An analysis and evaluation of the Spelman-Morehouse reading program for the year 1943-44

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AN ANALYSIS AND EVALUATION OF THE SPELMAN-MOREHOUSE READING PROGRAM FOR THE YEAR 1943-44

AN INVESTIGATIVE PAPER
SUBMITTED TO THE FACULTY OF ATLANTA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF ARTS

BY
VERA LOUISE SUGG
AND
VICTORIA LOUISE JOHNSON

DEPARTMENT OF ENGLISH

ATLANTA, GEORGIA
MAY 1944
Before 1937 Spelman College and Morehouse College, like many other colleges, had no direct interest in teaching reading. These two colleges maintained high schools until 1930 for the purpose of preparing students for college entrance. If a student needed to eliminate some difficulties before being admitted to college, he was placed in one of the preparatory schools. In 1930, as a result of affiliating with the Atlanta University System, the colleges discontinued the high schools; but they received a large number of students each year from the University Laboratory High School and similar private schools where students received specific training preparatory to entering college. Now, however, in the absence of many such private high schools, and with many students entering college without definite college preparation, the freshman classes present wider differences in reading efficiency than before. Because of these differences in pre-college training of the students admitted, the desire for a certain amount of uniformity in instruction, and in keeping with newer trends in education, Spelman and Morehouse have found it necessary to incorporate reading into their curriculums. This analysis is the first of a series of objective studies to be made as the reading program develops. It is an attempt by two Atlanta University students interested in the teaching of reading, to evaluate the Spelman-Morehouse reading program. The study is done in connection with the work of the reading councils.

While the entire study is the result of close cooperation between the two investigators, Vera L. Sugg was chiefly responsible for chapters

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one, two, and five and Victoria L. Johnson for chapters three, four, and
the supplement.

Many schools are now making studies of their own reading programs
and are attempting to evaluate them and to suggest ways of making improve-
ments as a whole. The investigators hope that this study will be signifi-
cant both in furnishing the councils with objective data and in promoting
and stimulating further participation of all people concerned with the
Spelman-Morehouse reading program.

The investigators wish to acknowledge their gratitude and sincere
appreciation to the following for their cooperation and assistance in col-
lecting data for this study: to the administrations for making accessible
the records of psychological tests and academic achievement; to all the
instructors, administrative officers and assistants who consented to inter-
views; to Mr. J. L. Whiting, professor of psychology and education at Spel-
man and Morehouse Colleges, for assistance with statistics used; and to
Miss M. L. Saine, instructor in reading at Spelman College and Dr. N. P.
Tillman, chairman of the English department at Morehouse College and
Atlanta University, for critical reading and understanding guidance dur-
ing the preparation of the manuscript. The investigators also acknowledge
the cooperation of those students who consented to be included in the
experiment and to the administration of Spelman College for making the
experiment possible.

The major portion of this study was made before it was possible
to evaluate the reading program for the entire year, consequently it in-
cludes only an analysis of the reading progress through January. One of
the investigators has, therefore, prepared a supplementary chapter showing
the reading and class achievements as indicated by the May reading tests
and second semester academic grades.
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CHAPTER I

INTRODUCTION

This treatise is a study of the entire Spelman-Morehouse freshman reading program for 1943-44 in order to determine its effectiveness. Each phase will be considered from four viewpoints: (1) aims and scope of the present program, (2) organization of both the developmental and the corrective and remedial phases of reading instruction, (3) participation of teachers and pupils in both phases, (4) actual results in terms of the students' academic grades and scores on reading tests.

Data used in the study were obtained from the following sources: (1) interviews with participating instructors, (2) scores on reading tests administered in September and January, (3) scores on psychological tests administered in September, (4) academic grades, (5) Spelman and Morehouse College Catalogues, and (6) an experiment in remedial and corrective reading conducted in an integrated English-reading class.

The investigators acknowledge the following limitations: (1) They had no experience with or observations of the Spelman-Morehouse reading program until the beginning of this academic year. (2) Only the testing in the limited experiment was done by the investigators. The coordinator and the instructor in reading at Spelman College administered other reading tests. The professor of psychology at Morehouse and Spelman gave the psychological examinations. (3) The information given here does not include the 201 Spelman students and the 117 Morehouse students tested in September, but 109 Spelman students and 97 Morehouse students who had taken both reading tests. (4) Except in the experiment, observations and evaluations of
student progress are made for only the first semester. (5) The control group in the experiment was not ideal. While not participating in the remedial program, they had the benefit of developmental instruction in the content courses in which they enrolled.

Certain technical terms used in the study are defined thus: An experimental group is a group of students selected for specific instruction. A control group is a group of students who receive no instruction but who are tested for the purpose of measuring the progress of the experimental group. The opthalmograph is an instrument for photographing eye movements. The telebinocular is an instrument for measuring binocular coordination. The metronoscope is an instrument for developing speedy rhythmical eye movements across a page. Developmental reading is a program of reading designed to teach students the value of using different reading skills according to the purpose and types of material read. It usually includes a whole student body. Remedial instruction is concerned with seriously retarded cases who, according to Ruth Strang, "are so extremely immature in their reading interests and habits that they can be aided only by extensive clinical study and therapy." Corrective instruction involves giving aid to slighter individual difficulties through group training.

In making this study the investigators used this procedure: First of all, they studied the former interest in reading at the two schools. The faculty committee on freshman testing divided the freshmen into four groups according to the median standard scores made on the September reading test. These scores were recorded and names of the students were matched in order to find all students who had taken both tests. Psychological scores and

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1Ruth Strang, Problems in the Improvement of Reading in High School and College (Lancaster, Pennsylvania, 1938), p. 123.
academic marks were obtained for the selected students at both schools. The investigators prepared questionnaires and held interviews with instructors of freshman content courses. The limited experiment with students in the fourth or lowest group as of September was organized at Spelman.

The procedure used in the experiment is as follows: (1) selection of twenty students for the experimental group, (2) selection of eight students who, unfortunately, could not be included in the already crowded remedial and corrective program, and whose scores matched eight of the scores in the experimental group which were not too low to be matched, (3) selection and administration of the initial test to both the experimental and control groups, (4) intensive remedial and corrective instruction for five weeks, three one-hour periods a week, and (5) administration of the final tests to both groups.

The testing committee chose the Iowa Silent Reading Test, New Edition, Advanced Test for High School and College, Forms Am and Cm, for the freshman reading testing. Form Am is a revised edition and Form Cm is a new revised edition. Each form tests seven areas: (1) rate-comprehension: science, social science; (2) directed reading; (3) poetry comprehension; (4) word meaning: social science, science, mathematics, and English; (5) sentence meaning; (6) paragraph comprehension; and (7) location of information: use of index and selection of key words. Both new and old forms have equated scores based on national standards. Correlation on these tests is high.

The Haggerty Test, Sigma 3, for grades six through twelve, was used in the limited experiment. Form A was given at the initial testing, and Form B was given at the final testing. Each form measures the areas which the councils chose for concentration: vocabulary, sentence, and
paragraph comprehension. Gray's Oral Reading Test was also used in the experiment. This test contains twelve paragraphs ranging in difficulty from grades one through twelve.

Psychological scores for the sampling of students used in this study were obtained from results on tests prepared by the American Council on Education. Specimens of each of these tests may be found in the appendix.
CHAPTER II
THE DEVELOPMENTAL READING PROGRAM

Progress of Reading Instruction in the Colleges

Long before the present interest in reading instruction, college freshmen were given only achievement and psychological tests upon entering college. A study of the testing programs of Spelman and Morehouse reveals the fact that the same kinds of tests were administered to freshmen who entered these schools. According to the schedules for entrance examinations at Spelman and the courses of study for new students, the program of reading testing was begun in September, 1937. Before that time only students who graduated from non-accredited high schools below Class 2 were required to take achievement tests in subjects other than English. All students were required to take the English and psychological examinations.¹ Likewise, there were no separate reading tests given to Morehouse freshmen.² The English tests included informal reading, but no special effort was made to determine the efficiency in reading in any definite area.³ Students at both schools who failed to make near average scores on the English test were requested to enroll in a course in English fundamentals before going

¹Spelman College Catalogues, Atlanta, Georgia, Vol. I, No. 1 (April, 1928) to Vol. XVI, No. 1 (April, 1943).

²Interviews with Dr. N. P. Tillman, Chairman, Department of English, Morehouse College and Atlanta University, March 14, 1944, and Miss C. J. Clark, Assistant to the Registrar, Morehouse College and Atlanta University, March 14, 1944.

³Interviews with Dr. N. P. Tillman; Miss C. J. Clark; Miss L. M. Saine, Instructor in reading, Spelman College; and Miss V. L. Jenson, Registrar, Spelman College, March 14, 1944.
on with regular college English. From 1937 through 1938, the Haggerty Reading Examination, Sigma 3, was given in connection with the English entrance examination. This test required thirty minutes and measured three areas: vocabulary, sentence, and paragraph comprehension.

From 1937 to 1940, reading at Spelman was integrated with freshman composition. A course was provided for students deficient in English in which they were taught "oral and written composition through remedial reading." In this course a diagnosis was made

... of reading habits and interests of each student as a starting point in developing her ability to grasp meaning from the printed page and in motivating language expression through informal reviews of favorite books, first as oral composition, then as written composition. From the student's point of view, all language instruction is subordinate to reading for pleasure. No credit. Both semesters.

In 1939, a similar course of instruction with the same aim was added to the Morehouse curriculum. The inauguration of these courses into the curriculum at Spelman and Morehouse marked a definite step toward a professional interest in reading.

A program of separate reading testing was begun at the two schools in 1939. Students within the lowest twenty-five per cent according to the Iowa Silent Reading Test and an informal composition

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2 Interviews with Miss C. J. Clark and Dr. N. P. Tillman.
6 Interviews with Miss M. L. Saine, Miss V. L. Jenson, and Miss C. J. Clark.
test were placed in remedial English courses for which they received no credit. Beginning in 1942, "the remedial class was integrated with regular freshman English, given six days a week, and raised to credit status." The catalogues state that

For this course a diagnosis is made of the reading habits of each student as a starting point in developing his ability to grasp meaning from the printed page. Emphasis is also placed on conversation, written composition, and coordinating language work with other subjects. Students are assigned to this class by the Department. Twelve hours.

Thus the progress of Spelman-Morehouse reading instruction before 1943 has been traced. This year the colleges organized reading councils which formulated the following methods of handling reading problems so that all the freshmen would be included in a developmental reading program. Those students in the upper fifty per cent were subjected to only a developmental type of reading instruction. Those in the next lowest twenty-five per cent received corrective reading instruction. They were required to enroll in separate reading courses for which they received no credit. Those in the lowest twenty-five per cent were required to enroll in the coordinated English-reading courses for which they received credit. It was almost invariably true that those students who were greatly deficient in reading were also exceedingly poor in English fundamentals; therefore the coordinated program offered no problems in the selection of students. Remedial

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1English 100R at Spelman and 150R at Morehouse. See description p. 6 of study.

2N. P. Tillman, "Reading Problems in Negro Colleges and High Schools," unpublished committee report on a reading project conducted at the University of Chicago during the summer of 1943 under the auspices of the Cooperative Negro College Study and The Secondary School Study.

instruction was planned to continue for the entire freshman year with the hope of bringing the students by the end of the term as near as possible to the level of those students who were permitted to take regular freshman English. The entire program was planned from the developmental standpoint, emphasizing vocabulary and general comprehension, and necessarily complemented by the corrective remedial program.

The Developmental Approach

The idea of developmental reading is grounded on the principle that there must be developed in students the ability to employ the most effective combination of reading skills, techniques and abilities according to the purposes involved and the degree of comprehension desired.¹ The Spelman-Morehouse reading program aims to develop in each student a knowledge of and facility in the use of techniques and vocabulary required for each subject, to integrate reading into each division of instruction, and to stimulate interest and independence in reading. The desired outcome of such a program is, in the words of Ruth Strang, "the development of a greater ability on the part of students to use reading in the process


W. S. Gray and others, Reading in General Education (Washington, D. C., 1940), pp. 33, 114.

Ruth Strang, Problems in the Improvement of Reading in High School and College (Lancaster, Pennsylvania, 1938), p. 100.

of becoming truly educated persons."\(^1\)

The program follows, to some extent, the plan outlined by Bond and Bond in *Developmental Reading in High School*.\(^2\) Reading councils consisting of representatives from each department of freshman instruction were organized at both colleges. The Spelman council consists of ten members, two of whom conduct classes at Morehouse.

The Morehouse council consists of seven members, two of whom conduct classes at Spelman. The activities of the councils consist of the following: (1) collecting and organizing reports from those instructors who have developed effective methods of integrating reading into their subjects, (2) collecting, organizing, and discussing reading problems of specific students, and (3) presenting important facts and experiences to the faculty or to appropriate groups or persons.

A reading specialist acts as coordinator for the entire program. The duties performed by the coordinator in addition to the regular teaching of classes consist of the following: aiding in the selection and administration of reading examinations, making periodical reports of reading progress of freshman groups as a whole, and making individual reports available to teachers who desire such. In cooperation with the reading councils the coordinator makes suggestions for the integration of reading into the content subjects, and suggests most pertinent and available literature related to the teaching of reading in a developmental program. Responsibility for the diagnostic, remedial and corrective phases of the program is assumed by the coordinator, assisted by two

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\(^1\)Ruth Strang, *op. cit.*, p. 100.

other part-time reading teachers and a full-time reading specialist.

A few of the Spelman and Morehouse instructors of freshmen have adopted the slogan "every teacher a reading teacher." Five of the thirteen instructors interviewed, who were participating in the developmental program, were very interested, understood the functions of reading techniques and skills, had analyzed their subject in terms of reading abilities, and had formed definite methods of developing skills necessary in their subjects. Data obtained from interviews are tabulated below in order of the total frequency of mention by the instructors.

1. Abilities needed by students in various content subjects
   a. General vocabulary
   b. Specific vocabulary
   c. General comprehension
   d. Detailed comprehension
   e. Drawing conclusions
   f. Following directions
   g. Mental imagery
   h. Interpreting pictorial devices
   i. Predicting outcomes
   j. Retention
   k. Concept of time and magnitude

2. Methods used in developing the needed skills in the subjects
   a. Analysis of selections in class, paying attention to word usage, central and supporting ideas, cognates and derivatives
   b. Use of the dictionary
   c. Teacher explanation of words
   d. Conferences with students
   e. Assignment sheets listing important terms and information to be learned

3. Observation of students' difficulties
   a. Lack of vocabulary
   b. Inattention to words
   c. Lack of speed
   d. Inability to comprehend
   e. Inability to organize while reading
   f. Inability to concentrate
   g. Inability to grasp abstractions
   h. Lack of imagery
   i. Insufficient grammatical background
4. Methods of checking reading progress of students
   a. Observation of written and oral expression as evidence of comprehension
   b. Individual conferences with students
   c. Unassisted problem solving
   d. Vocabulary tests
   e. Surprise questions involving interpretation
   f. Vocabulary diaries
   g. Vocabulary "bees"

5. Improvement of skills
   a. Slight
   b. Uncertain
   c. Definite

6. Causes for improvement
   a. Motivation of student caused by awareness of difficulties
   b. Student-teacher cooperation
   c. Methods of instruction

7. Vote for continuation and expansion of program in light of the present merits
   a. Definitely
   b. Yes

   These data show that: (1) vocabulary and comprehension were thought by the majority to be the most essential skills needed in all subjects, (2) instructors observed that students were weakest in vocabulary, speed, and comprehension, (3) the methods most used in the development of these needed skills were analysis of selections in class and use of the dictionary, (4) observation and individual conferences were most used to measure progress in reading, (5) the majority observed a slight improvement in skills emphasized, (6) improvement was felt by the majority to be due to students' awareness of and eagerness to remove the difficulties, and (7) a definite majority desired the continuation and expansion of the program.

   It is essential at this time to analyze the student participation and to try to determine the effectiveness of the program in terms of students' scores on reading tests administered in September and January,
and mid-semester and semester grades in content subjects. The figures represent a sampling of 59 Spelman students and 45 Morehouse students who had taken both the initial and final tests and who, having attained a level of grade eleven or above on the initial test, were subjected to only the developmental phase of the program.

Fig. 1.—Median scores on psychological tests

Spelman Morehouse

The median total score on the psychological tests administered to this group of students in September was 96.5 for Morehouse and 68.7 for Spelman. Figure 1 shows the comparison. These scores, which represent that group of students whose reading level on the initial test was above grade eleven, reveal that Morehouse men have the greater capacity for benefiting from instruction received.

Fig. 2.—Median scores on reading tests

Spelman Initial Morehouse Initial Final

Figure 2 shows that the median total score on the Spelman reading tests was 175.6 in September and 180.0 in January. Morehouse scores were 172.5 in September and 178.1 in January. The median score was higher for
Spelman but progress was greater for Morehouse. This higher rate of progress may be due to either or all of the following causes: (1) Morehouse students had the greater capacity for progress, (2) Morehouse students were more aware of their reading difficulties, (3) they were more eager to make all possible improvements before going into the armed forces, (4) methods of instruction were more efficient, and (5) three periods per week were devoted to reading at Morehouse as compared with two at Spelman. Classes met three times at Spelman, but one period was usually devoted to speech.

![Figure 3](image-url) — Median scores on vocabulary

Figure 3 shows median scores on the vocabulary phase of the Iowa Tests. The median Spelman scores were 179.5 in September and 182.2 in January. Median Morehouse scores were 186.5 in September and 180.1 in January. The figure shows a loss for Morehouse and a gain for Spelman.

![Figure 4](image-url) — Median scores on paragraph comprehension

The median Spelman score on paragraph comprehension was 173.5 in September and 173.1 in January as shown in the figure above. Loss is very slight. Morehouse median scores were 180.1 in September and 182.2 in January. Morehouse scores show a greater gain than Spelman.
Since the developmental program includes the whole freshman class, it is important at this time to show results made by the entire classes at both schools. Table 1 shows the reliability of median scores in reading for the two Iowa Tests given to the entire freshman classes at both schools.

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<td>Quartile Deviation</td>
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</tr>
<tr>
<td>Spelman</td>
<td>165.5</td>
<td>36.98</td>
<td>4.44</td>
<td>167.1</td>
<td>10.35</td>
<td>1.32</td>
<td>0.35</td>
</tr>
<tr>
<td>Morehouse</td>
<td>161.3</td>
<td>21.23</td>
<td>2.73</td>
<td>169.2</td>
<td>11.24</td>
<td>1.45</td>
<td>2.50</td>
</tr>
</tbody>
</table>

The test scores at both schools show some reliability. There are 59 chances in 100 that the Spelman students actually improved and 95 chances that the Morehouse students actually improved. In all instances the groups became more homogeneous as a result of teaching. The greater reliability of the Morehouse test scores indicates a greater probability of the effectiveness of the total reading instruction employed at this school.

Another means of determining the effectiveness of reading instruction is by academic marks or ratings given by the instructor. It is generally assumed that reading efficiency and academic progress go hand in hand. Percentages used in the table below were compiled from mid-semester and semester grades, reports of nine and eighteen weeks. Table 2 shows the academic ratings of Morehouse freshmen in terms of the per cent of grades received in content subjects in which they enrolled: English, history, mathematics, science, and foreign language.

Ten per cent of marks attained by Morehouse freshmen in content
courses in which they enrolled were A's, 33 per cent were B's, and so on. A total of 26 per cent of the freshmen students in the upper reading quartiles received unsatisfactory grades or grades below C at the end of the first nine weeks of school and 19 per cent received unsatisfactory grades at the end of the semester. A total of 64 per cent received satisfactory grades at the end of the first nine weeks and 81 per cent received them at the end of the semester. These scores have a very high correlation, .94. There was a noticeable increase in satisfactory grades.

**TABLE 2**

MARKS ATTAINED IN ALL CONTENT SUBJECTS BY MORRIS FRESHMEN READING ABOVE GRADE ELEVEN ON THE INITIAL IOWA TEST

<table>
<thead>
<tr>
<th></th>
<th>Per cent of Marks attained by the Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Mid-semester</td>
<td>10</td>
</tr>
<tr>
<td>Semester</td>
<td>11</td>
</tr>
</tbody>
</table>

Seventy-three per cent of satisfactory grades at Spelman increased to 74 per cent at the end of the semester and 27 per cent of unsatisfactory grades decreased to 26 per cent. Table 3 indicates that grades of Spelman

**TABLE 3**

MARKS ATTAINED IN ALL CONTENT SUBJECTS BY SPELMAN FRESHMEN READING ABOVE GRADE ELEVEN ON THE INITIAL IOWA TEST

<table>
<thead>
<tr>
<th></th>
<th>Per cent of Marks attained by the Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Mid-semester</td>
<td>0</td>
</tr>
<tr>
<td>Semester</td>
<td>7</td>
</tr>
</tbody>
</table>
students in the content subjects in which they enrolled have improved a little. The correlation of these scores is .83.

Casual conversation with students from both colleges revealed that students were aware of the interest in reading and thought that they had been helped in vocabulary, general comprehension, and location of information. They had noticed some improvement in academic marks and attributed this improvement to the fact that they were learning how to find and study the information needed in the different subjects. They had observed that all subjects may not be studied in the same manner.

The summary of findings thus far is as follows: (1) The Spelman-Morehouse developmental reading program aims to develop in the student the ability to recognize and employ the essential combination of reading skills needed for each subject. (2) Reading instruction is organized so as to include all freshmen in a developmental program with supplementary remedial instruction for students reading below grade eleven. (3) The program is organized with a reading council at each school and a central coordinator. (4) The councils and the coordinator cooperate with the instructors in making suggestions for the teaching of reading in a developmental program. (5) A few of the instructors have conceived clearly their role in the reading program. (6) Students in the upper half of the classes have recognized their reading difficulties, and have made progress in reading comparable to the instruction given and the respective capacities of the group.

This discussion has dealt with the developmental phase of the Spelman-Morehouse reading program, and specifically with achievements by the upper portion of the classes. The next discussion concerns the remedial and corrective phases of the program and achievements by the lower portion of the classes.
CHAPTER III

THE REMEDIAL PROGRAM

Until recently, wherever colleges have manifested any degree of interest in remedial reading, they have been concerned with correction and remediation, the college remedial program antedating the very recent developmental program by approximately a decade. It is, therefore, the purpose of this chapter to describe and analyze the remedial phase of the present Spelman-Morehouse reading set-up now organized along developmental lines to which remedial reading is still a very necessary supplement.

With the change in educational procedures, the shift of interest from a literary to a more practical type of education, and the growing secondary and college student population, the gap between elementary reading abilities and those required on the college level has continued to become more immense. Many students now admitted to college are heirs of impoverished educational and social backgrounds, both of which are essential to the development of adequate reading habits and abilities. The schools sought to remedy this situation by offering courses especially designed to bring reading delinquents up to the required college reading standards.

Over a period of years, authorities have sufficiently studied the remedial situation in American colleges to be able to suggest many effective techniques and methods for diagnosing and instructing students who

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1Paul Witty and David Kopel, Reading and the Educative Process (Chicago, 1939), pp. 231-232.
2Ibid., pp. 79-80; Frances O. Triggs, Remedial Reading (Minneapolis, 1943), chs. III and IV; and Strang, Problems in the Improvement of Reading, pp. 180-181.
3Triggs, op. cit., chaps. V and VI; also Bond and Bond, op. cit., pp. 302-320.
need this type of aid. Since the remedial student is the ill member of the reading group, proper diagnosis of his reading difficulties is equally as important as the methods of correction employed.

Some other important factors to be considered for the remedial program are the selection of students, the advisability of making the course required or voluntary, and whether or not the student should receive credit. The students needing remedial aid should be chosen early, the ideal time being the freshman year.¹ This selection should be based upon the findings of good standard tests, students' grades in content subjects, recommendations from instructors, and the student's own realization of his reading needs.² The period over which the program should extend ranges from a five-week period of intensive work³ to an indefinite period during which the student must master the various sections of the planned program irrespective of needs.⁴ In some schools the courses have been put on a voluntary non-credit basis; in others remedial reading, for those who needed it, has been required with and without credit.⁵ The chief advantage of the voluntary enrollment is that it removes the stigma of being placed in a group for retarded students and eliminates the student's resentment at being required to add to his usual academic load. Yet, because of the usual indifference of retarded students, the voluntary program may fail to have the intended effectiveness where it is seriously needed.

¹Strang, "Diagnosis and Remediation," Reading in General Education, p. 345.
²Iriggs, op. cit., p. 100.
³Strang, Problems in the Improvement of Reading in High Schools and Colleges, pp. 126-127.
⁴Strang, "Diagnosis and Remediation," op. cit., p. 345.
⁵Ibid.
For the past seven years Morehouse and Spelman Colleges have made provisions for administering aid to those students who, according to standard tests, showed marked deficiencies in reading. A limited number of the poorest readers were placed in special reading classes and subjected to clinical therapy. Since in former years these two colleges have been concerned only with remedial reading, a general history of the reading project has already been given above.¹

The present program follows the plan devised for the term 1942-43. At that time, instead of offering a separate remedial course, the colleges coordinated remedial reading with a special English course designed for students who were greatly retarded in the mastery of English fundamentals. It almost invariably happened that the same students were deficient in both of these important educational tools; therefore, the coordinated program offered no problems in selection of students. The course was planned to continue throughout the entire freshman year with the hope of bringing the students by the end of the term as near as possible to the level of those students who were permitted to take the regular freshman English course. The classes met six periods each week, three of which were devoted chiefly to English, and the other three mainly to reading, each phase of the coordinated course being taught by special instructors in the respective subject.

