleasant 5 jeweled</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. hoax —</td>
<td>6 danger 7 deception 8 persuasion 9 revelation 10 mischief</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. curdle —</td>
<td>1 coagulate 2 spoil 3 snuggle 4 condense 5 churn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. reverence —</td>
<td>6 revenge 7 relevance 8 obedience 9 veneration 10 mercy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. incite —</td>
<td>1 instigate 2 revolt 3 announce 4 disrupt 5 consume</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. boldness —</td>
<td>6 hypocrisy 7 ferocity 8 audacity 9 frankness 10 confidence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. appease —</td>
<td>1 praise 2 pique 3 entice 4 gladden 5 placate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**TEST 5. ANALOGIES**

Study the samples carefully.

**SAMPLES.**

Ear is to hear as eye is to
1. cry  2. glasses  3. spy  4. wink  5. see

Hat is to head as shoe is to
6. arm  7. leg  8. foot  9. fit  10. glove

DO THEM ALL LIKE THE SAMPLES.

1. Zoo is to animals as aquarium is to
   1. birds  2. fish  3. bees  4. statues  5. butterflies

2. Linoleum is to floor as sheet is to
   6. cotton  7. piano  8. blanket  9. linen  10. bed

3. Food is to hunger as water is to
   1. desert  2. thirst  3. quench  4. drink  5. milk

4. Add is to subtract as multiply is to
   6. arithmetic  7. increase  8. fraction  9. add  10. divide

5. Stone is to marble as wood is to
   1. brick  2. soft  3. cut  4. oak  5. pile

6. Abide is to depart as stay is to
   6. play  7. leave  8. away  9. over  10. home

7. Author is to book as artist is to
   1. painter  2. brush  3. picture  4. easel  5. paint

8. You is to yours as me is to
   6. his  7. ours  8. mine  9. theirs  10. my

9. Singing is to opera as dancing is to
   1. masquerade  2. orchestra  3. movie  4. drama  5. ballet

10. Shell is to nut as skin is to
    6. hull  7. animal  8. white  9. soft  10. cover

11. Cub is to bear as gosling is to
    1. fox  2. grouse  3. goose  4. rabbit  5. duck

12. Liberty is to freedom as bondage is to
    6. slavery  7. free  8. suffer  9. serf  10. revolution

13. Imitate is to copy as invent is to
    1. inventory  2. copyright  3. originate  4. machine  5. patent

14. 1 is to 3 as 9 is to
    6. (18)  7. (27)  8. (36)  9. (45)  10. (81)

15. Complex is to simple as hard is to
    1. tough  2. work  3. easy  4. smooth  5. brittle

16. Tree is to forest as person is to
    1. women  2. couple  3. human  4. crowd  5. men

17. City is to mayor as army is to
    1. soldier  2. navy  3. private  4. admiral  5. general

18. Wolf is to sheep as cat is to
    1. milk  2. fur  3. kitten  4. mouse  5. dog

19. 4 is to ½ as 28 is to
    1. (7)  2. (14)  3. (33)  4. (34)  5. (43)

20. Hog is to bristles as snake is to
    1. fangs  2. scales  3. venom  4. coil  5. rattle

21. Seldom is to never as little is to
    1. none  2. neither  3. small  4. often  5. large

22. Day is to 365 as week is to
    1. (7)  2. (31)  3. (48)  4. (52)  5. (60)

23. Corrupt is to depraved as sacred is to
    1. hallowed  2. Sunday  3. depressed  4. Bible  5. prayer

24. Square is to cube as circle is to
    1. round  2. circumference  3. sphere  4. dice  5. line

25. Thermometer is to temperature as metronome is to
    1. intensity  2. weight  3. distance  4. pressure  5. time

**Score**
TEST 3. LOGICAL SELECTION

Mark the answer space which has the same number as the word which tells what the thing ALWAYS or ALWAYS involves.

SAMPLE. A cat always has

1. An orchestra always has
   1 violinists 2 piano 3 musicians 4 saxophone 5 singers
   1

2. A museum always has
   6 visitors 7 minerals 8 collections 9 guides 10 paintings
   6

3. School always involves
   1 children 2 students 3 arithmetic 4 geography 5 sports
   1

4. A box always has
   6 contents 7 wood 8 lid 9 hinge 10 depth
   6

5. Contentment always involves
   6 pictures 7 editor 8 puzzles 9 fiction 10 cartoons
   6

6. A newspaper always has
   1 engine 2 guns 3 hull 4 passengers 5 freight
   1

7. A wheel always has
   1 circumference 2 spokes 3 tire 4 wood 5 metal
   1

8. A policeman always has
   6 club 7 cap 8 beat 9 uniform 10 authority
   6

9. A nation always has
   1 states 2 colonies 3 seaports 4 laws 5 navy
   1

10. Night always has
    6 stillness 7 moon 8 clouds 9 ghosts 10 hours
    6

11. A ship always has
    1 engine 2 guns 3 hull 4 passengers 5 freight
    1

12. A message always involves
    6 telepathy 7 messenger 8 speech 9 communication 10 writing
    6

13. Discipline always involves
    1 revenge 2 anger 3 morale 4 whipping 5 training
    1

14. A bottle always has
    6 hollowness 7 label 8 cork 9 glass 10 transparency
    6

15. Anxiety always involves
    1 awe 2 grief 3 insomnia 4 uneasiness 5 discouragement
    1

16. Compromise always involves
    6 respect 7 friendship 8 adjustment 9 law 10 violation
    6

17. An heir always has
    1 money 2 lawyer 3 heirlooms 4 property 5 predecessor
    1

18. An invention always involves
    6 usefulness 7 originality 8 patent 9 value 10 imitation
    6

19. A dance always has
    1 music 2 partners 3 rhythm 4 audience 5 costume
    1

20. A debt always involves
    6 interest 7 creditor 8 mortgage 9 payment 10 worry
    6

21. Rebuke always involves
    1 criticism 2 help 3 resignation 4 postponement 5 despair
    1

22. Admiration always involves
    6 affirmation 7 generosity 8 flattery 9 esteem 10 love
    6

23. Annihilation always involves
    1 surprise 2 destruction 3 pain 4 punishment 5 vengeance
    1

24. Abhorrence always involves
    6 aversion 7 rage 8 fear 9 irreverence 10 nausea
    6

25. Ostentation always involves
    1 simplicity 2 modesty 3 wealth 4 display 5 perfection
    1

Score
### TEST 4. CLASSIFICATION

In each line below, four of the words belong together. Pick out the ONE WORD which does not belong with the others, and mark the answer space bearing its number.

