A STUDY OF

THE PROMOTION AND THE CLASSIFICATION OF PUPILS IN

THE ELEMENTARY SCHOOLS
LINCOLN KANSAS
BY

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## CHAPTER I

#### INTRODUCTION

In the early days of the American school there were no grades. Schools were like the present one-room rural schools. In cities large rooms were provided in which several hundred children might be brought together under one teacher with a number of monitors or assistants.

In the middle of the nineteenth century the idea of the graded school began to be expressed. This was particularly true in New England. Horace Mann spoke enthusiastically and frequently on the merits of the graded school. Some of his arguments are the very arguments which are now used for a much more accurate adjustment of the school to the pupil than the graded system ever permitted. believed that if one did no more than divide a school into eight or ten levels or grades, one could bring together pupils of the same ability. It was predicted that in a graded school the teacher of a grade would have to adopt but one method because the abilities of the children would all be the same. Reduction in effort, increase in efficiency, greater progress of pupils, and diminished cost of education were suggested as the probable results of adopting the graded system.

The graded system was adopted and was a milestone in the long road over which the American school has traveled. In its implications, if not in its actual work, it had in it all the things which Horace Mann saw. But the graded system began to harden. It lost the flexibility which it might have carried over from the ungraded system; instead of facilitating the progress of pupils it often hindered it. It brought with it the promotion system and the "lock step" of the grades.

As the graded system has developed, each grade has come to be thought of as a level of ability. The New England leaders seemed to think the pupils in a grade would be of about the same ability; and the teachers, despite the evidence of their own experience have continued to act as if they were. According to the usual idea, promotion is a certification that a child has successfully done the work of the previous grade.

Children in each grade are not of equal ability. As a matter of fact the assumption concerning the grades of the elementary school is not true. The pupils in them are not of the same ability. The evidence on this point is quite conclusive. This may be proved not only from educational literature but from every schoolhouse in the land. It is quite the usual thing for the pupils taught as a grade by one teacher to differ in mental age by four or five years. If proper adjustments were made, each of these years of difference ought to correspond to a differ-

ence of one grade. Yet all these pupils are in the same grade. The same thing is true in respect to chronological age. You will find ten-year olds, for example, in the first grade and you will find them in the eighth grade.

In achievement the range of individual difference within a given grade is likewise astonishingly wide. It has been said that in a given subject we can ordinarily take the best one-fifth of the pupils in a given grade, advance them to the next grade higher, and replace them with the poorest one-fifth of the pupils in the higher grade without changing the average ability of either grade.

Thus the graded system has failed to realize the purpose of its early advocates. It has broken down in the sense that it has failed to bring together pupils of like ability.

Classification is any arrangement of pupils which seeks to bring them together so that they may be instructed with the greatest benefit to each of them. It is an attempt to realize in the light of present knowledge and through present methods the benefits which in an earlier day were expected from the graded system. The chief opponents of reclassification are the teachers themselves. Many investigators have pointed out the reluctance of classroom teachers to permit children to be promoted or "skipped". McCall'2\*

<sup>\*</sup> The index figure appearing after references gives the numerical order of the reference in the bibliography.

"Teachers do not like to lose their good pupils, and it is of course the best pupils who are candidates for promotion". The argument is also advanced that a child promoted at other than the regular time of promotion, or a child who is permitted to skip a grade will have gaps in his information. Experiments have shown this to be untrue.

The fears on the part of teachers that pupils will not really profit by rapid advancement have so often been proven to be groundless that it is a wonder they have not been dropped. One investigator after another, bears testimony to the effect that when bright pupils have been given extra promotion they have made good in the grade to which they were promoted.

Experiments have shown that regrading or reclassification is considerably more frequent in the lower than in the upper grades. The Ohio Classification Committee report shows that the greatest amount of regrading was in the fourth grade. There was nearly as much, however, in the first, second and third grades, and the amount in the fifth grade was still considerable. Two-thirds of all the reported readjustments of this kind were in the first half of the eight-year elementary school.

Teacher's judgments of intelligence, proficiency and industry are the most frequently used basis of classification

at the present time. The superiority of the results of intelligence tests for this purpose has been strikingly exhibited by several writers.

Pressey, S. L. and L. C.'s report two investigations, one dealing with sixth and seventh grade pupils, the other with first-grade pupils. The pupils in the sixth and seventh grades had been sectioned according to teacher's judgments. On the basis of intelligence tests certain pupils in the slow sections made high scores and were transferred to fast sections. Those in fast sections who did poorest in the tests were transferred to slow sections. Eight out of ten pupils thus transferred to fast sections made good, and eight out of ten who were put in slow sections were retained in those sections the next year.

The second investigation reported by the Pressys tells of the giving of intelligence tests to the pupils entering the first grade and the division of the classes into two groups. The pupils were not actually divided into groups except on paper. At the end of the first month of school the teachers divided their pupils into two sections on the basis of their judgments. According to the marks given the pupils at the end of the semester, the test grouping was superior to the grouping made according to the teachers estimates in twelve out of thirteen sections concerned in the investigations.

The conclusion of most writers on this subject seems to be clear. It is that wherever possible the estimates of teachers should be supplemented by the results of testing.

The graded system was a great advance over the ungraded system, but its benefits have only been partly secured because as a system it has become rigid. It is an administrative device rather than an instructional force.

The purpose of classifying and grouping pupils is to bring together those who may be instructed in groups with the maximum of individual benefit.

In the work of reclassification of the pupils in the Lincoln Schools, it was necessary to examine a great many kinds of intelligence tests as well as achievement tests in order to determine the test best fitted to this particular school. It was also essential to get tests which would give as much information as possible about the pupils to be classified, at the same time tests which could be given without too great an expenditure of time and money. The Otis Group Intelligence Test was finally chosen as the proper Intelligence test to use.

In looking over the related literature the writer was influenced toward using the Otis Group Test, by the results obtained from its use in an experiment on reclassification of the pupils in the Lawrence Public Schools in 1921.

Quoting from a Thesis written in 1921 by Ellen Grace Green-wood<sup>8</sup> "The specific effects of the classification upon the school system in Lawrence have been positive and show that the Otis Tests have proved a valuable supervisory device in the Lawrence reclassification. Furthermore, children who were classified upon the basis of the Otis scores did a better quality of school work as was shown by both teachers' marks and teachers' judgments. The better quality of school work produced throughout the school system after classification is an unquestionable proof that the Otis test is a much better basis for reclassification than the one formerly in use--that of teachers' marks."

The Otis Test may be administered with very little difficulty and it is a test which children enjoy taking. The test is easily scored and the results easily tabulated. In the Lawrence experiment the work of giving the test, scoring and reclassification was all complete in about a month's time.

"Group Intelligence Tests may be used as a basis of classification when they are administered intelligently, purposefully and with the cooperation of the teaching force." In the Lawrence reclassification a very large per cent of the pupils promoted made excellent grades. These pupils were given special promotion after being given the Otis test. These results prove that the Otis test succeeds in

picking out the children of very superior intelligence or those whose ability warrants special promotion. Since ninety-five per cent of the children who received special promotion made good, the value of the Otis test in reclassification seems to be verified.

A school system should be classified upon the basis of mental age rather than upon the intelligence quotient for the latter is only a measure of relative brightness while the former is a measure of mental maturity. Similarity of mental ability in classes then is only guaranteed by securing a greater similarity of mental ages in such classes. The older a child is in a given grade the lower his IQ, thus intelligence quotients and chronological ages are related inversely. Since it has been shown that the youngest children in each grade make the highest intelligence scores, teachers can no longer use the old method of chronological age promotion without doing a great injustice to the children of superior intelligence, who are found to be the real retardates of the conventional lock-step school system.

The problem of retardation of children of both low and high intelligence can largely be solved by grouping all children according to mental age in order that they may progress normally, according to ability. This grouping of children on the basis of mental maturity, rather than on chronological age can be accomplished only by

the use of reliable intelligence tests, either group or individual. This should be supplemented by the use of achievement tests.

The classification of children according to mental capacity is the most significant administrative problem today. No child can do his best work in a class in which the whole range of mentality exists. The Lawrence experiment showed that the mental maturity within classes ranged from a mental age of below 8 to a mental age of 18. Thorndike25 states, "that on the basis of psychological tests in a given class the variation is such that some pupils in the grade do four or five times as much work as others in a given time, or do the same amount with a far smaller proportion of errors, or do successfully tasks which others cannot master." Later experiments have shown that the performance ability at the upper end of the range was as much as ten times that at the lower end. All intelligence tests show the enormous differences in intelligence which obtains for any unselected group of children of a given age.

The Otis Test revealed in the Lawrence experiment that while the youngest child in the fourth grade, age 7, made an intelligence score of 51, the oldest child in the grade, age 14, made a score of 26. Terman's experiments on the use of intelligence tests in the educational guidance of high school pupils, reveal individual differences in mental age from 12 years 8 months to 19 years, and in chronological age from 13 years 1 month to 19 years 3 months.

Such facts as these prove without doubt that grade placement cannot be reliably made upon chronological age, or without reference to the mental ability of the school child. Investigations have shown, quoting from Terman "that the resulting classification of children has been so far from successful that, generally speaking, the lowest 20 or 25 per cent of pupils in any grade belong mentally in a lower grade, and the highest 20 or 25 per cent in a higher grade. Only the middle 50 or 60 per cent are classified approximately where they should be. Usually more than 15 per cent of the pupils are at least two grades removed from the one in which they belong by mental age." Thorndike has pointed out that "even in the most progressive cities the school population is not even approximately divided into groups of similar mental ability or capacity to do the work of the particular grade."

The school problem which is every where prevalent because of the wide range of individual differences, challenges school administrators to classify their school systems upon the basis of intelligence tests. Grade placements and grade promotion should be made on the basis of the child's ability to meet the requirements of the next higher grade. This fact has been lost sight of in school room practice. Dull children are usually found one to three grades above that warranted by their mentality;

while bright children are generally found from one to three grades below the location where their mentality would place them. This condition reveals that ordinarily, teaching procedure does not detect and properly estimate mental ability, and that schools miserably fail in grading according to mentality.

Children cannot be successfully classified on the basis of teachers' estimate of intelligence. Some schools today have the idea that the classification on the basis of the teachers' judgment of intelligence is as reliable as the classifications made by the use of intelligence There are many fallacies in this assumption. it has been shown that the intelligence of retarded children is usually over estimated by teachers, and that the intelligence of superior children is underestimated. Second, even though some teachers may detect superior ability it is with reluctance that they promote the child. Third, Intelligence has been judged by teachers on the basis of school performance rather than upon the grade in which the child should, according to his chronological age, be doing satisfactory work. Intelligence can be adequately judged only by the quality of work done in the grade that is normal to the child's age. Fourth, teachers are likely to err in judging the intelligence of children coming from the poorer homes, who by the conditions of their environment are naturally timid and shy and cannot make the response

or showing that the less intelligent children can, who are very talkative, cunning and active. Fifth, teachers' judgments of intelligence are not reliable because they have no standard for normal intelligence and no scientific methods of judging intelligence.

The day has come when objective mental testing is taking the place of the subjective estimates of teachers. To be of most value to both the child and the school these tests should be given to all children upon their first entrance into the school. This early classification on the basis of mentality is desirable in order that those children of marked ability may be selected for rapid advancement and those of low grade mentality may be early segregated. In the past it has been the mentally defective child that has been given the special attention in ungraded rooms, and an undue amount of time and money has been expended upon them.

Munroe/4 has said, "the tendency in our schools is to devote more attention to the subnormal or the mediocre than to the supernormal." Group tests supplemented by individual tests makes it possible for school administrators to place every child in the school system where his ability warrants. When children are thus correctly placed and grouped, school work can be more satisfactorily adapted to the needs of the pupil; and as a result, he can work more freely, happily, contentedly and at a rate normal with his ability.

The intelligence test by providing a scientific basis for grade placement will also largely enable the supervisor to solve his retardation problem. Retardation, which is an alarming problem in many schools, can partly be explained by the fact the children have not been placed where they can work with a maximum of efficiency. Children of unequal ability cannot work together successfully. Those of less ability become laggards in the class and as a result soon become retarded. The retardation of such children becomes greater each successive year until they drop out of school. This retardation can be materially lessened by grouping children in each grade according to ability, so that school work may be adapted to the various abilities. Such a procedure makes it possible for the less intelligent children to make normal age-grade progress in their group, and prevents the clogging of the lower grades with over-age and dull pupils. Furthermore, this prevents the holding back of superior children, who are usually retarded below the grade which their ability warrants.

The democratic school system, today must classify and group all children according to mental maturity. The group intelligence test is the only device by which this can be effectively accomplished. This in conjunction with some achievement test taken along with teachers marks makes a suitable method of reclassification.

The Otis Group Intelligence Scale was devised to measure the native mental ability of any individual whether child or adult, who has had the equivalent of three or four years of schooling. According to Terman<sup>23</sup> "it was the first scientifically grounded and satisfactory scale for testing subjects in groups." Through this scale Otis has done much to free intelligence tests from the influence of the personal equation of the examiner.

The Otis Test cannot take the place of the Binet or other methods of individual examination, for the two methods supplement each other. The group test will serve as a basis for the general classification of children above the fourth grade, while the individual test will be necessary to place all exceptional or puzzling cases. The Otis Group Test, Primary Examination, is among the best in classifying pupils in the first four grades.

The movement to measure, more scientifically, educational products began about two decades ago. It was of necessity to a great extent, theoretical. The elementary school was the field around which the educational yard stick was first placed. It is only since the World War that the newer methods of objective Measurements have been generally used in the secondary schools and the institutions of higher learning.

In 1924, the Holton Kansas High School challenged the Sabetha Kansas High School to a dual scholarship contest

in American History. This was the first dual scholarship contest. These tests were prepared and furnished by the Kansas State Teachers College of Emporia, Kansas.

In 1926, the Kansas State Teachers College of Emporia brought this group contest idea, worked out on a larger scale, before the high schools of Kansas. The tests are constructed under the supervision of the Bureau of Educational Measurements and Standards at the State Teachers College. In 1926, tests in eighteen subjects were prepared for these contests. More than 65,000 pupils in 687 schools participated in these contests. More than 53 per cent of the schools sent reports to the Bureau of Measurements from which a summary report was made and sent to the participating schools for comparison purposes. The interest in the 1927 contest increased the number that took part to more than double that of 1926. There were more than 143,000 students who took part in the two contests of January eleventh and March fifteenth in 1927. Since that time the Bureau of Measurements has added tests in all of the elementary school subjects and the contest among pupils of the elementary schools is carried on in the same manner as that of the high school tests. In the first three grades the tests are worked out in group tests and is known as The Primary Achievement Test. This test is worked out on practically the same basis as a regular standardized achievement

test. In grades four to six inclusive the tests are arranged for each of the several subjects given in these grades.

A small charge is made for the tests to take care of the expense of conducting the contests. The tests cost two cents per copy, the report sheet one cent per copy and the general directions one cent per copy.

In these contests every member of the class takes part. The class accomplishment is determined by the mid-score. In this way a school is competing with all the schools that report on the test.

The tests are given as a regular examination in the classrooms. They are given in all schools on the same day and scored under the direction of the Superintendent or Principal. General directions and keys for scoring accompany the tests. The tests are administered in 30 minutes and are so constructed that the scoring is objective and is quickly done.