Only those students falling below the lowest quartile were required to enroll in this special combined English-reading course for which they received the usual course credit. Those in the upper half of the lower 50 per cent were required to enter separate reading courses; and for

¹See chap. II, pp. 5-7.
this work they received no credit. Those in the lowest twenty-five per cent were so greatly handicapped in their content courses that they were usually required to carry a reduced freshman schedule; but the twenty-five per cent just above carried, in most cases, the usual number of courses.

In addition to provisions for classroom instruction, the two colleges maintained a joint language and reading clinic at Spelman. The clinic occupies a large well-lighted room on the ground floor of Laura Spelman Hall, and is equipped with work-tables, stools, and mechanical devices\(^1\) for detecting, recording and correcting reading and speech difficulties. The special mechanical equipment includes a voice recorder, linguaphone, ophthalmograph, telebinocular, metronoscope, and tachistoscope. The isolation and quiet surroundings of this language work-shop make it an ideal place for the purposes to which it is devoted.

At Morehouse the remedial instruction given to the upper half of the remedial group was administered by a part-time reading instructor. Though this individual had received training in reading instruction, she was primarily trained for the field of science. This fact gave her the advantage of being able to present reading from the science teacher's point of view.

In this group stress was placed on speed, vocabulary, general comprehension, and location of information. In order to give continuity to the course and offer adequate self-appraisal for the class, a basic remedial text\(^2\) was used. This text contained a variety of materials from

\(^{1}\)These devices have been defined above, see chap. 1, p. 21; for fuller description see Emmet A. Betts, Prevention and Correction of Reading Difficulties (New York, 1936), pp. 137-164.

\(^{2}\)William McColl, Standard Test Lessons in Reading (New York, 1926). Books IV and V.
the content fields, giving the student needed training in employing a variety of combinations of reading skills and differentiating between reading purposes. Specially prepared units based upon students' interests were used to supplement the reading of the text. These units were built around personality, English, and science. Evaluation of the effectiveness of the lessons were made through informal tests, class discussions, and questioning. In addition to these general methods, drills were given in speed and eye movements.

According to the instructor, the students showed considerable improvement in the areas stressed. They handled material intelligently and approached the subject matter in the various content fields with greater assurance of self-mastery. Unsolicited student testimonials showed that the students themselves felt that they had been benefited. Several who had improved beyond the grade limit set for this course had come to see its benefits so clearly that they asked to remain in the class.

The success of the course she attributed to the interest resulting from proper motivation, the student's awareness of his difficulties, opportunities for the student to observe his own progress, and regular class attendance.

In order that more permanent advantages of the remedial program be realized in the content courses, the instructor offered several suggestions: (1) Teachers should present their work in as attractive a manner as possible; if one method fails, another should be substituted. (2) No teacher should feel bound by any tradition to follow a set method of instruction. (3) Teachers should maintain a sympathetic attitude toward students; they should be close enough to the student to be able to diagnose his difficulties, but this closeness must not be of a nature to destroy
their dignity as instructors.

At Spelman, students on the corresponding level to that just discussed were instructed by a faculty member in the field of education who, because of the great need for remedial reading and because properly trained reading instructors were not available, had consented to assist with the program.

During the first semester, in addition to studying the findings in the Iowa test, this instructor checked physical disabilities known to be related to reading inefficiency; but she felt that there was no proper follow-up to this phase of the diagnosis. In the second semester, no physical diagnosis was made of those new students who were admitted to the class.

The instruction in this group was designed to stress vocabulary and comprehension. The methods followed the general plan of the basic reading text¹ and were supplemented by methods and materials suggested by the Reader's Digest. In addition, work was done with letter sounds and word building as a means of developing word recognition.

It was felt by the instructor that the remedial program was promising and could be made quite successful but at present it had several disadvantages: There was a need for more specially trained workers in remedial reading. Reading should be made an integral part of the freshman courses; grades in other courses, especially English, should depend upon the students' ability to read satisfactorily. Reading groups should be organized early; when remedial classes begin so late after students have already begun working according to a schedule, the students feel it an imposition to have reading added. As an incentive students who improve

¹Carol Hovious, Following Printed Trails (New York, 1936).
to a certain level should be allowed to discontinue the course. There should be closer integration with content teachers in order that students might be aided in the preparation of assignments.

All students in the lowest twenty-five per cent at both Spelman and Morehouse were taught by a specially trained reading instructor at Morehouse. Her time was almost entirely devoted to some phase of reading. Besides the remedial reading courses, she taught two courses in reading methods and techniques to seniors and graduate students.

Each remedial class was held at the respective college, but for clinical work the Morehouse students went to Spelman. At Spelman the forty remedial students in the lowest group were divided into two classes for two days each week, but met as one combined class on the third. At Morehouse approximately thirty students comprising the lowest twenty-five per cent were taught in one remedial class. This group could not be divided because of conflicting schedules of students and instructor.

In this group the instructor began by making a thorough diagnosis of each student, which was in most cases completed at the end of three weeks, but, which in others extended indefinitely. The first phase of this diagnosis was concerned with ascertaining a knowledge of special reading difficulties as shown by standard oral and silent reading tests in addition to the initial Iowa test. Physical checks were made with the available testing machines already described and by observation of the student's handling of reading material. Students were tested with material near their level and with more difficult material in order to observe their methods of attack. In rare cases checks on reading difficulties were made with the Durell-Sullivan or Monroe Diagnostic blanks. Cumulative case records were kept for each student. Such records were obtained from the reg-
istrar's records, interviews, and all informal conversation with the stu-
dent. These case studies included psychological scores, medical records,
school and family histories and interest inventories. In some instances
it was necessary to do some lay psychoanalysis in order to determine
emotional balance and to discover emotional blocks which might contribute
to the reading deficiencies. Many of the best revelations of school and
family history were obtained through skillfully worded questions which
were often asked not only in special interviews but when the student was
unaware of the teacher's intent and purpose.

The course was organized on a corrective-remedial basis, and
began on the student's level and with his interests. Instruction, however,
was geared as near as possible to the needs of the content courses. Com-
mon difficulties were determined by careful examinations of the tests, and
the corrective instruction based upon these findings was administered to
the group. The usual common difficulties were: poor sentence and para-
graph comprehension, limited vocabularies, ineffective methods of attack
for material in various content subjects, inability to organize material
read, inability to effectively and quickly locate information, and a need
for guidance in reading.

A basic text\textsuperscript{1} was supplemented by the Reader's Digest, teacher-
prepared materials, miscellaneous reading from papers, magazines, and work-
books. All plans were made with a great degree of flexibility, but in
general one day was devoted almost entirely to comprehension, one to vocabu-
lary, and the third to miscellaneous reading instruction. Students were
always allowed to evaluate their own vocabulary improvement, comprehension,

\textsuperscript{1}Carol Hovious, op. cit.
and study habits.

Remedial instruction was administered to individual members of the group while the other portion of the class was doing written assignments, but most individual instruction was given at the clinic. The clinic remained open for two and a half hours, three days each week. At this time the instructor dealt with the most acute individual reading difficulties or helped students with reading problems which they voluntarily brought to the clinic. Much of this time was devoted to helping students with reading assignments in their content courses.

The techniques were many and varied. Those most commonly used are as follows:

1. Increasing the vocabulary
   a. Use of words in context
   b. Stressing the functional use of certain words in a sentence without the use of formal grammatical terms
   c. Use of the dictionary

2. Comprehension development
   a. Informal tests
   b. Challenging questions
   c. Recognition of figures of speech
   d. Creation of an audience-reading situation in which each student at some time during the period is responsible for getting over a central idea in a discussion
   e. Making distinctions between immediate and fundamental causes
   f. Outlining
      (1) Development of an outline from jumbled words and phrases
      (2) Development of first a word and then a sentence outline

3. Locating information
   a. Index and content drills
   b. Dictionary drills
   c. Instruction in the use of the library followed by "library days" in which they did simple research

4. Speed
   a. Drills with the metronoscope
   b. Stressing general word configuration as a means of rapid reading
   c. Drills with simple material in which unimportant words were omitted without seriously affecting the idea.
According to the instructor, all students showed some improvement; but students on this level, in general, required more than one year to be brought up to college reading standards. From her experience with similar groups she predicted that about 25 per cent of the group would be able to approximate the college standard by the junior year. The other 75 per cent unless given much more additional help would continue to do work below the average, many of them will repeat courses, others will drop out either voluntarily or be required to do so because of inability to do college work.

The students' reaction to the remedial program was far from negative. There were of course some who resented being placed in courses of this nature; but where the students were properly motivated, the purpose made clear, and benefits obtained, the attitude usually changed to one of gratefulness for an opportunity to remove what they realized to be a serious handicap. The boys seemed, in general, to react more favorably to the remedial courses. This perhaps resulted from the greater sensitiveness of the girls as compared with a realization on the part of the boys of the high army reading and English standards, and a desire to accomplish as much as possible toward graduation before being drafted. Several boys voluntarily admitted to their instructors that they had been greatly aided in the solution of their reading problems. In one class students wrote testimonials expressing their opinions concerning the reading instruction. These ranged from a facetious admission from one that he had a punctured brain in which nothing could be retained to wholehearted acknowledgement of the benefits received.

Members of one class in freshmen composition at Morehouse were asked to write on their reading difficulties. An examination of fourteen
of these compositions showed that most of them found speed, vocabulary, and comprehension to be their basic weaknesses. Most of them lacked the power to concentrate. This they attributed to daydreaming and the lack of will power to force themselves to eliminate foreign thoughts from their minds. One student felt that he lacked the imagination necessary for the enjoyment of good literature; three others mentioned that their reading experience had been chiefly with fiction and they, therefore, found it extremely difficult to do the type of reading required in college. Another admitted that he enjoyed reading novels and read them often, but never seemed able to follow the thread of the plot or to keep his characters distinguished.

Because of the intricacies involved in remedial reading, sometimes even the best teaching methods and greatest interest on the part of the student fail to accomplish their purpose in improving the achievements of the student. Therefore, after describing the various aspects of student-teacher participation, it is now important to examine the effects of the program upon the students in terms of reading improvement and general academic advancement.

An effort was made to give remedial reading instruction to those whose test scores indicated that they were reading below the eleventh grade level; but because of the limited number of reading and English instructors available, it was not possible to place all students needing aid in remedial classes from the beginning of the term. Preference was given to those who fell below grade nine, and to as many above this level as could be accommodated. As the numbers in the classes decreased because of student progress or for other reasons, more students of the higher portion of this lower half received instruction.
Of 97 Morehouse men and 109 Spelman women who participated in the reading program from the initial testing and for whom records were available, 52 of the former and 50 of the latter fell within this group. While this sampling does not give a complete picture of the remedial situation, it is sufficient to reveal significant accomplishments.

Of the remedial sampling selected, 38 at Spelman and 39 at Morehouse were reading below the ninth grade in September. In January this number had decreased to 21 at the former and 22 at the latter. Also in January, 9 young women and 12 young men had improved beyond the eleventh grade level, most of them attaining college reading standards. Within this entire remedial section at Spelman 32 improved, 11 retrogressed, and 2 remained where they were; at Morehouse 45 improved, 6 retrogressed, and 1 remained where he was. The progress at Spelman ranged from 0.2 to 3.8 grades and the retrogression from 0.2 to 2.4 grades. For change of grade levels in each group see Table 4. In most instances the retrogression

<table>
<thead>
<tr>
<th>Grade Levels</th>
<th>Number of Students September</th>
<th>Number of Students January</th>
<th>Grade Levels</th>
<th>Number of Students September</th>
<th>Number of Students January</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.9 - 10.9</td>
<td>15</td>
<td>10</td>
<td>10.0 - 10.9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>9.0 - 9.9</td>
<td>7</td>
<td>10</td>
<td>9.0 - 9.9</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>8.0 - 8.9</td>
<td>7</td>
<td>5</td>
<td>8.0 - 8.9</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>7.0 - 7.9</td>
<td>7</td>
<td>11</td>
<td>7.0 - 7.9</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>6.0 - 6.9</td>
<td>11</td>
<td>4</td>
<td>6.0 - 6.9</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>5.0 - 5.9</td>
<td>2</td>
<td>1</td>
<td>5.0 - 5.9</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4.0 - 4.9</td>
<td>1</td>
<td>0</td>
<td>4.0 - 4.9</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>41</td>
<td>Total</td>
<td>52</td>
<td>40</td>
</tr>
</tbody>
</table>

was slight enough to be within a plausible limit of individual variability.
but where a student fell as many as two grades below that indicated on the initial test, he should have been immediately retested. When this study was made, too much time had elapsed to make retesting valid; therefore, it is impossible to give any substantial reason for the decline except to suggest that there was possibly some fault in the testing.

It is generally conceded that intelligence has a direct relationship to the acquisition of reading abilities, but to what extent all reading skills depend upon general intelligence is not known. It seems, however, that some are more definitely correlated with and dependent upon intelligence than others. According to Gray:

The studies reported on reading show that, in general, the more intelligent the reader, the more fluent and accurate will be his recognition, the broader his association, the greater his power of apprehension, the keener his evaluations, and the more thoughtful his application or use of ideas gained through reading. Although a pupil of superior ability may be a poor reader because of particular handicaps, wrong attitudes, or poor application, his chances of overcoming these handicaps and of becoming an efficient reader are more favorable than are those of a student of low intelligence. However, to test the intelligence of excessively poor readers, the test used should not require reading, for then it is almost impossible to determine the native intelligence of the student.

The only testing which attempted to determine the intelligence of all the Morehouse and Spelman students involved reading. The reading level of the psychological test had not been determined, but a casual
examination would show that it would be almost impossible for an extremely poor reader to make anything approaching the average psychological score. Nevertheless, a comparison of the scores on the two tests will have some significant indications, but it is impossible to say that these tests adequately measured the intelligence of the poorest readers.

The median for the psychological scores for the entire freshman enrollment at Spelman was 49.72, and for Morehouse 65.62. Of the 50 Spelman and 52 Morehouse students, 12 of the former and 13 of the latter made psychological scores above their respective medians. This bears a close relationship to those who moved beyond the eleventh grade level. No person with a score below the median progressed beyond the remedial level but in some cases these students made as much progress in number of grades as those with the higher ratings. The range of the psychological scores for the remedial sampling was from 8 to 117 at Spelman and from 10 to 94 at Morehouse. The Spelman student with a psychological score of 117 advanced 2.1 grades in reading by the end of the semester; the Morehouse student with a score of 94 advanced 2.2 grades. The greatest advance in grade level at Spelman was 3.8 grades, made by a student whose psychological score was 80 and who at the beginning of the term was reading on a level of 9.2 grade. At Morehouse the greatest advance was 4.4 grades made by a student whose psychological score was 70 and whose reading level was 7.3 grade.

In this remedial group the instruction emphasized vocabulary, sentence and paragraph comprehension. An analysis of the scores on these specific abilities showed significant gains as well as a general improvement

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¹Eleven Morehouse psychological scores were not available, but the percentile ranks of these eleven students were all below 50 except 4.
The median total remedial reading score was raised for Spelman from 156.3 in September to 158.3 in January and for Morehouse from 151.8 to 158.5 in January. In vocabulary, sentence meaning, and paragraph comprehension at Spelman the improvement was from 156.3 to 162.8, 157 to 162.5, and 151 to 151.7 respectively; and for Morehouse these respective abilities improved from 156 to 159.5, 149 to 165, and 147 to 157.5. Morehouse made the greater gains in sentence and paragraph comprehension, while Spelman made the greater gain in vocabulary. These gains are shown in Table 5.

TABLE 5

TOTAL READING PROGRESS AND IMPROVEMENT IN THREE AREAS AS SHOWN BY TWO IOWA TESTS

<table>
<thead>
<tr>
<th>Abilities Improved</th>
<th>Spelman</th>
<th>Morehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>September</td>
<td>January</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>156.3</td>
<td>162.8</td>
</tr>
<tr>
<td>Sentence Meaning</td>
<td>157.0</td>
<td>162.5</td>
</tr>
<tr>
<td>Paragraph Comprehension</td>
<td>151.0</td>
<td>151.7</td>
</tr>
<tr>
<td>Total change in median on</td>
<td>156.3</td>
<td>158.5</td>
</tr>
<tr>
<td>entire Iowa Test</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This information is graphically represented in Figure 5 on page 32.

Because the chief purpose of the college remedial reading program is to bring the students up to a level at which they can adequately apply reading as a tool in their content subjects, the true test of its effectiveness is to be found in general scholastic improvement. For a check on the progress made by the students at both colleges, a comparison was made between mid-semester and semester grades for the first semester. At Spelman
the percentage of satisfactory mid-semester grades for the remedial group was 51; by January this percentage had increased to 60, making a gain of 17.6 per cent. (See Table 6 on page 33.) At Morehouse for the same period
the percentage of satisfactory grades increased from 54 to 60, making a gain of 11.1 per cent. (See Table 7.) By the end of the semester both schools had developed to the same point both in reading and general academic achievement. Spelman made up the scholastic difference and progressed enough to reach the Morehouse scholastic level. Morehouse made up its reading difference and made enough progress beyond this point to reach the January Spelman reading standing. In both schools more than 50 per cent of the grades were C's and D's.

The summary of the description and analysis of the remedial-
corrective phase of the reading program is as follows: (1) Instruction for students in the lower half of the freshman class was both corrective and remedial. (2) Corrective and remedial instruction was given to all students below the lowest quartile by a reading specialist. (3) Instruction was given to the upper half of the lower fifty per cent by two persons who had some training in the field but were not reading specialists. (4) A clinic for both schools was maintained at Spelman. (5) Instructors felt the need for a program of this type and felt that progress had been made in the reading achievements of students on this level. (6) Varied methods and techniques were employed in all reading classes. (7) Wherever there was proper motivation, and the students saw clearly defined purposes, they tried to improve their reading abilities themselves. Many felt that they had improved. (8) Academic grades and test scores showed noticeable improvement in the ability to read effectively.
CHAPTER IV

THE LIMITED EXPERIMENT WITH TWENTY SPELMAN FRESHMEN

For the purpose of observing and determining the effectiveness of five weeks' reading instruction upon a group of very poor college readers, the investigators conducted a limited experiment with twenty Spelman students beginning March 20 and extending to April 21. Of this group only eight students could be matched by a control group according to reading scores received on Form Cm of the Iowa Test. It is, therefore, the purpose of this chapter to describe and analyze the experiment as a whole; but in order to determine the actual progress made as a result of the experiment, only the eight students whose scores were matched will be considered.

In order to become acquainted with the students and have them know the purpose of the experiment, the investigators visited the class for three periods prior to March 20. Immediately before actual instruction began, the students were tested with the Haggerty Reading Examination, Sigma 3; Form A. This test was chosen because it specifically tested the areas to be stressed during the period of the experiment--vocabulary, sentence meaning, and paragraph comprehension.

The following general description of the group was compiled from questionnaires, interviews, and case studies made before the time of this investigation: The twenty students ranged in chronological age from fifteen to twenty-one years, with psychological scores from 8 to 41. According to the Iowa Test their reading abilities ranged from grade 5.4 to 9.3.
The students all came from southern states: Seven from cities with populations greater than fifty thousand, two from smaller cities, all others from distinctly rural surroundings. The home environments were somewhat varied. Of seventeen male parents or guardians, three were business men, the others farmers and unskilled workmen. One female guardian was a teacher, one mother a dressmaker, the others housewives and domestic servants. Three of the students had no brothers or sisters; the others had from one to nine, a greater proportion having more than four. There were radios in most of the homes, but only three students were exposed to home libraries. The radio programs to which they listened included popular music, serial and mystery stories, "Wings Over Jordan," and, in a few instances, quiz programs.

All of the students had a hobby of some kind. Most of them liked to attend the movies, but in no case was one of the ten best pictures of any year mentioned. They preferred musicals and serial movies. Three students mentioned reading as a hobby. One of them was especially interested in the newspaper. Several liked to read but did not consider reading as a hobby. This reading was confined to the more simply written fiction. Only three had travelled to any extent outside her home state.

The personality problems were generally the kind expected in a group of this type. Some were having difficulties in adjusting themselves to college life. A few showed some reluctance at being included in an experiment, but in only one case did the participation continue to be almost negligible. Another student cooperated poorly with testing because of her own feeling of inadequacy. Among other factors which had to be dealt with were the egotism of one student, the camouflaging excuses of a few, and the passive indifference of one or two others.
The reading level of these students seems to indicate poor work in high school. This evidently was not true in all cases, because four of these students had been offered college scholarships and two had been salutatorians of their high school classes.

The instruction was designed to stress vocabulary, sentence meaning, and paragraph comprehension. The materials used consisted of lessons planned in Reader's Digest and Following Printed Trails, supplemented by teacher-prepared lessons. The text lessons were used because they gave excellent opportunities for developing the specific areas stressed and were adapted to the grade level of the students. The Reader's Digest lessons were used because they not only fitted the grade level of the students, but, in most instances, were interesting because the content dealt with material of a current nature. Where it was necessary to offer more drills of the type provided by the texts, teacher-prepared lessons were used. In addition, checks were made with informal tests also prepared by the instructors.

Vocabulary building included the study of word families, prefixes, suffixes, synonyms, antonyms, and words in context. Some attention was given to specialized vocabularies of various content subjects. An example is the differentiation of the statistical definition of mean from the other meanings of the word. In many instances vocabulary and sentence meaning were studied simultaneously; false and true statements, in which the entire meaning of the sentence depended upon the knowledge of certain words within the sentence, were checked. Oral and written summaries made by the students gave drill in comprehension. Detailed outlining of paragraphs helped to develop organization of thought. Some instruction was given in associating ideas. Statements were matched for similarity of
thought. Word associations and background concepts were brought out by having students rapidly jot down all ideas suggested by a given word or statement.

The lesson which created the greatest amount of enthusiasm was one which tested concentration and comprehension. The lesson required the rearranging and substitution of letters in "Good Night, Sweet Prince" in order to change the expression to John Barrymore.\(^1\) It was necessary for them to interpret and follow a series of accurately stated directions. From this little exercise, interest was created in reading and discussing the condensed version of the actor's biography which appeared in the April issue of Reader's Digest.\(^2\) This work gave excellent opportunity for distinguishing between actual and implied meaning, and observing the delicate line of demarcation between comedy and tragedy.

Since most lessons used in class were chosen by the teachers, weekly reading diaries gave the students opportunity for reporting on any outside reading selected by the students themselves. These diaries were not compulsory, and of the twenty students, fourteen made from one to three entries each week. Summary statements in these diaries indicated their general grasp of materials. New words were recorded in the sentences in which they were first encountered and in sentences made by the students.

At the end of the five weeks' period, the students were retested with the Haggerty Reading Examination, Sigma 3: Form B. All students


\(^2\)Gene Fowler, Good Night, Sweet Prince condensed in Reader's Digest, Ibid., pp. 108-128.
except two showed some slight improvement, but the probability of the improvement resulting from teaching must be determined by a comparison of the eight students with the control group. As has been stated, these students were matched according to total reading scores on the Iowa Test. Unfortunately, they could not be matched psychologically. The median psychological score for the experimental group was 17.1 and that of the control group, 27.1. These scores indicate a higher general intelligence for the group not subjected to instruction. The difference in psychological scores of the students matched may be observed in Table 8.

**TABLE 8**

PSYCHOLOGICAL AND READING SCORES OF EXPERIMENTAL AND CONTROL GROUPS

<table>
<thead>
<tr>
<th>Student</th>
<th>Grade Level on Iowa Test</th>
<th>Psychological Scores</th>
<th>Haggerty Examination Sigma 3: Form A</th>
<th>Haggerty Examination Sigma 3: Form B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Form Cm</td>
<td>Exp. Cont.</td>
<td>Exp. Cont.</td>
<td>Experimental Control Experimental Control</td>
</tr>
<tr>
<td>A</td>
<td>7.0 7.0</td>
<td>14 26</td>
<td>77 78</td>
<td>88 67</td>
</tr>
<tr>
<td>B</td>
<td>7.7 7.6</td>
<td>18 33</td>
<td>67 69</td>
<td>57 81</td>
</tr>
<tr>
<td>C</td>
<td>7.9 7.9</td>
<td>15 40</td>
<td>42 84</td>
<td>65 67</td>
</tr>
<tr>
<td>D</td>
<td>7.4 7.4</td>
<td>29 31</td>
<td>58 78</td>
<td>67 64</td>
</tr>
<tr>
<td>E</td>
<td>6.9 6.9</td>
<td>8 27</td>
<td>45 68</td>
<td>54 88</td>
</tr>
<tr>
<td>F</td>
<td>8.5 8.5</td>
<td>31 50</td>
<td>48 1</td>
<td>81 64</td>
</tr>
<tr>
<td>G</td>
<td>8.6 8.6</td>
<td>17 23</td>
<td>79 72</td>
<td>70 74</td>
</tr>
<tr>
<td>H</td>
<td>9.0 9.0</td>
<td>18 28</td>
<td>55 84</td>
<td>62 86</td>
</tr>
</tbody>
</table>

Though the students were almost identically matched by grade levels in the Iowa Test, the initial Haggerty Examination indicated a general superiority among the control group in each of the three areas tested.

---

1Student F in the experimental group made a score of 102 on the initial Haggerty Test. This placed her in a grade level so superior to that shown by the Iowa Test that it was thought advisable to retest her with another form of the same test. The second score was 46.
According to the final test at the end of the experiment, the control group was still superior in all areas but had retrogressed, while the experimental group had improved. The control group improved only in paragraph comprehension, the experimental in each of the three areas. This improvement may be observed by comparing Tables 9 and 10.