<table>
<thead>
<tr>
<th>Sample 1</th>
<th>Sample 2</th>
<th>Sample 3</th>
<th>Sample 4</th>
<th>Sample 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 dog, 2 cat, 3 horse, 4 chicken, 5 cow</td>
<td>6 hop, 7 run, 8 stand, 9 skip, 10 walk</td>
<td>1 Catholic, 2 Methodist, 3 Presbyterian, 4 Republican, 5 Baptist</td>
<td>6 hop, 7 run, 8 stand, 9 skip, 10 walk</td>
<td>1 Catholic, 2 Methodist, 3 Presbyterian, 4 Republican, 5 Baptist</td>
</tr>
</tbody>
</table>

**Examples:**

1. 1 dog, 2 cat, 3 horse, 4 chicken, 5 cow
2. 6 hop, 7 run, 8 stand, 9 skip, 10 walk

**Sample Questions:**

1. 1 Catholic, 2 Methodist, 3 Presbyterian, 4 Republican, 5 Baptist
2. 6 damp, 7 wet, 8 moist, 9 soggy, 10 soft
3. 1 telegraph, 2 train, 3 automobile, 4 bicycle, 5 boat
4. 6 often, 7 seldom, 8 safely, 9 always, 10 rarely
5. 1 oats, 2 rye, 3 wheat, 4 clover, 5 barley
6. 6 cello, 7 harp, 8 drum, 9 violin, 10 guitar
7. 1 Scottie, 2 Holstein, 3 Collie, 4 Shepherd, 5 Spitz
8. 6 digestion, 7 smell, 8 sight, 9 hearing, 10 taste
9. 1 pepper, 2 cinnamon, 3 nutmeg, 4 pickle, 5 mustard
10. 1 oats, 2 rye, 3 wheat, 4 clover, 5 barley

**Score:**
RECORD BOOKLET — Form L
FOR THE REVISED STANFORD-BINET SCALE
as described in Terman and Merrill's Measuring Intelligence
No.---------------------
Series-------------------

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Name---------------------------------------------------------- Examine... --------------- C.A.---------------
Sex------------------ Birthdate----------------------------- Date------------------ M.A.---------------
School------------------ Grade----------------------------- I.Q.---------------
Parent------------------ Address-----------------------------
Birthplace------------------ of father------------------ of mother------------------
Occupation of father------------------ of mother------------------
Race------------------ Nationality of descent------------------

TEST BEHAVIOR

Willingness
enthusiastic eagerness enters actively into task normal attitude because proper disagreeable task active objection

Self-confidence
extremely self-confident; relies on own ability rather self-confident neither distrustful nor entirely self-reliant inclined to distrust own ability extremely lacking in self-confidence; constantly distrustful of own ability

Social confidence
perfectly assured in personal contacts rather confident normal for age rather shy shy, reserved, reticent

Attention
completely absorbed by task little interference from distracting stimuli normal; attention to outside stimuli does not impair efficiency easily distracted by extraneous stimuli or by own ideas but returns readily to task abstracted; difficult to get and hold attention

TEST SUMMARY

II-6--------------------- VI--------------------- XIII---------------------
II--------------------- VII--------------------- XIV---------------------
III--------------------- VIII--------------------- A.A.---------------------
IVA--------------------- IX--------------------- S.A. I---------------------
IVA--------------------- X--------------------- S.A. II---------------------
V--------------------- XI--------------------- S.A. III---------------------
V--------------------- XII---------------------

Time--------------------- Total---------------------

HOUGHTON MIFFLIN COMPANY

The Riverside Press Cambridge
PRINTED IN THE U.S.A.
YEAR II (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Three-hole form board (1+)  a)  

☐ 2. Identifying objects by name (4+)
   a) Kitty  b) Button  c) Thimble  d) Cup  e) Engine  f) Spoon

☐ 3.*Identifying parts of the body (same as II—6, 2) (3+)
   a) Hair  b) Mouth  c) Ears  d) Hands

☐ 4. Block building: Tower

☐ 5.*Picture vocabulary (same as II—6, 4; III, 2; III—6, 2; IV, 1) (2+)

☐ 6.*Word combinations
   Alternate. Obeying simple commands (same as III—6, 1) (2+)

Note. — The tests marked with a * constitute an abbreviated scale, for use in case there is not time to give a complete test. See page xx of "Measuring Intelligence."

Mos........................................

YEAR II-6 (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Identifying objects by use (same as III—6, 5) (3+)
   a) Cup  b) Shoe  c) Penny  d) Knife  e) Automobile  f) Iron

☐ 2. Identifying parts of the body (same as II, 3) (4+)

☐ 3.*Naming objects (4+)
   a) Chair  b) Automobile  c) Box  d) Key  e) Fork

☐ 4.*Picture vocabulary (same as II, 5; III, 2; III—6, 2; IV, 1) (9+)

☐ 5.*Repeating 2 digits (1+)
   a) 4-7.................................  b) 6-3................................  c) 5-8.................................

☐ 6. Three-hole form board: Rotated (II, 1 must precede) (1+)  a)  
   b) Alternate. Identifying objects by name (same as II, 2) (5+)

Mos.................................
YEAR III (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1. Stringing beads (4+) (2 min.) No. strung

☐ 2.*Picture vocabulary (same as II, 5; II–6, 4; III–6, 2; IV, 1) (12+)

☐ 3.*Block building: Bridge

☐ 4.*Picture memories (1+)

☐ 5. Copying a circle (1+)

☐ 6.*Repeating 3 digits (1+)

Alternate. Three-hole form board: Rotated (same as II–6, 6) (2+)

Mos..........................

YEAR III–6 (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Obeying simple commands (3+)

☐ 2.*Picture vocabulary (same as II, 5; II–6, 4; III, 2; IV, 1) (15+)

☐ 3. Comparison of sticks (3 of 3, or 5 of 6)

☐ 4. Response to pictures I (2+)

☐ 5.*Identifying objects by use (same as II–6, 1) (5+)

☐ 6.*Comprehension I (1+)

Alternate. Drawing a cross

Mos..................
YEAR IV (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Picture vocabulary (same as II, 5; II–6, 4; III, 2; III–6, 2) (16+)

☐ 2.*Naming objects from memory (2+)  a)        b)        c)

☐ 3. Picture completion: Man (same as V, 1) (1 point)

☐ 4.*Pictorial identification (3+)

   a) Stove  b) Umbrella  c) Cow  d) Rabbit  e) Moon  f) Cat

☐ 5.*Discrimination of forms (8+)  No. correct...........................

☐ 6. Comprehension II (2+)

   a)        b)

Alternate. Memory for sentences I (1+)

   a) We are going to buy some candy for mother.
   b) Jack likes to feed the little puppies in the barn.

Mos....................

YEAR IV–6 (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1. Aesthetic comparison (3+)  a)        b)        c)

☐ 2.*Repeating 4 digits (1+)

   a) 4–7–2–9.......................   b) 3–8–5–2.......................   c) 7–2–6–1.......................  

☐ 3.*Pictorial likenesses and differences (same as VI, 5) (3+)

   a)        b)        c) d)        e)

☐ 4. Materials (2+)  a) Chair  b) Dress  c) Shoe

☐ 5.*Three commissions (3+)  a)        b)        c)

☐ 6.*Opposite analogies I (same as VII, 5) (2+)

   a)        b)        c) d)        e)

   Alternate. Pictorial identification (same as IV, 4) (4+)

Mos....................

YEAR V (6 tests, 1 month each; or 4 tests, 1½ months each)

☐ 1.*Picture completion: Man (same as IV, 3) (2 points)

☐ 2. Paper folding: Triangle

☐ 3.*Definitions (2+)

   a) Ball  b) Hat  c) Stove

☐ 4. Copying a square (1+)  a)        b)        c)

☐ 5.*Memory for sentences II (1+)

   a) Jane wants to build a big castle in her playhouse.
   b) Tom has lots of fun playing ball with his sister.