There is only one form of the tests, hence it is not possible to determine the reliability. So far as the writer knows, there has been no attempt to determine the validity of these tests. They are not standardized except in the administration and scoring of them.

In a study made by Le Grande' in 1928 a comparison of the results obtained in the use of the dual scholarship contest was made with the results obtained in the Otis Intelligence Tests. His conclusions were as follows: (1) "All correlations between the Dual Scholarship Tests scores and Otis scores are positive, and all except American History show marked relationship, the correlation between American History scores and Otis scores on the January and March tests were .33 and .19 respectively. (2) Correlations between English scores and Otis scores were the highest found. The range is from .54 to .76. (3) The correlations between the Dual Scholarship Contest scores and Otis scores in this study compare favorably with a majority of similar studies where standardized test results were employed to correlate with intelligence scores. (4) Results obtained in this study indicate that the Dual Scholarship Contest Examinations measure about the same thing that the Standardized Educational Tests measure."

Arthur I. Gates <sup>7</sup> summarized in a study he reported as follows: "Other things being equal the more verbal the material the higher the correlation with school attainment. When the individual group tests were arranged for the degree of verbalness, time being eliminated by the technique of partial correlation, the independent correlation (partial r first order) with achievement was .69. Verbalness being equal, the greater the length of the test the higher the correlation with achievement. The Stanford Test and the verbal group tests yield very nearly the same correlations

with particular school subjects, the former correlating relatively high with Arithmetic, the latter with Reading and Spelling."

- A. H. McPhail reports an experiment which was carried on in the grades. The National Intelligence Test Form A and the Lippincott-Chapman Test, in Arithmetic and Reading for grades 5 to 8 were used. For the lower grades Otis Primary Group Intelligence Scale and the Haggerty Reading examinations Sigma were used. McPhail reports the following findings: "A high coefficient of correlation was found between the National Intelligence Tests and scores on the Lippincott-Chapman Tests in Reading and Arithmetic. number of pupils in each of the four grades ranged from 12 to 124 with an average of 45. Eighteen coefficients of correlations were computed by the rank difference method between these two tests, ranging from .45 to .88 with a median of .68. Two coefficients of .65 and .66 were found by the product moment formula and were based upon 106 and 124 cases respectively."
- W. C. Eubank states, "Mental tests have been constructed for the purpose of measuring general intelligence, and such tests are being used for educational purposes. That children vary in Mental ability is an accepted fact. The fact that children vary in achievement in school subjects is quite generally recognized."

Mental measurements have been primarily used for the purpose of grouping students into speed groups. If on the basis of mental test scores, educational achievement can be predicted, additional value shall have been found for the use of mental measurements in the instruction of children.

#### CHAPTER II

## SPECIFIC FIELD OF THIS STUDY

This study includes 315 pupils of the Lincoln, Kansas Elementary Schools, grades 1 to 8 inclusive.

In making this study the following points were studied:-

- (1) To show the present status of the pupils in the Lincoln Elementary Schools under the existing plan of classification. The pupils are now classified upon the basis of chronological age and the teacher's judgment. They are promoted by annual promotions. Under the present plan of classification each grade is divided into two sections, A and B, according to ability. The ability of the pupils is determined by the teacher's judgment. The only criterion used by the teacher is the pupil's ability to do the work required by the class. Age, mental ability or physical fitness are not taken into consideration in making promotions.
- (2) To show the wide range of mental ability existing between the pupils in each grade as they are now classified.

- (3) To work out a plan of classification based upon mental maturity, achievement in school subjects and physical fitness to do the work of a given grade.
- (4) To show that intelligence and achievement test results, chronological age and physical fitness should all be considered in the classification of pupils.
- (5) To show that the present plan of classification is very unsatisfactory, (a) because it does not provide for the wide range in mental ability found in the same grade; (b) it does not take care of the exceptionally bright pupil or the exceptionally dull pupil; (c) it does not consider physical fitness to do work of a given grade.
- (6) To reclassify the pupils under the suggested plan of classification.
- (7) To show that under the suggested plan of classification, it is possible to group the students within each grade according to their mental ability, and thus provide a greater chance of normal progress of all pupils.

#### CHAPTER III

# METHOD OF SECURING DATA AND METHOD OF PROCEDURE

The data for this study were secured from the intelligence tests and achievement tests given to the pupils in the Lincoln, Kansas Elementary Schools. Witham's Age-Grade Charts were used to show the status of the pupils under the existing form of classification.

The Otis Group Intelligence Scale, Primary Examination and Intermediate Examination Form A were administered to the 315 pupils of the Lincoln Schools in March, 1930. These intelligence tests were given and scored by the writer with the assistance of an instructor who had been trained in giving the tests. The instructions for giving and scoring the tests were followed as carefully as possible. All tests and the tabulated results were then checked by another instructor.

The achievement tests used in securing data for this study were the Elementary Scholarship Contest Examinations of the Kansas State Teachers College of Emporia. The

Elementary Scholarship Contest Examinations were administered in March, 1930. Great care was taken in the administration and scoring of these tests. The package of test material was not opened until the day of the examination, and then the instructors were not given access to the tests until the hour appointed for the examination. Two instructors were in each room during the testing period of all these tests. These papers were then graded by the writer with the assistance of an instructor and checked for possible errors by another instructor. Copies of all tests and the tabulated scores were then placed on file in the high school office. To make comparison between scores made by the pupils in the Lincoln Schools on these tests and the scores made by pupils in other schools on the same tests, it was necessary to know the results, with median score of all pupils who took the test. There were several thousand pupils who took these tests. This comparison was made by referring to a booklet compiled by the Teachers College of Emporia.

Witham's Age-Grade Progress Charts were filled out May, 1930, showing the number and per cent by grades of above normal, normal and below normal pupils.

With these data at hand, the writer proceeded to tabulate results as measured by the Otis Scores, and the Elementary School Contest Results, and to make comparison between scores made by pupils in the two contests. This was carried out by means of tables, graphs and charts.

## CHAPTER IV

#### PRESENTATION OF DATA

The pupils in the Lincoln elementary schools are now classified upon the basis of chronological age and the teacher's marks. The mental maturity, physical fitness or determination to do good work are not considered.

Witham's Age-Grade Chart was used to show the pupils above normal, normal and below normal, in respect to chronological age. This shows the status of the pupils under the present system of classification.

The tables and charts following this are distribution of scores and IQ's obtained from the Otis Intelligence Tests given all the pupils included in this study.

A distribution of the achievement test scores by grades and subject are given to show the pupils ability to achieve in the different subjects. A comparison is made of the pupils IQ and achievement test scores. These were used to help in the reclassification of the different pupils.

Witham's Age-Grade Classification Chart showing the number and per cent of pupils above normal, normal and below normal on the basis of chronological age.

TABLE I

Age Sept. 1	I	II	III	IV	V	VI	VII	VIII	Total
5 yrs 8 mo									
6 yrs 8 mo	26	2							28
7 yrs 8 mo	18	21	4						43
8 yrs 8 mo	3	13	21						37
9 yrs 8 mo		2	18	14					34
10 yrs 8 mo			1	17	20	4			42
ll yrs 8 mo			•	2	17.	15			34
12 yrs 8 mo				1	5	13	20		39
13 yrs 8 mo					1	4	12	16	33
14 yrs 8 mo						3	2	9	14
15 yrs 8 mo					1		3	5	9
16 yrs 8 mo								2	2
17 yrs 8 mo									Dom
Total	47	38	44	34	44	39	37	32	Per- 315 cent
Above normal	0	2	4	0	0	4	4	0	3.17
Normal	44	34	39	31	37	28	32	25	85.70
Below normal	3	2	1	3	7	7	5	7	11.10

(Pupils were permitted to enter the first grade at 5 years and 8 months of age. This classification was made upon that basis. These figures were compiled May 14, 1930)

In table I the classification of the pupils in different grades from 1 to 8 is shown as they are now classified. "Witham's Age-Grade Classification Card" was used. The intent, in making this classification, was to discover the number of pupils in each grade who were, in regard to chronological age classified above normal, normal and below normal. classification doesn't tell us anything about their mental status except that it indicates that as far as chronological age is concerned some are above normal and some are below normal. This table shows a greater per cent below normal than there are above normal. This may be explained by the fact that the unusually bright pupils finish the grades and enter high school while the laggards repeat grades and remain two or more years longer than it is necessary for the normal pupils to finish the grades. Where the pupils are classified upon the basis of chronological age alone there is a strong tendency for the over age pupils to accumulate in the fifth, sixth, seventh and eighth grades. This is true in the Lincoln Schools as the table shows. There are seven over age pupils in each of the fifth, sixth and eighth grades, and five in the seventh grade. There are only 10 pupils in the entire system who are above normal as far as chronological age is concerned. There are 35 who are below normal in respect to chronological age. If the pupils are classified upon the basis of chronological age alone, there are pupils in the normal group who are quite frequent-

ly retarded in respect to mental ability. The basis of the classification of the pupils should be determined by their mental maturity, physical ability and determination to do efficient work. Those pupils who are above normal in the Age-Grade Classification, with few exceptions are also above normal in mental maturity as shown by their scores on intelligence and achievement tests. The same is true of those There are some below normal whose score on below normal. intelligence and achievement tests indicate that they are capable of doing better work and are undoubtedly retarded mentally. These should have special promotion. also several pupils who are classified as normal from chronological age standpoint, who have high IQ's and high achievement scores. These would also receive special promotion. Experiments have shown that both superior and inferior pupils do much better work when grouped on the basis of their mental ability. If the classification of the pupils in the Lincoln Schools had been administered upon the basis of mental maturity and the grouping within grades done in like manner, all pupils would have done better work. who are now classified as below normal would have completed the grades in less time than they are now doing. Pupils who are not promoted, and who are forced to compete with pupils of superior mental ability, become discouraged and do not do the amount of work they are capable of doing. According to the present classification there are too many pupils below normal and not enough above normal.

In the first grade according to Witham's Age-Grade Classification there are three pupils below normal with IQ's 113, 104 and 101 and their achievement test scores were 22, 51 and 23 respectively. The median for the state in the achievement tests was 15. The median for the second grade in the same achievement test was 39. According to the IQ and the test score made by one of the pupils in the above case he should be promoted to the second grade; his achievement score was 51 which is above the state median for the second grade.

In the second grade the two pupils above normal in age had IO's of 136 and 124. Their achievement test scores were 53 and 50. The state median for the second grade is 39 and for the third grade 64. The girl with an IQ of 136 and achievement of 53 should be given special promotion into the third grade. The boy with the IQ of 126 and achievement score of 50 should not be given special promotion. The teacher's judgment and the child's lack of application were the chief factors in making this decision. Those in the second grade who were classified as below normal had IQ's of 87 and 84 and made scores of 14 and 13 on the achievement The IQ's were below normal and the achievement test scores were below the median for the first grade. These two pupils should be placed in an opportunity room.

In the third grade there are four pupils in this grade who are in the above normal group. Their IQ's are 135, 135, 132 and 115. Their achievement scores are 71, 70, 70 and

41. Three of these should receive special promotion to the A section of the fourth grade, as their IQ's and achievement test scores are very high. The fourth pupil should be given regular promotion. There is only one student in the grade below normal. His IQ is 106 and his achievement score is 49 which is a little below the state median. He should be given regular promotion. The health of this boy is interfering with his work.

The fourth grade has no pupils above normal but there are three below normal. Their IQ's are 92, 87 and 74 and their achievement test scores were in order of IQ's above,—Reading 24, 13, and 5; Spelling 21, 24, and 24; and Arithmetic 19, 2, and 5. The State Medians for these subjects are 19, 27, and 17. The first student is eligible for regular promotion and the next two should be retained in this grade or if it is possible to maintain an opportunity room these pupils will be placed in this room.

In the fifth grade there are no pupils above normal and 7 below normal as to chronological age classification. Their IQ's were 107, 97, 93, 89, 80, 75, and 60. Their achievement test scores were Reading 29, 32, 22, 23, 13, 22, and 18; Spelling 52, 38, 36, 34, 15, 24, and 32; Arithmetic 16, 17, 24, 21, 21, 18, and 21. The State Medians were Reading 23, Spelling 40 and Arithmetic 25. In making a comparison of the above IQ's and achievement test scores it seems expedient to

give regular promotion to the first three pupils as their IQ's are normal or above and their achievement test scores will average up to or above the state medians. Two of the remaining four should be retained in the same grade another year and the last two should be placed in the opportunity room, as their IQ's and achievement test scores show inferior mental development. The low achievement test score and the IQ of 60 is without doubt feebleminded.

The Sixth grade has four above normal according to the Age-Grade Classification Chart. Their IQ's are 122, 120, 98, and 84. Their achievement test scores are: Reading 35, 30, 16, and 20; Spelling 57, 48, 51, and 42; Arithmetic 28, 54, 29, and 22. The state medians for these subjects are: Reading 27, Spelling 48 and Arithmetic 31. The first pupil with an IQ of 122 should have special promotion. The next two pupils with IQ's of 120 and 98 should have regular promotion and the last one of the group would be retained in the grade as her IQ is normal but her achievement test scores are below the medians of the preceding grade.

Table showing age, IQ's and achievement scores of the 7 pupils in the 6th grade, classified below normal by Witham's Age-Grade Classification Chart.

TABLE II

	Pupil	Age	IQ.	Reading	Spelling	Arithmetic	Classifi- cation
1 -10	1	14-2	91	30	59	22	Promoted to 7th
	2	13-3	89	24	16	24	Retained (too near median of
	3	13-4	88	24	31	25	5th) Retain
	4	13-3	85	23	51	30	Promote
	5	13-3	78	17	23	21	Retain
	6	14-5	78	21	62	30	Promote
	7	14-11	72	20	36	33	Opportunity room (low IQ and test score)
				A			
	State	Median g	d 6th	27	48	31	
	State	Median g	d 5th	23	40	25	

Table II shows that of the 7 pupils below normal in this grade only one has an IQ of 90 or better. Their IQ's are as follows: 91, 89, 88, 85, 78, 78 and 72. Their achievement test scores are: Reading 30, 24, 24, 23, 17, 21 and 20; Spelling 59, 16, 31, 51, 23, 62 and 36; Arithmetic 22, 24, 25, 30, 21, 30 and 33. The state medians for these subjects in the sixth grade are Reading 27, Spelling 48 and Arithmetic 31. Table number II will give the best illustration of the disposition of these pupils. Three will be promoted, three retained, and one placed in the opportunity room due to the advanced age, very low IQ and the low test scores. This pupil is apparently feeble-minded.

Classifi-

Retain

Table showing ages, IQ's and achievement scores by subjects of pupils in the 7th and 8th grades who were classified below normal by Age-Grade Classification.

TABLE III

Pupil	Age	Gd	IQ.	Hist	Arith	Read	Spell	Lang	Geog	cation
No. 1	15	7	96	28	31	32	45	59	49	Promote
2	15	7	87	30	36	36	49	53	67	Promote
3	14	7	86	20	22	28	52	58	60	Promote
4	14	7	85	24	26	23	37	50	49	Retain
5	15	7	65	24	27	27	30	49	40	Opportunity Rm
6	15	8	89	27	32	25	61	61		Promote
7 7	15	8	89	34	30	30	58	57		Promote
8	15	8	87	34	42	31	53	43		Promote

10	16	8 ,	84	25	26	29	54	51		Retain	
11	15	8	78	31	18	32	28	58		Retain	
12	15	8	78	29	37	26	35	49		Retain	<del></del>
Median	7th	gđ.		26	35	30	58	58	44		
Median	8th	gđ.		31	39	34	64	63			
		•									

18

29

57

16 8 84 26

The seventh and eighth grades had no pupils classified above normal according to the Age-Grade Classification, but there were 12 pupils classified below normal. Table number III lists those 12 pupils with their ages, IO's and achievement scores. The state medians for the different subjects are given. By referring to Table III you will see that those pupils were retained in the same grade, who had low IO's and test scores near the median of the preceding grade.