**TABLE 9**

MEDIAN SCORES ON THE INITIAL HAGGERTY EXAMINATION, FORM A

<table>
<thead>
<tr>
<th></th>
<th>Vocabulary</th>
<th>Sentence</th>
<th>Paragraph</th>
<th>Total Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>22.5</td>
<td>13.8</td>
<td>22.5</td>
<td>55.5</td>
</tr>
<tr>
<td>Control</td>
<td>30.5</td>
<td>23.1</td>
<td>28.8</td>
<td>75.5</td>
</tr>
</tbody>
</table>

**TABLE 10**

MEDIAN SCORES ON THE FINAL HAGGERTY EXAMINATION, FORM B

<table>
<thead>
<tr>
<th></th>
<th>Vocabulary</th>
<th>Sentence</th>
<th>Paragraph</th>
<th>Total Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>24.1</td>
<td>14.1</td>
<td>23.8</td>
<td>63.8</td>
</tr>
<tr>
<td>Control</td>
<td>28.5</td>
<td>14.5</td>
<td>29.5</td>
<td>70.5</td>
</tr>
</tbody>
</table>

A comparison of the reliability of the differences between the two sets of test scores for each group indicates: (1) the chances are 81 in 100 that the improvement in the experimental group was significant, and (2) the chances are 69 in 100 that the retrogression of the control group was not accidental. There was greater variability in both groups in the initial test; homogeneity in reading abilities had increased by the final test to the extent that the quartile deviation in the control
group was three times as great as that of the experimental group. For reliability of the differences of the scores of both groups, see Table 11.

**TABLE 11**

**RELIABILITY OF PROGRESS AND RETROGRESSION SHOWN BY TWO HAGGERTY TESTS**

<table>
<thead>
<tr>
<th></th>
<th>Initial Test</th>
<th></th>
<th>Final Test</th>
<th></th>
<th>Reliability of the Difference of Two Medians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Form A</td>
<td>Quartile Deviation</td>
<td>Probable Error</td>
<td>Form B</td>
<td>Quartile Deviation</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td></td>
<td></td>
<td>Median</td>
<td></td>
</tr>
<tr>
<td><strong>Experimental</strong></td>
<td>55.5</td>
<td>12.5</td>
<td>5.55</td>
<td>63.8</td>
<td>3.25</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>75.5</td>
<td>12.5</td>
<td>5.38</td>
<td>70.5</td>
<td>9.75</td>
</tr>
</tbody>
</table>

The results of the experiment show that, though the experimental group was low psychologically, it improved after being subjected to remedial instruction. The control group, though superior psychologically, made no significant progress but retrogressed in two areas. The slight improvement of a little more than .2 grades in the experimental group during five weeks indicates the need of an extended remedial program for slow learners and seriously retarded readers. A student beginning her college work with a reading grade level of 7.0, and moving at this rate, could scarcely be expected to reach adequate college reading standards in one year. A remedial program would work more effectively if planned to continue as long as the student showed a need for this kind of aid. Remedial reading instruction could be further facilitated by a more homogeneous grouping of slow learners, the native capacity of the poorest students being determined by a test which did not involve reading.
CHAPTER V

SUMMARY AND CONCLUSION

This study was made as an attempt to evaluate the Spelman-Morehouse reading program for the year 1943-44. Each phase was considered from four viewpoints: (1) aims and scope of the present program, (2) organization of the entire program, including the remedial phase, (3) participation of teachers and students in both phases, and (4) actual results in terms of students' academic grades and scores on reading tests.

As has been indicated throughout the study, reading is a complex process in which efficiency requires the mastery of many different skills. It should be understood that the Spelman-Morehouse reading program is one developmental program, which is designed to aid students in selecting and using the necessary combination of abilities, skills, and techniques in different situations. Many students in a developmental program are able to profit by reading instruction given in connection with content courses; but for those who are so deficient that special attention is required to bring them up to the level where they can benefit from integrated reading instruction, the remedial program is a vital supplement. The remedial program was established at the Colleges in 1937, the developmental program in 1943. This year the program included only freshmen.

Organization of the program is as follows: All freshman students were subjected to a thorough testing program in September, using the Iowa Tests described on page 3. Students were divided into four groups according to median standard scores on these tests. Those students whose scores on the initial test placed them in the higher fifty per cent
received only developmental instruction, an integration of reading and content, from teachers of content courses. Students whose scores warranted placement in the two lowest groups, consisting of readers below the eleventh grade level, were given group and individual training to supplement the developmental instruction received in regular classes. The low reading level of students in the lowest groups made it improbable that they could receive much benefit from the developmental program, since that program is based on the assumption that students have mastered the basic reading skills and techniques needed in reading. Corrective instruction was given to the upper half of the lower fifty per cent by part-time instructors not especially trained in the teaching of reading. Remedial instruction was given to the lower half of the lower fifty per cent at both schools by one reading specialist employed by Spelman and serving as an exchange instructor at Morehouse. A clinic situated on the Spelman campus was used by both schools. Councils were organized at each school, and there was one central coordinator for the whole program. The councils and the coordinator cooperated with instructors by making suggestions for teaching and integrating reading instruction in content subjects.

A questionnaire-interview was held with thirteen instructors of freshman content courses at both schools, through which the investigators learned that only a few instructors conceived clearly their role in the reading program. Most of them felt that instruction in reading was done in reading classes. The majority thought that vocabulary, comprehension, careful reading, and interpretation of pictorial devices and symbols were the most essential abilities needed by students in their classes. Instructors of the lower groups felt the need of guidance in reading and believed that students could progress with proper guidance. Techniques
employed on this level were many and varied, suited as needed to the indi-
viduals and to the situation. Clinical instruction for three afternoons
each week was provided for students whom the instructors recommended or
who voluntarily brought in reading problems. Students on all levels at
both colleges, generally speaking, recognize a need for efficient reading.
Many of them, especially men, attempted to analyze their own reading dif-
ficulties and made efforts to remove these handicaps. Students, as well
as instructors, observed that the program was beneficial.

The investigators were interested in testing the effectiveness
of five weeks of intensive reading instruction on a group of the poorest
readers at Spelman. An experiment revealed that these students, after
the period of instruction, had improved .2 grades in vocabulary, sentence
meaning, and paragraph comprehension. This improvement gave some indica-
tion of the reading progress made by students who were low both on the
psychological test and in reading ability.

Total results of students in terms of reading scores on tests
are shown above in Table 1 (page 14). Results in terms of academic grades
are shown in Table 2 (page 15), and Table 6 (page 33). This study has
revealed progress in both phases of the developmental program comparable
to the psychological capabilities of the students and the type and amount
of instruction received. Test scores and academic grades show that More-
house students made the greatest general progress.

The following suggestions for improving the program were given
by faculty members: (1) closer integration, (2) more frequent council
meetings for discussions and evaluations of teaching methods and student
progress, (3) more frequent conferences between coordinator and teachers
of content subjects, (4) reduction of teacher loads so that adequate
attention may be given to individuals in the content classes, (5) gradual
extension of reading instruction into the upper levels of college, event-
tually leading to a college-wide developmental program, and (6) closer
teacher-student cooperation. As a result of the study of the program in
force, the investigators feel it advisable to make several recommenda-
tions. First, the reading council should continue its efforts to enlighten
the teachers of content courses on the necessity of teaching reading in
every course, and, in this connection, teachers should be made fully aware
of the inclusiveness of the term "reading." Some teachers have not real-
ized that reading instruction has not imposed an added burden upon them,
but rather has offered a new method of presenting the old subject matter--
a method designed to equip students to independently and effectively read,
interpret, and evaluate the materials in the particular content course.
Second, an adequate staff should be employed in order that remedial aid
be extended to all who need it, and that complete permanent reading records
be kept for each student. And third, the reading program should be ex-
tended, wherever needed, throughout the four years of college work, not
only to include those who will need further remedial help beyond the fresh-
man year, but to care for the new reading problems that arise as students
change to new types of courses.

In the light of the findings of this study, it may safely be
concluded that the Spelman-Morehouse reading program has shown significant
success and indicates a potentiality for far greater success as the teach-
ers become more and more cognizant of reading as a basic and integral part
of all their classroom instruction and exert a more conscious effort to
develop in the students those reading skills and techniques necessary for
fullest comprehension of their particular content courses with the least
waste of time and effort.

The study of the reading program through January revealed the following significant facts:

1. There were differences in the attitudes of teachers toward the importance of reading instruction as a part of their regular classroom procedures, most of them favorable, a few indifferent, and some uncertain of methods of procedure.

2. There were considerable differences in the amount of progress made by the freshman groups of the two schools.

3. Though girls are usually better readers, the Morehouse group, having a higher psychological rating, made greater progress.

4. Approximately 90 per cent of the Spelman freshmen showed improvement ranging from 0.2 grade to 3.8 grade. Of the Morehouse freshmen 92 per cent showed improvement ranging from 0.2 grade to 4.4 grade.

5. The number of students reading on and above the freshman level increased at Spelman from 31.2 per cent to 36.2 and at Morehouse from 30.5 per cent to 43.2.

6. The percentage of students still needing special corrective and remedial instruction was 42 at Spelman and 39 at Morehouse.

The potential success of the program is, therefore, quite obvious.

With the increasing awareness of the fundamental importance of extended reading instruction on the college level, the program shows definite possibilities of developing more efficient students who will ultimately become capable of fuller participation as members of a democratic society.
This study having been completed before the end of the school year, the final reading scores and second semester grades were not available for evaluation. Consequently, the original study does not reveal a complete picture of the reading development for the entire year. It will, therefore, be the purpose of this supplement to indicate the total reading and academic achievements of the Spelman and Morehouse freshmen by a comparison of the September and May reading scores and of the first and second semester grades.

The same organization explained in the body of this study continued throughout the year. Classroom methods and procedures remained generally the same except for a possibly more intensified effort on the part of most students and teachers as they became increasingly aware of the advantages of this school-wide reading program, and as the teachers developed greater efficiency in classroom techniques of reading instruction. All students were subjected to the developmental reading program in which the teachers attempted to develop skills and techniques necessary for comprehension in their particular content courses. As many students as could be accommodated continued to receive special remedial and corrective instruction.

The final reading test for the year was administered to 123 Spelman and 100 Morehouse freshmen; and of this group, it was possible to select for comparison a random sample of 83 of the former and 81 of the
latter. Within this group at Spelman, 70 students showed improvement in reading, 11 retrogressed, and 2 showed no progress at all. At Morehouse, 76 students improved, 4 retrogressed, and 1 indicated no improvement. This represents an improvement in 84.3 per cent of the Spelman students and in 93.8 per cent of those at Morehouse. A difference is not only indicated in the proportion of students showing improvement at the two schools, but likewise in the amount of improvement indicated in the respective groups. In the Spelman group the total median score was raised from 165.46 in September to 180.21 in May, and at Morehouse from 162.75 to 183.94, as shown in the figure below.

Fig. 9.—Comparison of total median scores for September and May

In terms of grades this indicates that the upper half of the Spelman group in September ranged from a level well above beginning freshman standards to as low as a reading grade level of 10.7, with the lower half extending from this point to below grade 4.0. The upper half of the Morehouse group in September extended upward from grade 10.1, while the lower half extended downward from this point to below grade 4.0. According to the May tests, all students in the upper halves of both groups were reading above the beginning freshmen level with the highest students reading beyond the highest rank of the standard freshman population; and the lower halves extending from a grade level above the beginning freshman level to grade 5.6 at
Spelman and 5.9 at Morehouse. In September the reading scores showed that 2 Spelman and 4 Morehouse students ranked in the highest ten per cent of the standard freshman population. In May, 1 Spelman and 2 Morehouse students ranked above the highest score of the standard freshman group, while those in the highest ten per cent had increased to 10 at Spelman and 14 at Morehouse. The number of students whose reading scores placed them in the upper half of the standard population increased from 14 at Spelman and 13 at Morehouse to 35 and 38, respectively. This change in reading abilities and percentile ranks may be observed in Tables 14 and 15, pages 119 through 122.

The reading areas on which continued stress was placed were vocabulary, sentence meaning, and paragraph comprehension. A comparison of the September and May median scores in each of these areas shows considerable improvement. In vocabulary the Spelman group increased from a median of 165 in September to 180 in May, in sentence meaning from 167 to 183, and in paragraph comprehension from 156 to 173; at Morehouse the increase in the respective areas was from 172 to 187, from 164 to 182, and from 158 to 179. (See figures 10, 11, and 12.) Both groups made

![Fig. 10.--Improvement in vocabulary from September through May](image)

equal progress in vocabulary, the Morehouse group made only slightly greater progress in sentence meaning, but in paragraph comprehension the Morehouse group made progress twenty-five per cent greater than that made by the
Spelman group. These differences in progress may be accounted for possibly by psychological superiority,¹ student attitudes as affected by army requirements, and by teaching methods.² In spite of these differences in the amount of progress indicated, the improvement in each group shows the results of effective efforts. The reliability of the difference of the median of these scores is so great as to entirely eliminate the element of chance in each school. It might, therefore, be concluded that the improvement in reading was due to the concerted effort on the part of students and teachers to realize the benefits of the school-wide program.

With an increase in reading efficiency it is logical to expect greater academic achievement. A comparison of the first and second semester

¹See pp. 12, 30, above.
²See pp. 10, 23–26, above.
grades shows not only an increase in the percentage of higher grades, but a reduction in the number of failures. (See Tables 12 and 13.) It cannot be definitely stated that all academic progress has resulted from improvement in reading, but the study has shown that by the end of the school term the students had gained greater mastery of a basic tool without which their college work would have been seriously retarded. With the increase in reading ability and a comparable increase in scholastic achievement, it may be safely concluded that greater reading efficiency contributed largely to this general academic progress.

### TABLE 12

**COMPARISON OF GRADES IN CONTENT SUBJECTS MADE BY EIGHTY-THREE SPELMAN FRESHMEN FOR THE FIRST AND SECOND SEMESTERS**

<table>
<thead>
<tr>
<th>Per cent of grades made by the group</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>5</td>
<td>18</td>
<td>35</td>
<td>26</td>
<td>1</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>Second Semester</td>
<td>5</td>
<td>23</td>
<td>36</td>
<td>27</td>
<td>1</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

### TABLE 13

**COMPARISON OF GRADES IN CONTENT SUBJECTS MADE BY EIGHTY-ONE MOREHOUSE FRESHMEN FOR THE FIRST AND SECOND SEMESTERS**

<table>
<thead>
<tr>
<th>Per cent of grades made by the group</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>12</td>
<td>26</td>
<td>33</td>
<td>15</td>
<td>3</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Second Semester</td>
<td>13</td>
<td>27</td>
<td>39</td>
<td>14</td>
<td>2</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>
The final comparison and analysis of the reading and academic progress of the selected sampling give the following evidences of the extent of the effectiveness of the reading program initiated for the 1943-'44 school term:

1. There was an increase in the reading efficiency of 84.3 per cent of the Spelman students and 93.8 per cent of those at Morehouse.

2. The per cent of students on and above the freshman level in reading increased from 26.5 to 60.2 at Spelman and from 24.7 to 69.1 at Morehouse.

3. The percentage of students needing remedial instruction decreased within the Spelman group from 51.8 to 31.3, and within the Morehouse group from 60.5 to 19.7.

4. Each group showed considerable progress in vocabulary, sentence meaning, and paragraph comprehension—the areas emphasized by the program.

5. The academic grades in the content courses were consistently higher with the amount of failures decreased by approximately fifty per cent for each freshman group.

The final analysis of the reading program substantiates the evidences of greater potential success indicated in the earlier portion of this study. As the program moved on during the year, it obviously gained in momentum to the extent that the effectiveness shown at the end of the year was more than three times that of the first semester. However, with 31.3 per cent of the Spelman freshmen and 19.7 per cent of those at
Morehouse still seriously enough retarded to require additional remedial and corrective aid, it seems advisable to include these students in the freshman reading program for next year. No objective measurements have been made of the reading abilities of those students above the freshmen academic level; however, since students after having completed their freshman work will still be exposed to new types of subject matter which will call for new reading techniques, the progress shown by the freshmen as a result of the developmental reading program warrants the extension of this emphasis on reading to include the students on all of the four college levels.
APPENDIX A

TESTS

1. IOWA SILENT READING TEST, FORM Am
2. IOWA SILENT READING TEST, FORM Cm
3. HAGGERTY READING EXAMINATION, SIGMA 3: FORM A
4. HAGGERTY READING EXAMINATION, SIGMA 3: FORM B
5. PSYCHOLOGICAL EXAMINATION
# ADVANCED TEST: FORM AM

For High Schools and Colleges

**PROFILE CHART**

<table>
<thead>
<tr>
<th>TEST</th>
<th>RAW SCORE</th>
<th>PART STAND. SCORE</th>
<th>SUBTEST STAND. SCORE</th>
<th>Score</th>
<th>TEST</th>
<th>Median Score</th>
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</thead>
<tbody>
<tr>
<td>Rate-Comprehension Rate</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>A... + C...</td>
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<tr>
<td>Comprehension</td>
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<tr>
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<td>Directed Reading</td>
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<tr>
<td>Poetry Comprehension</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Word Meaning</td>
<td>X</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>A... + B... + C... + D...</td>
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TEST 1. RATE-COMPREHENSION — PART A

DIRECTIONS. This is a test to see how well and how rapidly you can read silently. Read this story about "Glass" very carefully so that you can answer questions about it. At the end of one minute you will hear the word "Stop." Put your finger on the word you are reading and wait for further instructions.

Glass

Glass is made by melting sand with lime, potash, soda, or oxide of lead at a great heat. Silica, which is the basis of sand, enters into all varieties of glass. It has more to do with determining the quality than any of the other ingredients. The purity of the ingredients and the proportion in which they are mixed also have much to do with the quality of the glass.

Sand may be said to form the basis of the glass. Consequently the clearness of the glass depends largely upon the quality of this ingredient. The proportion of silica varies in different kinds of glass. In lead glass it is from 42 to 60 per cent; plate contains about 79 per cent, and window glass about 70 per cent. The amount of silica usually determines the degree of hardness, though other substances have some effect upon this quality. Lead tends to make glass soft. Sometimes lime is used to make it hard.

Nearly all the silica used in the glass factories within the last fifty years is in the form of sand. Prior to that the best qualities of glass were produced by crushing and washing flint and quartz rock. This process was so expensive that it made the glass too costly for general use. Bohemian and a few other varieties of European glass are still made from silica obtained in this way. The expense of Bohemian glass in this country restricts it to the homes of wealthy people.

In the manufacture of glass of high grade, the quality and purity of sand are of the greatest importance. The most searching examination and careful tests are made to determine the nature and extent of any impurities which the sand may contain. These impurities are common: oxide of iron (iron rust), alumina in the form of clay, light gravel, and decaying animal or vegetable matter. Most of these impurities except iron can be removed by burning and washing. Oxide of iron can be removed only by the use of chemicals. Iron is the most troublesome of all because it discolors the glass and destroys its transparency. For the best qualities of glass it must be entirely free from iron. A proportion greater than one half of one per cent renders the sand worthless for even the poorest quality of glass.

Wait for further directions.

Do not answer any of the questions until you are told to do so.

1. vegetable matter
2. day
3. oxide of iron
4. The impurity in sand which most seriously affects the clearness of glass is —
5. technical "waste people"
6. every type
7. in the homes of which class of people in this country is injured glass used?
8. one half of one percent is one percent is two percent
9. Sand used in making glass must contain more iron than —
10. Putting the silex obtaining silica from granite is melting silica
11. What process in the manufacture of glass correctly makes it too expensive for general use?
12. Quartz sand and granite rock
13. The chief source of the silica used in making glass in the United States is —
14. Burning wasteburnt oxides
15. How is iron oxide removed from the sand used for making glass?
16. The one factor in the manufacture of glass which most affects the quality of the product is —
17. window glass
18. glass
19. The amount of lead used —
20. What kind of glass contains the greatest proportion of silica?
21. Making where is contractor's glass compressing sand
22. What process is always used in the manufacture of glass?
23. Amount of lead that quantity of sand
24. What determines the transparency of the glass?
TEST 1. RATE-COMPREHENSION — PART C

DIRECTIONS. Read this story very carefully so that you can answer questions about it. When you hear the word "Stop," put your finger on the word you are reading and wait for further instructions.

Attempts to Increase Citizen Control

The government of the United States is merely the agency by which the people protect their own rights and liberties. Our government may be said to be the organized will of all the people. The people govern in this country. The men and the means by which they govern, all combined, are the government.

Public officers are not masters, but servants. The President, Senators, Congressmen, and judges in the nation, the governors, senators, and members of the legislatures in the states, are only agents or servants of the people to carry out the people's will. The power of government does not rest in Washington, the capital of the nation, nor at the capitals of the different states. Governmental power exists all over these United States. In fact, the power of government exists right in the homes and hearts of the people.

The President has no power except that conferred upon him by the Constitution and the laws which the people have adopted. Neither have the Senators, the Congressmen, or the judges any power except that given by the people, and the people at any time can take away any part of the power given. By people, of course, is meant all the people. Not that all the people must agree to any law to have it enacted. The majority of the people make the laws, as a rule. This fact will be taken up and considered more completely later, in connection with the initiative and referendum. Government is power to exercise authority. Authority is in the people, and the authority of the people is expressed as they want it in laws which they make.

The problem of particular interest here is that of attempting to prevent abuses of public office, and of still further increasing citizen control. Early in the history of our government the system of appointing men to office because they had rendered some special party service resulted in a great many abuses. These abuses are gradually being corrected through a better system of appointment, known as Civil Service Reform. Under civil service people who wish to be considered for a particular position must give evidence of their ability to fill the position satisfactorily by passing an examination designed to test their qualifications for the service demanded. This method of appointment has a tendency to procure more competent public officials.

One of the devices to secure more direct self-government or citizen control is known as the initiative. This plan permits any person or group of persons to draft a proposal for a law. If the signatures of a certain percentage of the voters are secured, this proposal is then submitted to all the voters for their approval or disapproval, which they express by voting "Yes" or "No." If approved by a majority vote, the proposed measure becomes a law.

The referendum, as the word suggests, means a referring of something to the people. Before most of the state constitutions were adopted, they were referred to the people. In a similar manner, amendments to state constitutions are referred to the people for adoption or rejection. The referendum, therefore, is not an entirely new idea. As applied in some states, the referendum provides a plan whereby a measure passed by the legislature must be submitted at the next election to the vote of the people, provided a certain percentage of the voters petition that this be done.

The recall provides a way to remove a man from office if the voters decide he has failed to give satisfactory service. Under this plan, whenever a certain number of voters are dissatisfied with the conduct of an elective officer, they can get up a petition against him. This will compel a new election; and, if the officer then fails to be elected, he loses his office.

 Wait for further directions.

Do not turn this page until you are told to do so.

Rate (Part A) .
Rate (Part C) .
### TEST 7. LOCATION OF INFORMATION

**PART B. SELECTION OF KEY WORDS**

**DIRECTIONS.** This is a test of your ability to choose key words for use in looking up information in an index. Study the sample. Read the question and note that below the question are given four numbered words or phrases. Three of these groups of words would, if looked up in an index, be likely to lead to an answer to the question. One of the numbered parts would not help in locating the information. Locate this one word or phrase, and note its number. Then fill in the answer space at the right of the exercise which has the same number as the word you chose. The sample is answered correctly.

**SAMPLE.** What is the value of our annual corn crop?

<table>
<thead>
<tr>
<th>1</th>
<th>crops</th>
<th>2</th>
<th>wheat</th>
<th>3</th>
<th>corn</th>
<th>4</th>
<th>sweet corn</th>
</tr>
</thead>
</table>

1. What is the value of our annual supply of dairy products?
   - 1 butter
   - 2 cream
   - 3 wool
   - 4 cheese

2. When was the first transcontinental railroad completed in the United States?
   - 1 United States
   - 2 travel
   - 3 railroads
   - 4 transcontinental railroads

3. Was Lafayette the leader of the “Committee of Public Safety” during the “Reign of Terror”?
   - 1 Lafayette
   - 2 Public Safety
   - 3 “Reign of Terror”
   - 4 leader

4. Was Hindenburg the commander of the Allied Armies during the World War?
   - 1 Hindenburg
   - 2 Allied Armies
   - 3 enemies
   - 4 World War

5. What was the loss to the citrus fruit industry caused by insects in 1937-1938?
   - 1 production
   - 2 oranges
   - 3 citrus fruit
   - 4 insects

6. Was Longfellow the author of “The Courtship of Miles Standish”?
   - 1 American literature
   - 2 poem
   - 3 Longfellow
   - 4 Miles Standish

7. Is the metallic element called “radium” obtained solely from pitchblende, a uranium mineral?
   - 1 radium
   - 2 pitchblende
   - 3 uranium
   - 4 elements

8. How does the United States rank with other countries in the production of rubber?
   - 1 United States
   - 2 rubber
   - 3 tire industry
   - 4 rubber plants

9. What was the character of the literature of New England throughout the Colonial Period?
   - 1 literature
   - 2 Colonial writers
   - 3 imagination
   - 4 New England authors

10. Did the Cabinet system of England begin with Queen Victoria?
    - 1 Cabinet
    - 2 Reign of Queen Victoria
    - 3 English Cabinet
    - 4 constitution

11. How does the United States rank with the more important European countries in the production of wool?
    - 1 woolens
    - 2 imports
    - 3 sheep
    - 4 wool

12. Was the “Golden Age” of Rome during the period of Hadrian?
    - 1 period
    - 2 Roman culture
    - 3 Hadrian
    - 4 “Golden Age”

13. Was the Boy Scouts of America the first national organization for boys?
    - 1 national organizations
    - 2 Boy Scouts
    - 3 leaders
    - 4 scouting

14. Was General Wolfe in command of the French at the battle of Quebec?
    - 1 General Wolfe
    - 2 battle
    - 3 French and Indian War
    - 4 battle of Quebec

15. Is the North Pole surrounded by land or water?
    - 1 water
    - 2 North Pole
    - 3 arctic regions
    - 4 polar regions

16. What one factor contributes most to the present death rate in the United States?
    - 1 death rate
    - 2 accidents
    - 3 disease
    - 4 contributions

17. Was Aristotle known principally as a philosopher of early Roman culture?
    - 1 Aristotle
    - 2 literature
    - 3 philosophy
    - 4 Roman philosophy

18. What effect did the mosquitoes have on the development of the Panama Canal?
    - 1 Panama Canal
    - 2 mosquitoes
    - 3 illness
    - 4 climate

19. Was Garfield the fifth President of the United States?
    - 1 government
    - 2 Garfield
    - 3 American politics
    - 4 Presidents

20. Has the Socialist party generally followed the policy of closed shops and government ownership?
    - 1 government ownership
    - 2 Socialist policies
    - 3 closed shops
    - 4 party

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*Number right.*
### TEST I. RATE-COMPREHENSION — PART D

**Directions.** Without looking again at the article, answer these questions. Study these statements carefully. Decide whether, in terms of the article, a statement is true, false, or not discussed. If, according to the article, the statement is true, fill in the answer space under T (for true); if false, fill in the space under F (for false). If a statement is not discussed in the article (even though true or false in itself), fill in the space under N (for not discussed). The samples are answered correctly.