☐ 6.*Counting four objects (2+)  a)        b)        c)

   Alternate. Knot

Mos....................

(There is no heading V–6. Since tests at each level cover the preceding period of mental development, Years IV–6 and V, together, account for the twelve months of mental development between the mental ages of four and five. Year VI with six tests carrying two months' credit each accounts for the next twelve months of mental development between the mental ages of five and six.)
YEAR VI (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. *Vocabulary (5+) No. words......................

☐ 2. *Copying a bead chain from memory I (2 min.)

☐ 3. Mutilated pictures (4+)
   a) b) c) d) e)

☐ 4. *Number concepts (3+) a) b) c) d)

☐ 5. *Pictorial likenesses and differences (same as IV-6, 3) (5+)

☐ 6. Maze tracing (2+) a) b) c)

Mos............................
YEAR VII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. Picture absurdities I (3+)
   a) 
   b) 
   c) 
   d) 

☐ 2. Similarities: Two things (2+)
   a) Wood and coal
   b) Apple and peach
   c) Ship and automobile
   d) Iron and silver

☐ 3. Copying a diamond (2+)
   a) 
   b) 
   c) 

☐ 4. Comprehension III (2+)
   a) 
   b) 
   c) 

☐ 5. Opposite analogies I (same as IV-6, 6) (5+)
   a) b) c) d) e) 

☐ 6. Repeating 5 digits (1+)
   a) 3-1-8-5-9.--------------------- b) 4-8-3-7-2.--------------------- c) 9-6-1-8-3.---------------------

YEAR VIII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. Vocabulary (8+) No. words.---------------------

☐ 2. Memory for stories: The Wet Fall (5+)
   a) --------------------- b) --------------------- c) --------------------- d) --------------------- e) --------------------- f) ---------------------

☐ 3. Verbal absurdities I (3+)
   a) 
   b) 
   c) 
   d)
□ 4.*Similariesties and differences (3+)
  a) Baseball — orange
  b) Aeroplane — kite
  c) Ocean — river
  d) Penny — quarter

□ 5.*Comprehension IV (2+)
  a)
  b)
  c)

□ 6. Memory for sentences III (1+)
  a) Fred asked his father to take him to see the clowns in the circus.
  b) Billy has made a beautiful boat out of wood with his sharp knife.

Mos.............................

YEAR IX (6 tests, 2 months each; or 4 tests, 3 months each)

□ 1. Paper cutting I (same as XIII, 3) (1+)
   a) b)

□ 2. Verbal absurdities II (same as XII, 2) (3+)
   a)
   b)
   c)
   d)
   e)

□ 3.*Memory for designs (same as XI, 1) (1+ or 2 with 3/4 credit each)
   a) b)

□ 4.*Rhymes: New form (3+)
   a) b) c) d)

□ 5.*Making change (2+)
   a) 10-4................................. b) 15-12................................. c) 25-4.................................

□ 6.*Repeating 4 digits reversed (1+)
   a) 8-5-2-6................................. b) 4-9-3-7................................. c) 3-6-2-9.................................

Mos.............................
YEAR X (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1.*Vocabulary (11+) No. words________________________

☐ 2. Picture absurdities II — Frontier Days

☐ 3.*Reading and report (35 seconds, 2 errors, 10 memories)

<table>
<thead>
<tr>
<th>Memories</th>
<th>Time for reading</th>
<th>Mistakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>September</td>
<td>5th.</td>
</tr>
</tbody>
</table>

☐ 4.*Finding reasons I (2+)

a)

b)

☐ 5.*Word naming (28 words in one minute)

☐ 6. Repeating 6 digits (1+)

a) 4-7-3-8-5-9_______________  
b) 5-2-9-7-4-6_______________  
 c) 7-2-8-3-9-4_______________

Mos________________________

YEAR XI (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1.*Memory for designs (same as IX, 3) (1½+)

☐ 2.*Verbal absurdities III (2+)

a)

b)

c)

☐ 3.*Abstract words I (3+)

a) Connection  
b) Compare  
c) Conquer  
d) Obedience  
e) Revenge

☐ 4. Memory for sentences IV (1+)

a) At the summer camp the children get up early in the morning to go swimming.  
b) Yesterday we went for a ride in our car along the road that crosses the bridge.

☐ 5. Problem situation

☐ 6.*Similarities: Three things (3+)

a) Snake — cow — sparrow  
b) Rose — potato — tree  
c) Wool — cotton — leather  
d) Knifeblade — penny — piece of wire  
e) Book — teacher — newspaper

Mos________________________
YEAR XII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1.*Vocabulary (14+) No. words....................
☐ 2.*Verbal absurdities II (same as IX, 2) (4+)
☐ 3. Response to pictures II: Messenger Boy

☐ 4. Repeating 5 digits reversed (1+)
   a) 8-1-3-7-9.................................
   b) 6-9-5-8-2.................................
   c) 5-2-9-4-1.................................
☐ 5.*Abstract words II (same as XIV, 6) (2+)
   a) Constant
   b) Courage
   c) Charity
   d) Defend

☐ 6.*Minkus completion (same as S.A. I, 3) (2+) (5 min.)
M o s ...........................................

YEAR XIII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. Plan of search
☐ 2. Memory for words (1+)
   a) Cow, sand, glass, chair, bell.
   b) Grace, truth, worth, peace, doubt.
☐ 3.*Paper cutting I (same as IX, 1) (2+)
☐ 4.*Problems of fact (2+)
   a)
   b)
   c)
☐ 5.*Dissected sentences (2+) (1 min. ea.)
   a)
   b)
   c)

☐ 6.*Copying a bead chain from memory II (2 min.)
M o s ...........................................

YEAR XIV (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1.*Vocabulary (16+) No. words....................
☐ 2.*Induction
   a)
   b)
   c)
   d)
   e)
   f) Rule:
☐ 3. Picture absurdities III: The Shadow

☐ 4.*Ingenuity (same as A.A., 6) (1+) (3 min. ea.)
   a)
   b)
   c)

☐ 5. Orientation: Direction I (3+)
   a)
   b)
   c)
   d)
   e)

☐ 6.*Abstract words II (same as XII, 5) (3+)
M o s .............................................
AVERAGE ADULT (8 tests, 2 months each; or 4 tests, 4 months each)

☐ 1.*Vocabulary (20+) No. words
☐ 2.*Codes (1½+) (3 min. ea.) a) b)
☐ 3.*Differences between abstract words (2+)
   a) Laziness and idleness
   b) Poverty and misery
   c) Character and reputation
☐ 4. Arithmetical reasoning (2+) (1 min. ea.) a) b) c)
☐ 5. Proverbs I (2+)
   a) 
   b) 
   c)
☐ 6.*Ingenuity (same as XIV, 4) (2+) (3 min. ea.)
☐ 7. Memory for sentences V (1+)
   a) The red-headed woodpeckers made a terrible fuss as they tried to drive the young away from the nest.
   b) The early settlers had little idea of the great changes that were to take place in this country.
☐ 8. Reconciliation of opposites (same as S.A. II, 5) (3+)
   a) Heavy — light 
   b) Tall — short 
   c) Sick — well 
   d) More — less 
   e) Outside — inside 
   f) Asleep — awake

SUPERIOR ADULT I (6 tests, 4 months each; or 4 tests, 6 months each)