The Witham's Age-Grade Classification (Table I) shows that of the 315 pupils in the Lincoln Schools 10 pupils or 3.17 per cent are above normal, 270 or 85.70 per cent normal and 35 or 11.10 per cent are below normal. This classification alone, based upon chronological age, is unsatisfactory as the comparisons will show. When some other measures are used, such as the intelligence test, showing mental age or mental maturity, and the achievement test showing ability to achieve in different subjects, then the method of classification upon the basis of chronological age proves to be inefficient.

In the preceding tables no effort has been made to reclassify the pupils in the normal group or those classified by the Age-Grade Classification as normal. These pupils who show high IO's and high test scores will be given special promotion. No demotions will be made.

Terman's Classification Based upon IO's of pupils made on the Otis Intelligence Tests.

Table IV

Grades	Inferior	Dull	Normal	Superior	
	below 70	70-89	90-119	120 and above	Totals
1		1	31	15	47
2		2	18	18	38
3	•	2	30	12	44
4		5	26	3	34
5	1 ·	13	24	6	44
6		, 8 v	27	4	39
7	1	3	29	4	37
. 8		10	21	1	32
Totals	2	44	206	63	315
Percent	.63%	13.97%	65.4%	20%	100%

Table number IV shows the distribution of the pupils in the Lincoln Schools according to Terman's Classification based upon the IQ's secured from the Otis Intelligence Tests. This table shows 2 pupils inferior or possibly classed as feeble minded, 44 pupils are dull, 206 normal and 63 superior.

In considering the percentage of pupils in each group, there are .63% of all the pupils inferior, 13.97% dull, 65.4% normal and 20% are superior. These percentages are reversed from the percentages obtained on the Witham's Age-Grade Classification where the classification is based upon chronological age alone. In the Age-Grade Classification, Table I, there were 3.17% superior or above normal, 85.73% normal and ll.1% below normal. The percentages secured from the IO's would show that the present system of classification, based upon chronological age alone is not adequate to properly place the pupils.

There are some pupils whose IO's are considerably above 120 but the preceding table does not show the extremes. There are many more who are very superior than there are of the feeble minded group. These groups will be shown in a later table.

The superior pupils seem to be grouped in the first three grades with the smallest number in the eighth grade. There are no pupils in the inferior group in the first three grades and only one dull pupil. This is perhaps a group of unusually bright pupils, as this would not hold

true in all schools. In some schools there are a larger number of inferior pupils in the lower grades than in the higher grades; but usually the inferior pupils are retained in the upper grades and the superior pupils are passed on, thus congregating the dull ones in the upper grades.

### DISTRIBUTION OF IQ'S

#### OTIS INTELLIGENCE TEST PRIMARY EXAMINATION GRADES I TO III INCLUSIVE

### TABLE V

		TABLE V		
		GRADES	5	
Scores	I	II	III	Totals
137-139			•	
134-136		2	3	5
131-133		2	1	3
128-130	4	0	1	5
125-127	4	3	1	8
122-124	4	6	2	12
119-121	4	7	6	17
116-118	5	2	5	12
113-115	6	4	8	18
110-112	5	4	8	17
107-109	2	1 .	1	4
104-106	5	1	3	9
101-103	3	2	0	5
98-100	ı	0	3	4 4 4 4
95-97	0	1	0	1
92-94	3	1	0	4
89-91	0	0	0	0
86-88	1	1	1	3
83-85		1	0	1
80-82	•		1 .	1
77-79				
otals	47	38	44	129

Table V shows the distribution of IQ's by grades from I to III inclusive. There were 5 pupils making scores between 134-136. These scores were in the second and third grades. The highest score in the first grade was between 128-130. The lowest score in these three grades was between 80 and 82. The range of scores increases from the first grade throughout the three grades, with the first grade IQ's There is a greater grouping closer around the median score. increase in range in the next two higher grades. Table V shows there are 50 of these pupils with an IQ of 120 or better with only 5 having an IQ below 90. These three grades are above the average grades in intelligence. A great majority of these pupils are of normal intelligence and there is also a large group of superior pupils. The writer does not know the reason for this; however, it quite often happens that an unusually bright group of pupils enter school at the same time, and continue through school in the same group. In the next five grades this is not true as Table VI will Table V will help to substantiate the fact that a system of classification based upon chronological age alone is unsatisfactory. There are several pupils in this group with an unusually high IQ. These pupils should have special promotion if their achievement test grades and physical condition warrant such promotion.

Table I, Witham's Age-Grade Chart, shows 6 pupils above normal in the first three grades. Table V shows the distri-

bution of IQ's with 50 pupils of an IO of 120 or better. In the same tables there are 6 below normal in chronological age and 5 with IO's below 90. It would seem that the system of classification based upon chronological age alone is able to properly classify the inferior pupil to a better advantage than it classified the superior pupil. Teachers seem to be slow to recognize merit, but recognize dullness more readily.

# DISTRIBUTION OF IQ'S OTIS INTELLIGENCE TEST INTERMEDIATE EXAMINATION GRADES IV TO VIII INCLUSIVE

### TABLE VI

CI	Δ	D	ਜ਼	C
171	14		P <sub>1</sub>	ລ

·			GI	RADES					
Scores	IV	<u>v</u>	VI	VII	VIII	Totals			
137-139		1				1			
134-136		0				0			
131-133		0	1	•		1			
128-130		0	0			1	*********** <b>*</b>		
125-127	l	2	0	1		4			
122-124	1	2	1	0		4			
119-121	2	. 2	2	3	2	11			
116-118	2	1	1	5	0	9			
113-115	l	1	3	5	3	13			
110-112	0	1	4	2	2	9	,		
107-109	4	1	2	2	2	11			
104-106	3	3	1	1	4	12			
101-103	4	4	2	4	2	16			
98-100	3	7	5	3	3	21			
95-97	2	2	3	6	0	13			
92-94	5	2	2	0	3	12			
89-91	ı	3	5	0	3	12			
86-88	3	3	2	2	3	13			
83-85	0	3	2	1	2	8			
80-82	0	3	Ö	0	1	4			
77-79	0	1	2	0	2	5			
74-76	2	ı	0	0		3			
71-73	0	1.	1	0		1			
70 and below		1	0	1.		2	······································		
TOTALS	34	44	39	37	32	186			

Table VI shows the distribution of IQ's by grades from IV to VIII inclusive. The greatest range of scores is in the fifth grade. One pupil has an IQ of 59 and the highest IQ is 137. This grade has more pupils with IQ's above 120 than any other grade and it also has more pupils with IQ's below 90 than any other grade.

The eighth grade has the smallest range of IQ's of any of the grades. This grade has only 2 pupils with scores above 120 while it has 8 with IQ's below 90. This is due to the fact that the bright pupils have been passed on into high school and the dull pupils have been retained in this grade, thus accumulating a large number of pupils of low intelligence. These eventually drop out of school with very few of them entering high school. The majority of these who do enter high school drop out the first year.

Table VI showing IQ's has 22 pupils with IQ's above 120 or superior in intelligence and 36 with IQ's below 90 or below normal. Table I with classification based upon chronological age alone, shows 4 pupils above normal and 29 pupils below normal. This bears out the fact as pointed out on a previous page that inferiority is more easily recognized than superiority. Table I shows 4 pupils above normal and Table VI shows 22 above normal. The same tables list 29 and 36 below normal. These figures substantiate the fact that the pupils are unproperly classified under the present classification. The superior pupils are the ones who are receiving the greatest

injustice. In this study the pupils in the normal group with but few exceptions have been properly classified. A few have superior intelligence as indicated by their IO's and achievement test scores. Some merit promotion while others do not have the determination to work sufficiently to warrant promotion.

INTERPRETATION CHART. For Intermediate Examination 10 10 2 + 6 8 10 11 2 + 6 8 10 12 2 + 6 8 10 13 2 + 6 8 10 14 2 + 6 8 10 15 2 + 6 8 10 16 2 + 6 8 10 17 Published by World Book Company, Yonkers-on-Hudson, New York, and Chicago, Illinois. Copyright 1922 by World Book Company. Copyright in Great Britain. All rights reserved

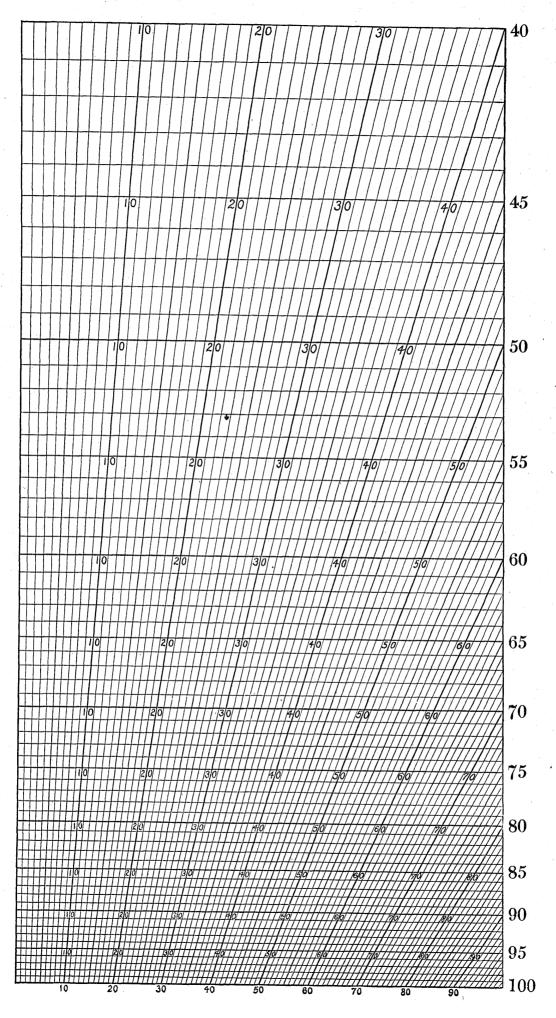
### OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

### PERCENTILE GRAPH

For Intermediate and Higher Examinations

Grade or Class							Examir	ation				,	* .				· · · · · · · · · · · · · · · · · · ·	
Number								or College		<del></del>							<del></del>	
Date of Exam.				1			Examir					<u>'</u>						
Form Used							Banni											
Time Limit		<del></del>		1 .							Pe	rcenti	le Gra	aph				2
Score	Tally- ing	Sub- totals	Per cents	Tally- ing	Sub- totals	Per cents	0	10 2	20	3	0 4	0 5	0 6	0 7	<u>'0</u>	8	0	90
75				- 1									-75	·				
70-74											. '		70	-			> -	
65-69		·										1						
60-64		:		-									-65			-		
55-59													- 60				· · · · · · · · · · · · · · · · · · ·	
50-54													55					
45-49					1								50					
40-44													45					
<b>35</b> -39													40	•				
<b>3</b> 0-34			1.1					,					35					
25-29													30					
									-				25		-			
20- 24									-				20					
15-19													15					
10-14													-10					
5- 9									/				5					
0- 4				1 .									-0					
Class Medians	<u>                                     </u>						0	10	20	$^{"3}$	0 4	0  5	0 6	$0^{\frac{1}{7}}$	0	$^{111}8$	$0 \over min$	90

#### SCALE CHART



### OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

#### INTERPRETATION CHART. For Higher Examination

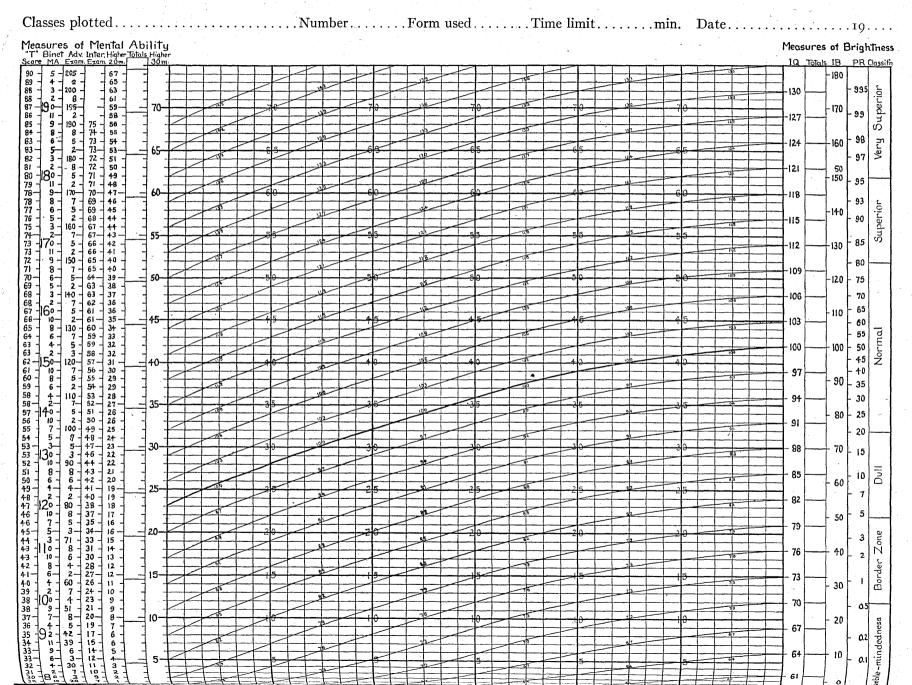


Chart number I is an interpretation Chart showing the distribution of IQ's in the 4th, 5th, 6th, 7th and 8th grades. This chart shows the overlapping of the different grades. The chart also shows the wide range of mental ability of the pupils in each of the five grades. The fourth grade is checked with a dot (•); the fifth grade with a triangle (A); the sixth with a cross  $(\times)$ ; the seventh with a circle  $(\circ)$ and the eighth a circle and dot ( 0). An inspection of this table shows some of the fourth grade pupils with chronological age and intelligence equal to that of the sixth grade pupils. In reading the Chart the age of the pupils in years and months are listed at the bottom of the chart and the scores made on the Otis Intelligence Test along the left hand margin. This interpretation Chart is sometimes used as the only basis for classification. The writer feels that this Chart alone is not sufficient evidence of the pupils! ability to do the work of a given grade. Other measures of their ability should supplement this, such as scores on achievement tests and physical ability. This Chart shows some very superior pupils and some who are feeble minded. example, one pupil has a chronological age of 15 years 3 months and an In of 60. This pupil is in the 5th grade. pupil in the same grade has a chronological age of 10 years 6 months and an IQ of 137. In the 7th grade one pupil has a chronological age of 15 years 10 months and an 10 of 64.

Another pupil in the same grade has a chronological age of 12 years 1 month with an IQ of 130. The oldest pupil in the 4th grade has a chronological age of 13 years and 10 months with an IQ of 101. The youngest pupil in the same grade has a chronological age of 9 years 4 months and an IQ of 123. The oldest pupil in the 8th grade has a chronological age of 16 years 7 months with an IQ of 83 and the youngest pupil in the same grade has a chronological age of 13 years 1 month and an IQ of 120. This wide range between pupils in the same grade, in both chronological age and mental ability makes it very evident that the present system of classification is not conducive to the best quality of work.