**Samples.**

| A. In order for a law to be enacted it must be approved by all the voters. | T F N |
| B. Every citizen is required to vote in a national election. | T F N |

1. In the United States the real source of all governmental authority is in the people themselves. T F N
2. The agency for the exercise of the authority delegated by the people is called politics. T F N
3. In a democratic nation a public officer is actually the servant of the people who elect him. T F N
4. In order for a law to be enacted it must be approved by the Supreme Court. T F N
5. The control of government in the American system is in Congress. T F N
6. Citizens, by their votes, may delegate authority to officers but have no power to withdraw it. T F N
7. Judges have no authority except that specifically granted each judge by the President. T F N
8. Men are frequently appointed to government office because of some special party service they have rendered. T F N
9. A voter is entitled to vote as he pleases. T F N
10. Ambassadors are appointed from Civil Service lists. T F N
11. According to this article the Civil Service system has corrected abuses connected with political appointments. T F N
12. All laws passed by Congress are automatically referred to the people. T F N
13. The Dred Scott Decision was a famous court ruling. T F N
14. Under the Constitution of the United States the only persons who can draft a proposal for a law are Congressmen. T F N
15. Government control is centered in the hands of the state and national officers. T F N
16. Civil Service examinations are open only to voters from the party in control at the time. T F N
17. A proposed measure when referred to the voters becomes a law if approved by a majority. T F N
18. An officer who is recalled loses his office even though the voters reelect him. T F N
19. The Federal income tax provides money for the support of the national government. T F N
20. Under Civil Service rules an appointment to public office is determined by the man's qualifications. T F N
21. The initiative is a privilege which may be used only by a government officer. T F N
22. The way to remove an unsatisfactory official from office is by means of a petition signed by a number of voters. T F N
23. The appointment of men to government office as rewards for political service is called the Spoils System. T F N
24. The power of government in a democracy is delegated unreservedly to one man. T F N
25. Many state constitutions were referred to the people before they were adopted. T F N

*Do not turn this page until you are told to do so.*
TEST 7. LOCATION OF INFORMATION

PART A. USE OF THE INDEX

DIRECTIONS. The answers to the questions in Column 2 are found in the index below. First read the question and then find the desired answer by looking under the proper topic in the index. Then locate your answer among the possible answers given with the question and fill in the answer space in the margin which is numbered the same.

Study the samples carefully before you try to answer the questions.

Look at Sample A. In the index under "Indiana" you will find the word "coal" and the page reference, 145. 145 is third among the answers given with the question; so the third answer space has been filled in.

Look at Sample B. See if you can find the answer in the index. The correct answer space is marked.

Answer the remaining exercises the same way.

INDEX

Alaska: agricultural possibilities, 213, 214; commerce, 214, 215; exports, 214 (Fig. 147); fisheries and forests, 210-212; fur farms, 210; imports, 214; map (Fig. 120), facing 107.

Citizenship: defined, 24; boys and girls, 26; responsibility of, 20, 84-85; duties of, 20-30, 49-50. See also Americans.

Communities: definition, see Community; kinds of, 9-18; origin of, 11-12; growth of, 12-20; large and small, 15-18; cooperation of, 19-20, 42, 49, 113; and health, 31-43; and the protection of life and property, 45; and education, 65-66; and beauty, 72-85; money for expenses, 87-98; organization of, 99-111; dependent upon each other, 139.

Corn: in America, 187; Argentina, 282; United States exports (Fig. 190), 282-284; plant, 187; industrial uses of, 189.

Courts: city, 108-110; county, 125; state, 120-127; national, 260-268.

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Denmark: commerce, 411, 414; exports, 180, 411 (Fig. 262); map (Fig. 258), facing 408; possessions, 242; resources, 181-184.

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Flour: See Wheat.

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Texas: map of, 315; admission to Union, 318.

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Trade: 482-488; advantages for, 483-484; Arctic Ocean, 396; Eskimos with white people, 388; Hawaiian sugar, 465.

Venice: 55, 340-344; Grand Canal, 341-343; manufacturing, 344.

Wheat: fertilizers for, 48; insects injurious to, 51; kinds of, 43; preparation of seed bed, 55; when to sow, 57; world's bread grain, 52; wheat diseases, 59.

SAMPLES.
A. On what page will you find information about coal in Indiana?
   1 88 2 88 3 145 4 146 5 169
   A

B. Can you find information about the schools of Denmark?
   1 Yes 2 No.
   A

1. Next to what page can you find a map of Alaska?
   1 129 2 197 3 197 4 210 5 213
   A

2. Does the index tell where to find information about the industrial uses of corn?
   1 Yes 2 No.
   A

3. On what page can a definition of citizenship be found?
   1 125 2 197 3 226 4 226 5 226
   A

4. Under what topic can you find additional references to gas?
   1 cattle 2 coal 3 fuel 4 petroleum
   A

5. What is the number of the figure which shows something about the export of corn from the United States?
   1 182 2 185 3 187 4 189 5 190
   A

6. Under what entry does the index refer you to additional information about railroads?
   1 American 2 freight cars 3 tracks
   A

7. On what page will be found information about tobacco as a cause of nervousness?
   1 312 2 363 3 385 4 386 5 400
   A

8. What is the number of the chart showing recent changes in the value of dye products?
   1 1 2 12 3 15 4 20 5 22
   A

9. Does the index tell you on what page you can find something about flour?
   1 Yes 2 No.
   A

10. On what page would you learn about the insects which injure wheat?
    1 43 2 48 3 50 4 51 5 56
    A

11. On how many pages is a continuous discussion given about the Grand Canal of Venice?
    1 1 2 2 3 3 4 4 5 5
    A

12. Information about the admission of Texas to the Union is given on what page?
    1 310 2 312 3 316 4 317 5 318
    A

13. On how many different pages are brief references given to the commerce of Denmark?
    1 1 2 2 3 3 4 4 5 5
    A

14. On what page is a discussion of the county court given?
    1 125 2 127 3 260 4 272 5 278
    A

15. Under what other word would you look for further information about dairy products?
    1 cattle 2 corn 3 cows 4 Denmark
    5 Texas
    A

16. Under what topic would you look for further information about Washington?
    1 dentistry 2 construction 3 development 4 government 5 geography
    A

17. On what page will you find information about Alaska?
    1 125 2 197 3 197 4 210 5 213
    A

18. Under what entry will you find information about the earliest appearance of corn in America?
    1 187 2 202 3 226 4 226 5 226
    A

19. On what page will you find a chart showing the changes in the value of dye products?
    1 1 2 12 3 15 4 20 5 22
    A

20. What is the number of the page on which a discussion of the county court is given?
    1 125 2 127 3 260 4 272 5 278
    A

21. Where will you find information about the admission of Texas to the Union?
    1 310 2 312 3 316 4 317 5 318
    A

22. What is the number of the page on which a discussion of the county court is given?
    1 125 2 127 3 260 4 272 5 278
    A

23. On what page will you find information about Alaska?
    1 125 2 197 3 197 4 210 5 213
    A

24. What is the number of the page on which a discussion of the county court is given?
    1 125 2 127 3 260 4 272 5 278
    A
TEST 2. DIRECTED READING

DIRECTIONS. The story about "Glass" is given below, with each sentence numbered. These numbers are to help you answer more questions about the story. Read each question and find the sentence in the story which answers it. Notice the number of this sentence. Find this number among the answer spaces at the right of the question and fill in the space under it.

Look at the sample below. Space No. 1 is filled because the question "In what sentence does the article tell how glass is made?" is answered in sentence No. 1 in the article. Answer the other questions in a similar manner.

You will have three minutes for this work. You may reread parts of the story if you need to do so.

Glass

1 Glass is made by melting sand with lime, potash, soda, or oxide of lead at a great heat. 2 Silica, which is the basis of sand, enters into all varieties of glass. 3 It has more to do with determining the quality than any of the other ingredients. 4 The purity of the ingredients and the proportion in which they are mixed also have much to do with the quality of the glass. 5 Sand may be said to form the basis of the glass. 6 Consequently the clearness of the glass depends largely upon the quality of this ingredient. 7 The proportion of silica varies in different kinds of glass. 8 In lead glass it is from 42 to 60 per cent; plate contains about 79 per cent, and window glass about 70 per cent. 9 The amount of silica usually determines the degree of hardness, though other substances have some effect upon this quality. 10 Lead tends to make glass soft. 11 Sometimes lime is used to make it hard. 12 Nearly all the silica used in the glass factories within the last fifty years is in the form of sand. 13 Prior to that the best qualities of glass were produced by crushing and washing flint and quartz rock. 14 This process was so expensive that it made the glass too costly for general use. 15 Bohemian and a few other varieties of European glass are still made from silica obtained in this way. 16 The expense of Bohemian glass in this country restricts it to the homes of wealthy people. 17 In the manufacture of glass of high grade, the quality and purity of sand are of the greatest importance. 18 The most searching examination and careful tests are made to determine the nature and extent of any impurities which the sand may contain. 19 These impurities are commonly oxide of iron (iron rust), alumina in the form of clay, loam, gravel, and decaying animal or vegetable matter. 20 Most of these impurities except iron can be removed by burning and washing. 21 Oxide of iron can be removed only by the use of chemicals. 22 Iron is the most troublesome of all because it discolors the glass and destroys its transparency. 23 For the best qualities of glass it must be entirely free from iron. 24 A proportion greater than one half of one per cent renders the sand worthless for even the poorest quality of glass.

SAMPLE. In what sentence does the article tell how glass is made?

1. What one substance is always present in some form in all kinds of glass? 2. What two factors in the manufacture of glass greatly affect its quality? 3. What effect does the quality of sand have on glass? 4. Is silica used in the same amounts in different varieties of glass? 5. What substance used in glass making tends to make the glass less brittle? 6. What percentage of silica is found in plate glass? 7. What one ingredient has the greatest effect on the hardness of glass? 8. Is lime mentioned as an ingredient which is sometimes used to affect the hardness of glass? 9. In what form is the silica obtained in most modern glass factories? 10. From what sources is the silica obtained which is used in making Bohemian glass?

Do not turn this page until you are told to do so.
9. The art of clay-working was first evolved through the manufacture of pottery. The development of satisfactory bodies and color effects came through trial and error and accordingly involved great expenditure of labor. As the clay industry grew, these processes were held in secrecy and improvements were slow in coming. With the advancement of science in other industries, however, it was natural that its attention should also be directed toward clay-working.

10. The coconut-palm tree is put to many uses. The natives make paper, twine, ropes, and brushes from the fiber. The shell is used for ladles and cups. The young leaves are eaten like cabbage. Baskets, fans, and fish nets are made from the mature leaves. The trunk is used for canoes and posts.

11. Cotton culture is not unlike that of corn and potatoes. Fields are plowed and fertilized and the seed is dropped in hills. Cotton planting begins in February and frequently continues for two months. During May and June, when corn is just being planted, the cotton plants are ready to be cultivated. This is done with a hoe and is called “chopping cotton.” At this time the rows are thinned by cutting out the poorer plants. During the latter part of September cotton picking begins.

12. The first discovery that our ancestors made about coal was that it would burn. The second great discovery, which was made many years later, was that coal would become coke if it were heated out of contact with the air, so as not to burn it. The third very recent discovery was the recovery of the by-products from the gases evolved when the coal was heated in this way.
TEST 3. POETRY COMPREHENSION

DIRECTIONS. This is a test of your ability to read and interpret poetry. Read the poem on “Wisdom” very carefully before attempting to answer any of the questions about it.

Notice that in this selection certain passages are marked by numbered brackets. Read each question and find the bracketed passage which contains the best answer to the question. Answer the question by filling in the answer space at the end of the question which has the same number as the bracketed passage which contains the correct answer.

You may reread parts of the poem if necessary.

The sample is answered correctly.

SAMPLE. To whom is the poet addressing his discourse?

1. Are we all asked to believe the explanation given here?  
2. What feeling inspired the poet to write?  
3. What does the speaker say about all that we do and think?  
4. Is the path of life very difficult to travel?  
5. How does the poet refer to the length of life?  
6. Do people ever await the end of life with fear?  
7. When do we begin our work and worry?  
8. What do we take with us through life?  
9. What will we come to realize as we near the end?  
10. At what time in history was it decreed that happiness should never be realized?  
11. What does the poet say is the object of what we call life?  
12. Over what race was Solomon a ruler?  
13. Is Solomon’s father mentioned in this poem?  
14. Did Solomon know how well his people liked him?  
15. Was Solomon widely known in the Orient?  
16. What indication is there that Solomon was wealthy?  
17. Did Solomon have a strong and healthy body?  
18. What did Solomon say to himself when reviewing all that was given to him?  
19. Where does he say spiritual contentment comes from?  
20. What did Solomon say about knowledge?  

Do not turn this page until you are told to do so.

WISDOM

Ye sons of men, with just regard attend,
Observe the preacher, and believe the friend,
Whose serious Muse inspires him to explain,
That all we act, and all we think is vain,
That in this pilgrimage of seventy years,
Over rocks of perils, and through vales of tears,
Destined to march, our doubtful steps we tend,
Tired with toil, yet fearful to its end.

That from our birth, we take our fatal shares
Of follies, passions, labors, tumults, cares;
And at approach of death we shall only know
The truths, which from these pensive numbers flow,
That we pursue false joy, and suffer real woe.

But O! ere yet original man was made,  
Ere the foundations of this earth were laid,  
It was opponent to our search, ordained,  
That joy, still sought, should never be attained;
This sad experience cites me to reveal,
And what I dictate is from what I feel,
Born as I was, great David’s favorite son,  
Dear to my people, on the Hebrew throne;
Sublime my court with Ophir’s treasures blessed,
My name extended to the farthest east,
My body clothed with every outward grace,
Strength in my limbs, and beauty in my face,
My shining thought with fruitful notions crowned,
Quick my invention, and my judgment sound.
Arise, (I communed with myself) arise;
Think, to be happy; to be great, be wise;
Content of spirit must from science flow.

From “Knowledge,” by John Pryor
6. Corn is the great feed crop of the nation. Unlike wheat, it can only with difficulty be transported long distances, because it is heavy and bulky and spoils quickly when packed. Moreover, it is not in great demand for human food, because it does not make such light bread as wheat does. Therefore, only a very small percentage of the United States corn crop is sent to other countries, and four fifths of it is used where it is grown, for the feeding of cattle, sheep, and hogs. Nearly one half of all the crop is fed to hogs alone in the Corn Belt.

6. The western part of the United States was not settled till much later than the eastern. The discovery of gold quickly drew many settlers to California; and, as the search for precious metals was carried farther, the entire West soon became explored and settled.

7. Professor Louis Agassiz was a great scientist who taught natural history at Harvard University. His skill in classifying birds, fish, or insects was remarkable. If he were given a single bone of a bird, he could tell instantly the kind of bird to which it belonged. He could do the same with other animals.

8. The red in the cross stands for sacrifice, for giving life, as the warm crimson blood gives life to the body. The cross has the same length on all four of its arms, to signify that it gives life equally to all, high or low, east or west. It stands alone always, no words or markings on it, to show that the Red Cross workers have only one thought — to serve. They ask no questions, they care not whether the wounded be ours or those of another race. Their duty is to give and to give quickly.
TEST 4. WORD MEANING

DIRECTIONS. Each of the exercises in Parts A, B, C, and D of this test consists of a statement which is correctly completed by one of the five numbered words or phrases. Find the number of this correct answer. Then, in the answer space at the right of the exercise, fill in the space which has the same number as the word or phrase you selected. The sample is answered correctly.

SAMPLE. To toil is to —
1 read 2 play 3 work 4 fall 5 believe

PART A. SOCIAL SCIENCE

1. To make a treaty means to —
1 make war 2 trespass 3 make an agreement 4 become violent 5 restrict

2. Armistice means — 1 continued 2 suspension of arms 3 chivalry 4 a campaign 5 a battle array

3. A constitution means a —
1 tax 2 conspiracy 3 judicial act 4 fundamental body of law 5 national debt

4. An amendment means — 1 a change in a constitution 2 a property tax 3 an agreement 4 a national convention 5 an income tax

5. Allegiance means —
1 felony 2 anarchism 3 impeachment 4 adjournment 5 loyalty to one's country

6. Immigrate means to —
1 emigrate 2 threaten 3 come into a country 4 leave a country 5 punish severely

7. Capital means —
1 paper money 2 accumulated wealth 3 gold and silver 4 spending money 5 property

8. Initiative means —
1 iniquity 2 prohibition 3 administration of an inheritance tax 4 the right of the people to introduce a new course of action 5 an injunction

9. Reconstruction means the same as —
1 reconciliation 2 destruction 3 reorganization 4 discovery 5 obstruction

10. An embargo is a —
1 legal act 2 prohibition on commerce 3 diplomat 4 treaty 5 judicial statement

11. To boycott is to — 1 secure goods illegally 2 combine against a person or organization 3 protect a trademark 4 allow credit 5 sell imported goods

12. An envoy is — 1 an envious individual 2 a soldier 3 a general 4 a period of time 5 a messenger

13. Suffrage means —
1 women's voting 2 representation 3 the right to vote 4 intrigue 5 suffering

14. To impeach means to —
1 elect 2 indict 3 protect 4 yield 5 renounce

15. Belligerent means —
1 friendly 2 dangerous 3 warlike 4 peaceful 5 fearful

16. Contraband means —
1 a forbidden article 2 a careful criticism 3 a contradiction 4 war supplies 5 a veteran

17. Amnesty means —
1 a conviction 2 an embargo 3 an armistice 4 a civil law 5 a general pardon

18. Referendum means — 1 submitting to a vote of the people 2 an amendment 3 the passage of an act by Congress 4 voting in party convention 5 recommendation

19. To nullify means to —
1 invalidate 2 secede 3 pass laws 4 create public sentiment 5 oppose legislation

20. A writ refers to —
1 legal evidence 2 a stock certificate 3 a credential 4 a mandate 5 a special tax

Go right on to the next page.
TEST 6. PARAGRAPH COMPREHENSION

DIRECTIONS. Read each paragraph carefully, and then study the questions A, B, and C at the right. Select the correct answer. Notice the number of this answer. In the margin at the right, fill in the answer space under this number.

1. In some parts of the world metal pins have been in use for ages. In certain Egyptian tombs pins of bronze and copper have been found. Pins like our hatpins, and others like the safety pins of today, were used by people in very ancient times. The first pins made in our country were nothing but bits of wire. The wire was rolled up at one end to form a head, while the other end was sharpened.

A. Choose the best title for the paragraph.
   1. Bronze and Copper Pins
   2. Early Metal Pins
   3. The Use of Hatpins

B. Over how long a period have pins been made and used?
   1. since modern times
   2. since very ancient times
   3. since the founding of this country

C. The pins found in Egyptian tombs were made of —
   1. bronze and copper
   2. copper wire
   3. iron wire

2. The great production of corn in the corn belt has made this grain the largest and most valuable of all American crops. Each year the United States produces about 3,000,000,000 bushels of corn — a crop three times as large as the wheat crop and three fourths of the total corn crop of the world.

A. Choose the best title for the paragraph.
   1. The American Corn Crop
   2. The Corn Belt
   3. The Wheat Crop

B. How does the size of the annual corn crop of the United States compare with the wheat crop of the world?
   1. three fourths as large
   2. twice as large
   3. three times as large

C. The United States produces more corn than —
   1. all of the European countries
   2. all other American countries
   3. the rest of the world combined

3. The Eskimos have two kinds of houses, one for use in summer and the other for use in winter. The winter house is made of blocks of snow or ice and is like a sugar bowl turned upside down. Outside the door there is a long tunnel, also made of snow or ice, and through this, people crawl on their hands and knees when they go in or out. The windows are of ice, or thin skin, for there is no glass in the country.

A. Choose the best title for the paragraph.
   1. The Houses of Eskimos
   2. Summer Houses of Eskimos
   3. The Winter Houses of Eskimos

B. Why do some Eskimo families have two kinds of houses?
   1. because they do not like to use tunnels
   2. because of the seasonal changes
   3. because they like snow houses

C. The windows of an Eskimo house may be made of —
   1. skin
   2. snow
   3. glass

4. One way to protect ourselves against poison ivy is to kill all poison-ivy plants that grow in yards or in other places where people are likely to touch them. Someone who is not easily poisoned should put on leather gloves and pull the plants up by the roots. The plants may also be killed by cutting them off at the roots and pouring something on the roots which will kill them. Lubricating oil such as is used in automobiles will kill poison-ivy plants.

A. Choose the best title for the paragraph.
   1. Poison-Ivy Plants
   2. Protective Measures against Poison Ivy
   3. Killing Poison Plants

B. How may poison-ivy plants be killed?
   1. by pulling them up
   2. by cutting them off at roots
   3. by pouring oil over them

C. To prevent ivy poisoning, one should —
   1. pour oil on the hands
   2. destroy all near-by poison-ivy plants
   3. wash hands frequently
1. To expand means to —
   1 expound 2 become smaller 3 become larger 4 derive 5 rebound.
2. Oxidation means —
   1 combining with oxygen 2 drying 3 osmosis
   4 combining with hydrogen 5 neutralizing.
3. Gravity means —
   1 seriousness 2 gratitude 3 attraction of bodies 4 capillarity 5 energy.
4. Reaction means —
   1 extension 2 emulsion 3 equation 4 inertia 5 chemical change.
5. Velocity is the same as —
   1 motion 2 rate of movement 3 power of combining 4 friction 5 process.
6. To adulterate means to —
   1 concede 2 caution 3 instruct 4 reduce
   5 make impure by mixing with other substances.
7. Soluble means —
   1 stable 2 neutral 3 rigid 4 liquefiable 5 solid.
8. Density means —
   1 rarity 2 compression 3 ratio of height to width
   4 ratio of mass to volume 5 impenetrable.
9. To filter means to —
   1 strain 2 radiate 3 mix 4 dissolve 5 resist.
10. To diffuse means to —
    1 digest 2 comprehend 3 assimilate 4 digress 5 spread out.
11. A pigment is a —
    1 coloring matter 2 plaster 3 white substance 4 liquid 5 smooth surface.
12. Translucent means —
    1 transmarine 2 partially transparent 3 transpose 4 transfer 5 luminous.
13. Adhere means to —
    1 recognize 2 listen 3 stick fast 4 adjust 5 mix together.
14. Volume means —
    1 height 2 depth 3 capacity for holding 4 space occupied 5 model.
15. Latent means —
    1 qualitative 2 dormant 3 quantitative 4 peculiar 5 visible.

PART C. MATHEMATICS

1. To invert means to —
   1 invest 2 inventory 3 simplify 4 factor 5 turn upside down.
2. Intersect means to —
   1 cut across 2 reduce 3 cancel 4 subtract 5 insert.
3. Degree pertains to —
   1 size 2 angles 3 solids 4 decimals 5 division.
4. Approximate means —
   1 exact 2 inaccurate 3 estimated 4 averaged 5 combined.
5. Definite means —
   1 careful 2 precisely limited 3 infinite 4 divided 5 decimal.
6. Operation means —
   1 quotient 2 transformation of quantities 3 reduction 4 review 5 repetition.
7. A diagonal is —
   1 a diameter 2 a description 3 an extreme
    4 a line from angle to angle 5 a line which bisects a figure.
8. Origin means —
   1 beginning 2 drill 3 difficulty 4 tables 5 decimals.
9. Vertices pertain to —
   1 decimals 2 multiplication 3 angles 4 equality 5 values.
10. Oblique means —
    1 slanting 2 straight 3 opposite 4 parallel 5 symbolical.
11. Horizontal means —
    1 straight 2 perpendicular 3 hypothesis 4 a line connecting two points 5 level.
12. Projection means the same as —
    1 angle 2 sphere 3 conjunction 4 extension 5 projectile.
13. Linear pertains to —
    1 breadth 2 width 3 area 4 base 5 length.
14. Polynomial means —
    1 many angles 2 many numbers 3 one term 4 many terms 5 one number.
15. To converge is to —
    1 cancel 2 correspond 3 approach 4 combine 5 estimate.