☐ 1.*Vocabulary (23+) No. words
☐ 2. Enclosed box problem (3+) a) b) c) d)
☐ 3.*Minkus completion (same as XII, 6) (3+) (5 min.)
☐ 4.*Repeating 6 digits reversed (1+)
   a) 4–7–1–9–5–2
   b) 5–8–3–6–9–4
   c) 7–5–2–6–1–8
☐ 5.*Sentence building (2+)
   a) Benefactor — institution — contribution
   b) Civility — requirement — employee
   c) Attainment — fortune — misery
☐ 6. Essential similarities (2+)
   a) Farming and manufacturing
   b) Melting and burning
   c) An egg and a seed

Mos..........................
SUPERIOR ADULT II (6 tests, 5 months each; or 4 tests, 7½ months each)

☐ 1.*Vocabulary (26+) No. words

☐ 2.*Finding reasons II (2+)
   a)
   b)

☐ 3.*Repeating 8 digits (1+)
   a) 7-2-5-9-4-8-3-6__________  b) 4-7-1-5-3-9-6-2__________  c) 4-1-9-3-5-8-2-6__________

☐ 4.*Proverbs II (2+)
   a)
   b)

☐ 5. Reconciliation of opposites (same as A.A., 8) (5+)

☐ 6. Repeating thought of passage: Value of Life

Many opinions have been given on the value of life. | Some call it good, | others call it bad. | It would be nearer correct to say that it is mediocre, | for on the one hand our happiness is never as great as we should like, | and on the other hand our misfortunes are never as great as our enemies would wish for us. | It is this mediocrity of life which prevents it from being radically unjust.

Mos........................

SUPERIOR ADULT III (6 tests, 6 months each; or 4 tests, 9 months each)

☐ 1.*Vocabulary (30+) No. words

☐ 2.*Orientation: Direction II (2+)
   a)  b)

☐ 3.*Opposite analogies II (2+)
   a)  b)  c)

☐ 4. Paper cutting II

☐ 5.*Reasoning (5 min.)

☐ 6. Repeating 9 digits (1+)
   a) 5-9-6-1-3-8-2-7-4__________  b) 9-2-5-8-4-1-7-3-6__________  c) 4-7-2-9-1-6-8-5-3__________

Mos........................
MINIATURE COMPLETION

VOCABULARY

1. orange
2. envelope
3. straw
4. puddle
5. tap
6. gown
7. eyelash
8. roar
9. scorch
10. muzzle
11. haste
12. lecture
13. Mars
14. skill
15. juggler
16. brunette
17. peculiarity
18. priceless
19. regard
20. disproportionate
21. shrewd
22. tolerate
23. stave
24. lotus
25. bewail
26. repose
27. mosaic
28. flaunt
29. philanthropy
30. ochre
31. frustrate
32. incrustation
33. milksop
34. harpy
35. ambergris
36. piscatorial
37. depredation
38. perfunctory
39. limpet
40. achromatic
41. casuistry
42. homunculus
43. sudorific
44. retroactive
45. parterre

Score...
Intermediate Form CC
California Reading Test
(Formerly: Progressive Reading Test)
DEvised BY ERENST W. TIEGS AND WILLIS W. CLARK

INSTRUCTIONS TO STUDENTS;
This is a reading test. In taking it you will show how many words you know and how well you understand what you read. No one can do the whole test correctly, but you should answer as many items as you can. Work as fast as you can without making mistakes.
DO NOT WRITE OR MARK ON THIS TEST BOOKLET UNLESS TOLD TO DO SO BY THE EXAMINER.
DIRECTIONS: Mark as you are told the number of the word that means the opposite or about the opposite of the first word.

SAMPLE: A. large 1 rich 2 small 3 gone 4 away

TEST 1 — SECTION A

1. answer 1 label 2 bare 3 question 4 trim — 1
2. save 1 date 2 solve 3 spend 4 rate — 2
3. length 1 gain 2 blot 3 double 4 width — 3
4. divide 1 provide 2 multiply 3 deride 4 separate — 4
5. center 1 edge 2 prepare 3 elude 4 place — 5
6. deposit 1 alarm 2 withdraw 3 clay 4 moisture — 6
7. reduce 1 consume 2 modify 3 enlarge 4 contract — 7
8. latitude 1 name 2 exist 3 connective 4 longitude — 8
9. cheap 1 valuable 2 conceal 3 bright 4 gain — 9
10. add 1 manage 2 inch 3 seal 4 deduct — 10
11. question 1 numeral 2 solution 3 distance 4 partly — 11
12. profit 1 heed 2 loss 3 average 4 name — 12
13. duty 1 trim 2 piece 3 exit 4 rebate — 13
14. correct 1 inaccurate 2 mature 3 balance 4 lucid — 14
15. balance 1 wheel 2 deficit 3 adjust 4 poise — 15
16. collect 1 interest 2 suspect 3 insult 4 disperse — 16
17. bill 1 money 2 receipt 3 trust 4 charge — 17
18. transverse 1 signet 2 complex 3 parallel 4 corpse — 18
19. refute 1 refuse 2 expand 3 prove 4 separate — 19
20. income 1 money 2 expenditure 3 budget 4 debtor — 20
21. economical 1 ornate 2 scion 3 liberal 4 productive — 21
22. tangent 1 motile 2 antagonize 3 merge 4 intersect — 22

TEST 1 — SECTION B

23. bitter 1 supple 2 pert 3 sweet 4 contract — 23
24. fresh 1 calm 2 spoiled 3 delicious 4 marsh — 24
25. freeze 1 melt 2 human 3 permit 4 farther — 25
26. increase 1 ascend 2 refer 3 reduce 4 produce — 26
27. dye 1 madman 2 dell 3 badge 4 bleach — 27
28. incline 1 definite 2 decline 3 expand 4 delight — 28
29. muscular 1 modish 2 brine 3 weak 4 punctual — 29
30. separate 1 bleach 2 annual 3 tense 4 unite — 30
31. revive 1 congenial 2 taint 3 relapse 4 aloft — 31
32. brittle 1 similar 2 flexible 3 bright 4 harsh — 32
33. tropical 1 frigid 2 luscious 3 ahoy 4 breeze — 33
34. partial 1 complicate 2 preserve 3 complete 4 decrease — 34
35. discard 1 dedicate 2 obtain 3 consume 4 obligate — 35
36. dissolve 1 contract 2 pliant 3 lucidity 4 solidify — 36
37. diverge 1 shorten 2 converge 3 stabilize 4 permit — 37
38. distend 1 blithe 2 deflate 3 sesame 4 appease — 38
39. stable 1 recent 2 spread 3 origin 4 fluctuating — 39
40. conductor 1 factor 2 generator 3 destroyer 4 insulator — 40
41. automatic 1 manual 2 pliable 3 similar 4 diversified — 41
42. absorb 1 emulate 2 involve 3 cmit 4 abstain — 42
43. acidity 1 nativity 2 alkalinity 3 acute 4 lucidity — 43
44. extract 1 inject 2 pollute 3 retract 4 interrupt — 44
45. plastic 1 sophisticate 2 rigid 3 lurid 4 vigilant — 45
**SAMPLE:** B. large 1 rich 2 small 3 gone 4 away