### DISTRIBUTION OF SCORES

### KANSAS PRIMARY ACHIEVEMENT TESTS 1930

### TABLE VII

GRADES

	GR	ADES		<del></del>
Scores	I	II	III	
85-89	:			
80-84			6	
75-79		ı	5	e.
70-74		0	8	
65-69	ı	1	4	
60-64	4	2	4	
55-59	4	9	4	
50-54	7	4	ı	
45-49	4	4	5	
40-44	2	2	3	
35-39	0	4	3	
30-34	4	4	0	
25-29	0	2	1	
20-24	4	3		
15-19	4	0		
10-14	6	2		
5-9	4			
0-4	2			esteronomico menero, que espaçabilidado
Total Papers	47	38	44	<del> </del>
High score	67	78	84	
Low score	<u>2</u> 32	13	28	
Median State Median	<u>  32</u> 15	<u>4</u> 7 39	66 64	

Table VII is the distribution of the scores made by the pupils in grades I to III inclusive on the Primary Achievement Tests issued by the Kansas State Teachers College of Emporia. This table gives the high score, low score, median score and the state median. The scores made by the pupils in the Lincoln schools were very good as the median in each grade was above the median made by the state. The first grade was very high. In fact it seems too high but the test was given and scored according to directions and those were the scores made. The pupils in the first grade made very high scores on the Otis Intelligence Tests which would help to substantiate the fact that this must be a group above the average in mental ability. Their school work throughout the year was also of superior quality. The first eight pupils in the first grade made IO's above 125 which shows superior mental maturity. These same pupils made scores on the achievement tests above the state median of the second grade. There is no doubt but what they could do the work of the A section in the second grade. Four of the first grade pupils have IQ's of between 138 and 140 as shown in Table V. achievement test scores were above the state median for the third grade. These pupils could skip the second grade and take the work of the B section in the third grade. Two pupils in the second grade made achievement test scores above that of the state median for the third grade. Their IO's were between 134 and 136. These pupils should be promoted to the

A section of the third grade. In the third grade there are five pupils with very high scores on the achievement tests and IO's from 130 to 137. These pupils deserve special promotion to the A section of the fourth grade. In these three grades there are five pupils with IO's below 90 and very low scores on the achievement tests. These pupils should be retained in the same grade another year. There are three pupils in the second and third grades who should be placed in an opportunity room. The size of the Lincoln schools and lack of funds make it impossible to have an opportunity room at the present time.

### DISTRIBUTION OF SCORES IN READING KANSAS ELEMENTARY TESTS 1930

### TABLE VIII

GRADES

		GRAI	)ES			
SCORES	IV	Δ	VI	VII	VIII	
45-47				2	4	
42-44		2	2	4	3	
39-41	1	1	0	3	5	
36-38	1	2	2	3	3	
33-35	0	1	3	7	0	
30-32	1	4	3	8	4	
27-29	5	4	8 .	5	4	
24-26	6	7	6	1	6	
21-23	4	13	7	4	1	
18-20	4	5	6	0	2	
15-17	6	2	2			
12-14	2	2				
9-11	2.	0				
6-8	l	1				
3-5	1				•	
0-2			الماريسية الخاريسية الخاتاب			
Total Papers	34	44	39	37	32	
High Score	40	44	43	45	46	
Low Score	4	- 8	16	21	18	
Median	23	23	25	33	33	
State Median	19	23	27	30	34	

# DISTRIBUTION OF SCORES IN ARITHMETIC KANSAS ELEMENTARY TESTS 1930

### TABLE IX

	· ····	UN.	ADES		
SCORES	IV	V	VI	VII	AIII
65-69					•
60-64	*				
55-59					1
50-54					l
45-59				1	5
40-44			1	4	6
35-39			2	6	5
30-34		4	8	9	7
25-29	1	4	16	11	6
20-24	.5	19	10	6	0
15-19	12	12	2		1
10-14	14	5		,	
5-9	2			•	
0-4					
Total Papers	34	44	39	37	32
High Score	25	33	41	46	55
Low Score	5	12	18	20	18
Median	15+	21+	27	31	37
State Median	17	25	31	35	39

### DISTRIBUTION OF SCORES IN SPELLING KANSAS ELEMENTARY TESTS 1930

TABLE X

		-	طف استداستان			
		. (	GRADES			
 SCORES	<u>IV</u>	V	VI	VII	VIII ·	
80-84				2	1	
 75-79		ı	2	1	6	÷
70-74		0	0	4	3	
65-69		0	2	4	4	inte .
60-64		2	3	1	4	
55-59		2	7	7	4	
50-54	2	3	3	7	4	
45-49	3	6	4	5	0	
40-44	0	7	3	0	2	
35-39	3	3	8	4	1	
30-34	1	6	3	2	0	
25-29	6	4	1		2	
20-24	6	4	2		1	
15-19	9	5	1		• • • • • • • • • • • • • • • • • • •	
10-14	4	ı			•	
5-9						
 0-4						
 Total Papers	34	44	39	37	32	
High Score	59	76	79	83	82	
 Low Score	12	14	17	30	20	
 Median	22	38	48	55	62.5	
 State Median	27	40	48	58	64	

### DISTRIBUTION OF SCORES IN LANGUAGE KANSAS ELEMENTARY TESTS 1930

#### TABLE XI

#### GRADES

	GRADES		
SCORES	VII	VIII	
75-79			
70-74	3	3	
65-69	9	5	•
60-64	11	8	
55-59	5	6	
50-54	4	4	
45-49	4	2	
40-44	1	1	
35-39		2	•
30-34		0	
25-29	o de la compania del la compania de la compania del la compania de la compania del la compania de la compania d	1	
Total Papers	37	32	
High Score	72	73	
Low Score	44	29	
Median	62	60	
State Median	58	63	

### DISTRIBUTION OF SCORES IN HISTORY KANSAS ELEMENTARY TESTS 1930

### TABLE XII

### GRADES

	GALDED	
SCORES	VII	VIII
48-51		
44-47		
40-43		
36-39	2	9
32-29	6	8
28-31	14	4
24-27	. <b>11</b>	10
20-23	4	
16-19		
12-15		
8-11		
Total Papers	37	32
High Score	36	38
Low Score	20	23
Median	29	32
State Median	26	31

# DISTRIBUTION OF SCORES IN GEOGRAPHY KANSAS ELEMENTARY TESTS 1930

### TABLE XIII

	GRADES	
SCORES	VII	
75-59		
70-74	2	·
65-59	5 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
60-64	4	
55-59	9	
50-54	10	
45-49	6	
40-44	0 · · · · · · · · · · · · · · · · · · ·	
35-39		
30-35		
Total Papers	37	
High Score	73	
Low Score	36	j krej t
Median	55	
State Median	44	

Table VIII, IX, X, XI, XII and XIII show the distribution of achievement test scores for grades 4, 5, 6, 7 and 8 in Reading, Arithmetic, Spelling, Language, History and Geography. Table VIII, Reading, grades 4 and 7, the medians were above the state median and the 5th grade median was the same as the state median. Two grades, 6 and 8, were slightly below the state median. The 6th grade was 2 points below and the 8th grade was 1 point above. The 8th grade was below the state median in all but one subject, History. They were from 1 to 3 points below in all other subjects, as Tables IX, X, XI and XII will show. This would indicate one of two things, poor teaching methods or a group averaging low in mentality. referring to Table IV we see that almost 33% of the 8th grade pupils are listed as dull pupils with only one pupil in the superior group. Many of these pupils should be placed in an opportunity room or retained in this grade for another year. This will account for the medians on the achievement test being lower than the state median.

The 7th grade achievement scores shown in Tables VIII, IX, X, XI and XII were above the state median in three subjects and below in three subjects. They were above in Geography 11 points, History 3 points and Language 4 points. They were below the state median in Reading 3 points, Arithmetic 4 points and Spelling 3 points. By adding up the points above and below the state medians, it will be seen that they had 18 points above the medians and 10 points below. It would seem that they

are a little better than an average grade and considerably better than the 8th grade. The 7th grade median was higher than the 8th grade in Language and the same in reading. There are four of the 7th grade pupils superior in intelligence (Table IV) and their achievement test scores were above the median score of the 8th grade. Arithmetic seemed to be their weakest subject as they were 4 points below the state median in this subject. Geography was their best subject; they were 11 points above the state median. There are 3 pupils in the 7th grade listed as dull and one pupil inferior (Table IV). These pupils made very low scores on the achievement tests and will be retained in the grade. The inferior pupil is feeble minded.

Tables VIII, IX and X show the 6th grade below the state median in Reading 2 points, Arithmetic 4 points and the same median in Spelling. There are 4 pupils in the 6th grade who are superior (Table IV). These 4 pupils have achievement test scores above the state median for the 7th grade. These pupils should be promoted. There are 8 pupils in the 6th grade according to Table IV who are dull. These pupils had achievement test scores below the median of the 5th grade in each of the subjects. These pupils should be demoted, however no pupils are being demoted, due to the discouragement attending demotions. They will be retained in the same grade.

The 5th grade (Tables VIII, IX and X) are below the state median in Arithmetic 4 points, Spelling 2 points and the same as the state median in Reading. This indicates that the grade

is a little below the average as a grade. There are 6 pupils superior, 13 dull and 1 inferior in mental ability (Table IV). Four of the superior pupils in mental ability had achievement scores above the state median of the 6th grade in all subjects. The other 2 superior pupils had achievement scores above the state median of the 6th grade in all but one subject and they were very close. These pupils will all be promoted. There are 13 dull pupils and 1 inferior (Table IV) in the fifth grade. The remaining 4 should be given regular promotion.

Tables VIII, IX and X show the 4th grade medians 4 points above the state median in Reading, 2 points below in Arithmetic and 5 points below the state median in Spelling. This indicates that the 4th grade is a little below the average grade, judging from the results of these tests. There are 3 superior pupils and 5 dull pupils (Table IV). The 3 superior pupils made achievement test scores above the state median for the 5th grade and should be promoted to the A section of the 5th grade. The 5 dull pupils did inferior work on the achievement tests with scores in the lowest 25% and should be retained in the grade.

# CHAPTER V SUMMARY AND CONCLUSIONS

The results of this study have helped to point out the defects in a system of classification and promotion based upon chronological age and teachers' marks. Such a system of classification in most cases properly places the inferior pupils, but it fails to recognize the superior pupil. The teachers are slow to recognize superior mental maturity, thus causing the superior pupil to be mentally retarded.

The results obtained from the Otis Intelligence Tests agree in almost all cases with the results obtained from the Achievement Tests. The results of these tests did not agree with the Witham's Age-Grade Classification, which classified the pupils upon the basis of chronological age. This fact would indicate that the best measures of a pupil's ability to do work are measures of mental maturity and his achievement test scores in school subjects. In the Lawrence Experiment the pupils were classified upon the basis of scores made upon the Otis Group Intelligence Tests. The results of this experiment show that the pupils did much better work as a result of the reclassification.

Another study made by Arthur I. Gates shows a very close correlation between achievement in school subjects and intelligence tests.

H. O. LeGrande' made a comparative study of certain dual scholarship contest scores and their relation to intelligence scores. In his study he found a very close relationship existing between results on scholarship tests and intelligence tests.

Van Wagemen<sup>27</sup> in a study on "Grade Placement vs Mental Age
As a Factor in School Achievement" found the mental age an important factor in the success or failure of the child in school
work. The results of this study substantiate the results of the
past experiments;—there is a very close relationship existing
between the achievement test scores and intelligence scores.

Pupils making high scores in the achievement tests had high IQ's
on the Otis Intelligence Tests and pupils making real low scores
on the achievement tests had low IQ's.

The results of this study point out the close relationship of pupil's scores on intelligence tests and achievement tests. The scores made upon these tests are a fairly accurate measure of the child's ability to achieve. Some pupils were permitted to skip a grade, others were promoted to the A section or best section of the next grade. Promotions were made upon the basis of mental maturity as shown by their IQ's, scores on achievement tests, chronological age and physical fitness. The physical ability of the child to do the work of a given grade was determined by the teacher and by physical examination. The results of the physical examination were not con-

sidered in making this study.

Tables given in this study show the wide range in both mental maturity and chronological age in the same grades. We find a range in mental maturity from the very superior to the feeble minded and in chronological age as much as four years difference.

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## APPENDIX

## ACHIEVEMENT TESTS

Primary Achievement Test

Reading

Spelling

Geography

American History

Language

Arithmetic

# OTIS GROUP INTELLIGENCE SCALE

Primary Examination (Form A)

Manual of Directions and Key

Intermediate Examination (Form A)