Go right on to the next page. Number right, Part B. Number right, Part C.
TEST 5. SENTENCE MEANING (Cont'd)

1. Are judicial decisions ever reversed? .......................................................... 26
   YES NO

7. Does insufficient evidence ever result in a conviction? ........................... 27
   YES NO

3. Do alleged facts often need to be verified? ............................................ 28
   YES NO

9. Does similarity between objects necessitate their being identical? .......... 29
   YES NO

5. Are ceremonious activities characteristic of informal gatherings? .......... 30
   YES NO

1. Do most people approach an unusual ordeal with apprehension? ............ 31
   YES NO

2. Does the League of Nations approve open hostilities among its members? 32
   YES NO

3. Are consistent statements usually untrue? ............................................. 33
   YES NO

4. Should a valid answer be based on exact data? ...................................... 34
   YES NO

5. Is the circulation of slanderous rumors ethical? ....................................... 35
   YES NO

6. Is a marked discrepancy usually obvious? .............................................. 36
   YES NO

7. Should an antagonist in a contest show aggressive behavior? ................. 37
   YES NO

8. Is a certain amount of prejudice necessarily debasing? ......................... 38
   YES NO

9. Are arguments ever free from enmity? .................................................. 39
   YES NO

10. Is an intemperate person usually characterized by excessive activities? .. 40
    YES NO

11. Is fair play a good policy to follow in all international relationships? .41
    YES NO

12. Are persons innocent of criminal intent never indicted and convicted? ... 42
    YES NO

13. Does irksome employment sometimes prove to be profitable to the worker? .43
    YES NO

14. Do insolvent business enterprises sometimes go into bankruptcy? .......... 44
    YES NO

15. Is a loquacious individual necessarily a bore? ....................................... 45
    YES NO

16. Are presumptuous persons often bold and arrogant? .............................. 46
    YES NO

17. Is a conscientious worker often subjected to the embarrassment of his employer's criticism? 47
    YES NO

18. Do obstinate individuals usually respond readily to admonition? ............ 48
    YES NO

19. Is rich and expensive food essential to the happiness of a gourmand? .... 49
    YES NO

20. Is satisfaction in work well done generally considered an adequate substitute for an economic reward? 50
    YES NO

Do not turn this page until you are told to do so.

Number right

Number wrong

Number right minus number wrong
1. An autobiography is a —
   1 characterization 2 caricature 3 contradiction 4 memoir of one’s life 5 classic...

2. Realistic means —
   1 conventional 2 true to life 3 romantic 4 idealistic 5 dramatic...

3. A simile is —
   1 a lyric 2 a similarity 3 a poem 4 an analogy 5 a dialogue...

4. A prefix means —
   1 that which is put after 2 that which is put before
   3 a figure of speech 4 a title of a book 5 an appendix...

5. A legend is —
   1 a song 2 a motto 3 a tradition 4 a title 5 an editorial...

6. Objective refers to —
   1 verbs 2 nouns 3 adverbs 4 adjectives 5 case...

7. A synopsis is —
   1 an outline 2 a climax 3 a general review 4 an alliteration 5 a controversy...

8. A prologue is similar to a —
   1 suffix 2 prefix 3 table of contents 4 bibliography 5 preface...

9. Anonymous means —
   1 critical 2 fictitious 3 eloquent 4 of unknown authorship 5 singular...

10. A manuscript is a —
    1 magazine 2 manual 3 document 4 folio 5 pamphlet...

11. Lyrical means —
    1 suitable to be sung 2 dramatic 3 narrative 4 descriptive 5 poetical...

12. Brackets are —
    1 italics 2 initials 3 diagrams 4 outlines 5 punctuation marks...

13. An allegory is a —
    1 figurative story 2 couplet 3 comedy 4 ballad 5 diary...

14. Degree is a quality of —
    1 conjunctions 2 adjectives 3 objects 4 infinitives 5 pronouns...

15. Pathos means —
    1 humor 2 song 3 drama 4 quality of sorrow 5 melancholy...

16. Contemporary means —
    1 in contact 2 living at the same time 3 complete 4 emphasis 5 continual...

17. Satire is similar to —
    1 humor 2 wit 3 vice 4 buffoonery 5 irony...

18. Colloquial refers to —
    1 everyday talk 2 folklore 3 idioms 4 pastorals 5 dialects...

19. A bibliography is a —
    1 history 2 personal record 3 list of books 4 description 5 writer...

20. An epigram is a —
    1 pithy saying 2 maxim 3 jest 4 jingle 5 prosody...

Do not turn this page until you are told to do so.
TEST 5. SENTENCE MEANING

DIRECTIONS. You are to read each sentence and answer it by filling in the answer space under the right answer. Study the samples. Do not guess.

SAMPLES.

A. Are all people dishonest? ........................................... A

B. Are authors often quoted? ........................................... B

1. Do people sometimes cooperate for self-preservation? ........................................... 1

2. Do all students have the same determination to achieve? ........................................... 2

3. Are dishonest officials ever in charge of political campaigns? ........................................... 3

4. May external appearances be deceiving to the uninitiated? ........................................... 4

5. Do the bacteria causing tuberculosis grow rapidly in fresh air? ........................................... 5

6. Is an undesirable reputation often based upon a record of misbehavior? ........................................... 6

7. Are agility and endurance considered good qualifications for an athlete? ........................................... 7

8. Are exact measurements usually secured with inaccurate instruments? ........................................... 8

9. Is foolhardiness a sure indication of one's courage? ........................................... 9

10. Does public opinion ever disregard the decrees of justice? ........................................... 10

11. Are careless observations the only causes of mistakes in arriving at conclusions? ........................................... 11

12. Do many people fail to live up to their possibilities? ........................................... 12

13. Will our knowledge of scientific facts be decreased by experimentation? ........................................... 13

14. Do individuals always adjust themselves to their environment? ........................................... 14

15. Will the pleasure of the host be increased by the presence of an obnoxious guest? ........................................... 15

16. Can one predict future events with absolute surety? ........................................... 16

17. Does a knowledge of the rules of traffic tend to decrease accidents? ........................................... 17

18. Does a controversy always result in a satisfactory solution of a problem? ........................................... 18

19. Does the absence of authority often result in frivolity? ........................................... 19

20. May there be contention among the members of a parliament? ........................................... 20

21. Are valuable natural resources an asset to a nation? ........................................... 21

22. Are all anti-trust laws enforced with facility? ........................................... 22

23. Is the cause of liberty weakened by freedom of the press? ........................................... 23

24. Are editorials always based upon quotations from authorities? ........................................... 24

25. Is all good writing the result of frequent consultation of an outline? ........................................... 25

Go right on to the next page.
# Advanced Test: Form CM

**Name**

**Age**

**Grade**

**Date**

**School**

**City and state**

## Profile Chart

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TEST 1. RATE-COMPREHENSION - PART A

DIRECTIONS. This is a test to see how well and how rapidly you can read silently. Read the story below very carefully so that you can answer questions about it.

At the end of one minute you will hear the word "Stop." Put a circle around the word you are then reading. Wait for further instructions.

CORK

1 Cork is the outer layer of the bark of an evergreen oak tree which grows to an average height of about thirty feet. 2 It is cultivated principally in Spain and Portugal but may also be found in several other countries. 3 About seventy per cent of the commercial cork comes from these two countries. 4 The cork tree is also being experimentally grown in Southern California at the present time.

The cork is first stripped from the trees when they are from 15 to 20 years of age. 6 The first yield, which is soft, uneven, and woody in nature, is called virgin cork. 7 This first trimming is not very valuable and is used extensively as a tanning substitute and for rustic decorations. 8 Thereafter, the bark is removed every eight or ten years and improves with each successive stripping. 9 The tree continues to live and thrive for a period of 150 years or more.

In order to remove the cork, two horizontal cuts are made around the stem, one a little above the ground and the other just under the main branches. 10 Between these circular cuts three or four longitudinal incisions are then made. 11 The cork is carefully removed in sections, care being taken to avoid injuring the surface of the tree itself. 12 The operation of stripping the tree takes place during July and August. 14 The surface of the strips is cleaned and then flattened by press and heat. 15 This process closes the pores and gives a better texture to the material. 16 When properly done, the stripping of the corky layer is beneficial to the tree.

17 The average yield at each cutting for a tree is 45 pounds, but some trees yield as much as 500 pounds.

18 Cork is especially suitable as a stopper for both because of its elasticity and its imperviousness to gases and liquids. 19 Even the crown caps so widely used in soft-drink bottles have a thin inner lining of cork. 20 High quantities of cork are used in America for linoleum and other patent floor coverings. 21 Linoleum is a mixture of ground cork and linseed oil put through one or more of several secret processes. 22 Because of its lightness and strength, cork is used in life preservers and other saving apparatus. 23 High-grade artificial limbs are made from cork. 24 On account of its lightness, softness, and non-conducting properties, cork is used for hat linings and the soles of shoes.

Wait for further directions. Do not answer any of the questions until you are told to do so.

1.

What quality of cork makes it satisfactory for stopping bottles?

2.

What is mixed with cork to make linoleum?

3.

What percent of commercial cork comes from Spain and Portugal?

4.

How long does the cork tree usually live?

5.

How high does the average cork tree grow?

6.

How often is the cork bark removed?

7.

At what time of the year is the cork taken from the tree?

8.

What is the average yield per tree at each cutting of cork?

9.

How clean is the bark patch removed?

10.

If 20% of commercial cork comes from Spain and Portugal,

11.

What is the average yield of cork cord?

12.

What percent of the commercial cork comes from these two countries?
TEST 1. RATE–COMPREHENSION—PART B

**THE ORGANIZATION OF A CITY GOVERNMENT**

Since the residents and taxpayers in a city share a common interest in maintaining good government, they elect officials to direct certain governmental responsibilities. Most governmental services given by the city are tasks which no single family or small group of families could possibly accomplish. Some of these group responsibilities assumed by the city are: police protection, fire protection, maintenance of a safe and dependable water supply, provision of light, power, and transportation, and establishment and enforcement of health regulations. Most cities offer many additional services, most of which are cooperative undertakings maintained on a large scale. If the citizens should fail to give the local officers the power to carry on such activities, the results might be quite disastrous. Many of the most progressive citizens would move away from such a city, and few strangers would care to move in to take their places.

Each state determines how many inhabitants a community must have before it can become a city. In Kansas a community with two hundred inhabitants can come a city, while in New York State ten thousand inhabitants are required. About half of the states require a population of twenty-five hundred inhabitants before a community is designated as a city. The United States census classifies all incorporated communities with twenty-five hundred inhabitants as cities. Since each state also determines just what powers cities are permitted to exercise, there is, accordingly, wide variation in governmental authority in different cities.

There are three types of city government. The most and perhaps the most widely followed plan is that of the mayor-council type of organization. The main function of the council is to enact such local laws or ordinances as may seem wise. Of course these laws must conform to the state and national laws. Appointments made by the mayor may be subject to the confirmation of the council.

It is the chief executive officer of the city, exercising supervisory power over the various administrative offices, and frequently appointing administrative heads of departments. Because of the difficulty of locating responsibility and because it frequently becomes so complex that the citizens do not clearly understand its workings, the council-mayor type of government has fallen into bad repute in many places.

The commission form of government has been developed in an attempt to remedy some of the weaknesses of the mayor-council form of government. This plan largely centralizes the power and responsibility in a small group which takes the place of the mayor and council. Each commissioner is the head of a department and thus assumes responsibility for its management on a business-like basis. When the commissioners act together they form the council.

The most common charge against the commission plan is that often the commissioners fail to cooperate for the general good.

The city-manager plan is really a modification of the commission form of city government. Under this plan a small council is usually elected with power to select a city manager to become the chief executive officer. The responsibility for the supervision of all administrative divisions is placed in the hands of the city manager. This officer is directly responsible to the council, thus making it fairly easy to fix the blame if conditions are not satisfactory.

Regardless of the form of the organization of the city government, the control of the city rests in the people themselves. The citizens can control their government through their votes and the influence of public opinion. Political parties and office holders are very reluctant to adopt any policy which they feel will be opposed by a majority of citizens. When there is dishonesty in government, a few alert citizens can often arouse public opinion sufficiently to enforce an honest city administration.

Wait for further directions. Do not turn this page until you are told to do so.
TEST 7. LOCATION OF INFORMATION

PART B. SELECTION OF KEY WORDS

DIRECTIONS. This is a test of your ability to choose key words for use in looking up information in an index. Study the sample. Read each question and note that four numbered words or phrases are given below it. Three of these words or phrases would, if looked up in an index, be likely to lead to an answer to the question. One of the numbered items would not help in locating the information. Locate this one word or phrase, the one that would not help, and note its number. Then fill in the answer space at the right of the exercise which has the same number as the word or phrase which you chose. The sample is answered correctly.

SAMPLE. What is the value of our annual corn crop?
1. crops 2. wheat 3. corn 4. sweet corn

1. How many transcontinental air routes were operating in the United States in 1940?
1. aviation 2. air routes 3. canals 4. U. S. mail

2. What is the value of our annual cotton crop?
1. sugar cane 2. Southern states 3. cotton 4. agriculture

3. Is Japan the most important industrial nation in the Orient?
1. Japan 2. Orient 3. fisheries 4. industrial nations

4. Was Napoleon defeated by the Duke of Wellington at Waterloo?

5. Did the League of Nations settle the dispute between Italy and Ethiopia?
1. Ethiopia 2. dispute 3. League of Nations 4. Italy

6. How large an army did General Lee command at Appomattox?

7. Does erosion by wind cause any loss to the soil in the United States?
1. erosion 2. wind 3. soil 4. loss

8. Is the Antarctic more difficult to explore than the North Pole region?
1. Arctic 2. South Pole 3. Antarctic 4. equator

9. What was the total crop loss due to hail in 1938–39?
1. hail 2. insects 3. crops 4. crop damage

10. What is the total crop loss due to hail in 1938–39?

11. Is tuberculosis death rate declining in the United States?
1. tuberculosis 2. tuberculosis 3. declining 4. public health

12. What is the value of our annual supply of cotton produce?
1. cotton 2. cotton goods 3. cotton products 4. annual supply

13. Was Lee the commander of the Union Army during the Civil War?
1. Lee 2. Civil War 3. commander 4. Union Army

14. What purpose did William Booth hope to serve when he organized the Salvation Army?

15. How does Russia rank among European countries in oil production?
1. oil 2. Russia 3. Europe 4. petroleum

16. Was Thomas Jefferson one of the original signers of the Constitution of the United States?
1. Thomas Jefferson 2. signer 3. constitution 4. constitutional convention

17. Was Joffre the commander of the French forces in the first World War?

18. When did the United States Army begin to use planes for combat purposes?
1. aeronautics 2. combat 3. aerial navigation 4. aircraft carriers

19. Is textile manufacturing an important industry in Massachusetts?
1. manufacturing 2. textiles 3. cotton industry 4. Massachusetts

Stop here. Wait for further instructions.
Without looking again at the article, answer these questions. Study these statements carefully. Decide whether, in terms of the article, a statement is true, false, or not discussed. If, according to the article, the statement is true, fill in the answer space under T (for true); if false, fill in the space under F (for false). If a statement is not discussed in the article (even though true or false in itself), fill in the space under N (for not discussed). The sample is worded correctly.

Small groups of citizens could organize and carry on effectively the activities of a city.

The number of inhabitants needed before a city can be established is determined by the state.

City officials should take responsibility for providing police protection.

The city officials need not be concerned about maintaining an adequate water supply.

In Kansas a community with two hundred inhabitants can become a city.

The average salary of the city manager is about ten thousand dollars.

In the commission form of government each commissioner is responsible for the management of a department.

The United States Chamber of Commerce report gives a list of all cities in the United States.

The oldest plan for city government is the commission form.

The mayor in the mayor-council plan does not appoint any officials.

When the commissioners sit together as a committee they act as a council.

There are about five hundred cities in the United States with a population above twenty-five hundred.

In most cities the people have very little influence on the kind of government they will have.

Lack of cooperation among the commissioners is one of the common criticisms of the commission form of government.

The United States Supreme Court must approve city ordinances before they become effective.

Cities usually maintain only the services mentioned in this article.

The laws which the council pass are sometimes called ordinances.

The governor of the state can veto the acts of the commission.

Political parties usually try to adopt a policy which they feel the majority of voters favor.

Cities secure their power to organize through the United States government.

The city-manager plan resembles the commission plan of city government.

In the mayor-council form of government the council exercises administrative authority.

All first-class cities follow the mayor-council plan of city government.

In the mayor-council plan the mayor acts only as the chairman of the council.

The city manager is usually elected by vote of the people.

In the commission form of government the mayor is appointed by the commissioners.
TEST 2. DIRECTED READING

DIRECTIONS. A story is given below, with each sentence numbered. These numbers are to help you answer questions about the story. Read each question and find the sentence in the story which answers it. Notice the number of this sentence. Find this number among the answer spaces at the right of the question and fill in the space under it.

Look at the sample below. Space No. 1 is filled because the question in the sample is answered in sentence No. 1 in the article. Answer the other questions in a similar manner.

You will have three minutes for this work. You may reread parts of the story if you need to do so.

Iron

1. Iron is by far the most useful of all the metals which man has discovered. 2. Fortunately it is found in many different areas and in much greater abundance than other metals. 3. One reason iron ore is abundant is that the deposits are formed in a number of different ways. 4. A second reason is that many iron ore regions have been formed by sedimentation, a process which makes large ore deposits. 5. Sedimentation accounts for at least seven out of ten of the world's great iron ore deposits.

The United States obtains about eighty per cent of its supply from the Lake Superior region. 7. The iron ore in this region is a result of the sedimentary process. 8. Ore containing from fifty to sixty per cent iron may be found here. 9. This is considered a very valuable deposit. 10. The other principal region is found in Alabama, which furnishes about ten per cent of the supply for the United States.

11. Iron ore is obtained by two methods, shaft mining and open pit mining. 12. When the ore deposits lie far below the earth's surface, shafts are put down to the ore and tunnels are dug out in all directions. 13. The miners work in these tunnels and send the iron to the surface through the shaft. 14. Some iron ore lies so near the surface that the covering of rocks and other material can be removed profitably by steam shovels. 15. After this waste has been stripped off, the iron ore is then loaded into cars by smaller steam shovels.

16. The ore is shipped from the mine by rail and water to the iron and steel mills. 17. At the mills the furnaces are filled with iron ore, limestone, and coke in proper proportions. 18. Air, heated to a temperature of five thousand degrees in huge ovens, is blown into the furnace. 19. The coke burns and melts the iron ore and limestone. 20. The impurities of the iron ore combine with the melted limestone, leaving the nearly pure iron metal. 21. Since the melted iron is heavier than the impurities, it sinks to the bottom of the furnace. 22. The melted limestone and the impurities, called slag, run off through an opening above the heavier iron. 23. The molten iron is then poured into molds of sand where it cools and hardens into short bars, known as pig iron. 24. When the pig iron is further purified it becomes cast iron, wrought iron, and steel.

SAMPLE. Is iron the most useful of metals?

1. Can iron ore be found in greater quantities than other ores?
2. What is the process called by which large ore deposits are formed?
3. Are iron ore deposits formed in more than one way?
4. What percentage of the large ore deposits are sedimentary?
5. Is the Lake Superior region a result of the sedimentary process?
6. Where does the United States obtain most of its iron ore?
7. What per cent of iron is found in the iron ore of the Lake Superior region?
8. Is iron ore taken from the ground by more than one method?
9. Where is the second important iron-producing region in the United States?
10. Through what is the iron ore sent to the surface?
11. What is used to clear the top surface away when the iron ore is near the surface?
12. When are shafts sunk into the ground for mining ore?
13. What is the temperature of the air which is blown into the blast furnaces?
14. Where is the iron ore taken when it leaves the mine?
15. What substances are used in refining the iron ore?
16. Is iron ore heavier than the impurities?
17. With what do the impurities from the iron ore combine?
18. What becomes of the impurities in the furnace?
19. What products result from the more complete refinement of iron?
20. What is the iron called when it comes from the sand molds?

Do not turn this page until you are told to do so.
9. The Industrial Revolution, which began about the middle of the eighteenth century, made many changes in the lives of workers. The handicraft system with its small shop and small group of workers, its close personal relations, and its limited production soon disappeared. In its place came the modern factory with its machinery, its countless numbers of workers, its regimentation, and its discipline. The worker, who previously owned his tools and worked at his own rate, now became merely a cog in the machinery of modern industry.

10. Changes in the purposes of education which our forefathers brought to the New World from Europe soon began to be exhibited. The influence of pioneer and wilderness life and the social equality of the people tended to break down the class barriers of the Old World. The colonists soon demanded schools which would educate their children for their times and conditions. The inadequacy of the traditional education of the homeland soon became apparent and a program of education adapted to the New World gradually developed.

11. The discovery of America gave the potato plant to civilization. It is interesting to know that although it is an American product, it is called the “Irish potato.” The early settlers in this country were slow to adopt the potato. For a long time it was considered to be poisonous. It was thought that if a man ate it regularly he would surely die. The potato was early imported into Ireland, where it was regarded as a great delicacy. When Irish settlers came to America, they brought the potato with them. Neighbors observed its cultivation by the Irish and gave it the name “Irish potato.”

12. Tillage practice in preparation for a crop should create a moisture condition favorable to growth and maintain a surface condition resistant to wind erosion. Plans should be made to reduce the rain runoff as well as to control the competing plant growth. For instance, the early working of wheat land after harvest is a very important means of storing water for the next wheat crop. Surface cultivation should be deep enough to control weed growth, fine enough to maintain a surface open to permit ready penetration of water, and coarse enough to leave clods to resist wind action.
TEST 3. POETRY COMPREHENSION

Sections. This is a test of your ability to read and interpret poetry. Read the poem below very carefully before attempting to answer any of the questions about it.

Notice that in this selection certain passages are marked by numbered brackets. Read each question and find the bracketed passage which contains the best answer to the question. Answer the question by filling in the answer space at the end of the question which has the same number as the bracketed passage which contains the correct answer. You may reread parts of the poem if necessary. The sample is answered correctly.

To whom is the poet addressing her discourse?

Life

I know not what thou art.

But know that thou and I must part;

And when, or how, or where we met,

I own to me's a secret yet.

But this I know, when thou art fled,

Where'er they lay these limbs, this head,

No clod so valueless shall be

As all that then remains of me.

O whither, whither, dost thou fly?

Where bend unseen thy trackless course?

And in this strange divorce,

Ah, tell where I must seek this compound I?

To the vast ocean of empyreal flame

From whence thy essence came

Dost thou thy flight pursue, when freed

From matter's base encumbering weed?

Or dost thou, hid from sight,

Wait, like some spellbound knight,

Through blank oblivious years th' appointed hour

To break thy trance and reassume thy power?

Yet canst thou without thought or feeling be?

O say, what art thou, when no more thou'rt thee?

Life! we have been long together,

Through pleasant and through cloudy weather;

'Tis hard to part when friends are dear;

Perhaps 'twill cost a sigh, a tear;

Then steal away, give little warning,

Choose thine own time;

Say not Good-night, but in some brighter chime

Bid me Good-morning!

From "Life," by Anna L. Barbauld

Do not turn this page until you are told to do so.
Before the fifteenth century men knew very little about the earth upon which they lived. However, maps in the fifteenth century outlined the Mediterranean and Western Europe fairly accurately. The rest of the world, however, was not shown correctly. Africa was thought to be much smaller. Little was known of Asia; the maps showed that it extended out into a sea of mystery.

There has been a great reduction in the number of deaths from disease, both in the United States and in the rest of the world, as we have increased our information about communicable disease. Seventy-five years ago certain diseases were a constant terror to people everywhere. Smallpox and typhoid fever were widespread. In Asia came cholera, a terrible death-dealing scourge. During the summer months yellow fever from the tropics came a serious threat to life in America. These diseases are very rare now as a result of our study of bacteriology.

Insects are found in nearly every place on earth—the water, in the air, on land, and burrowing in the earth. One authority estimates that there are 400,000 species. Many insects are known to be harmful; others are useful; some apparently do not affect us at all; and others we are quite ignorant. Most living things have insect enemies, and insects in turn have enemies that prey on them.

Every state has a written constitution which is the foundation of its government. The people of each state have the privilege of making and amending their own constitution. In making or changing laws, a state legislature must be careful not to conflict with anything in the constitution. In other words, the constitution of the state is the fundamental law for the state just as the Federal Constitution is fundamental for the United States.
TEST 4. WORD MEANING

DIRECTIONS. Each of the exercises in Parts A, B, C, and D of this test consists of a statement which is correctly completed by one of the five numbered words or phrases. Find the number of this correct answer. Then, in the answer space at the right of the exercise, fill in the space which has the same number as the word or phrase you selected.

The sample is answered correctly.

EXAMPLE. To toil is to —
1. read 2. play 3. work 4. fall 5. believe.