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<thead>
<tr>
<th>Correct Test Booklet Mark</th>
<th>Correct Answer Sheet Mark</th>
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<tr>
<td>46. slave 1 master 2 next 3 important 4 article</td>
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<tr>
<td>47. defend 1 avenue 2 attack 3 shower 4 district</td>
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</tr>
<tr>
<td>48. free 1 title 2 value 3 firm 4 enslave</td>
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<td>49. innocent 1 guilty 2 conditional 3 previous 4 judicious</td>
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<td>50. courage 1 position 2 timidity 3 degree 4 interest</td>
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<td>51. slavery 1 unsavory 2 unequal 3 freedom 4 cancel</td>
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<td>52. majority 1 compound 2 variable 3 minority 4 aged</td>
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<td>53. produce 1 destroy 2 director 3 principal 4 record</td>
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<td>56. convict 1 conceive 2 concoct 3 acquit 4 frame</td>
<td>4</td>
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<td>57. ancient 1 square 2 fertile 3 modern 4 brave</td>
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<td>58. desert 1 sandy 2 lucid 3 torrid 4 fertile</td>
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<td>59. civilized 1 primitive 2 docile 3 sterile 4 brittle</td>
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<tr>
<td>60. abolish 1 repel 2 purify 3 establish 4 defeat</td>
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<td>61. treason 1 manna 2 loyalty 3 ire 4 embargo</td>
<td>4</td>
</tr>
<tr>
<td>62. justice 1 command 2 guide 3 record 4 favoritism</td>
<td>4</td>
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<tr>
<td>63. homage 1 valise 2 chapter 3 disrespect 4 information</td>
<td>4</td>
</tr>
<tr>
<td>64. hostile 1 hideous 2 friendly 3 abundant 4 scene</td>
<td>4</td>
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<tr>
<td>65. condemn 1 exonerate 2 grudge 3 scheme 4 wail</td>
<td>4</td>
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<tr>
<td>66. prejudice 1 oracle 2 treachery 3 gesture 4 impartiality</td>
<td>4</td>
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<tr>
<td>67. evidence 1 ruin 2 supposition 3 problem 4 guidance</td>
<td>4</td>
</tr>
<tr>
<td>68. exalt 1 painted 2 comply 3 dethrone 4 err</td>
<td>4</td>
</tr>
</tbody>
</table>

**TEST 1 — SECTION D**

| 69. noise 1 silence 2 flier | 2 |
| 70. absent 1 number 2 milk 3 present 4 compel | 4 |
| 71. stupid 1 final 2 witty 3 effect 4 origin | 4 |
| 72. please 1 cherish 2 envy 3 test 4 annoy | 4 |
| 73. clear 1 dim 2 cleverness 3 humor 4 repose | 4 |
| 74. laugh 1 jewelry 2 belief 3 surk 4 charge | 4 |
| 75. sincere 1 feeble 2 abhor 3 sightly 4 insincere | 4 |
| 76. genuine 1 celestial 2 false 3 fluent 4 moral | 4 |
| 77. usual 1 cheap 2 abnormal 3 proud 4 pass | 4 |
| 78. confident 1 annual 2 suit 3 snub 4 uncertain | 4 |
| 79. shrill 1 faint 2 ashen 3 aria 4 naive | 4 |
| 80. hospitable 1 unsocial 2 acid 3 trouble 4 mortal | 4 |
| 81. complete 1 horrific 2 deficient 3 ordinary 4 ignite | 4 |
| 82. thoughtful 1 thorough 2 sinister 3 inattentive 4 huge | 4 |
| 83. flatter 1 definite 2 antic 3 slander 4 mope | 4 |
| 84. prominent 1 celestial 2 historic 3 assume 4 commonplace | 4 |
| 85. eloquent 1 imbue 2 entice 3 technical 4 inarticulate | 4 |
| 86. reluctant 1 deceptive 2 articulate 3 demure 4 nameless | 4 |
| 87. polished 1 appalled 2 eager 3 vulgar 4 verbose | 4 |
| 88. superficial 1 curious 2 cunning 3 moraine 4 profound | 4 |
| 89. stoical 1 guilty 2 dull 3 excitable 4 thoughtful | 4 |
| 90. literary 1 sinister 2 cunning 3 prosaic 4 deceptive | 4 |
DIRECTIONS: Read the following directions. Mark as you are told the number or letter of each correct answer.

TEST 2 — SECTION E

91. Read the following words:
   eat  door  roof  fly
Mark the number which shows the first letters of the names of parts of a house.
   1rf  2fd  3dr  4re  ---91

92. Read these numbers:
   7 2 4 3 5 6 8 9 1 2
Mark the letter of the fourth number after 3.
   a 1  b9  c8  d6  ---92

93. The altitude of a parallelogram is found by dividing the area by the base. Mark the letter which shows the altitude of a parallelogram which has an area of 100 square feet and a base of 10 feet.
   a 10  b1000  c20  d8  ---93

94. Longitude is the distance east or west of Greenwich, the prime meridian, on the earth's surface. Mark the letter of the following ship's reading which indicates longitude.
   a North  12° 42' 20"  
   b East  150° 36' 30"
   c South  54° 14' 10"
   ---94

95. African is the proper adjective derived from the proper noun, Africa. Mark the number of the word which is the proper adjective of the proper noun, Bolivia.
   1 Bolivia  2 Bolivia's  3 Bolivian  ---95

96. Regular adverbs are formed by adding ly to the adjectives, such as sweet, sweetly. Mark the number of the word which is the adverb formed from the adjective, clean.
   1 cleanly  2 cleanest  3 cleaner  ---96

97. The plural of a noun ending in y preceded by a consonant is formed by changing the y to i and adding es; as ivory, ivories. Mark the number of the word which indicates correctly the plural of the noun, harmony.
   1 harmonies  2 harmonies  3 harmonies  ---97

98. The suffix ous added to a noun forms an adjective meaning full of or abounding in; as joy, joyous. Mark the number of the word which uses this suffix correctly with mountain.
   1 mountainous  2 mountain  3 mountains  ---98

99. Read the following recipe:
   1 tablespoonful butter
   1 cup milk
   1 teaspoonful flour
   ½ teaspoon salt
Melt butter in saucepan over slow fire. Stir flour slowly into melted butter, but do not allow mixture to brown. Gradually add the milk, stirring constantly until mixture thickens. Add salt and remove from fire. Mark the number of the item which is the second thing to be used in mixing the above recipe.
   1 salt  2 flour  3 milk  4 butter  ---99

100. To find the altitude of a rectangle subtract the square of the base from the square of the diagonal of the rectangle and extract the square root of this difference. Mark the letter which indicates in feet the altitude of a rectangle whose base is 6 feet and whose diagonal is 10 feet (Six squared is 36, 10 squared is 100, and 8 is the square root of 64.)
   a 4  b6  c8  d10  ---100
TEST 2 — SECTION F

101. A preface is found in what part of a book?
   1 beginning  2 middle  3 end  — 101

102. The introduction is found in what part of a book?
   1 end  2 middle  3 beginning  — 102

103. The appendix is found in what part of a book?
   1 beginning  2 end  3 middle  — 103

104. A glossary contains
   1 index  2 pictures  3 definitions  — 104

105. The bibliography is found in what part of a book or chapter?
   1 end  2 middle  3 beginning  — 105

Look at the following and answer items 106 and 107.

Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
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<tbody>
<tr>
<td>1. The Demand for Coffee</td>
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<tr>
<td>2. Coffee Plantations</td>
<td>6</td>
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<tr>
<td>3. Growth of Coffee</td>
<td>19</td>
</tr>
<tr>
<td>4. Preparation for the Market</td>
<td>35</td>
</tr>
<tr>
<td>5. Coffee Ports</td>
<td>57</td>
</tr>
<tr>
<td>6. World’s Trade in Coffee</td>
<td>65</td>
</tr>
</tbody>
</table>

106. Mark the letter of the page on which “Preparation for the Market” begins.
   a 6  b 35  c 57  d 19  — 106

107. Mark the number of the chapter in which the material on page 29 will be found.
   1 Growth of Coffee  
   2 Preparation for the Market  
   3 Coffee Ports  — 107

Look at this partial index and find the answers to items 108, 109, and 110.

INDEX

Ukraine, p. 452.
United Kingdom: Agriculture, 344; commerce, 354-365; fisheries, 356, 372-74; manufacturing, 348-351; shipbuilding, 352; woolens, 369.
United States: map of, 46-47; agricultural regions, 32; cattle, 116-118; coal, 162-168; forests, 137-144; iron and steel, 178-183; territorial expansion, map of, 34; waterways, 199-207.
Utah: map of, 76; sugar-beet production, 76-81.

108. Mark the letter of the page on which information concerning the Ukraine will be found.
   a 344  b 76-81  c 452  d 369  — 108

109. Mark the letter of the page on which information concerning ship-building in the United Kingdom will be found.
   a 199-207  b 344  c 352  d 452  — 109

110. Mark the letter of the page on which the map showing territorial expansion of the United States will be found.
   a 46-47  b 178-183  c 137-144  d 34  — 110
Decide which are the TWO best topics to look up in an encyclopedia or reference book for information on the following subjects. Mark the numbers of these two topics.

Sample C: Skating in Holland
1 Skating  2 Wrestling  3 Baseball  4 Football  5 Recreation in Holland

Answers to Sample C:
Correct Test Booklet Mark  Correct Answer Sheet Mark
1-5  c  C  1-2  1-3  1-4  1-5  2-3
2  2  2  3-4  3-5  4-5

111. The Salmon Industry in the Pacific Coast States
1 Fisheries in U.S.  2 Industries  3 Pacific Coast States  4 Meats  5 Deep Sea Fishing

112. The Coffee Industry in Brazil
1 Beverages  2 Grades of Coffee  3 Brazil  4 Coffee Growing  5 South American Ports

113. Farming in Canada
1 Farm Life  2 Western Canada  3 Dairies  4 Fertility  5 Agriculture in Canada

114. Destructive Pests of Fruit Orchards
1 Destruction  2 Agriculture  3 Pests  4 Industry  5 Horticulture

115. Inter-Collegiate Athletics in the U.S.
1 Colleges  2 Game Rules  3 Athletics  4 College Sports  5 United States

Foreign trade was the chief commercial activity of the American Colonies during the Colonial period. They shipped tobacco, furs, indigo, rice, naval stores, and lumber to Europe. They sent fish, lumber, agricultural products, and cattle to the West Indies.

The colonists obtained manufactured goods from European countries, chiefly from Great Britain, while the West Indies furnished them slaves, sugar, and gold.

During the period 1790 to 1820, European wars changed the nature of the foreign trade of the United States. It became to a large extent concerned with the reshipping to Europe of foreign products which American-owned vessels had gathered in the West Indies, South America, and the Orient.

The Civil War caused a temporary lull in the country’s foreign trade. In 1860 more than two-thirds of American trade was carried in American ships; but by 1870, it had dropped to about one-half this amount. There was also a general downward trend of prices during the last quarter of the nineteenth century.

In 1947, the foreign trade of the United States was higher than any previous year. It amounted to over $14,000,000,000, an increase of 75 per cent over the previous peacetime record. Imports also reached a very high level during 1947, totaling nearly $6,000,000,000, an increase of 17 per cent above 1946.
TEST 2—SECTION G (Continued)

Read this story:

The olive is a tree having oblong pointed leaves and small oval or egg-shaped berry-like fruit. This fruit turns from dull green to darker hues, often purplish in color, when ripened.

The olive is a native of the Mediterranean region. It was introduced into South America, Mexico, and California by Spanish settlers and Jesuit missionaries in the 17th century. It is also cultivated in California, South Carolina, Florida, and Mississippi.

Because of its high oil content, the fruit became a symbol, not only of peace among the Southern European nations of antiquity, but also of national wealth and domestic plenty. This was due to the fact that olive oil is a substitute for the butter and animal fats which are consumed by the races of the North.

A report showed that in one year, European and Asiatic olive-growing countries produced the following amounts of edible olive oil:

<table>
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<tr>
<th>Countries</th>
<th>Tons</th>
<th>Per Cent</th>
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</thead>
<tbody>
<tr>
<td>Italy</td>
<td>108,000</td>
<td>26.6</td>
</tr>
<tr>
<td>Spain</td>
<td>107,000</td>
<td>26.4</td>
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<tr>
<td>Greece</td>
<td>52,000</td>
<td>12.8</td>
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<tr>
<td>Tunis</td>
<td>46,000</td>
<td>11.3</td>
</tr>
<tr>
<td>Portugal</td>
<td>25,000</td>
<td>6.2</td>
</tr>
<tr>
<td>Turkey</td>
<td>22,000</td>
<td>5.4</td>
</tr>
<tr>
<td>Others</td>
<td>46,000</td>
<td>11.3</td>
</tr>
<tr>
<td>Total</td>
<td>406,000</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Although the olive is valued principally for its oil and the many uses to which this oil may be put, the most common use of the fruit itself is its preparation in brine as a sort of pickle or condiment, which is often stuffed, but usually kept with the seed intact. Besides its use as a cooking fat, olive oil is used on salads, for packing sardines, and in medicines.

Mark the number of each correct answer. You may look back to find the answers.

123. The best title for this story is
   1 Orchard Fruits
   2 Uses of Olive Oil
   3 Olives

124. The olive is a native of
   1 California
   2 The Mediterranean region
   3 Mexico

Mark as you have been told the number of each correct answer. You may look back to find the answers.

116. The best title for this story is
   1 Foreign Trade of the U.S.
   2 Foreign Trade of the Colonies
   3 Colonial Period

117. The chief commercial activity of the early American colonies was
   1 farming
   2 manufacturing
   3 export trade

118. Between 1790 and 1820 the nature of foreign trade of the U.S. was changed by
   1 Civil War
   2 European Wars
   3 Discoveries and Inventions

119. Colonists obtained manufactured goods from
   1 West Indies
   2 Great Britain
   3 South America

120. By 1870 American trade carried in American ships totaled about
   1 one-half
   2 two-thirds
   3 one-third

121. During the European Wars of about 1800, American-owned vessels were engaged to a large extent in
   1 storing supplies
   2 foreign wars
   3 reshipping

122. During Colonial times, slaves were imported from
   1 Africa
   2 West Indies
   3 South America
TEST 2 — SECTION G (Continued)

125. The olive was introduced into Mexico in the 17th century by
1 Syrians  2 Mexicans  3 A religious group  ——125

126. The country producing the largest amount of olive oil in one year was
1 Greece  2 Italy  3 Spain ——126

127. About six per cent of the total amount of olive oil was produced in
1 Portugal  2 Syria  3 Tunis ——127

128. The Mediterranean countries regarded olive oil highly as a
1 medicine  2 pickle  3 substitute for butter or fat ——128

129. A common use of the fruit of the olive tree is its preparation as
1 a lean meat substitute  2 a pickle or condiment  3 an emblem of peace ——129

Mark the number of each correct answer. You may look back to find the answers.