Manual of Directions and Key

Interpretation Chart for Intermediate Examination

# OTIS GROUP INTELLIGENCE SCALE

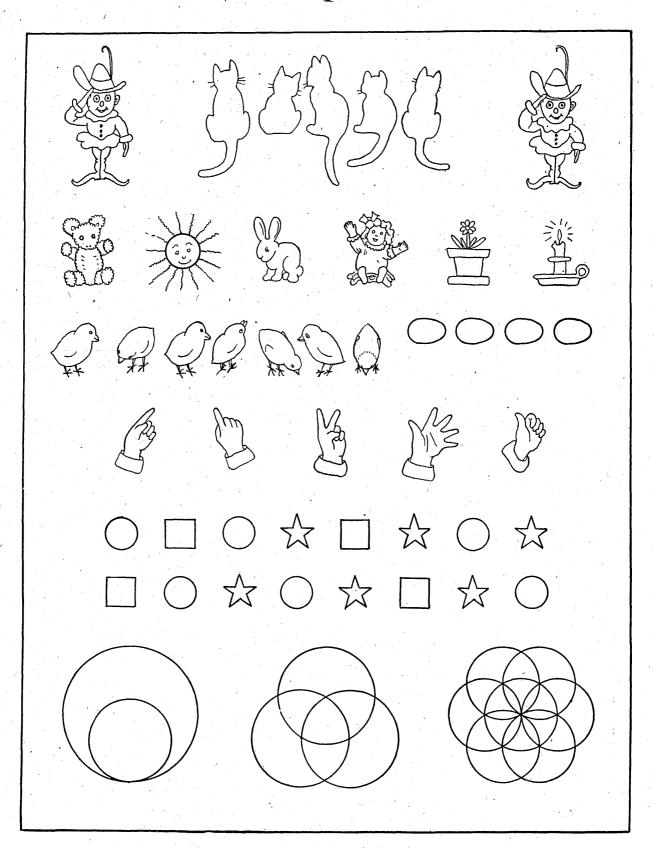
Devised by ARTHUR S. OTIS

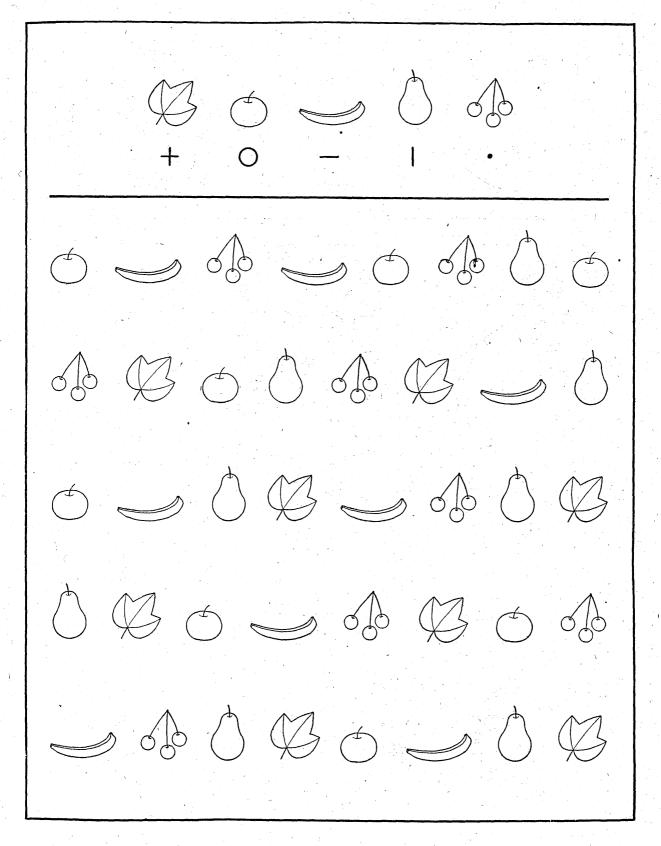
# PRIMARY EXAMINATION: FORM A

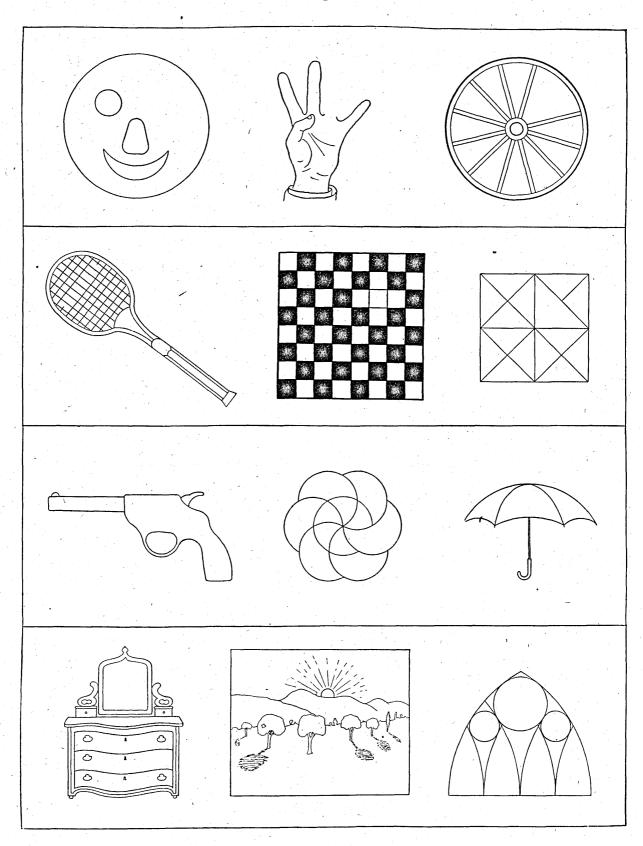
My name is		
My birthday is		••••
On my last birthday I was years old.		
I am in the grade.		
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The name of this city is		• • • • • •
The date today is		
(Do not write below this line.)		
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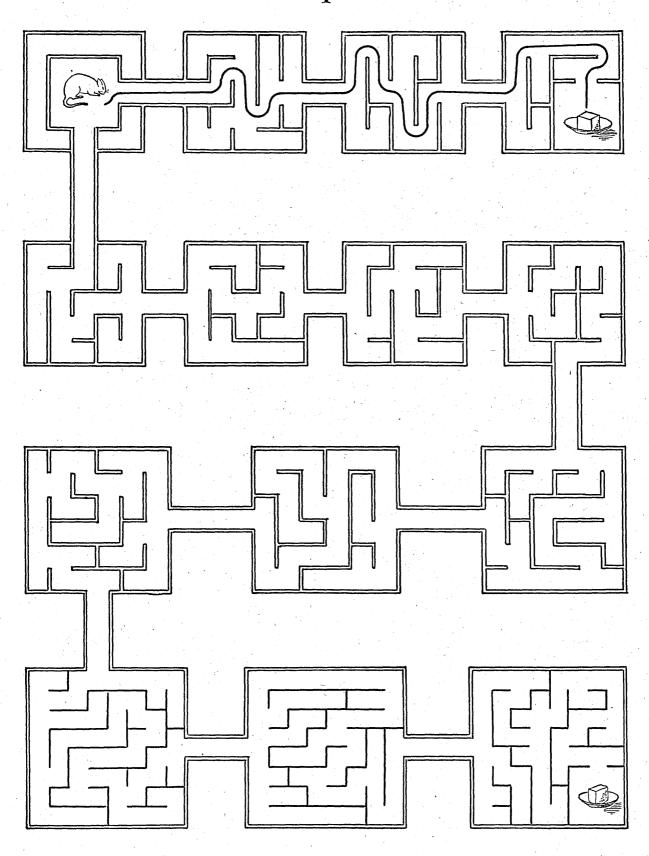
Published by World Book Company, Yonkers-on-Hudson, New York, and 2126 Prairie Avenue, Chicago Copyright, 1919, 1920, by World Book Company. Copyright in Great Britain. All rights reserved. OGIS: PR: A-15

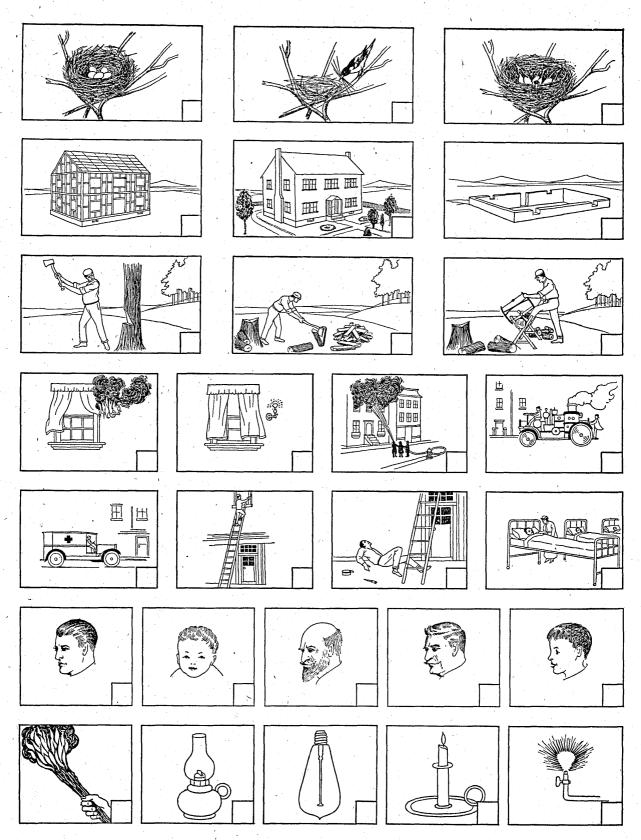
To the Examiner: Do not administer this test without first reading carefully the Manual of Directions. The Manual must be ordered extra.



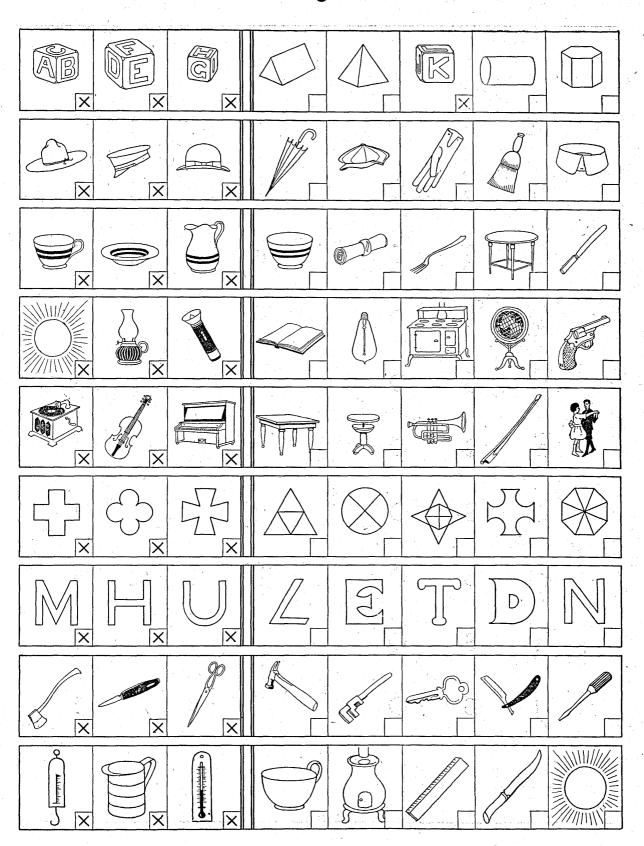








P. Santan



A	S	Ο.	K	1	2	3
В	S	· O	L	1	2	3
C	<b>S</b>	0	M	1	2	3
D	S	0	N	1	2	3
E	S	Ο	O	1	2	3
F	S	O	P	1	2	3
G	S	O	Q	1	2	3
H	S	Ο	R	1	2	3
	S	0	S	1	2	3
J	S	O	T	1	2	3

# OTIS GROUP INTELLIGENCE SCALE

Devised by ARTHUR S. OTIS, Ph.D.

Formerly Development Specialist with Advisory Board, General Staff, United States War Department

## MANUAL OF DIRECTIONS FOR PRIMARY EXAMINATION

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## I. GENERAL PROCEDURE

The Otis Group Intelligence Scale is designed to test general mental ability. The scale is issued in two series, a Primary Examination and an Advanced Examination. The Primary Examination is designed especially for the Kindergarten and for Grades 1 to 4. The Advanced Examination is designed for Grades 5 to 12—in fact, for all literate persons, including university students. To provide for reëxamination after a short interval without the scores being influenced by memory of the previous examination, and also to prevent collusion between groups successively examined, two forms of the test are available, Form A and Form B. These are different in substance but similar in structure, and the total scores from them are equivalent.

When it is inconvenient to give the entire test at one sitting, divide and administer in two sittings. The examination booklets should be distributed and the headings filled in as usual, and when the first half of the tests have been administered, the booklets should be collected immediately so that the pupils may not acquaint themselves with the remaining tests. The booklets should be collected in such a manner that, when the pupils are seated in the same seats for the second sitting, the booklets can be returned to them without confusion. At a later period the examination booklets may be distributed again and the examination completed without in any way vitiating results. For young pupils this method is of advantage in that it prevents fatigue.

#### REËXAMINING

The method of examining pupils in groups is subject, of necessity, to certain limitations. It is impossible for the examiner to be sure in every case that he has the full and undistracted attention at all times of all the pupils being tested. While it is impossible for a really dull person to make a good score in the examination, it occasionally happens that a pupil tested with others in a group does not do himself justice. The most common reasons are nervousness, temporary

confusion, or lapse of attention. For this reason, no score should be taken as absolute. Whenever the score of any pupil does not accord reasonably with the quality of his school work or other known facts about his mentality, he should be given further examination. Form B of the test, in both series, is available for this purpose. Sometimes a second testing in a group will reveal the fact that he was capable of making a better score. If a second examination is given within a short time after the first, a slight allowance should be made for so-called practice effect. If a pupil makes a second score which is more than ten points above the first, however, it is probable that his first score was vitiated in some way and was therefore too low.

Causes which vitiate a pupil's score commonly have the effect of increasing the variability of the pupil's test scores. For example, if a pupil has one or two zero test scores or very low ones along with others considerably above zero, it is probable that these low scores are caused by factors other than mere lack of intelligence. In order to discover whether this is not the case, the pupil may be examined individually and given only those tests in which he failed badly. In any other puzzling case, especially when it may be necessary to pronounce a pupil feeble-minded, an individual examination should be given.

#### Considerations Regarding Giving of Directions

In giving the directions for these tests, it is essential that every point be clearly understood by every one. This can be assured in no other way than by giving the directions slowly and distinctly, with proper expression and emphasis. Before an examiner gives a test for the first time, he should practice the directions several times, preferably with one or more listeners who are unfamiliar with the test. In order that the meaning of each sentence may be fully grasped, it should be followed by a pause. It is impossible to emphasize too strongly the need for these precautions. A good rule to follow is to allow a pause of 2 seconds after every sentence. The procedure may be considered as standardized only on the condition that the examiner makes an adequate pause after every sentence throughout the testing.

## II. DIRECTIONS FOR ADMINISTERING

To administer the examination, begin by addressing the pupils as follows: "We are going to give you some booklets now, and we will tell you pretty soon what you are to do with

them. While they are being passed you may look at the first page, but do not open them until you are told to."

Have monitors pass the booklets, one to each pupil, right side up. If the pupils can write, have them fill in the blanks, telling their names, birthdays, ages, etc. Give any help that will facilitate. It might be well to fill in the blanks beforehand on booklets for those pupils who cannot write.

When blanks are filled in, say, "Now lay your pencils down and listen a moment, while I read to you about what you are to do. In these booklets are some pictures and drawings and other interesting things. We want to see if you can answer some questions about the pictures and drawings. Also you will be told to make certain marks in certain places in the booklets and we want to see if you can do exactly what you are told to do, and how quickly you can do it.

"Now in order to play this little game fairly, nobody must look to see what any one else is doing. That isn't fair. We want to find out what you can do all by yourself. You must listen very carefully to everything I say, so that you will be sure to hear the first time, because I will not repeat anything. Do not ask any questions. We will take one page at a time. I will tell you when to turn the page, and you must not turn any page until you are told to."

# TEST 1. FOLLOWING DIRECTIONS [Form A] (For Form B, see below)

"Now turn over to the next page — the one with pictures of little men in the corners.<sup>2</sup> Here you see pictures of many things. I am going to tell you something to do with your pencils, on this page, and I want to see if you can do exactly what I say. Listen carefully while I tell you what to do, and then do it as quickly as you can. Notice the pictures at the top of the page. (1) Now take your pencils and put a tail on the kitty that has no tail." (Pause 5 seconds.)

"Remember not to look around. That isn't fair.

- (2) "Now look at the little man in the upper right-hand corner and draw a line for him to stand on." (Pause 5 seconds.)
- (3) "Now look at the next row of pictures and draw a circle around the doll." (Pause 5 seconds.)
- (4) "Next find the picture of something that can run, and draw a line under it." (Pause 5 seconds.)
- (5) "Next find the picture that is between the doll and the candle and make a little cross under it." (Pause 5 seconds.)
- (6) "Next find the picture of something that gives light and can be picked up. Make a round dot under it." (Pause 5 seconds.)

All passages to be read to the pupils are given in bold type. For the sake

of uniformity, these should be strictly adhered to.

<sup>2</sup> The examiner will realize that the administration of the test is standardized only when the directions are read at a standard rate. This is such that the reading of the first paragraph — without allowing time for turning the page — is slightly more than half a minute. The examiner should time his reading of this paragraph and gauge the rate of reading accordingly. If less than one-half minute is taken, the reading rate is too rapid and may vitiate the scores in the test.