PART A. SOCIAL SCIENCE

1. A census is a — 1. government agency 2. traffic violation 3. counting of population
   4. hundred years 5. state bureau. ..............................1
2. A budget is a — 1. bureau 2. plan for spending 3. means of revenue
   4. financial statement 5. legislative act. ........................2
3. Smuggling is — 1. bringing in goods illegally 2. prohibiting sale 3. falsely arresting
   4. convicting 5. pardoning........................................3
4. A custom is a — 1. financial statement 2. lawyer’s charge 3. police officer
   4. long-established practice 5. legislative act. ..................4
5. A bureau is a — 1. democratic organization 2. legislature 3. citizen
   4. politician 5. government department. .........................5
6. A law is a — 1. law enforcement 2. trustworthiness 3. betrayal of one’s country
   4. use of armed forces 5. punishment for cowardice. ............6
7. Resources are — 1. taxes 2. import duties 3. officers’ reports 4. customs duties
   5. available funds. .................................................7
8. To disfranchise means to — 1. take away privileges 2. destroy property 3. distribute supplies
   4. vote honors 5. commission an officer. ..........................8
9. To appeal means to —
   1. compromise 2. settle 3. take to a higher court 4. carry away
   5. annoy...............................................................9
10. Arid means — 1. windy 2. land which is not farmed 3. soft 4. unprofitable
   5. dry.................................................................10
11. Internal means — 1. foreign 2. domestic 3. trade relations 4. suffrage
   5. legislation.........................................................11
12. To appraise is to — 1. destroy 2. elevate 3. build up 4. set value on
   5. appeal.............................................................12
13. Reparations are — 1. amends for injuries 2. war debts 3. war arms
   4. hospitals 5. gifts.................................................13
14. A controversy is — 1. a settlement 2. a dangerous practice
   3. a dispute 4. an international agreement 5. a labor board.
   .................................14
15. Diplomacy means — 1. caution 2. boldness 3. force 4. tact
   5. concern........................................................15
16. A partisan is a — 1. supporter of a cause 2. convicted person
   3. generous person 4. socialist 5. believer in laws. 16
17. To subsidize is to — 1. buy goods 2. aid by funds 3. destroy
   4. censure a friend 5. cultivate land ..........................17
18. A quorum is — 1. a business enterprise 2. a parliamentary action
   3. a quota 4. an election 5. the number required to transact business...
       18
19. A demagogue is a — 1. statesman 2. selfish political leader
   3. monthly magazine 4. naval officer 5. follower. .............19
20. Reciprocity means — 1. free trade 2. without tariff 3. trade barriers
   4. mutual exchange 5. recognition. .............................20

Go right on to the next page.
TEST 6. PARAGRAPH COMPREHENSION

DIRECTIONS. Read each paragraph carefully, and then study the questions A, B, and C at the right. Select the correct answer. Notice the number of this answer. In the margin at the right, fill in the answer space under this number.

1. Corn usually requires a growing season of five months. A few varieties mature in three months. Corn grows best when the average temperature ranges from 60 to 80 degrees during the growing season. A rainfall of from 3 to 4 inches per month is desirable. Gently sloping lands that have good drainage and deep, black, fertile soil produce the best corn. A yield of 100 bushels per acre is outstanding, and farmers call 35 to 40 bushels good yield.

A. Choose the best title for the paragraph.
   1. Effect of Soil on Corn Crop  
   2. Quick-maturing Varieties of Corn  
   3. Conditions Required for Corn Crop

B. What average temperature is best for corn?
   1. 60 to 70 degrees  
   2. 70 to 80 degrees  
   3. 80 to 90 degrees

C. The growth of corn requires a rainfall of three or four inches —
   1. per month  
   2. per year  
   3. per season

2. The National Geographic Society was founded in 1888 to spread geographic knowledge. In the interests of research it sends expeditions to many parts of the world. Some of these expeditions are financed entirely by the society, while others are partially financed by other agencies. The society attempts to spread knowledge through the National Geographic Magazine and other publications. The Hubbard Gold Medal is awarded by the society to explorers and other individuals for outstanding achievement.

A. Choose the best title for the paragraph.
   1. Work of the National Geographic Society  
   2. A Geographic Society  
   3. Publications of the National Geographic Society

B. Why was the National Geographic Society organized?
   1. to make explorations  
   2. to publish a geographic magazine  
   3. to increase and spread geographic knowledge

C. The National Geographic Society awards a medal for —
   1. geographic lectures  
   2. outstanding achievement  
   3. making explorations

3. It has been proved that almost anyone can greatly increase his speed of reading and yet retain his accuracy. A fact, some experiments show that the faster we read within certain limits the better we understand. When we read rapidly, we have to concentrate more closely. There is less mind-wandering. In rapid reading we take in more of the line at a single glance. This has a tendency to cause us to group words and phrases, and thus to grasp the author’s ideas rather than his words only.

A. Choose the best title for the paragraph.
   1. Speed and Accuracy in Reading  
   2. Speeding Up Reading  
   3. Reading Accurately

B. Why may speeding up reading increase accuracy?
   1. Rapid reading helps to see the letters.  
   2. Grouping words may help to grasp ideas.  
   3. Experiments have proved it to be true.

C. When we read rapidly there is less —
   1. concentration  
   2. mind-wandering  
   3. effort

4. The Arlington National Cemetery, which is the national burial ground of our military heroes, is situated in Arlington, Virginia, on the banks of the Potomac River. It was used as a cemetery dates from 1864, when a Confederate soldier was first buried there. Since that time, more than 25,000 soldiers, of whom a majority were Civil War soldiers, have been buried in this cemetery. The best-known memorial in the cemetery is the Tomb of the Unknown Soldier. The monument erected for the victims of the Maine and the amphitheater erected through the efforts of the Grand Army of the Republic are also quite impressive.

A. Choose the best title for the paragraph.
   1. The Arlington National Military Cemetery  
   2. The Tomb of the Unknown Soldier  
   3. The Location of the National Military Cemetery

B. What class of people are buried in Arlington National Cemetery?
   1. political leaders  
   2. military heroes  
   3. financial leaders

C. The first soldier buried in Arlington National Cemetery was —
   1. a Revolutionary War hero  
   2. a Union soldier  
   3. a Confederate soldier

Go right on to the next page.
### PART B. SCIENCE

#### Erosion means —
1. evasion
2. gathering up
3. conservation
4. waste lands
5. wearing away

#### Crystal means —
1. extremely clear
2. dark
3. smooth
4. opaque
5. hard

#### Combustion means —
1. combined
2. destruction
3. the act of burning
4. chemical analysis
5. decomposition

To liquefy is to —
1. harden
2. dissolve
3. reshape
4. mold
5. make into gas

To solidify is to —
1. cause to harden
2. destroy
3. dissolve
4. discharge
5. change to a liquid

#### Luminous means —
1. heated
2. transparent
3. full of light
4. without light
5. perforated

#### Humidity refers to —
1. heat
2. dryness
3. suffocation
4. wind
5. moisture

#### Microscopic means —
1. very interesting
2. telescopic
3. bacteria
4. exceedingly small
5. light rays

#### Equilibrium means —
1. equilateral
2. equivalent
3. a state of balance
4. bound together
5. moving about

#### Rigid means the same as —
1. visible
2. calm
3. rough
4. round
5. stiff

To digest means to —
1. divert
2. assimilate physically
3. destroy completely
4. eat
5. control

To preserve means to —
1. put away
2. keep from decay
3. destroy
4. persevere
5. put in cans

Sterile means —
1. having unusual strength
2. weak
3. stern
4. incapable of reproducing
5. microscopic

To repel means to —
1. force apart
2. attract
3. restrain
4. call together
5. repeat

A phenomenon is —
1. something scientific
2. a distraction
3. a legal conference
4. an observable event or fact
5. scientific data

### PART C. MATHEMATICS

#### To simplify is to —
1. make less complex
2. divide
3. add together
4. account for
5. bring down

#### To depreciate is to —
1. liquidate
2. falsify a report
3. decrease in value
4. destroy property
5. elevate

#### Dimensions mean —
1. distances
2. circumferences
3. areas
4. volume
5. measurements

#### A fraction is a —
1. decimal
2. fracture
3. complete number
4. part of a whole
5. reduced number

An octagon is —
1. a four-sided figure
2. an eight-sided figure
3. a circular figure
4. a measure of volume
5. a six-sided figure

#### Proportional means —
1. having the same ratio
2. different
3. rational
4. abstract
5. proved proposition

An arc is a part of a —
1. rectangle
2. diameter
3. radius
4. circle
5. triangle

To calculate is to —
1. cultivate
2. stimulate
3. converge
4. traverse
5. compute

#### Quadrilateral means —
1. six-sided
2. a right angle
3. a large area
4. four-sided
5. many-sided

To reduce means to —
1. invert
2. multiply
3. transpose
4. divide
5. change form without changing value

An obtuse angle is —
1. a right angle
2. exactly 360°
3. between 90° and 180°
4. an acute angle
5. less than 90°

To evaluate is to —
1. appraise
2. develop
3. reduce
4. collect
5. distribute

An hypothesis is a(n) —
1. general law
2. proved belief
3. tentative theory
4. infallible rule
5. mathematical equation

An abstract number is —
1. a whole number
2. used without specific application
3. a fractional value
4. applied to things
5. a partial answer

The abscissa is the —
1. y-distance
2. x-distance
3. hypotenuse
4. diagonal
5. circumference

Go right on to the next page. Number Right, Part B Number Right, Part C
TEST 5. SENTENCE MEANING (Cont’d)

Is the President considered the executive head of the United States? ........................................ 26

Does the enemy ever attempt to confuse its opponents by several methods of attack? .................. 27

Will education usually hinder an individual in securing an important position? .......................... 28

Will a good mathematician be likely to make excessive errors in arithmetic? .............................. 29

Will a bankrupt individual usually have a large bank balance? .................................................... 30

Is social progress always secured by social legislation? ................................................................. 31

Does a man usually derive satisfaction from doing his work efficiently? ..................................... 32

Will courtesy sometimes accomplish more than threatening? ....................................................... 33

Are economic conditions benefited by a prolonged depression? .................................................... 34

Is international good will likely to be hindered by widespread use of a language which all people understand? ................................................................. 35

Is a measure likely to be passed by Congress if members unanimously favor it? ....................... 36

Is the publication of libelous statements an ethical practice? ....................................................... 37

Does a religious martyr adhere to his beliefs in spite of persecution? ........................................ 38

Are individuals with low intelligence likely to graduate from college with honors? ....................... 39

Is harmony among nations fostered by border difficulties? .......................................................... 40

Does a metropolitan newspaper ever distort political news? ....................................................... 41

Does damming up a stream create an artificial lake? ................................................................. 42

Is promptness in arriving at work likely to be condemned by an employer? .............................. 43

Do illegal enterprises sometimes receive support from legal sources? ........................................ 44

Does the usual police force provide adequate protection in times of great strife? ....................... 45

Do carefully verified calculations sometimes turn out to be in error? ..................................... 46

Is procrastination a virtue which people admire? ........................................................................... 47

Are efficient employees ever discharged during an industrial depression? ................................ 48

Will a public debater always possess the facts necessary to establish his position? .................... 49

Are altruistic individuals constantly concerned about their selfish interests? ............................... 50

not turn this page until you are told to do so.  No. Right ............ No. Wrong ............. Right minus Wrong.
To be dramatic is to be — 1 commonplace  2 unusual  3 polished  4 vividly expressive  5 established.

A proverb is — 1 a statement from Franklin’s Autobiography  2 an old saying  3 provincial language  4 prophetic speech  5 a dialogue.

A preface is — 1 an appendix  2 a table of contents  3 an index  4 a prepared introduction  5 a type of bookbinding.

A fable is — 1 long poem  2 couplet  3 tale with a moral  4 morality play  5 mystery tale.

Pathetic means — 1 patriarchal  2 arousing compassion  3 gloomy  4 gruesome  5 ludicrous.

To paraphrase means to — 1 give meaning in another form  2 embody in a letter  3 speak  4 rhyme  5 translate into a foreign language.

Unabridged means — 1 dictionary  2 in condensed form  3 not shortened  4 an encyclopedia  5 having excellent definitions.

A syllabus is a — 1 magazine  2 condensed statement  3 pamphlet  4 folio  5 complete discussion.

Conjugation is — 1 arrangement of adjectives  2 case of nouns  3 connotation  4 declension  5 arrangement of verb forms.

Antonyms are — 1 terse words  2 words similar in meaning  3 words spelled alike  4 vague words  5 words opposite in meaning.

An extract is a(n) — 1 appendix  2 quotation  3 poem  4 anthology  5 bibliography.

A minstrel in olden days was a — 1 Shakespearean actor  2 circus clown  3 novelist  4 lyric poet  5 history writer.

An appendix is — 1 an anecdote  2 a table of contents  3 an index  4 a dramatization  5 supplementary material.

Trite means — 1 commonplace  2 sacred  3 religious  4 tested  5 very rarely used.

A soliloquy is a — 1 monologue  2 dialogue  3 dramatic play  4 Greek theater  5 musical comedy.

An epistle is a — 1 song  2 figure of speech  3 letter  4 myth  5 legend.

A caricature is a(n) — 1 short story  2 condensed novel  3 characterization  4 animated cartoon  5 ridiculous exaggeration.

Cadence refers to — 1 suspense  2 verse form  3 plot  4 rhythm  5 portrayal.

Declension is the — 1 inflection of nouns  2 conjugation of verbs  3 formation of objectives  4 use of Latin  5 past participle.

Vernacular means — 1 foreign language  2 bilingual  3 mother tongue  4 monoglot  5 many languages.

Do not turn this page until you are told to do so.
TEST 5. SENTENCE MEANING

DIRECTIONS. You are to read each sentence and answer it by filling in the answer space under the right answer. Study the samples. Do not guess.

SAMPLES. A. Are all people dishonest? .................................................. A
B. Are authors often quoted? .............................................................. B

- Are generous people sometimes approached by people who have selfish interests? ............................. 1
- Is a boastful person often disliked? ..................................................... 2
- Does a person desire to meet ferocious animals when he is unarmed? ................................................. 3
- Do all athletes have the same scholastic ability? ...................................................................................... 4
- Are exaggerated statements ever found in printed material? ................................................................. 5
- Are people sometimes unintentionally discourteous to their friends? .................................................... 6
- Are all critical people free from prejudices? ............................................................................................ 7
- Do people sometimes experience inconvenience because of their own disregard for law? .................... 8
- Does extensive reading help to increase a person's vocabulary? ............................................................. 9
- Will a scientist be satisfied with crude measurements in conducting an important experiment? .......... 10
- Are house furnishings always chosen with artistic care? ................................................................. 11

- Will our international relations be improved by honesty and fair dealings? ....................................... 12
- Does opposition to the passage of a law mean that one is disloyal? ....................................................... 13
- Are fresh air and sunshine conducive to recovery from tuberculosis? .................................................. 14
- Does the Supreme Court ever reverse the decision of a lower court? .................................................... 15
- Do members of different political parties sometimes disagree upon questions of government policy? ........ 16
- Is a fictitious name always assumed as an alias by a criminal? ............................................................. 17
- Are people sometimes accused of serious crimes because of public sentiment? .................................... 18
- Are parents usually proud of a disrespectful child? ................................................................................. 19
- Does a knowledge of geography help in the understanding of many economic problems? ................... 20
- Does an athlete usually eat rich pastry foods while training for a contest? ............................................ 21
- Is an undesirable reputation usually based upon the previous acts of an individual? .............................. 22
- Will a newspaper sometimes print stories which later are found to be false? ....................................... 23
- Does compulsory military service mean that the government depends upon volunteers? ....................... 24
- Does a person always choose his vocation with sufficient consideration of his abilities? .......................... 25

Go right on to the next page.
Haggerty Reading Examination
SIGMA 3: FORM A
FOR GRADES 6—12
Arranged and standardized by M. E. HAGGERTY and LAURA C. HAGGERTY, University of Minnesota

My name is______________________________ I am a______________________________
First name Last name Write boy or girl

This is the______________________day of______________________ I am____________years old.

My next birthday will be______________________ I am in____________half of Grade____________

The name of my school is______________________________ The name of my city (county) is______________________________

The name of my state is______________________________

Directions for Test 1

1. On the following pages are some words — each word is written like the word red in the next line, with some other words and phrases in parentheses.
red (apple, color, to shine, green)

2. One of the words in the parentheses is a definition of the first word. You are to draw a line under the word or phrase which is the best definition, like this:
red (apple, color, to shine, green)

3. Here are some words for practice. Look at the first word and then look at the words and phrases in the parentheses and draw a line under the word or phrase which is the best definition of the first word. The first one is marked as it should be. Mark all the others.
   a. orange (round, a fruit, sour, to eat)
   b. coffee (black, liquid, drink, bitter)
   c. soldier (man, man who fights, animal, gun)
   d. pupil (school child, boy, school, teacher)
   e. juggler (engineer, plowman, butcher, one who throws balls)

4. Now turn to page 2 and mark all the definitions correctly. Mark the definitions in order.

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TEST 1

VOCABULARY

Draw a line under the best definition for each word.

1 minister (servant, preacher, agent, to assist) .................................................. 1
2 student (one who seeks knowledge, teacher, paper, book) .............................. 2
3 pardon (forgive, hinder, condemn, smile at) ..................................................... 3
4 island (section, part of the ocean, land surrounded by water, peak) .................. 4
5 float (sail, sink, to fly, to stay on top of the water) ........................................... 5
6 cataract (rushing, a waterfall, a basin, a spray) .............................................. 6
7 aisles (houses, passages, churches, length) ....................................................... 7
8 parliament (a conference, to propose, to palliate, foreigners) ........................... 8
9 perilous (precious, dangerous, to spy, to invest) ............................................. 9
10 fleet (navy, engineer, group of vessels, effective) ........................................... 10
11 armor (metal, protective covering, soldiers, knights) ....................................... 11
12 wharf (person who has no parents, landing place for ships, edge, animal) ......... 12
13 brandy (wine, liquid, liquor, medicine) ............................................................ 13
14 noose (midday, a loop with knot, a gallows, a moose) ...................................... 14
15 bristling (stubby, standing stiff, long, thin) .................................................... 15
16 descend (to move downwards, to fall, to speed, to climb) ............................... 16
17 retort (a charge, to speak back, civility, to control) .......................................... 17
18 calm (quiet, sleepy, night, restful) ................................................................. 18
19 cupola (church, high, schoolhouse, rounded dome) .......................................... 19
20 swain (a prince, a country lover, swing, a student) ........................................... 20
21 coast (shore line, outside, near the sea, boundary) .......................................... 21
22 value (prize, worth, cost, amount) ................................................................. 22
23 deceitful (trustworthy, misleading, sincere, careful) ......................................... 23
24 lapwing (flapping, crest, a bird, to waver) ...................................................... 24
25 dubious (certain, unsettled, determined, in danger) ......................................... 25
26 pallid (morose, darkness, pale, placid) ........................................................... 26
27 dwindled (swindled, decreased, to consume, dwarflike) .................................... 27
28 derision (amazement, mockery, decision, to succumb) .................................... 28
29 navies (commerce, navigation, fleets of warships, canoes) ............................. 29
30 crevice (tiny, a fissure, rocky, mountains) ..................................................... 30
31 ardent (praise, passionate, relative, to wed) .................................................... 31
32 scrupulous (populous, scrappy, conscientious, sacred) ..................................... 32
33 steel (metal, mineral, hard substance, a kind of iron) ....................................... 33
34 revive (to remember, to call back, to have life again, to return) ....................... 34
35 zinc (stove, to wash dishes in, soft lead, mineral) ........................................... 35

Go to top of next page.
Directions for Test 2

1. In the following pages are some sentences. Each sentence asks a question which can be answered by YES or NO. The sentences are written like this:

   Are all men soldiers? ..........YES NO

2. You are to draw a line under the right answer, like this:

   Are all men soldiers? ..........YES NO
   Are some men soldiers? ..........YES NO

3. Mark the right answer to these sentences by drawing a line under the YES or the NO. Do not mark both YES and NO. Mark only the right answer.

   a. Is snow white? ..........YES NO
   b. Are elephants plants? ..........YES NO
   c. Can a pupil respond to a question? ..........YES NO
   d. Are multitudinous defects desirable? ..........YES NO
   e. May a hamlet be located in a province? ..........YES NO

4. Now turn to page 4 and mark all the sentences correctly. Mark the sentences in order.
<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can good children make promises?</td>
<td></td>
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<tr>
<td>2. Do all people rent houses?</td>
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<td>3. Do laborers ever become exhausted?</td>
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<td>4. Are compasses used by mariners?</td>
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<td>5. Can children act in a serviceable manner?</td>
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<td>6. Do caravans always move with great speed?</td>
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<td>7. Is day always preceded by night?</td>
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<td>8. Can a boy be absorbed in a performance?</td>
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<td>9. Do vicious men plan revenge?</td>
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<td>10. Are all experiences humiliating?</td>
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<td>11. Are all sources of information reliable?</td>
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<td>12. Do some people have bright prospects?</td>
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<td>13. Do histories consist chiefly of prophecies?</td>
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<td>14. Are brazen persons the best companions?</td>
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<td>15. Can a man possess both valor and vigor?</td>
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<td>16. Are continuous sounds always harmonious?</td>
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<td>17. Are armed cruisers vessels of war?</td>
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<td>18. Is a battery a place where transports are made?</td>
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<td>19. Are venerable people sometimes invincible?</td>
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<td>20. Do lunatics render great service to their country?</td>
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<td>21. Are inquiring friends sometimes courteous?</td>
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<td>22. Should evildoers make amends?</td>
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<td>23. Do autumnal showers occur in the winter?</td>
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<td>24. Can prominent people administer relief?</td>
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<td>25. Are devices used in measuring time?</td>
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<td>26. Do ravenous monsters respond to persuasion?</td>
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<td>27. Are arsenals primarily for civic meetings?</td>
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<td>28. Are stalactites parts of dwellings?</td>
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<td>29. Are the prospects of good crops always remote?</td>
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<td>30. Do financial transactions involve monetary considerations?</td>
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<td>31. Are the adherents of law and order sometimes orthodox?</td>
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<td>32. May popular distrust be evident to a sovereign?</td>
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<td>33. Can a challenge to a duel be accepted?</td>
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<td>34. Is it mutinous to give succor to the helpless?</td>
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<td>35. Can the confidence of a discouraged man be restored?</td>
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<td>36. Are insidious people usually deceptive?</td>
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<td>37. May candidates live in hamlets?</td>
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<td>38. Does fidelity denote faithfulness?</td>
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<td>39. Do conciliating parties have pacific interests?</td>
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<tr>
<td>40. Are assiduity and frugality undesirable characteristics?</td>
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</tbody>
</table>

Right: \[ \] Wrong: \[ \] Score: \[ \]
Directions for Test 3

Read these directions in order and do what they say to do.

1. The following pages contain a series of paragraphs with directions. You are to read the paragraphs and do what the directions tell you to do.

2. There are two kinds of directions. The first direction is to "underline." Where this direction occurs, you are to draw a line under the correct word or phrase, as in this sample:

   He was an old-fashioned scholar who made the boys learn the Latin grammar by heart, and who flogged them when they failed.

   i. Underline the correct word to complete this sentence:

      The "old-fashioned scholar" was
      young
      jolly
      severe
      ignorant

   "Severe" is the correct word, and so you should draw a line under the word "severe." Do it before you read the next line.

3. The second direction is to "check." Where this direction occurs, you are to put a check like this ✓ in front of the correct statement, as in this sample:

   2. Check the true sentence:
      a. —The scholar was a boy.
      b. —The scholar taught history.
      c. —The scholar taught Latin.

4. The first and second statements are clearly false. The third one is true. So a check mark should be put in front of the third sentence. Put it on the line between the letter c and the first word of the sentence. Do it.

5. On the following pages read each paragraph as you come to it. Then read directions which follow the paragraph and do what the directions tell you to do. The correct answers to all questions are to be found by reading the paragraphs. Read the paragraphs as often as you need to.

6. Now turn the page. You will have about twenty minutes to work. Do all you can in that time, but work carefully. Make the correct mark for each direction.
PARAGRAPH READING

I

A carriage, drawn by four horses, dashed 'round the turn of the road. Within it, thrust partly out of the window, appeared the face of a little old man, with a skin as yellow as gold. He had a low forehead, small, sharp eyes puckered about with innumerable wrinkles, and very thin lips, which he made still thinner by pressing them forcibly together.

1. Underline the correct phrase:
   a. two mules
   b. a fancy team
   c. four horses
   d. a gray mare

2. Check the sentence which is true:
   a. — The carriage was slowly drawn around the turn.
   b. — The carriage was turned over as it rounded the turn.
   c. — The carriage was hurried violently around the turn.

3. Check the false statements:
   a. — The man was large and bony.
   b. — The man was middle-aged.
   c. — The man was little and old.

II

There was the greatest interest throughout the ship, and not an eye was closed that night. As the evening advanced, Columbus took a position in the cabin of his vessel and kept up a continuous watch. About two o'clock he thought he beheld a light, glimmering at a great distance. Fearing his eager eyes might deceive him, he called a gentleman of the King's bedchamber, to inquire whether he saw such a light, and he admitted that he saw it.

1. Underline the word that shows what time it was:
   a. midday
   b. forenoon
   c. night
   d. afternoon

2. Underline the correct phrase:
   a. riding on a train
   b. walking on land
   c. living in a house
   d. traveling in a boat

3. Check the statement which is true:
   a. — Columbus called the King.
   b. — The gentleman saw a light.
   c. — All were asleep except Columbus.

4. Check one statement which is not true:
   a. — Columbus watched continuously.
   b. — Columbus first saw the light.
   c. — No one except Columbus was interested.
   d. — Columbus saw the light after midnight.