130. The best title for this story is
1 Street Railways  2 Modern Inventions  3 Transportation ——130

131. The first street cars in New York City were pulled by
1 horses  2 steam power  3 electricity ——131

132. The world’s first subway was ready for service in London in
1 1853  2 1863  3 1900 ——132

133. Modern transportation facilities challenge the railroad’s
1 right to exist  2 dependability  3 supremacy as a common carrier ——133

134. Most city transportation is handled by
1 busses  2 trucks  3 street railways ——134

135. When trackage will not pay, street railways
1 use busses  2 borrow money  3 abandon the system ——135

Read this story:

The first streetcars were run in 1832 in New York City. They were pulled by horses. New York also had the world’s first elevated or overhead line. This was opened in 1868 with small steam locomotives as motive power.

Work started on the world’s first subway in London, England, in 1853; however, it was not ready for service until ten years later. Steam locomotives pulled the cars. America’s first subway was started in New York in 1900 and put into service in 1904.

The supremacy of the railroad as a common carrier is today being challenged by the automobile, the bus and truck, the airplane, and even steamships which are taking freight through the Panama Canal at cheaper rates than the railroad can offer. Busses and trucks are public carriers in cities, between cities, and across the continent. Large fleets of trucks haul freight to regions which the railroads cannot serve. Airplanes are carrying passengers, mail, and even freight at speeds impossible for surface carriers, and over airways as carefully charted and as well managed as the railroads.

Street railways continue to lead the bus lines in urban transportation. However, both steam and street railways are using busses wherever trackage cannot be made to pay a profit.
Read the story:

The Electric Light

After great expense and nearly two years of work, Thomas A. Edison devised, in 1879, the first successful carbon-filament lamp in his experimental laboratory in Menlo Park, N.J. This lamp consisted of a thread of carbon in a sealed glass globe from which the air had been exhausted until only about a millionth part of the original air remained. Edison at first tried to make the carbon-filament in this vacuum by charring cotton thread, paper, wood, and many other materials. Bamboo fibre proved superior to other materials. Edison then secured specimens of every known variety.

Edison was now ready to give his new light to the world. He had a row of lamps hung from the trees at Menlo Park, and the thousands who came to see, marvelled when they found that the lamps could burn day and night for longer than a week. The lamps were small and finely made, and could be lighted or extinguished by simply pressing a button. Then, too, the cost of making them was slight. Edison had given the world a new light which was practical and useful.

Edison determined to make it possible for people to use his lamps in their homes by getting their electricity from a central station, so he organized a company and trained his own men to take charge of factories for making lamps and everything else needed, and to set up high-speed machines for a big output of electricity for the city of New York.

The development of the electric light brought the individual home owner into the same class as the wealthy man in the lighting of his home. It served as an added impulse to business, made the streets safer at night, and became a stepping stone to further and more modern electrical inventions.

Mark the number of each correct answer. You may look back to find the answers.

136. A filament is a
1) glass globe
2) thread-like fibre
3) light

Answer: 2  

137. An exhausted globe in this story is a
1) vacuum
2) high-speed engine
3) broken glass tube

Answer: 1 2 3

The following things are mentioned in the story:

Charring cotton thread
Experimental laboratory
Electric light in homes
High-speed machines

The order in which the above things were mentioned in the story is as follows:

142. High-speed machines were
1st 2nd 3rd 4th
143. Experimental laboratory was
1st 2nd 3rd 4th
144. Electric light in homes was
1st 2nd 3rd 4th
145. Charring cotton thread was
1st 2nd 3rd 4th
**Grading Placement and Age Norms**

**Percentile Norms**

Use COLUMN 1 norms when scoring tests given in first month of school term. Use COLUMN 2 norms when scoring tests given in second to fifth months of term.
California Reading Test
Intermediate • Grades 7-8-9
Devised by ERNEST W. TIEGS AND WILLIS W. CLARK

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**TEST 1 — SECTION A**

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**TEST 1 — SECTION C**

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**TEST 2 — SECTION F**

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**TEST 2 — SECTION E**

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<th>128</th>
<th>127</th>
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</thead>
</table>

*Obtain from table of norms on Page 4 or see Manual.*

Press down firmly with your pencil.

Do not erase or fold this sheet. Keep away from extreme heat.

Scoreze No. 40
Language

INSTRUCTIONS TO STUDENTS:
This is a language test. In taking it you will show what you know about capitalization, punctuation, and words and sentences, and how well you can spell and write. No one can do the whole test correctly, but you should answer as many items as you can. Work as fast as you can without making mistakes.

DO NOT WRITE OR MARK ON THIS TEST BOOKLET UNLESS TOLD TO DO SO BY THE EXAMINER.
DIRECTIONS: In the sentences below the line, some of the letters with numbers above them should be capitals. Mark the number of each letter that should be a capital. Some lines may have more than one letter that should be a capital; others may have no such letter.

SAMPLE: A. His name is sam and he's my friend. 3 A

In Sample A the number 3 letter, s, in sam, should be a capital. Notice how the 3 has been marked.

TEST 5 — SECTION A

1. we shall travel east to Bagdad. 1
2. Mary visited her aunt, they went to 2 3 4 5
3. a show the first evening. 3
4. The only correct abbreviation for september 4
5. always has four letters, sept. 5
6. Abraham lincoln’s birthplace, kentucky, is very 6
7. far from where he lived later. 7
8. I read Black beauty and think it 8
9. is a very good book. 9
10. The last day of october is known to 10
11. all of our people as hallowe’en. 11
12. Beautiful france has a capital named paris. 12
13. On sunday I started for the rocky Mountains 13
14. to visit with my uncle Bill. 14
15. Jack asked, “may you play ball today?” 15

Page 2 CIL-AA

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Sec. A Score (number right)
DIRECTIONS: In the story below the line, numbers 16, 17, 18, etc., indicate places where punctuation may or may not be needed. In the answer row which has the number used in the story, make a black mark within the pair of dotted lines under the punctuation needed. If none is needed, mark N. Use the same answer row to show all punctuation needed at any one number in the story.

SAMPLE: B. Is1 John coming2 home3

No punctuation is needed at 1 after the word, is, in Sample B, so a mark has been made under the N in answer row 1. A mark under N in answer row 2 shows that punctuation not needed at 2 in the sample. A mark under the ? in answer row 3 shows the punctuation needed at 3 in the sample.

TEST 5 — SECTION B

Saturday,16 on the way17 back from a fishing trip18 Jack19 and Bill met Tom, who said20 Where have you been21".

"We22 have been fishing23 up at the lake24 answered Bill.25 "We caught some bass26 trout, and perch."