- (7) "Next draw a line from the teddy bear's ear to the rabbit's ear that will go under the sun." (Pause 5 seconds.)
- (8) "Next find the picture of a child's plaything that has large ears, and put a little circle under it." (Pause 10 seconds.)
- (9) "Now notice the chicks and eggs and draw more eggs so that there will be as many eggs as there are chicks." (Pause 10 seconds.)
- (10) "Next find the two chicks that look most alike and cross out the one between them." (Pause 5 seconds.)
- (11) "Now notice the pictures of hands and draw a ring around the picture of a right hand." (Pause 5 seconds.)
- (12) "Next, in the two rows of little drawings below the hands, cross out each circle that has a star under it." (Pause 10 seconds.)
- (13) "Next make a dot in each square that is between two stars." (Pause 10 seconds.)
- (14) "Now notice the large circle with a smaller circle in it. Put a cross in the space that is in the large circle but not in the smaller circle." (Pause 5 seconds.)
- (15) "Next, in the middle drawing, put a cross in the space that is in all three circles." (Pause 5 seconds.)
- (16) "Next, in the third drawing, in the corner, count all the circles, and write the number below the drawing." (Pause 10 seconds.)

## Test 2. Association [Form A]

"Now look at the next page. Notice the first row of pictures at the top of the page. There is a leaf with a little cross under it, an apple with a little circle under it, a banana with a line under it, a pear with an up-and-down line under it, and some cherries with a dot under them. You are to put the same marks under the same pictures below the line. Look at the next row of pictures. There you see an apple, banana, cherries, etc. Put a little circle under the apple, like the circle under the apple in the top row." (Pause 5 seconds.)

- "Now put a line under the banana just like the line under the banana in the top row." (Pause 5 seconds.)
- "Now put a little round dot under the cherries just like the dot under the cherries in the top row." (Pause 5 seconds.)
- "Now put under the next banana the same kind of line that is under the other bananas." (Pause 5 seconds.)
- "Now what goes under the apple? If you know, raise your hand." Call for an answer, and when the right answer is given say, "Yes, a little circle, the same as before. Put the little circle under the apple." (Pause 5 seconds.)
- "Now put under the cherries the mark that belongs under them and do the same with the pear and apple." (Pause 10 seconds.)
- "Then go right on with the other four rows and put under each picture the mark that belongs under it. Work fast and see how many you can get done before I say stop." After

1 minute say, "Stop. Lay down your pencils." (Pause.')
"Turn to the next page."

TEST 1. FOLLOWING DIRECTIONS [Form B]

Now turn over to the next page — the one with pictures of little men in the corners.<sup>2</sup> Here you see pictures of many things. I am going to tell you something to do with your pencils on this page, and I want to see if you can do exactly what I say. Listen carefully while I tell you what to do, and then do it as quickly as you can. Notice the pictures at the top of the page. (1) Take your pencils and put a tail on the kitty that has no tail." (Pause 5 seconds.)

- "Remember not to look around. That isn't fair.
- (2) "Now look at the little man in the upper left-hand corner, and draw a line for him to stand on." (Pause 5 seconds.)
- (3) "Now look at the next row of pictures, and draw a circle around the rabbit." (Pause 5 seconds.)
- (4) "Next find the picture of something that has hands, and draw a line under it." (Pause 5 seconds.)
- (5) "Next find the picture that is between the sun and the rabbit, and make a little cross under it." (Pause 5 seconds.)
- (6) "Next find the picture of something that grows but cannot see, and make a round dot under it." (Pause 10 seconds.)
- (7) "Next draw a line from the doll's hand to the flower in the flower pot that will go under the candle." (Pause 5 seconds.)
- (8) "Next find the picture of something that gives light but cannot be touched, and put a little circle under it." (Pause 10 seconds.)
- (9) "Now notice the chicks and eggs, and draw more eggs so that there will be as many eggs as there are chicks." (Pause 10 seconds.)
- (10) "Next find the two chicks that look most alike, and cross out the one between them." (Pause 5 seconds.)
- (11) "Now notice the pictures of hands, and draw a ring around the picture of a right hand." (Pause 5 seconds.)
- (12) "Next, in the two rows of drawings below the hands, make a dot in each circle that is between two stars." (Pause 10 seconds.)
- (13) "Next cross out each star that has a circle under it." (Pause 10 seconds.)
- (14) "Now notice the large circle with a smaller circle in it. Put a cross in the space that is in the large circle but not in the smaller circle." (Pause 5 seconds.)
- (15) "Next, in the middle drawing, put a cross in the space that is in the two lower circles but not in the upper circle." (Pause 10 seconds.)

<sup>1</sup>At this point there is no harm in relieving the disappointment of those who did not finish by asking, "How many finished the second row? Third row? Fourth row?" etc. Note when about half the hands have been lowered, and then say, "If you finished that many rows, you did very well."

A similar moment of relief and opportunity for questioning is permissible after each test, provided the examiner will see that no pupil takes the opportunity to look at the paper of another.

<sup>2</sup> See footnote to Test 1, Form A.

(16) "Next, in the third drawing, in the corner, count all the circles, and write the number below the drawing." (Pause 10 seconds.)

TEST 2. ASSOCIATION [Form B]

"Now look at the next page. Notice the first row of pictures at the top of the page. There is a pair of scissors with a little cross under it, a ball with a little circle under it, a spoon with a line under it, a bottle with an up-and-down line under it, and a spool with a dot under it. You are to put the same marks under the same pictures below the line. Look at the first row of pictures below the line. There you see a ball, spool, spoon, etc. Take your pencils and put a little circle under the ball, like the circle under the ball in the top row." (Pause 5 seconds.)

"Now put a line under the spoon just like the line under the spoon in the top row." (Pause 5 seconds.)

"Now put a little round dot under the spool just like the dot under the spool in the top row." (Pause 5 seconds.)

"Now put under the next spoon the same kind of line that is under the other spoons." (Pause 5 seconds.)

"Now what goes under the ball? If you know, raise your hand." Call for an answer, and when the right answer is given say, "Yes, a little circle, the same as before. Put the little circle under the ball." (Pause 5 seconds.)

"Now put under the spool the mark that belongs under it, and do the same with the bottle and ball." (Pause 10 seconds.)

"Then go right on with the other four rows and put under each picture the mark that belongs under it. Work fast and see how many you can get done before I say stop." After 1 minute say, "Stop! Lay down your pencils." (Pause.!) "Turn to the next page."

## TEST 3. PICTURE COMPLETION [Forms A and B]

"On this page are twelve pictures. Something is left out of each picture. Look at the first picture and think what is left out. If you know, raise your hand." Call on a pupil for the answer. Then say, "Yes, one eye is left out. Draw in the eye where it should go." (Pause 5 seconds.) "Now there is just one thing left out of each picture. Look at each of the other pictures and, as quickly as you can, draw in what is left out. See how many you can get done before I say 'Stop.' Ready, go." After 2 minutes say, "Stop! Lay your pencils down and look at the next page."

# TEST 4. MAZE [Forms A and B]

"Here you see pictures of little square boxes with walls in them and little paths between the walls. In the box in one upper corner you see a little mouse, and in the other upper corner is a piece of cheese. And there is a line from the mouse to the cheese, showing just how the mouse would have to go, around through the paths, to get to the cheese.

The line shows the *only* way to get to the cheese. If the mouse went into any other path, he would run up to a wall and have to turn and go back to the right path.

"Now you will see another piece of cheese in the box in the lower corner of the page. How would the mouse get to that piece of cheese? When I say 'Ready,' you are to draw a line to show just where the mouse would have to go to get to this other piece of cheese, in the lower corner. Be very careful not to go into any wrong path. See how far you can get before I say 'Stop,' without crossing over any wall or going into any wrong path. Ready, begin." After 2 minutes say, "Stop! Lay your pencils down." (Pause if desired.) "Turn to the next page."

## TEST 5. PICTURE SEQUENCE [Forms A and B]

"Look at the three pictures at the top of the page. They tell a little story about a bird building a nest and hatching out some little birds. You can see that the pictures are not in the right order. Think which one should come first." Call on a pupil, and when the right answer is given, say, "Yes, the bird has to build her nest first, so put a figure 1 in the picture where the bird is building her nest. Put it in the small square in the lower corner of the picture." (Pause 5 seconds.) "Now which picture comes next?" Call on a pupil, and when the right answer is given, say, "Yes, so put a figure 2 in the picture of the nest with the eggs in it, and put a figure 3 in the picture of the nest with the little birds in it. Always put the number in the small square in the corner of the picture." (Pause 5 seconds.) "Now you are to do the same with all the other rows of pictures. In each row, find the picture that should come first and put a figure 1 in the corner of that picture. Then put a figure 2 in the picture that should come next, and so on. See how many rows you can get done before I say 'Stop.' Go ahead." After 2 minutes say, "Stop! Lay your pencils down and look at the next page."

## Test 6. Similarities [Forms A and B]

"Look at the first row of pictures. You will see that they are all little wooden blocks. The three blocks together on this side with little crosses under them (hold up booklet and point so all may see) are alike, because they are all square blocks with letters on them. How many see another block in that row that is like the first three? Raise your hands." Call on a pupil, saying, "Which one is it?" When the right answer is given, say, "Yes, it is the one with the letter K on the front, isn't it? and there is a little cross in the corner to show that that is the right answer.

"Now look at the second row of pictures. The first three, that have little crosses under them, are alike. Look at the other five and pick out the right answer—the one that is most like the first three. Put a cross in the little square in the corner under the answer." (Pause 5 seconds.)

"Now in each row below, in the same way, look at the first three pictures and see how they are alike, then put a cross under the answer — the one that is most like the first three. Remember, there is only one right answer in each

row. Go ahead and work fast." After 2 minutes say, "Stop! Turn over to the last page." (Pause for short rest, if desired.)

## Test 7. Synonym-Antonym [Forms A and B]

"Notice on the side of the page the letters, A, B, C, D, E, and so forth, and after the letter A the letters S and O, and after B the letters S and O, and so on. The letter A stands for two words I shall read. You are to think whether they mean the same, like quick and fast, or whether they mean the opposite, like yes and no or like good and bad. If they mean the same, you are to draw a line around the letter S, after the A. But if they mean the opposite, you are to draw a line around the letter O. The two words are up and down. Should you draw the line around the S or the O?" Call on a pupil, and when right answer is given, say, "Yes, up and down mean the opposite; so draw a line around the O." (Pause 5 seconds.) "Now we will go on in the same way." (For Form B, see below.)

## [Form A].

- "Question B. Put your finger on B—the two words are large and big. Draw the line around the right letter to show whether they mean the same or the opposite." (Pause 5 seconds.)
- "Question C. Put your finger on C the two words are pleasant and agreeable." (Pause 5 seconds.)
  - "Question D. North and south." (Pause 5 seconds.)
- "Question E. Strange and common." (Pause 5 seconds.)
  - "Question F. Empty and vacant." (Pause 5 seconds.)
- "Question G. Awkward and clumsy." (Pause 5 seconds.)
  - "Question H. Sensible and foolish." (Pause 5 seconds.)
  - "Question I. Same and different." (Pause 5 seconds.)
  - "Question J. Courage and bravery." (Pause 5 seconds.)

#### [Form B]

- "Question B. Put your finger on B—the two words are tall and high. Draw the line around the right letter to show whether they mean the same or the opposite." (Pause 5 seconds.)
- "Question C. Put your finger on C the two words are ordinary and common." (Pause 5 seconds.)
- "Question D. Pleasant and disagreeable." (Pause 5 seconds.)
- "Question E. Forget and remember." (Pause 5 seconds.)
  - "Question F. Deceive and lie." (Pause 5 seconds.)
  - "Question G. Liberty and freedom." (Pause 5 seconds.)
  - "Question H. Same and opposite." (Pause 5 seconds.)
  - "Question I. Capture and escape." (Pause 5 seconds.)
  - "Question J. Justice and fairness." (Pause 5 seconds.)

## TEST 8. COMMON SENSE [Forms A and B]

"Now notice on the other side of the page the letters K, L, M, N, O, and so on, and after each letter the numbers 1, 2,

and 3. Each letter stands for a question I shall read to you. I am going to read three answers to each question. If answer No. 1 is the right one, you are to draw a line around the number 1. If answer No. 2 is the right one, draw a line around the number 2. But if answer No. 3 is the right one, draw a line around the number 3. The first question is: Why do birds build nests? These are the answers. Think which is the right one. Answer No. 1: Because they like to work. Answer No. 2: To make a place to lay their eggs. Answer No. 3: To keep other birds away. Now which is the right answer, No. 1, 2, or 3?" Call on a pupil, and when the right answer is given, say, "Yes, answer No. 2 is the right one, because birds build their nests to lay their eggs in. So draw a line around the number 2 after the letter K." (Pause 5 seconds.) (For Form B see below.)

## [Form A]

"Now I will read question L. Keep your finger on the letter L while I read. Think which answer is the right one and draw a line around the right letter. Question L: If you hurt some one without meaning to, what should you do?

One: Say you didn't do it.

Two: Beg his pardon.

Three: Run away." (Pause 5 seconds.)

" Question M: Why is it a good thing to brush our teeth?

One: So we can have a toothbrush.

Two: Because tooth paste has a pleasant taste.

Three: To keep our teeth clean and white." (Pause 5 seconds.)

" Question N: Why do people take baths?

One: They enjoy it.

Two: To make use of the bathtub.

Three: It is healthful." (Pause 5 seconds.)

"Question O: Why would most people rather have an automobile than a horse and carriage?

One: Automobiles have rubber tires.

Two: They go faster.

Three: They use gasoline." (Pause 5 seconds.)

"Question P: Why do men raise their hats when they meet women they know?

One: They learned to do it when they were boys.

Two: It is considered polite.

Three: To show their hair is brushed." (Pause 5 seconds.)

"Question Q: Why do automobiles keep to the right side of the street?

One: It is the custom and is easier for them to pass one another.

Two: The road is smoother on that side.

Three: They are not so likely to run over people."
(Pause 5 seconds.)

" Question R: Why are streets lighted at night?

One: So people can see where they are going.

Two: Because children are afraid of the dark.

Three: Because dark streets are colder." (Pause 5 seconds.)

" Question S: In what way are fish like pigeons?

One: They have feet to walk with.

Two: They have two eyes.

Three: They can swim and fly." (Pause 5 seconds.) "Question T: Why should we not pick up a kitten by its tail?

One: It doesn't look well.

Two: It hurts the kitty.

Three: Its tail might come off." (Pause 5 seconds.)

"Now lay your pencils down and turn your booklets over to the front page." Have monitors collect the booklets.

## [Form B]

"Now I will read question L. Keep your finger on the letter L while I read. Think which answer is the right one and draw a line around the right letter. Question L: Where is the sun at night?

One: It is behind heavy clouds.

Two: It is on the other side of the earth.

Three: It has set in the ocean." (Pause 5 seconds.) "Question M: If you buy two cents' worth of candy and

give the store man a nickel, how many pennies should he give you back?

Answer No. 1: One penny.

Answer No. 2: Two pennies.

Answer No. 3: Three pennies." (Pause 5 seconds.)
"Question N: If you gave a newsboy twenty-five cents

"Question N: If you gave a newsboy twenty-five cents for a three-cent newspaper, what would be the right change?

One: Three nickels.

Two: Two dimes.

Three: Two dimes and two pennies." (Pause 5 seconds.)

"Question O: Which would most people rather hear?

One: A factory whistle.

Two: A piano playing.

Three: A church bell." (Pause 5 seconds.)

"Question P: When is the best time to mend a leaky roof?