III

In the anteroom he found his attendant Anwold, who, taking the torch from the hand of the waiting-maid, conducted him with more haste than ceremony to an exterior and ignoble part of the building, where a number of small apartments, or rather cells, served for sleeping places to the lower order of domestics and to strangers of mean degree.

1. Check the true sentences:
   a. — Anwold was in the basement.
   b. — Anwold was in a waiting-room.
   c. — Anwold was not to be found.

2. Check the true statements:
   a. — The attendant took the light from the maid.
   b. — The attendant led the way.
   c. — Anwold held high his torch.

3. Underline the phrase making this sentence true:
   a. — The poorest servants had sleeping quarters in: the downstairs apartments
   b. — The worst part of the building
   c. — the attic

4. Underline the words which describe the strangers:
   a. fashionable
   b. guests of high repute
   c. of low manner
   d. poorly clad

Go to top of next page.
The great error in Rip’s composition was an insuperable aversion to all kinds of profitable labor. It could not be for the want of assiduity or perseverance; for he would sit on a wet rock, with a rod as long and heavy as a Tartar’s lance, and fish all day without a murmur, even though he should not be encouraged by a single nibble. He would carry a fowling-piece on his shoulder for hours together, trudging through woods and swamps, and up hill and down dale, to shoot a few squirrels or wild pigeons. He would never refuse to assist a neighbor, even in the roughest toil, and was a foremost man at all country frolics for husking Indian corn, or building stone-fences; the women of the village, too, used to employ him to run their errands, and to do such little odd jobs as their less obliging husbands would not do for them. In a word, Rip was ready to attend to anybody’s business but his own; but as to doing family duty, and keeping his farm in order, he found it impossible.

Yet, unless I greatly deceive myself, the general effect of this chequered narrative will be to excite thankfulness in all religious minds, and hope in the breasts of all patriots. For the history of our country during the last hundred and sixty years is eminently the history of physical, of moral, and of intellectual improvement. Those who compare the age on which their lot is fallen with a golden age which exists only in their imagination may talk of degeneracy and decay; but no man who is correctly informed as to the past will be disposed to take a morose or desponding view of the present.

1. Underline the phrase necessary to complete this sentence:

The author believes his narrative will: discourage the people inspire hope in the people leave the people indifferent

2. Check the one of the following sentences which is true:

a. — Rip never showed perseverance.
b. — Rip’s neighbors disliked him.
c. — Rip was an obliging neighbor.

3. Check the one of the following sentences which is true:

a. — Rip owned a well-kept farm.
b. — Rip disliked profitable labor.
c. — Rip always avoided rough work.

4. Underline the words which describe Rip’s character:

careless
good-natured
thrifty

5. Check all the true statements among the following:

a. — By “chequered narrative” the author refers to a historical narrative.
b. — The author believes his country has improved in the past century.
c. — The author believes all persons will accept his conclusions.

6. Check all the true statements among the following:

a. — The country had improved physically but not morally.
b. — Well-informed persons will take a hopeful view of the present.
c. — The “golden age” exists in imaginative minds.

7. Check the true statement:

a. — The history of “our country” is encouraging to religious minds.
The champions were therefore prohibited to thrust with the sword, and were confined to striking. A knight, it was announced, might use a mace or battle-ax at pleasure, but the dagger was a prohibited weapon. A knight unhorsed might renew the fight on foot with any other on the opposite side in the same predicament; but mounted horsemen were in that case forbidden to assail him. When any knight could force his antagonist to the extremity of the lists, so as to touch the palisade with his person or arms, such opponent was obliged to yield himself vanquished, and his armor and horse were placed at the disposal of the conqueror. A knight thus overcome was not permitted to take further share in the combat. If any combatant was struck down, and unable to recover his feet, his squire or page might enter the lists and drag his master out of the press; but in that case the knight was adjudged vanquished, and his arms and horse declared forfeited.

1. Underline the word which names the weapon that could not be used:
   - sword
   - mace
   - dagger
   - battle-ax

2. Check the one of these statements which is false:
   a. — A knight could fight on foot.
   b. — One knight could not injure another knight.
   c. — Mounted horsemen could fight only mounted horsemen.

3. Check the false statements:
   a. — A knight could be vanquished without being killed.
   b. — A knight's page could fight.
   c. — A vanquished knight retained his horse.

4. Check the true statements:
   a. — Champions were prohibited to use the sword.
   b. — An unhorsed knight could renew the fight.
   c. — An opponent was vanquished if his arms touched the palisade.
   d. — A knight dragged from the lists by his page was beaten.

The speech of Judge Hoar was perfect, and to that handful of people, who heartily applauded it. When a good man rises in the cold and malicious assembly, you think, “Well, it would be more prudent to be silent. Why not rest on a good past? Nobody doubts your talent and power; and, for the present business, we know all about it, and are tired of being pushed into patriotism by people who stay at home.” But he, taking no counsel of past things, but only of the inspiration of his today’s feelings, surprises them with his tidings, his better knowledge, his larger view, his steady gaze at the new and future event, whereof they had not thought, and they are interested like so many children, and carried off out of all recollection of their malignant nonsense, and he gains his victory by prophecy, where they expected repetition. He knew beforehand that they were looking behind, and that he was looking ahead, and therefore it was wise to speak. What a godsend are these people to a town! and the Judge, what a faculty! — he is put together like a Wal- tham watch, or like a locomotive just finished from the Tredegar Works.

1. Check all true statements, if any:
   a. — The audience was inclined to look backward.
   b. — At the end of the speech the audience was hostile.
   c. — The speaker had a forward-looking mind.

2. Check all false statements, if any:
   a. — The author admires Judge Hoar.
   b. — The speaker surprised his audience.
   c. — The audience changed its attitude.
   d. — The speech was a failure.

3. Underline the words which best describe Judge Hoar:
   - talented
   - sagacious
   - retrospective
   - prophetic

4. Check the false statements:
   a. — The Judge talked about an old subject in a new way.
   b. — The audience was wiser than the Judge.
   c. — The Judge was a burden to his community.

[8] Right ------------×2 = Score -------------------
Haggerty Reading Examination

SIGMA 3: FORM B

FOR GRADES 6-12

Arranged and standardized by M. E. HAGGERTY and LAURA C. HAGGERTY, University of Minnesota

My name is ______________________________ I am a ____________________________

First name Last name Write boy or girl

This is the ___________________________ day of ________________ 19________ I am __________ years old.

My next birthday will be ________________ 19________ I am in __________ half of Grade __________

The name of my school is ____________________________ The name of my city (county) is ____________________________

The name of my state is ____________________________

Directions for Test 1

1. On the following pages are some words — each word is written like the word red in the next line, with some other words and phrases in parentheses.
   red (apple, color, to shine, green)

2. One of the words in the parentheses is a definition of the first word. You are to draw a line under the word or phrase which is the best definition, like this:
   red (apple, color, to shine, green)

3. Here are some words for practice. Look at the first word and then look at the words and phrases in the parentheses and draw a line under the word or phrase which is the best definition of the first word. The first one is marked as it should be. Mark all the others.
   a. orange (round, a fruit, sour, to eat)
   b. coffee (black, liquid, drink, bitter)
   c. soldier (man, man who fights, animal, gun)
   d. pupil (school child, boy, school, teacher)
   e. juggler (engineer, plowman, butcher, one who throws balls)

4. Now turn to page 2 and mark all the definitions correctly. Mark the definitions in order.
TEST 1

VOCABULARY

Draw a line under the best definition for each word.

1 labor (look sad, work, liquor, to read)
2 victory (fight, to win a battle, sign, to exclaim)
3 captain (wears cap, person who commands, tall man, master)
4 cabin (small house, building, to peep, a ship)
5 tea (drink made from leaves, afternoon party, food, letter)
6 route (way to be traveled, march, pass, distance)
7 abundance (plenty, multitude, fruitful, several)
8 artificial (artful, not natural, to narrate, crafty)
9 plantation (large field, farm in South, cotton, place for grain)
10 shriek (to laugh, to seize, to spoil, to scream)
11 conceal (to hunt, to hide, to watch, to grasp)
12 herbage (a pasture, green plants, forests, agriculture)
13 embark (troops, fortune, to board a vessel, to undertake)
14 idle (lazy, quiet, not working, dreaming)
15 pierce (an enemy, a passage, a mystery, to penetrate)
16 enchanted (fascinated, connected, controlled, relieved)
17 keel (a molding, to project, bottom of ship, material)
18 adjusted (promised, impaired, arranged, to hold)
19 chivalry (kindness, cavalry, to be fair, just)
20 legacy (a gift by will, a delegate, a parchment, a loan)
21 knave (rascal, like a knife, well known, to be honest)
22 celestial (flowers, heavenly, above, splendid)
23 rare (a quality, character, precise, unusual)
24 cordial (sincere, helpful, trustworthy, true)
25 liberated (united, set free, to be liberal, destroyed)
26 ballad (musical, soloist, symphony, simple song)
27 monologue (speaking alone, to mumble, epilogue, to traverse)
28 beguile (to teach, to deceive, to be sorry, to disturb)
29 climate (temperature, atmospheric conditions, to be very hot, to be cold)
30 formality (substance, ceremony, extreme, regularity)
31 patriarch (family, paternal, an elder, a patriot)
32 conflagration (a fire, a large space, to heat, fiercely)
33 assiduity (diligence, hopeful, to work, scholar)
34 obstacles (observe, spectacles, opposition, to obviate)
35 nocturnal (poisonous, nightly, sentiment, insects)
Directions for Test 2

1. In the following pages are some sentences. Each sentence asks a question which can be answered by YES or NO. The sentences are written like this:

Are all men soldiers? ............ YES  NO

2. You are to draw a line under the right answer, like this:

Are all men soldiers? ............ YES  NO
Are some men soldiers? ............ YES  NO

3. Mark the right answer to these sentences by drawing a line under the YES or the NO. Do not mark both YES and NO. Mark only the right answer.

   a. Is snow white? ............ YES  NO
   b. Are elephants plants? ............ YES  NO
   c. Can a pupil respond to a question? ............ YES  NO
   d. Are multitudinous defects desirable? ............ YES  NO
   e. May a hamlet be located in a province? ............ YES  NO

4. Now turn to page 4 and mark all the sentences correctly. Mark the sentences in order.
TEST 2

SENTENCE READING

Draw a line under the right answer to each question.

1. Are shingles used on houses? ........................................YES NO
2. Are all fabrics made of wool? .......................................YES NO
3. Would you trust a dishonest character? ..............................YES NO
4. Are the opponents in controversy always enemies? ..............YES NO
5. Are victorious persons sometimes accorded honor? ................YES NO
6. Do the follies of children ever astound their parents? ..........YES NO
7. Do all inland cities have marvelous dwellings? ....................YES NO
8. Is the protection of citizens desired by most mayors? ............YES NO
9. Is counterfeited money coveted by honest folk? ....................YES NO
10. Can a pestilence be dangerous and destructive? ..................YES NO
11. Do physicians assist in combating disease? ........................YES NO
12. Are magnanimous persons always destructive? .....................YES NO
13. Do travelers occasionally perish in a severe climate? ..........YES NO
14. Is all exercise violently taken? .....................................YES NO
15. Should valuable documents be preserved? ..........................YES NO
16. Do manuscripts convey information? ................................YES NO
17. May an anonymous letter reach its destination? ..................YES NO
18. Do the disputations of men sometimes involve theories? .........YES NO
19. May there be contention among members of a jury? ...............YES NO
20. Does barren land have luxuriant vegetation? ........................YES NO
21. Is the intensity of heat determined by a scepter? .................YES NO
22. May an officer arrest a vagrant youth? .............................YES NO
23. Do extinguished lights give forth great brilliancy? ..............YES NO
24. Are all laws enacted with facility? ..................................YES NO
25. Do loud boastings ever give offense? ................................YES NO
26. Is citron found in craters? ..........................................YES NO
27. May the route of a regiment be disclosed by designing impostors?.......YES NO
28. Are good citizens insensible to progress? ..........................YES NO
29. Do embezzlers practice fraudulent activities? .....................YES NO
30. Do controversies determine the velocity of a stream? ............YES NO
31. Are disasters ever inexplicable? ....................................YES NO
32. Do despots invest subordinates with great authority? ............YES NO
33. Is petty larceny conducive to good repute? .........................YES NO
34. Were primeval forests devoid of trees? .............................YES NO
35. Should a heavily laden horse be vigorous? ........................YES NO
36. Do imbeciles have high intelligence? ...............................YES NO
37. Is a turbid stream devoid of sediment? .............................YES NO
38. May a deliberate man advocate an embargo? .......................YES NO
39. Does grim determination invariably bring about reconciliation? ....YES NO
40. Is perspicacity a desideratum of constructive statesmanship? ....YES NO

Right .................................Wrong..............................Score ...........................

Sigma 3: Form B
Directions for Test 3

Read these directions in order and do what they say to do.

1. The following pages contain a series of paragraphs with directions. You are to read the paragraphs and do what the directions tell you to do.

2. There are two kinds of directions. The first direction is to “underline.” Where this direction occurs, you are to draw a line under the correct word or phrase, as in this sample:

   He was an old-fashioned scholar who made the boys learn the Latin grammar by heart, and who flogged them when they failed.

   I. Underline the correct word to complete this sentence:

   young
   jolly
   severe
   ignorant

   “Severe” is the correct word, and so you should draw a line under the word “severe.” Do it before you read the next line.

3. The second direction is to “check.” Where this direction occurs, you are to put a check like this ✓ in front of the correct statement, as in this sample:

   2. Check the true sentence:

   a. —The scholar was a boy.
   b. —The scholar taught history.
   c. —The scholar taught Latin.

   The first and second statements are clearly false. The third one is true. So a check mark should be put in front of the third sentence. Put it on the line between the letter c and the first word of the sentence. Do it.

5. On the following pages read each paragraph as you come to it. Then read directions which follow the paragraph and do what the directions tell you to do. The correct answers to all questions are to be found by reading the paragraphs. Read the paragraphs as often as you need to.

6. Now turn the page. You will have about twenty minutes to work. Do all you can in that time, but work carefully. Make the correct mark for each direction.
They went across the hall to a door at the back of the house. It opened before them and disclosed a long, bare, melancholy room, made barer still by lines of desks. At one of these a lonely boy was reading near a feeble fire; and Scrooge sat down upon a form, and wept to see his poor forgotten self as he had used to be.

I

1. Underline the words telling where the door was:
   - in the front
   - at the side
   - in the rear
   - by the porch

2. Underline the true statement:
   - The room was cheery.
   - The room had desks in it.
   - The room was filled with beautiful pictures and flowers.

3. Check the one of the following statements which is true:
   - There were many boys getting their lessons.
   - One lonely lad was reading by a fire.
   - Only one person crossed the hall.

4. Underline the statements which are true:
   - Scrooge cried.
   - Scrooge sat down.
   - Scrooge laughed aloud.

II

Maggie soon thought she had been hours in the attic, and it must be tea time, and they were all having their tea, and not thinking of her. Well, then, she would stay up there and starve herself—hide herself behind the tub and stay there all night; and they would all be frightened, and Tom would be sorry. Thus Maggie thought in the pride of her heart, as she crept behind the tub; but presently she began to cry again at the idea that they didn’t mind her being there. If she went down again to Tom now—would he forgive her? Perhaps her father would be there, and he would take her part.

1. Check the statement which describes Maggie’s thoughts about Tom:
   - She hated him.
   - She wondered if he would forgive her.
   - She wanted her father to punish him.
   - She did not like Tom.

2. Underline the phrase which tells what Maggie hoped her father would do:
   - punish Tom
   - scold her
   - take her part
   - send her to bed

3. Check the false statement:
   - Maggie was proud.
   - Maggie was sorry for herself.
   - Maggie was brave and did not cry.

4. Check the true statements:
   - Maggie thought it was tea time.
   - Maggie thought she was forgotten.
   - Maggie enjoyed being alone.

III

He had in his house a housekeeper past forty, a niece under twenty, and a lad for the field and market place, who used to saddle the hack as well as handle the pruning hook. The age of this gentleman of ours was bordering on fifty; he was of a hardy habit, spare, gaunt featured, a very early riser and a great sportsman.

1. Underline the words which describe the housekeeper:
   - very old
   - a young woman
   - middle-aged
   - a kindly soul

2. Check the statement which is true:
   - The gentleman lived alone.
   - He was very fond of his niece.
   - The niece was young.
   - The lad was tall and slender.
3. Check the false statement:
   a. — He employed a boy to assist in the house.
   b. — The lad worked in the fields and did the marketing.
   c. — The gentleman had need for help.

4. Underline the phrases which describe the man:
   a late sleeper
   fond of sports
   thin and spare

IV

For my own part, as the gondola slipped away from the blaze and bustle of the station down the gloom and silence of the broad canal, I forgot that I had been freezing two days and nights; that I was at that moment very cold and a little homesick. I could at first feel nothing but that beautiful silence, broken only by the star-silvered dip of the oars. Then on either hand I saw stately palaces rise gray and lofty from the dark waters, holding here and there a lamp against their faces, which brought balconies, and columns, and carven arches into momentary relief, and threw long streams of crimson into the canal. I could see by that uncertain glimmer how fair was all, but not how sad and old; and so, unhaunted by any pang for the decay that afterward saddened me amid the forlorn beauty of Venice, I glided on.

1. Check the correct sentence:
   a. — The author was in a familiar scene.
   b. — The author was in New York City.
   c. — The author was in Europe.

2. Underline the one of these phrases which shows how light it was:
   very light
   very dark
   dimly lighted

3. Check the one of the following sentences which is true:
   a. — Joe caught a fox.
   b. — Old Sandy escaped.
   c. — More than one person saw the chase.
   d. — Jonah was a poor runner.

4. Check each of these sentences which is false:
   a. — Old Sandy was too tired to run.
   b. — Jonah ran under the fence.
   c. — None of the dogs barked.
   d. — Jonah caught the fox.

V

Old Sandy seemed to know that this was his last opportunity. With a marvelous burst of speed he plunged through the belated dogs that were hunting for the lost drag, slipped through the fence, and went back by the spectators like a flash. There was a tremendous outburst of music from the dogs as they sighted him, and for one brief moment Joe was afraid that Jonah would be thrown out. The next instant the dog appeared on the fence, and there he sighted the fox. It was then that the courage and speed of Jonah showed themselves. Nothing could have stood up before him. Within a hundred yards he ran into the fox. Realizing his fate, Old Sandy leaped into the air with a squall, and the next moment the powerful jaws of Jonah had closed on him.

1. Underline the word that tells what Joe was:
   dog
   man
   fox
   horse

2. Check the false sentences:
   a. — The writer is describing a battle.
   b. — The writer is describing a fox chase.
   c. — The writer is describing a race.

3. Check each of these sentences which is true:
   a. — Joe caught a fox.
   b. — Old Sandy escaped.
   c. — More than one person saw the chase.
   d. — Jonah was a poor runner.

4. Check each of these sentences which is false:
   a. — Old Sandy was too tired to run.
   b. — Jonah ran under the fence.
   c. — None of the dogs barked.
   d. — Jonah caught the fox.

Go to top of next page.
VI

This government, the offspring of our own choice, uninfluenced and unawed, adopted upon full investigation and mature deliberation, completely free in its principles, in the distribution of its powers, uniting security with energy, and containing within itself a provision for its own amendment, has a just claim to your confidence and your support. Respect for its authority, compliance with its laws, acquiescence in its measures, are duties enjoined by the fundamental maxims of true liberty. The basis of our political systems is the right of the people to make and to alter their constitution of government; but the constitution which at any time exists, till changed by an explicit and authentic act of the whole people, is sacredly obligatory upon all. The very idea of the power and the right of the people to establish government presupposes the duty of every individual to obey the established government.

1. Check each of the following which is true according to the author:
   a. — The people should not make their own laws.
   b. — True liberty demands that people obey the law and respect authority.
   c. — The people have no right to change the constitution of their government.

2. Check the statement which is false:
   a. — “Our political systems” are founded on the right of the people to alter their constitution.
   b. — The government of which the author speaks makes no provisions for being changed.
   c. — The people are obligated to be loyal to the government.

3. Check all true statements:
   a. — This government was forced on the people.
   b. — This government has power.
   c. — This government was adopted deliberately.

4. Check all false statements:
   a. — A minority may change the constitution.
   b. — The government makes no provision for its own growth.
   c. — True liberty does not imply duties.
   d. — The people have the right to establish government.

VII

I confess I did not much like this decision of the gypsy; I felt very slight inclination to leave the town behind, and to venture into unknown places in the dark night, amidst rain and mist, for the wind had now dropped and the rain began again to fall briskly. I was, moreover, much fatigued, and wished for nothing better than to deposit myself in some comfortable manger where I might sink to sleep, lulled by the pleasant sound of horses and mules dispatching their provender. I had, however, put myself under the direction of the gypsy, and I was too old a traveler to quarrel with my guide under the present circumstances. Therefore followed close at his crupper, our only light being the glow emitted from the gypsy’s cigar; at last he flung it from his mouth into a puddle, and we were then in darkness.

1. Underline the phrases which cannot be used to complete this sentence correctly:
   to leave town for unknown parts

   The gypsy decided:
   a. — to stay in town
   b. — to return to a known place
   c. — to leave town alone

2. Underline all the words which describe the traveler:
   a. — tired
   b. — sleepy
   c. — joyous
   d. — doubtful

3. Check the true statement:
   a. — The writer fully approved the decisions of the gypsy.
   b. — The writer desired to sleep in a well-kept room.
   c. — The writer followed closely after the gypsy.
   d. — The writer directed the gypsy to go forward.

4. Check the true statements:
   a. — The writer had perfect confidence in the gypsy.
   b. — The writer was an old traveler.
   c. — The writer did not know where the gypsy was going.
   d. — The gypsy did not carry a lantern.

Right ____________________ × 2 = Score ____________________
General Instructions

This examination is different from the ordinary school examinations to which you have been accustomed. The plan for each of these tests is as follows. First, you are given detailed instructions about the test, so that you know just what you are expected to do. Then you have some practice problems. Then you go to the test proper. This is the procedure for each of the six tests in this examination. The total examination requires an hour.

The six tests in this examination represent a variety of tasks. Three of them involve thinking of a quantitative sort, while the other three require more linguistic ability. If you find one test hard, do not be discouraged. You may find the next test easier. But you should do your best on all the tests.

People differ markedly in the speed with which they can do these different tests. The tests are long enough to keep everyone busy for the whole time, and you are not expected to complete the tests in the time allowed. By noting how many questions you can answer in a certain length of time, we can determine your speed on each kind of test. You must begin to work on a test promptly when the examiner calls the starting time and stop immediately when he says: “Stop.” Do not begin a test until the examiner gives the starting signal for that particular test. Do not turn back to a test after the time for it has expired. You are to work on each test during, and only during, the specified time as announced by the examiner in charge.

You are to record your answers on a separate answer sheet rather than on the pages of the test booklet. Instead of writing down your answers in the usual manner, you will record each answer by blackening the space between a pair of lines. Do not make any marks or record any answers on the pages of this test booklet.

Your answer sheet will be scored accurately if you observe carefully the following directions:

1. On the answer sheet, find the section which corresponds to the practice problems or test proper on which you are working.
2. Then find the row of answer spaces which is numbered the same as the question you are answering.
3. Then find the pair of dotted lines which corresponds to the answer you choose and blacken the space.
4. Indicate each answer with SOLID BLACK PENCIL MARKS drawn vertically between the two dotted lines. Solid black marks are made by going over each mark two or three times and by pressing firmly on the pencil.
5. Make your marks as long as the dotted lines.
6. If you change your answer, erase your first mark completely.
7. Make no unnecessary marks in or around the dotted lines.
8. Keep your answer sheet on a hard surface while marking your answers.
9. Make no folds or creases in the answer sheets.
10. No scratch paper is allowed in any of these tests. The answer sheet contains a special section which may be used for Scribbling.
11. Fold the pages of your test booklet back so that only one page is visible. Place the test booklet to the left. Keep the answer sheet under the test booklet so that the answer spaces being marked are as close as possible to the questions being answered.

(omit the next paragraph unless the tests are to be machine-scored.)

The examination will be scored by an electric test-scoring machine, which makes use of the fact that a solid black pencil mark will carry a current of electricity in the same way that a copper wire does. LIGHT PENCIL MARKS MADE WITH A HARD PENCIL WILL NOT CARRY A CURRENT OF ELECTRICITY! The machine will not give you a correct score unless you indicate your answers with solid black pencil marks made with the special pencil which is provided. Do not use any pencil other than the special one provided. The machine cannot distinguish between intended answers and stray pencil marks. If you are careless in erasing, or if you leave unnecessary marks on or near the pairs of lines, such marks may be counted by the machine as wrong answers so that your score will be lower than it should be.

Wait until the examiner gives the starting signal for the first set of practice problems.
Arithmetic

PRACTICE PROBLEMS

In this test you will be given some problems in arithmetic. After each problem there are five answers, but only one of them is the correct answer. You are to solve each problem and blacken the space on the answer sheet which corresponds to the answer you think is correct. The following problem is an example.

1. How many pencils can you buy for 50 cents at the rate of 2 for 5 cents?
   (a) 10   (b) 20   (c) 25   (d) 100   (e) 125

Find on the answer sheet the space labeled “ARITHMETIC, Practice Problems, Page 3.” The correct answer to the problem is 20, which is answer (b).
In the row numbered 1, space (b) has been blackened.

In the second row, blacken the space which corresponds to the answer to the second practice problem.