Jack said27 "Bill kept us28 from drowning29 too. We were30 out in a canoe and I stood up.31 The canoe began tipping and Bill yelled,32 'Sit down,33 just as the canoe34 was about35 to tip over.'"
DIRECTIONS: In the following sentences, mark as you have been told the number of each correct word.

TEST 5 — SECTION C

36. (1 Hasn't 2 Haven't) the children come home yet? _____36

37. (1 Doesn't 2 Don't) the boy know it is dangerous to go into deep water? _____37

38. He (1 did 2 done) the work well. _____38

39. We were at the theater last night where we (1 saw 2 seen) some trained animals. _____39

40. He should (1 have gone 2 have went) home before six o'clock. _____40

41. Put (1 them 2 those) books on the table. _____41

42. The cake was given to (1 he 2 him) and Mary. _____42

43. Miss Sparks gave the basket of flowers to her and (1 I 2 me.) _____43

44. (1 Lay 2 Lie) still and rest until morning. _____44

45. The ball game started when the mayor (1 threwed 2 threw) the baseball onto the field. _____45

46. As these men worked hard the previous day. YES NO

47. When the problem is one of addition. YES NO

48. The lake was surrounded by snow-covered hills. YES NO

49. After talking with the natives in the camp. YES NO

50. Running as hard as we could. YES NO

51. Great caravan routes lead to Damascus. YES NO

52. With the first breath of autumn. YES NO

53. Which in turn rests on logic. YES NO

54. To hold in mind a single line of reasoning requires higher types of thought than those which are involved in mastering a single statement. YES NO

55. When the pupil does not understand what he is aiming to accomplish in algebra or geometry and is carried along for a time by the demands of the teacher. YES NO

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Sec. C Score (number right)........................................

Page 4
CIL-AA GO RIGHT ON TO THE NEXT COLUMN

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO

YES NO
DIRECTIONS: Read the following sentence. Then consider how each individual word in that sentence is used in order that you may classify it as a part of speech. Mark the number which shows the classification of each word. If you do not know an answer, or if you think that none of the answers given is correct, mark the number, 5.

We walk in the park almost every afternoon and watch other small children feed doves which perch on their shoulders.

<table>
<thead>
<tr>
<th>WORDS</th>
<th>PARTS OF SPEECH</th>
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<tr>
<td>we</td>
<td>1 noun 2 pronoun 3 verb 4 adjective 5 None</td>
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</table>

STOP NOW WAIT FOR FURTHER INSTRUCTIONS

Sec. D Score (number right).................................
DIRECTIONS: Each line in this test contains four spelling words and the word, None. These words are numbered 1, 2, 3, 4, and the None is numbered 5. In some of the lines, one word is misspelled. In others, no word is misspelled. If there is a misspelled word, mark its number. If no word is misspelled, mark the 5.

SAMPLE: C. 1 now 2 just 3 come 4 ron 5 None

SAMPLE: D. 1 go 2 see 3 do 4 may 5 None

| 76. score | 2 rathur | 3 lame | 4 bitter | 5 None | Correct Test Booklet Mark | 7 |
| 77. soak | 2 really | 3 escape | 4 often | 5 None | 7 |
| 78. sipply | 2 nature | 3 loose | 4 promise | 5 None | 7 |
| 79. split | 2 elephunt | 3 niece | 4 sixty | 5 None | 7 |
| 80. entire | 2 trout | 3 losing | 4 listened | 5 None | 8 |
| 81. lantern | 2 faint | 3 motion | 4 arrest | 5 None | 8 |
| 82. moral | 2 sentury | 3 haste | 4 compel | 5 None | 8 |
| 83. tried | 2 woolen | 3 pech | 4 shining | 5 None | 8 |
| 84. safety | 2 dreamed | 3 careless | 4 unles | 5 None | 8 |
| 85. asist | 2 special | 3 weight | 4 paddle | 5 None | 8 |
| 86. funny | 2 taking | 3 until | 4 alone | 5 None | 8 |
| 87. obedient | 2 register | 3 target | 4 sesion | 5 None | 8 |
| 88. suburb | 2 laboratory | 3 carear | 4 efficiency | 5 None | 8 |
| 89. pantry | 2 wistle | 3 insect | 4 willow | 5 None | 8 |
| 90. mortal | 2 salute | 3 evidence | 4 estate | 5 None | 8 |
| 91. moskuito | 2 singular | 3 hymn | 4 drama | 5 None | 9 |
| 92. tangle | 2 presence | 3 intense | 4 prairie | 5 None | 9 |
| 93. evil | 2 detail | 3 justise | 4 amuse | 5 None | 9 |
| 94. foreign | 2 examation | 3 accent | 4 diamond | 5 None | 9 |
| 95. horrid | 2 strain | 3 orphan | 4 investigate | 5 None | 9 |
| 96. lease | 2 expand | 3 misterious | 4 cucumber | 5 None | 9 |
| 97. swich | 2 paw | 3 sleeve | 4 noisy | 5 None | 9 |
| 98. disposition | 2 brilliant | 3 magnificent | 4 accord | 5 None | 9 |
| 99. remit | 2 oxygan | 3 interfere | 4 delicious | 5 None | 9 |
| 100. stubborn | 2 permanent | 3 campain | 4 indifferent | 5 None | 10 |
| 101. silence | 2 vegetable | 3 patient | 4 mere | 5 None | 10 |
| 102. aerial | 2 indevidual | 3 exquisite | 4 convict | 5 None | 10 |
| 103. saucer | 2 unable | 3 sow | 4 prison | 5 None | 10 |
| 104. amiable | 2 seiges | 3 beneficial | 4 chaperon | 5 None | 10 |
| 105. strenuous | 2 accrued | 3 infamy | 4 melencholy | 5 None | 10 |

Test 6 Score (number right)
## Grade Placement and Age Norms

Use COLUMN 1 norms when scoring tests given in first month of school term.

Use COLUMN 2 norms when scoring tests given in second to fifth months of term.

### Percentile Norms

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<th>Reading Total</th>
<th>Writing Total</th>
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### DIAGNOSTIC PROFILE

- **Grade Placement**
- **Total Language (A+B+C+D)**
- **Spelling Total**
- **Possible Score**
- **Student's Score**

### Handwriting

- **Grade Placement**
- **Percentile Rank**

### Grade Placement and Age Norms

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<td>60</td>
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<td>80</td>
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</table>

### TOTAL SPELLING

- **Grade Placement**
- **Percentile Rank**

### TOTAL (A+B+C+D)

- **Possible Score**
- **Student's Score**

### Percentile Norms

- **Grade Placement**
- **Percentile Rank**

### Language

- **Grade Placement**
- **Percentile Rank**

### Grammar

- **Grade Placement**
- **Percentile Rank**

### Writing

- **Grade Placement**
- **Percentile Rank**

### Reading

- **Grade Placement**
- **Percentile Rank**

### Spelling

- **Grade Placement**
- **Percentile Rank**

### California Language Test

- **Intermediate Grades Form**
SAMPLE B:
John coming home.

ANSWERS:

- His name is som and he's my friend.

Now do 1 to 15 the same way

Write the words which are pronounced.

TEST 5 - SECTION A

- Now do 15 to 5

TEST 5 - SECTION B

- Now do 16 to 35

TEST 5 - SECTION C

- Now do 36 to 50

TEST 5 - SECTION D