One: While it is raining.

Two: As soon as the roof is dry after the rain.

Three: Just before it rains again." (Pause 5 seconds.)

"Question Q: There is a saying that it is hard to teach an old dog new tricks. This means,

One: It is easier to learn while we are young.

Two: New tricks are hard to teach.

Three: Dogs do not learn tricks easily." (Pause 5 seconds.)

" Question R: What does pity mean? - pity.

One: To feel sorry for some one.

Two: To hate some one.

Three: To give a beggar food." (Pause 5 seconds.)

"Question S: There is a saying that a stitch in time saves nine. It means.

One: It will save nine dollars.

Two: It is better to mend small tears before they get

bigger.

Three: Be careful not to tear your clothes." (Pause 5 seconds.)

"Question T: There is a saying: 'Don't cry over spilt milk.' It means,

One: Crying does not bring back the milk.

Two: It is foolish to worry over things we can't help. Three: The tears might fall in the milk." (Pause 5 seconds.)

"Now lay your pencils down and turn your booklets over to the first page." Have monitors collect the booklets.

## III. DIRECTIONS FOR SCORING

#### GENERAL PLAN

Each test consists of a certain number of items, defined below. Each item is answered either right or wrong; if right it counts one point, if wrong no points. There are no partial credits. Erasures and corrections are permitted in all tests but Test 4. The number of items in the eight tests are respectively 16, 12, 12, 10, 7, 8, 10, 10, making a total possible score of 85 points.

The correct answers to the items of Tests 1, 3, 5, 6, 7, and 8 are shown in the back of the Manual (pages 10 to 12). The correctness of items of Tests 2 and 4 are self-evident. It should be noted that the correct answers in Tests 6, 7, and 8 appear in a regular manner which renders the use of stencils unnecessary and aids in quickly detecting incorrect answers. It is suggested that each correct item be indicated by a check mark ( $\checkmark$ ) or each incorrect item by a cross ( $\times$ ), or that both checks and crosses be used. The score in each test (number of items answered correctly) is to be placed on the dotted line in the lower corner of the page. These will be copied afterward on to the front page of the booklet or on to the Class Record. The sum of the test scores constitutes the Total Score — the measure of the pupil's Mental Ability.

## SPECIAL DIRECTIONS

Test 1. There are 16 items, corresponding respectively to the 16 directions given for the test. Score each according to the apparent intent of the pupil, disregarding crudeness of drawing.

Item 1. In this item, for example, anything resembling a tail attached to the proper drawing of a cat will count as correct.

Items 3 to 8. It may happen that in addition to the correct symbol under some drawing, the pupil has placed another and incorrect symbol. This latter should be disregarded and if otherwise correct the item should be counted right. Thus, in Form A, if a circle has been placed under the teddy bear, which is correct, and also a cross, which is incorrect, the item will count as correct.

Items 10 and 11. If more than one chick or hand is crossed out, the item counts as wrong.

Items 12 and 13. If in either item more than the two correct drawings are crossed out or dotted, the item counts as wrong.

Items 14 and 15. The symbols must be wholly within the

correct spaces, and there must be no other marks in the drawings.

Test 2. In the first row the first two drawings count as one item, the second two as one item, etc., making four items in the first row. In each succeeding row the first four drawings count as one item and the second four as one item, making two items in each row after the first. Each correct item counts one point. Maximum score, 12 points.

Note carefully if the proper symbols have been placed under the drawings in the first two rows. If so, all succeeding symbols may be counted as correct without inspection; <sup>1</sup> if not, succeeding rows must be inspected and are credited only where found correct. Incomplete or only partially correct items count nothing.

Test 3. Each drawing properly completed counts one point. Maximum score, 12 points. No partial credits are given. Inaccuracy of drawing is not considered, only the evident intention. If the right answer is given to any item, together with something else that is reasonably lacking, count the item as correct — as, for example, in Form A, if pupils are drawn in the eyes in Item 1, or the handle of the pistol is shaded. However, if too much is drawn in, the item counts as wrong — as, for example, in Form A, if other circles in Item 8 besides the central one are completed, or if more than one square in the checkerboard is blacked.

Test 4. Each square through which the line is successfully drawn counts one point, — that is, without crossing a line or entering a wrong passage, — provided, however, that slight cutting of corners, etc., apparently only through awkwardness, do not count off.

Test 5. Each line of drawings correctly answered counts one point. Maximum score, 7 points. Count off one point from the score if the figures are not placed in the small squares as directed.

Test 6. Each line of drawings correctly answered counts one point. Maximum score, 8 points. If two or more answers are given to any item, count that item wrong.

Tests 7 and 8. Each item counts one point. Maximum score in each test, 10 points. If more than one answer is given to any item, count that item wrong.

In scoring Tests 6, 7, and 8, the scorer should note the regular appearance of the correct answers. This may be committed to memory in a few moments, after which no reference is needed to the Table of Answers.

#### RECORDING SCORES

For convenience in recording scores a Class Record is furnished in each package of test booklets. The copying of the scores in the separate tests on to the Class Record is optional.

## IV. DETERMINATION OF NORMS

The median or middle score of unselected children of a given age is called the normal score or *norm* for that age. The norms for the Primary Examination for ages 5 to 15 are shown in Table 4.

<sup>1</sup> It has been found that when the first two rows are correct, it almost never happens that errors are made thereafter. If it should be noted incidentally that there are errors in succeeding rows, credit should be deducted accordingly.

# Manual of Directions for Primary Examination

TARLE 1

Showing the Distributions of Scores of Pupils of Grades One to Five, All Ages Combined (Primary Examination)

Score Grade	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	TOTALS
1 2 3 4 5	44 4 1	49 8 0	54 22 1	53 45 5	40 67 7 2	28 90 24 11	23 68 43 11	20 87 64 27	14 86 93 50	5 55 106 74	37 106 87 3	1 23 101 103 10	11 69 90 19	3 32 73 26	3 16 44 38	1 5 17 19	2 5	331, 610 673 591 120

The table of norms is based upon the scores of 2325 pupils throughout the country. The pupils whose scores were received were distributed in the grades as shown in Table 2. Their scores were distributed as shown in Table 1.

The norms for the Primary Examination, given in Table 4, were derived from the 2325 scores referred to in Table 2 by the process of augmenting the number of cases for each grade

TABLE 2
SHOWING THE DISTRIBUTION BY GRADES OF PUPILS TAKING THE PRIMARY EXAMINATION

GRADE	Number of Pupils
1	331
2	610
3	673
4	- 591
5	120

to accord with the ratios of pupils actually in Grades 1, 2, 3, 4, and 5 (Bonner: Bulletin No. 24, 1920, Bureau of Education, page 91). The procedure for this correction is explained fully in the Manual of Directions for the Advanced Examination, page 7.

It will be noted that the norms in Table 4 run up to 100, whereas the maximum score in the test is 85 points. This simply means that if the test had been extended so as to be capable of adequately testing normal 15-year children, the

TABLE 3
REPRESENTATIVE PERCENTILE SCORES

GRADE	Perci	ENTILE S	CORES
	25%	50%	75%
1 2 3 4 5	9 25 42 48 65	17 35 50 57 71	27 45 57 64 75

norm in the test for a child of 15 years 11 months would probably be about 100 points. These high norms are to be used just as are the lower ones for finding IQ's, etc. (See page 9.)

#### MENTAL AGE

The term Mental Age has arisen in connection with the Binet-Simon Tests. To say that a pupil has a mental age of

8 years means that he has the mental ability of a normal 8-year child. In general, then, the mental age of a pupil is the age of the normal child having his degree of mental ability.

There are, however, degrees of mental ability attained by bright individuals at or nearing maturity which are above that normal for any age, just as some individuals attain heights above the median of adults. In order to express those degrees of mental ability in terms of "mental age," the mental age scale has been extended artificially in the upper ranges for use with the Binet-Simon Tests. For a more complete explana-

TABLE 4

Norms for Primary Examination (Revised November, 1925)

YEARS	5	6	7	8	9	10	11	12	13	14	15
Months 0	0	10	22	35	47	60	71	77	83	89	95
$\begin{array}{c} 1 \\ 2 \\ \end{array}$	0	11 12	23' 24	36 37	48 49	61 62	71 72	77 78	83 84	89 90	95 96
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	13	25	38	50	63	72	78	84	90	96
	2	14	26	39	51	64	73	79	85	91	97
	3	15	27	40	52	65	73	79	85	91	97
$egin{array}{cccc} 6 & \cdot & \cdot \\ 7 & \cdot & \cdot \\ 8 & \cdot & \cdot \end{array}$	4	16	28	41	54	66	74	80	86	92	98
	5	17	30	42	55	67	74	80	86	92	98
	6	18	31	43	56	68	75	81	87	93	99
9 · · ·	7	19	32	44	57	69	75	81	87	93	99
10 · ·	8	20	33	45	58	69	76	82	88	94	100
11 · ·	9	21	34	46	59	70	76	82	88	94	100

tion of this point see Chapter XIII of Statistical Method in Educational Measurement, by Arthur S. Otis, published by World Book Company.

To find the Binet Mental Age of a pupil from his score in the Primary Examination, consult Table 5, on page 8.

A mental age obtained from this table is the most probable Binet Mental Age that corresponds to the given score on the Primary Examination. For some as yet unexplained reason, for pupils of a given chronological age the variability of the distribution of their mental ages obtained from a group test tends to be greater than the variability of such a distribution obtained from the Binet test. That is, for a dull pupil the mental age obtained from Table 5 will tend to be too low and for a bright pupil it will tend to be too high. Therefore IQ's should not be computed from this table, but from Table 6 (page 9).

## V. INTERPRETATION OF RESULTS

#### INTELLIGENCE AND BRIGHTNESS

There are two aspects of the mind of a child that must not be confused. One is his degree of mental ability and the other is his degree of brightness.

Mental ability is that growing ability in a child which enables him, year by year, to think more abstractly and solve more difficult problems. Growth in mental ability may be thought of as growth in thinking power.

Brightness is that fixed quality of mind which determines the rate at which a child's thinking power shall grow. It is differences in brightness that cause children of the same age to differ in mental ability and that enable some individuals to reach ultimately a higher level of intellectual power than others.

Mental ability is measured in terms of score in a mental ability test, while brightness is measured by the so-called Intelligence Quotient (see page 9). These are derived meas-

TABLE 5
THE BINET MENTAL AGE CORRESPONDING TO EACH SCORE IN THE PRIMARY EXAMINATION

Score	M A	Score		Score	МА	Score	M A	Score	M A	Score	МА
1 2 3 4 5	5:3 5:4 5:5 5:6 5:7	16 17 18 19 20	6:6 6:7 6:8 6:9 6:10	31 32 33 34 35	7:8 7:9 7:10 7:11 8:0	46 47 48 49 50	8:11 9:0 9:1 9:2 9:3	62 63	10:1 10:2 10:3 10:4 10:5	76 77 78 79 80	11:11 12:1 12:3 12:5 12:7
6 7 8 9 10	5:8 5:9 5:10 5:11 5:0	21 22 23 24 25	6:11 7:0 7:1 7:2 7:3	36 37 38 39 40	8:1 8:2 8:3 8:4 8:5	51 52 53 54 55	9:4 9:5 9:6 9:6 9:7	66 67 68 69 70	10:6 10:7 10:8 10:10 10:11	82 83 84	12:9 12:11 13:1 13:3 13:5
11 12 13 14 15	6:1 6:2 6:3 6:4 6:5	26 27 28 29 30	7:4 7:5 7:6 7:7	41 42 43 44 45	8:6 8:7 8:8 8:9 8:10	56 57 58 59 60	9:8 9:9 9:10 9:11 10:0		11:1 11:3 11:5 11:7 11:9		

ures and are obtained only by consideration of a pupil's score or mental age in the light of the score or mental age that is normal for the age of the pupil in question.

The term Intelligence unfortunately has been used by nearly all writers both as meaning mental ability and as meaning brightness, and much confusion of thought has arisen on account of this double usage. Pending the standardization of the definition of the word Intelligence, it has seemed best to avoid its use when necessary to distinguish between mental ability and brightness.

The hypothetical individual of exactly normal or average brightness progresses in mental growth in such a manner that at each year of age he attains a score just equal to the median or middle score of children of that age. The above hypothetical individual of exactly normal brightness, if tested at the age of 8 years, would make a score in the Primary Examination of 35 points; if tested at the age of 9 years, his score would be 47 points, etc. His progress in terms of score is approximately uniform until the age of about 11 years, when the yearly increments of growth in terms of score decrease until the age of 15 years. According to the norms for the Advanced Examination, growth apparently continues until the age of 18 years, beyond which apparently no further

growth takes place. At 18 years of age an individual's natural mental ability is fully developed. Thereafter he merely acquires knowledge, experience, wisdom, and so on.

Of several hundred pupils taken at random from the school population of the country, whose "age last birthday" was 7 years and whose average age therefore was 7 years and 6 months, the median score in the Primary Examination was 28 points. We should expect the hypothetical child of exactly normal brightness, therefore, at the age of 7 years and 6 months to attain a score of 28 points. We find, however, that the actual scores of these pupils range from almost zero to nearly 80, as shown in Table 7 (page 10).

This wide range of scores of a group of pupils of the same age is due to the fact that certain children have an innate capacity for greater mental achievement than others, which operates to give them, chiefly during the early years of their mental development, an advance over their less fortunate fellows. This innate capacity we have called Brightness. That is, the greater the capacity for mental development, or the greater the potential development, the greater the degree of brightness. A child who exceeds just one half of the children of his age in mental ability and whose score is therefore just equal to the norm for that age is considered just normal. If a pupil obtains a score which is 25 points above the norm for his age, we may say that he has an Increment of Score of 25 points; if his score falls short of the norm by 15 points, we may say that he has a Decrement of Score of 15 points. Either the Increment of Score or the Decrement of Score is a Deviation from the Norm. Those who exceed more than half of the children of their own age and who consequently have an Increment of Score are therefore brighter than normal, and those who exceed less than half and have a Decrement of Score are duller than normal. Broadly speaking, however, the term "normal" is used to characterize all those who fall within the middle half of the group as distributed on the scale of brightness. Usually only those who fall in the upper quarter are termed bright and only those who fall in the lower quarter are termed dull.

#### PERCENTILE RANK

A pupil who exceeds just 50 per cent of the children of his age in Intelligence is said to have a *Percentile Rank* (PR) of 50. One who exceeds just 75 per cent of the children of his age in Intelligence is said to have a Percentile Rank of 75, etc. It may be seen, therefore, that the range of Percentile Ranks is from 0 to 100. A PR of 50 means exact normality, etc.

Now it is accepted as a fundamental fact that in most cases a child who is above normal at one age will be above normal at all ages, and a child who is below normal will always be below normal. Moreover, the degree of brightness of an individual is expected to remain approximately constant. Were this not so, prognostication would be impossible. Intelligence measurement would be of little value.<sup>1</sup>

This means that if an 8-year child exceeds just 50 per cent of 8-year-olds in mental ability, — being therefore a normal

<sup>&</sup>lt;sup>1</sup> Exceptions to this rule are noted in certain special instances, particularly in the case of feeble-minded persons.

child, — he will be expected to exceed approximately 50 per cent of children of his age at any later time and hence, when an adult, to exceed 50 per cent of adults in mental ability. That is, he maintains a constant Percentile Rank of 50. Similarly, an 8-year child who exceeds 75 per cent of 8-year-olds in mental ability will be expected to exceed 75 per cent of children of his age at any later time and hence ultimately to exceed in mental ability 75 per cent of adults, etc. That is, an individual's Percentile Rank is assumed to remain approximately constant. The Percentile Rank of an individual, therefore, is another measure of his degree of brightness. (See Table 6 for the percentile rank corresponding to each intelligence quotient.)