2. If James had 4 times as much money as George, he would have $16. How much money has George?
   (a) $4   (b) $8   (c) $12   (d) $16   (e) $64

You should have blackened space (a), which corresponds to $4, the correct answer.

Blacken the spaces corresponding to the answers to the following problems:

3. In 5 days Harry has saved a dollar. What has his average daily saving been?
   (a) 20¢   (b) 22½¢   (c) 25¢   (d) 30¢   (e) 40¢

4. John sold 4 magazines at 5 cents each. He kept ½ the money and with the other ½ he bought papers at 2 cents each. How many did he buy?
   (a) 3   (b) 4   (c) 5   (d) 6   (e) 10

When the signal is given (not yet), turn the page and work more problems of the same kind. Work rapidly and accurately. Your rating will be the total number of correct answers. You may not be able to finish in the time allowed.

Stop here. Wait for the signal.

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Find the correct answer to each problem below. Then blacken the corresponding space on the answer sheet.

1. A man earns $200 on a job requiring 8 weeks. If he works 5 days per week, what are his earnings per day?
   (a) $1  (b) $3  (c) $5  (d) $8  (e) $10

2. How many one-inch cubes can be placed in a box 4 inches wide, 6 inches long, and 2 inches deep?
   (a) 8  (b) 12  (c) 24  (d) 48  (e) 96

3. A file case has 21 drawers numbered from 1 to 21. The even-numbered drawers average 80 cards to the drawer. What is the total number of cards in the even-numbered drawers?
   (a) 800  (b) 880  (c) 960  (d) 1,000  (e) 1,680

4. I noticed that our car had gone 8 miles in 15 minutes. How many miles an hour was it going?
   (a) 16  (b) 24  (c) 32  (d) 40  (e) 48

5. A quarter ounce of gold is worth $4. How many ounces does $48 worth of gold weigh?
   (a) 2  (b) 3  (c) 4  (d) 8  (e) 16

6. The janitors in a large store use 12½ gallons of brass polish each week. How many weeks will 350 gallons of polish last?
   (a) 7  (b) 10½  (c) 11  (d) 22½  (e) 28

7. I bought 6¾ pounds of meat for $2.70. How much per pound did I pay for the meat?
   (a) $.19  (b) $.27  (c) $.33  (d) $.40  (e) $.45

8. Sound travels 1,080 feet per second. If the sound of a stroke of lightning is heard 3.5 seconds after the flash, how many feet away is the stroke?
   (a) 3,240  (b) 3,680  (c) 3,720  (d) 3,780  (e) 3,790

9. Three-fourths of a bushel of nuts is divided equally among 5 people. What fraction of a bushel does each get?
   (a) 1/5  (b) 1/10  (c) 2/15  (d) 3/20  (e) 4/15

10. If 20% of a gang of men were discharged and there were 32 men left, how many men were in the gang at first?
    (a) 40  (b) 80  (c) 100  (d) 120  (e) 160

11. How much more is 3/4 of 3/4 than 1/4 of 3/4?
     (a) 1/16  (b) 3/16  (c) 5/16  (d) 3/8  (e) 7/8

12. A package of crackers containing 10 ounces sells for 10 cents; the same kind sells for 10 cents per pound in bulk. What is the saving on 15 pounds of crackers by buying them in bulk?
     (a) $.50  (b) $.60  (c) $.65  (d) $.90  (e) $1.20

13. One-third of an estate went to charity, and one-half of the remainder went to each of two children. If each child received $5,000, what was the value of the estate?
     (a) $10,000  (b) $15,000  (c) $17,500  (d) $20,000  (e) $25,000

14. X, Y, and Z gathered 100 chestnuts altogether. X gathered 4 more than Y, and Y gathered 6 more than Z. How many did Z gather?
     (a) 28  (b) 32  (c) 34  (d) 36  (e) 38

15. If 10% is lost by selling a bicycle for $9.00, for how much should it have been sold to gain 10%?
     (a) $9.90  (b) $10.00  (c) $10.10  (d) $11.00  (e) $12.00

16. A man owning 3/6 of a section of land sells 20% of his land. What percent of a section has he left?
     (a) 20  (b) 37½  (c) 40  (d) 42½  (e) 50

17. If a stable has enough oats to last 10 horses 8 days, how many days will the oats last 4 horses?
     (a) 3½  (b) 12  (c) 16  (d) 18  (e) 20

18. If the average depth of 3 wells is 68 feet, and no one is less than 64 feet deep, what is the greatest possible depth in feet of one of the three?
     (a) 68  (b) 72  (c) 76  (d) 79  (e) 80

19. A can do a piece of work in 4 hours, and B in 6 hours. How many hours will it take them if they work together?
     (a) 2½  (b) 3  (c) 4  (d) 4½  (e) 5

20. If 9 apples are worth 6 peaches, and 4 peaches are worth 3 oranges, what percent of an orange is worth an apple?
     (a) 25  (b) 33½  (c) 37½  (d) 50  (e) 66%
Completion

PRACTICE PROBLEMS

Look at the following definition. You are to think of the word that fits the definition.

1. A contest of speed.
   B F M P R

The word is race. The letter R is the first letter in the word race. In the section of the answer sheet labeled “COMPLETION, Practice Problems, Page 5,” the space indicated by R in the first row has been blackened.

Blacken the space corresponding to the first letter of the word which fits the following definition.

2. A place or building for athletic exercises.
   C D G H T

The word is gymnasium. You should have marked the space indicated by G because it is the first letter in the word gymnasium.

Do the following examples in the same way:

3. The thin cutting part of an instrument, as of a knife or sword.
   A B D H W
4. The wife of a king.
   F N P Q V
5. A small or portable bed, as of canvas stretched on a frame.
   C G N P T

When the starting signal is given (not yet), turn the page and work more problems of the same kind. Work rapidly because your rating will be the total number of correct answers. You may not be able to finish in the time allowed.

Stop here. Wait for the signal.

1943 Edition
Think of the word that fits the definition. Then mark the first letter of that word on the answer sheet.

<table>
<thead>
<tr>
<th></th>
<th>COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A written direction for the preparation and use of a medicine.</td>
<td>B F H N P</td>
</tr>
<tr>
<td>2. A utensil with meshes for separating coarse particles from finer ones.</td>
<td>P R S V Y</td>
</tr>
<tr>
<td>3. The artificial watering of farm lands to supply growing crops with moisture.</td>
<td>A E I O U</td>
</tr>
<tr>
<td>4. A box or room for keeping food cool.</td>
<td>D H N Q R</td>
</tr>
<tr>
<td>5. The price paid or demanded for the return of a captive.</td>
<td>D E H L R</td>
</tr>
<tr>
<td>6. An artificial covering of hair for the head.</td>
<td>B D E V W</td>
</tr>
<tr>
<td>7. A choosing by vote, as to an office.</td>
<td>A D E G H</td>
</tr>
<tr>
<td>8. A single ring of a chain.</td>
<td>H I J K L</td>
</tr>
<tr>
<td>9. The latter part and close of the day and early part of darkness or night.</td>
<td>E F H I K</td>
</tr>
<tr>
<td>10. A newly enlisted soldier.</td>
<td>N O R W X</td>
</tr>
<tr>
<td>11. An enclosed sheet of ice, usually artificial, for skating.</td>
<td>B E N R V</td>
</tr>
<tr>
<td>12. A chair of state, especially a royal seat on a dais with a canopy.</td>
<td>F I L T W</td>
</tr>
<tr>
<td>13. A trench in the earth made by a plow.</td>
<td>A E F L P</td>
</tr>
<tr>
<td>14. A sworn statement in writing, especially one made upon oath before an authorized officer.</td>
<td>A F H M R</td>
</tr>
<tr>
<td>16. A word of opposite meaning to another.</td>
<td>A D H K L</td>
</tr>
<tr>
<td>17. Extortion by intimidation, especially by threats of public accusation or exposure.</td>
<td>B C F H K</td>
</tr>
<tr>
<td>18. A person given or kept as a pledge, as for fulfillment of a treaty.</td>
<td>G H I J K</td>
</tr>
<tr>
<td>19. A meeting of spiritualists to receive spirit communications.</td>
<td>C F G P S</td>
</tr>
<tr>
<td>20. A taillike plait of hair worn behind.</td>
<td>F J L O Q</td>
</tr>
<tr>
<td>21. A substance composed of two or more metals or a metal and a nonmetal.</td>
<td>A F L N T</td>
</tr>
<tr>
<td>22. A small bottle.</td>
<td>C E H V W</td>
</tr>
<tr>
<td>23. A collection of wild animals in cages for exhibition.</td>
<td>F K M N T</td>
</tr>
<tr>
<td>24. The rules of decorum.</td>
<td>E F G K N</td>
</tr>
<tr>
<td>25. A cabin on shipboard.</td>
<td>E H I M S</td>
</tr>
<tr>
<td>26. All work of imagination in narrative or dramatic form.</td>
<td>C F H I J</td>
</tr>
<tr>
<td>27. A small telescope.</td>
<td>S U V W Y</td>
</tr>
<tr>
<td>28. The act of talking to oneself.</td>
<td>R S T V Y</td>
</tr>
<tr>
<td>29. The husks of grain and grasses separated from the seed by threshing.</td>
<td>A C D E F</td>
</tr>
<tr>
<td>30. One who maliciously sets fire to a building or other property.</td>
<td>D E I O U</td>
</tr>
</tbody>
</table>

Stop here.
Figure Analogies

PRACTICE PROBLEMS

Look at the figures A, B, and C in Sample 1 below. Figure A is a large circle. Figure B is a small circle. By what rule is Figure A changed to make Figure B? The rule is “making it smaller.” Now look at Figure C. It is a large square. What will it be if you change it by the same rule? It will be a small square of the same color as the large square. Figure 2 is a small white square. In the section of the answer sheet labeled “FIGURE ANALOGIES, Practice Problems, Page 7,” the space numbered 2 in the first row has been blackened to indicate the correct answer.

A B C 1 2 3 4 5

In Sample 2 below, the rule is: “Turn Figure A upside down to make Figure B.” Now look at Figure C and think how it would look when turned upside down. It would look like Figure 4. The space numbered 4 has already been blackened on the answer sheet.

A B C 1 2 3 4 5

In Sample 3 below, the rule has two parts: “Make Figure B of the opposite color and larger than Figure A.” Apply the rule to Figure C and blacken the space which corresponds to the correct answer.

A B C 1 2 3 4 5

You should have blackened the space numbered 1, which corresponds to the large white square. Notice that the rule changes from one example to another. You are to do four things to each exercise on this page and the next.

a. Decide what rule is used to change Figure A to Figure B.
b. Apply this rule to Figure C.
c. Select the resulting figure from the five figures at the right.
d. Blacken the space on the answer sheet which is numbered the same as the figure you have selected.

Proceed to the four exercises below, marking your answers on the answer sheet. Go ahead.

A B C 1 2 3 4 5

Stop here. Wait for the signal.

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In each line below, find the rule by which Figure A is changed to make Figure B. Apply the rule to Figure C. Select the resulting figure at the right and blacken the corresponding answer space.

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FIGURE ANALOGIES

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Stop here.
Same-Opposite

PRACTICE PROBLEMS

The word at the left in the following line is “many.”

1. many (1) ill (2) few (3) down (4) sour

One of the four words at the right means either the same as or the opposite of “many.” The word “few,” which is numbered 2, is the opposite of “many.” In the section of the answer sheet labeled “SAME-O PPPOSITE, Practice Problems, Page 9,” space number 2 in the first row has been blackened.

The word at the left in the second example is “ancient.” Select one of the four words at the right that means the same as or the opposite of “ancient.” In the second row on the answer sheet, blacken the space which corresponds to the answer you have selected.

2. ancient (1) dry (2) long (3) happy (4) old

You should have blackened the space numbered 4, because 4 corresponds to “old,” which means the same as “ancient.”

In each of the following lines select the word that means the same as or the opposite of the word at the left. On the answer sheet, blacken the space which corresponds to the answer you have selected.

3. deep (1) blue (2) shallow (3) tense (4) watery
4. awkward (1) clumsy (2) loyal (3) passive (4) young
5. hot (1) dry (2) cooked (3) red (4) cold

When the starting signal is given (not yet), turn the page and work more problems of the same kind. Work rapidly because your rating will be the total number of correct answers. You may not be able to finish in the time allowed.

Stop here. Wait for the signal.
In each row select the word at the right which means the same as or the opposite of the first word in the row. Blacken the space which corresponds to the word you have selected.

| 1. severe | (1) cloudy | (2) lax | (3) flat | (4) rustic |
| 2. healthful | (1) dreamy | (2) fierce | (3) salubrious | (4) willful |
| 3. contemptible | (1) despicable | (2) unequal | (3) flabby | (4) incapable |
| 4. imperative | (1) brilliant | (2) mandatory | (3) cheap | (4) honorable |
| 5. defiant | (1) invisible | (2) indiscreet | (3) submissive | (4) periodic |
| 6. confident | (1) restful | (2) skeptical | (3) public | (4) barren |
| 7. sociable | (1) brisk | (2) reserved | (3) vivid | (4) erect |
| 8. attentive | (1) fiendish | (2) fluent | (3) mindful | (4) admirable |
| 9. despotic | (1) open | (2) comparative | (3) tyrannical | (4) brisk |
| 10. flimsy | (1) pithy | (2) fair | (3) contrite | (4) substantial |
| 11. petty | (1) new | (2) early | (3) ruined | (4) important |
| 12. eerie | (1) swarthy | (2) tuberous | (3) weird | (4) jesting |
| 13. subsequent | (1) meek | (2) preceding | (3) abated | (4) gruff |
| 14. single | (1) hearty | (2) knowing | (3) doubtful | (4) unique |
| 15. gaudy | (1) enraged | (2) inexact | (3) slight | (4) somber |
| 16. gaunt | (1) haggard | (2) unhappy | (3) front | (4) dumb |
| 17. florid | (1) pale | (2) foreign | (3) internal | (4) invisible |
| 18. disputable | (1) certain | (2) likable | (3) prim | (4) pensive |
| 19. garrulous | (1) present | (2) childish | (3) talkative | (4) sound |
| 20. ignoble | (1) worthy | (2) docile | (3) stable | (4) dull |
| 21. dogmatic | (1) stealthy | (2) urgent | (3) opinionated | (4) worthy |
| 22. subservient | (1) later | (2) haughty | (3) dainty | (4) fragile |
| 23. ominous | (1) needless | (2) insolent | (3) sinister | (4) constant |
| 24. decrepit | (1) infirm | (2) tanned | (3) virtual | (4) disloyal |
| 25. squallid | (1) forced | (2) empty | (3) grave | (4) filthy |

| 26. noble | (1) base | (2) facile | (3) profuse | (4) continual |
| 27. capricious | (1) fickle | (2) hoarse | (3) trained | (4) inbred |
| 28. bland | (1) peculiar | (2) undue | (3) athletic | (4) brusque |
| 29. inimical | (1) smoky | (2) mixed | (3) friendly | (4) advisory |
| 30. improvident | (1) legible | (2) mocking | (3) famed | (4) thriftless |
| 31. perfidious | (1) eastern | (2) entire | (3) faithful | (4) liberal |
| 32. jaded | (1) spinal | (2) tribal | (3) wide | (4) fresh |
| 33. implacable | (1) inexorable | (2) dislocated | (3) unlearned | (4) lazy |
| 34. urbane | (1) oral | (2) fearless | (3) noisy | (4) crude |
| 35. imperious | (1) learned | (2) false | (3) beautiful | (4) placatory |
| 36. callow | (1) sundry | (2) sophisticated | (3) constant | (4) tall |
| 37. circumspect | (1) fluent | (2) gigantic | (3) indiscreet | (4) hoarse |
| 38. nonpareil | (1) threatening | (2) rhetorical | (3) peerless | (4) greedy |
| 39. salient | (1) cowardly | (2) prominent | (3) practical | (4) loose |
| 40. perverse | (1) comic | (2) tractable | (3) poetic | (4) first |
| 41. exigent | (1) foaming | (2) pressing | (3) opulent | (4) average |
| 42. gauche | (1) vital | (2) cynical | (3) clumsy | (4) double |
| 43. vapid | (1) far | (2) insipid | (3) surly | (4) devoted |
| 44. tenuous | (1) lateral | (2) periodic | (3) thin | (4) molar |
| 45. recalcitrant | (1) blooming | (2) refractory | (3) lofty | (4) invisible |
| 46. succinct | (1) clever | (2) successful | (3) verbose | (4) impromptu |
| 47. ephemeral | (1) destructive | (2) transitory | (3) green | (4) transparent |
| 48. redolent | (1) unscrupulous | (2) odorous | (3) unruly | (4) tasteless |
| 49. mendacious | (1) harmful | (2) truthful | (3) young | (4) reluctant |
| 50. indigenous | (1) wholesome | (2) inclined | (3) stubborn | (4) native |
Number Series

PRACTICE PROBLEMS

The numbers in each series proceed according to some rule. For each series you are to find the next number.

In the first series below, each number is 2 larger than the preceding number. The next number in the series would be 14. Of the five answers at the right, answer (e) is, therefore, correct. In the section of the answer sheet labeled “NUMBER SERIES, Practice Problems, Page 11,” space (e) in the first row has been blackened.

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Find the rule in the series below, and blacken one of the answer spaces in the second row on the answer sheet.

2. 20 19 18 17 16 15 10 12 14 15 16

Each number in this series is 1 less than the preceding number. You should have blackened space (c), which corresponds to 14, the next number in the series.

Find the rule in the series below, and blacken the space on the answer sheet which corresponds to the next number.

3. 10 8 11 9 12 10

The series above goes by alternate steps of subtracting 2 and adding 3. You should have blackened space (e), which corresponds to 13, the next number.

In each series below, find the rule and blacken the space on the answer sheet which corresponds to the next number. There is a different rule for each series. Go right ahead. Do not wait for any signal.

4. 8 11 14 17 20 23

5. 27 27 23 23 19 19

6. 16 17 19 20 22 23

When the starting signal is given (not yet), turn the page and work more problems of the same kind. Work rapidly because your rating will be the total number of correct answers. You may not be able to finish in the time allowed.

Stop here. Wait for the signal.

1943 Edition
Find the rule in each problem below and blacken the space which corresponds to the next number.

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Verbal Analogies

PRACTICE PROBLEMS

Read the following words:

1. foot-shoe hand- (1) thumb (2) head (3) glove (4) finger (5) clasp

The first two words, foot-shoe, are related. The next word is hand. It can be combined with one of
the remaining words in the row so as to make a similar pair, hand-glove. In the section of the answer sheet
labeled "VERBAL ANALOGIES, Practice Problems, Page 13," space number 3 in the first row has been
blackened.

Read the following words:

2. father-son mother- (1) aunt (2) sister (3) child (4) daughter (5) niece

The first pair is father-son. The next word is mother. It can be combined with the word daughter
to make the similar pair, mother-daughter. In the second row on the answer sheet, blacken space number 4,
which corresponds to the word daughter.

In each row of words, the first two words form a pair. The third word can be combined with another
word to form a similar pair. Select the word which completes the second pair. On the answer sheet, blacken
the space which corresponds to the word you select.

3. sky-blue grass- (1) ground (2) sod (3) path (4) blue (5) green

4. ice-solid water- (1) hard (2) fire (3) iron (4) liquid (5) boat

In the third row on the answer sheet, you should have blackened space number 5, which corresponds
to green. In the fourth row, you should have blackened space number 4, which corresponds to liquid.

Select the answers to the following problems and blacken the corresponding spaces on the answer sheet.
Go right ahead. Do not wait for any signal.

5. ear-music nose- (1) face (2) perfume (3) breath (4) tone (5) noise

6. cloth-dye house- (1) shade (2) paint (3) brush (4) door (5) wood

7. green-grass yellow- (1) silver (2) color (3) golden (4) china (5) gold

8. cattle-hay man- (1) eat (2) drink (3) water (4) life (5) bread

When the starting signal is given (not yet), turn the page and work more problems of the same kind.
Work rapidly because your rating will be the total number of correct answers. You may not be able to finish
in the time allowed.

Stop here. Wait for the signal.

1943 Edition
| 1. field-fence | picture- | (1) beauty | (2) frame | (3) color | (4) art | (5) paint |
| 2. listen-hear | look- | (1) eyes | (2) see | (3) watch | (4) ears | (5) book |
| 3. airplane-air | submarine- | (1) dive | (2) engine | (3) helmet | (4) ship | (5) water |
| 4. friend-love | enemy- | (1) companion | (2) terror | (3) defeat | (4) hate | (5) depart |
| 5. book-author | statue- | (1) sculptor | (2) marble | (3) model | (4) magazine | (5) man |
| 6. tiger-hair | trout- | (1) meal | (2) water | (3) fish | (4) scales | (5) swims |
| 7. finger-hand | toe- | (1) nail | (2) heel | (3) foot | (4) arch | (5) leg |
| 8. skin-body | bark- | (1) dog | (2) bite | (3) tree | (4) leaf | (5) shin |
| 9. single-double | two- | (1) eight | (2) triple | (3) one | (4) four | (5) twins |
| 10. lion-claw | rose- | (1) pink | (2) smell | (3) plant | (4) thorn | (5) bush |
| 11. defeat-surrender | victory- | (1) battle | (2) capture | (3) enemy | (4) emblem | (5) flag |
| 12. Indian-wigwam | Eskimo- | (1) ice | (2) igloo | (3) home | (4) Arctic | (5) seal |
| 13. oranges-Florida | wheat- | (1) Vermont | (2) grain | (3) California | (4) bread | (5) Kansas |
| 14. face-veil | window- | (1) sash | (2) frame | (3) raise | (4) curtain | (5) light |
| 15. pork-pig | beef- | (1) lamb | (2) meat | (3) steer | (4) butcher | (5) dinner |
| 16. laborer-foreman | private- | (1) officer | (2) army | (3) servant | (4) soldier | (5) duty |
| 17. flour-cake | sugar- | (1) salt | (2) candy | (3) bread | (4) lump | (5) sweet |
| 18. court-decision | clinic- | (1) pain | (2) physician | (3) patient | (4) relief | (5) diagnosis |
| 19. historian-facts | novelist- | (1) fiction | (2) dates | (3) history | (4) writer | (5) book |
| 20. committee-chairman | team- | (1) member | (2) referee | (3) game | (4) guard | (5) captain |
| 21. rowboat-oar | airplane- | (1) engine | (2) pilot | (3) propeller | (4) cabin | (5) rower |
| 22. apron-kitchen | coveralls- | (1) mechanic | (2) wagon | (3) overcoat | (4) garage | (5) clean |
| 23. bow-violin | stick- | (1) violinist | (2) juggler | (3) orchestra | (4) leader | (5) 'drum |
| 24. persuade-force | suggest- | (1) censure | (2) urge | (3) hint | (4) idea | (5) abandon |
| 25. furniture-chair | tree- | (1) factory | (2) elm | (3) farming | (4) harvest | (5) landscape |
| 26. petition-demand | decline- | (1) demur | (2) refuse | (3) pause | (4) beg | (5) agree |
| 27. book-title | man- | (1) woman | (2) male | (3) Sir | (4) name | (5) adult |
| 28. quality-best | quantity- | (1) more | (2) worst | (3) least | (4) many | (5) most |
| 29. iron-ore | pearls- | (1) gems | (2) gold | (3) oysters | (4) ocean | (5) hay |
| 30. hose-nozzle | pitcher- | (1) handle | (2) rim | (3) cover | (4) spout | (5) basin |
| 31. receptacle-cup | cover- | (1) lid | (2) pot | (3) container | (4) kettle | (5) pan |
| 32. hinge-door | joint- | (1) bend | (2) open | (3) arm | (4) fasten | (5) tendon |
| 33. week-Sunday | year- | (1) months | (2) Monday | (3) day | (4) winter | (5) January |
| 34. galoshes-shoes | shoes- | (1) boots | (2) rubbers | (3) sole | (4) laces | (5) socks |
| 35. disease-sanitation | accident- | (1) doctor | (2) hospital | (3) bandage | (4) cleanliness | (5) care |
| 36. cold-ice | hot- | (1) heat | (2) steam | (3) warm | (4) melt | (5) snow |
| 37. kennel-Collie | coop- | (1) chicken | (2) Leghorn | (3) rooster | (4) hen | (5) colt |
| 38. ambition-initiative | discouragement- | (1) fatigue | (2) joy | (3) interest | (4) inertia | (5) force |
| 39. picture-paint | symphony- | (1) orchestra | (2) compose | (3) opera | (4) violin | (5) conduct |
| 40. blister-burn | bruise- | (1) blow | (2) cut | (3) bleed | (4) burst | (5) sore |
APPENDIX B

TABLES SHOWING COMPARISON OF INDIVIDUAL READING SCORES FOR SEPTEMBER AND MAY
APPENDIX B

TABLE 14

CHANGE IN SPelman READING SCORES, GRADE LEVELS, AND PERCENTILE RANKS FROM SEPTEMBER THROUGH MAY FOR EIGHTY-THREE FRESHMEN

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1Percentile rank of standard freshman population used by makers of Iowa Advanced Silent Reading Test.

*Score above highest rank of standard freshman population.
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**Score below lowest rank of standard population.
### TABLE 15

CHANGE IN MOREHOUSE READING SCORES, GRADE LEVELS, AND PERCENTILE RANKS FROM SEPTEMBER THROUGH MAY FOR EIGHTY-OUT FRESHMEN

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¹Percentile rank of standard freshman population used by makers of Iowa Advanced Silent Reading Test.

*Score above highest rank of standard freshman population.
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**Score below lowest rank of standard population.**
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