## DIRECTIONS FOR FINDING AN IQ

In view of the desire on the part of a number of examiners to express the measures of brightness of their pupils in terms of Intelligence Quotient, Table 6 is provided.

The "IQ" of a pupil found from this table is not the same as would be obtained by dividing his mental age obtained from Table 4 by his chronological age, but is, nevertheless, more nearly equal to the IQ that would be obtained from the Binet-Simon Tests than an IQ found as above.

To find the IQ of a pupil, find the difference between his score and the norm for his age. (Norms are given in Table 4.) Call this difference the "Deviation of Score" (DS). Find the IQ corresponding to this Deviation of Score in Table 6.

The table is read as follows: If a pupil made a score 0 points higher or lower than the norm for his age, his IQ is 100 and he exceeds 50 per cent of pupils of his age in mental ability. If his score is 1 point above the norm for his age, his IQ is 101 and he exceeds 53 per cent of pupils of his age in mental ability. If his score is 1 point below the norm for his age, his IQ is 99 and he exceeds 47 per cent of pupils of his age in mental ability, etc.

## VI. USES OF INTELLIGENCE TESTS

A comprehensive presentation of the uses of intelligence tests will be found in Dickson's *Mental Tests and the Classroom Teacher* (World Book Company). Some of these purposes are enumerated here.

Classification. The pupils in any class or school fall into three general types: (1) the average pupils, to whom the work and organization of the school are best fitted and who do fairly well; (2) the dull, who are slow in learning and have difficulty in understanding, and who are usually pushed ahead in the grades because of size or age; and (3) the bright, who learn quickly and easily and much of whose time during the day is, for that reason, necessarily unoccupied by school work.

In general the dull pupil is dull in all his work, the bright pupil is uniformly bright, and the average is uniformly average, although marked exceptions to this rule do appear. The work of the schools will then be most effective if it is determined in which of the three groups each pupil falls and if the work is adapted to the abilities of the pupils in each group.

TABLE 61
FOR FINDING THE BINET IQ. BY THE ADVANCED EXAMINATION

DEVIATION OF	Prus D	EVIATION	Minus I	DEVIATION
Score	IQ	PR	IQ	PR
0	100	50	100	50
1	101	53	99	47
2	102	57	98	43
3	103	60	97	40
4-5	104	63	96	37
6	105	66	95	34
7	106	69	94./	31
8	107	72	93	28
9–10	108	75	92	25
11	109	77.5	91	22.5
12	110	80	90	20
13	111	82	89	18
14–15	112	84	88	16-
16	113	86	87	14
17	114	88	86	12
18	115	89	85	11
19–20	116	91.1	84	8.9
21	117	92.4	83	7.6
22	118	93.55	82	6.45
23	119	94.4	81	5.6
24–25	120	95.4	80	4.6
26	121	96.1	79	3.9
27	122	96.8	78	3.2
28	123	97.3	77	2.7
29–30	124	97.8	76	2.2
31	125	98.2	75	1.8
32	126	98.58	74	1.42
33	127	98.84	73	1.16
34–35	128	99.09	72	.91
36	129	99.27	71	.73
37	130	99.43	70	.57
38	131	99.54	69	.46
39-40	132	99.65	68	.35
41	133	99.72	67	.28
42	134	99.79	66	.21
43 44–45 46 47 48 49	135 136 137 138 139 140	99.84 99.88 99.90 99.93 99.95 99.96	65 64 63 62 61 60	.16 .12 .10 .07 .05

The duller pupils must be expected to learn more slowly and to require more simple and thorough presentation. The bright pupils learn so quickly that an enriched curriculum must be provided for them so that all their time in school will be occupied with activities of educational value to them. It is to these exceptional children that the nation must look for the creative genius and leadership by means of which society can evolve a greater civilization.

Perhaps the chief value of intelligence measurement, then, is the scientific (as well as rapid and accurate) classification of pupils in regard to their native capacities to learn, in order

<sup>1</sup>Dr. L. M. Terman, author of the Stanford Revision of the Binet-Simon Intelligence Scale, has stated that the semi-interquartile range of the distribution of IQ's obtained by this test is 8 points (*The Measurement of Intelligence*, pages 78 ff., Houghton Mifflin Company, 1916). That is, a pupil who exceeds 75 per cent of pupils of his age in mental ability obtains an IQ of 108. Therefore, Table 6 has been constructed so that any pupil whose score exceeds the scores of 75 per cent of pupils of his age will obtain an IQ of 108. Consequently, of course, the percentile rank corresponding to the IQ of 108 is necessarily 75. The other IQ's and percentile ranks in the table were worked out on this basis

Showing the Distributions of Scores in the Primary Examination for Age Groups Six to Twelve. Based on 2325 Cases.

Distributions Augmented

	-								Score	3				\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.			. ,	100
Ages	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 TO 59	60 TO 64	65 TO 69	70 TO 74	75 TO 79	80 TO 84	TOTALS
5:0 to 5:11 6:0 to 6:11 7:0 to 7:11 8:0 to 8:11 9:0 to 9:11 10:0 to 10:11 11:0 to 11:11 12:0 to 12:11	6 59 21 2 2 2 0 1	8 65 27 9 1	4 70 31 19 2 2 2	2 62 62 23 9 3 1	56 50 22 13 4 4	43 58 48 22 8 3	2 29 50 34 26 15 8	23 43 55 41 22 13 8	11 65 69 53 34 12 8	8 36 69 48 45 17 12	1 22 70 67 44 18 16	1 15 59 .95 57 25 11	15 31 71 89 17 32	3 17 42 62 58 49	2 7 38 102 54 28	1 3 7 56 23 17	5 1 6 15	428 501 537 542 546 262 205

to provide for the separate teaching of pupils who differ markedly in ability to progress in school.

Feeble-minded and gifted. At one extreme there are found pupils in schools who are not able to profit from school work in the usual school organization. The more serious cases should be placed in institutions for the feeble-minded. The less serious cases should be placed in special classes.

At the other extreme there are found the exceptionally brilliant pupils who are not challenged to an appreciable degree by the usual school work. They too should be segregated, so that they will be in classes with pupils like themselves and provided with a specially enriched curriculum that will develop to the greatest possible extent their superior mental abilities and their possibilities for social and physical development.

Vocational guidance. Intelligence tests can be used to determine roughly the level of the vocation that a pupil may safely strive to prepare for. For example, it is known that for success in the professions—medicine, law, engineering, etc.—a high degree of general ability is required. On the other hand, for unskilled labor a fairly low level of general ability ordinarily suffices. For more precise guidance special tests, aptitude tests, must be used. Whether a particular boy or girl should prepare for one vocation or another depends on his tastes and temperament, his previous experience, his special

aptitudes as a result of the foregoing, his financial resources, immediate opportunities, etc. When these and his intelligence rating are known, vocational guidance becomes not a matter of measurement, but of judgment.

Problem pupils. Much light can be thrown on the reason for delinquency or other types of problems existing among school children, by their intelligence ratings. For this purpose the services of a trained psychologist must be obtained. Many school systems employ psychologists and visiting teachers to study and correct problem cases. The intelligence test is an important part of their technique.

Intelligence tests can also be used to advantage in penal institutions and in criminal cases, since among criminals a much larger percentage are feeble-minded than the percentage of feeble-minded in the population at large. Such tests will help in understanding the criminal better and in making more just and suitable the punishment or correction to be applied.

Validity of the Otis Group Intelligence Scale. For a discussion of the validity of the test as a measure of that which we have called general mental ability, the reader is referred to Otis, Arthur S., "An Absolute Point Scale for the Measurement of Intelligence," Journal of Educational Psychology, May and June, 1918, and Terman, L. M., The Measurement of Intelligence (Houghton Mifflin Company, Boston, Massachusetts).

KEY FOR SCORING

Answers, Primary Examination (Forms A and B)

	Test	5	6	7	8
Item				7	
1		2-1-3 2-3-1 1-3-2 2-1-4-3 3-1-2-4 3-1-5-4-2 1-3-5-2-4	3 2 1 2 3 4 5 4 3	0 s s 0 0 s s 0 0 s	2 2 3 3 2 2 1 1 2 .2

(Key continued on pages 11 and 12)

# KEY FOR SCORING — Continued

PLATE I

Answers, Primary Examination, Test 1 (Form A)

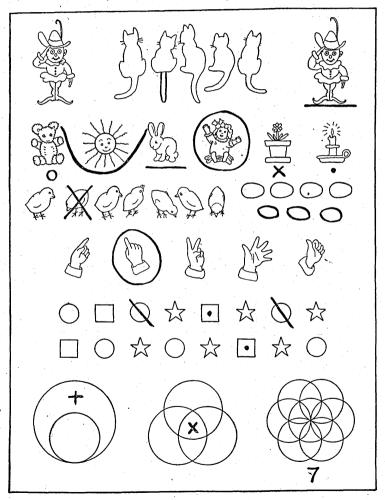
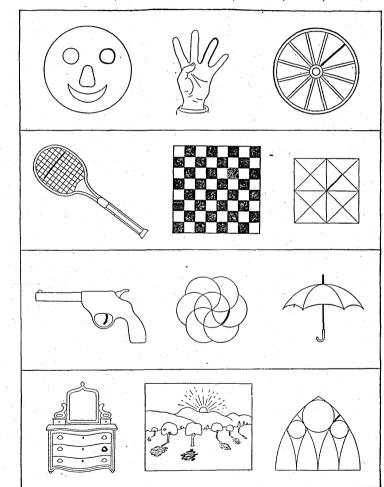


PLATE II

Answers, Primary Examination, Test 3 (Form A)



# KEY FOR SCORING — Continued

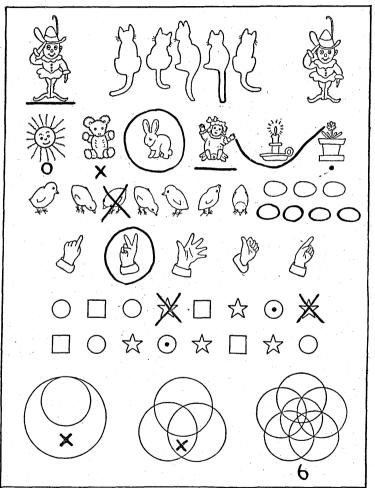
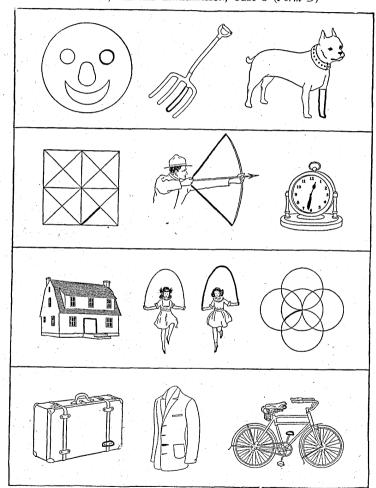


PLATE IV

Answers, Primary Examination, Test 3 (Form 3)



# OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

By Arthur S. Otis, Ph.D.

Formerly Development Specialist with Advisory Board, General Staff, United States War Department

# INTERMEDIATE EXAMINATION: FORM A For Grades 4-9

Score..

Read this page. Do what it tells you to do.
Do not open this paper, or turn it over, until you are told to do so. Fill these blanks, giving your name, age, birthday, etc. Write plainly.
Name
Birthday Date
Grade School City
This is a test to see how well you can think. It contains questions of different kinds. Here is a sample question already answered correctly. Notice how the question is answered:
Sample: Which one of the five words below tells what an apple is?  1 flower, 2 tree, 3 vegetable, 4 fruit, 5 animal
The right answer, of course, is "fruit"; so the word "fruit" is underlined. And the word "fruit" is No. 4; so a figure 4 is placed in the parentheses at the end of the dotted line. This is the way you are to answer the questions.  Try this sample question yourself. Do not write the answer; just draw a line under it and then put its number in the parentheses:
Sample: Which one of the five things below is round?  1 a book, 2 a brick, 3 a ball, 4 a house, 5 a box
The answer, of course, is "a ball"; so you should have drawn a line under the words "a ball" and out a figure 3 in the parentheses. Try this one:
Sample: A foot is to a man and a paw is to a cat the same as a hoof is to a — what?  1 dog, 2 horse, 3 shoe, 4 blacksmith, 5 saddle
The answer, of course, is "horse"; so you should have drawn a line under the word "horse" and put a figure 2 in the parentheses. Try this one:
Sample: At four cents each, how many cents will 6 pencils cost?
The answer, of course, is 24, and there is nothing to underline; so just put the 24 in the parentheses. If the answer to any question is a number or a letter, put the number or letter in the parentheses without underlining anything. Make all letters like printed capitals.  The test contains 75 questions. You are not expected to be able to answer all of them, but do the best you can. You will be allowed helf on hour after the appropriate talks and the formal of the parenty of the second of the parentheses.
the best you can. You will be allowed half an hour after the examiner tells you to begin. Try to get as many right as possible. Be careful not to go so fast that you make mistakes. Do not spend too much time on any one question. No questions about the test will be answered by the examiner

Do not turn this page until you are told to begin.

after the test begins. Lay your pencil down.

# EXAMINATION BEGINS HERE. 1. Which one of the five things below does not belong with the others? (Do not write on these dotted lines.) 1 potato, 2 turnip, 3 carrot, 4 stone, 5 onion...... 2. Which one of the five words below tells best what a saw is? something, 2 tool, 3 furniture, 4 wood, 5 machine..... 3. Which one of the five words below means the opposite of west? north, 2 south, 3 east, 4 equator, 5 sunset..... 4. A hat is to a head and a glove is to a hand the same as a shoe is to what? I leather, 2 a foot, 3 a shoestring, 4 walk, 5 a toe..... 5. A child who knows he is guilty of doing wrong should feel (?) 1 bad, 2 sick, 3 better, 4 afraid, 5 ashamed..... 6. Which one of the five things below is the smallest? 7. Which one of the five things below is most like these three: cup, plate, saucer? 1 fork, 2 table, 3 eat, 4 bowl, 5 spoon..... 8. Which of the five words below means the opposite of strong? o. A finger is to a hand the same as a toe is to what? I foot, 2 toenail, 3 heel, 4 shoe, 5 knee..... 10. Which word means the opposite of sorrow? 1 sickness, 2 health, 3 good, 4 joy, 5 pride..... 11. Which one of the ten numbers below is the smallest? (Tell by letter.) A 6084, B 5160, C 4342, D 6521, E 9703, F 4296, G 7475, H 2657, J 8839, K 3918 12. Which word means the opposite of pretty? 1 good, 2 ugly, 3 bad, 4 crooked, 5 nice..... 13. Do what this mixed-up sentence tells you to do. number Write the the in 5 parentheses..... 14. If we believe some one has committed a crime, but we are not sure, we have a (?) r fear, 2 suspicion, 3 wonder, 4 confidence, 5 doubtful...... 15. A book is to an author as a statue is to (?) 1 sculptor, 2 marble, 3 model, 4 magazine, 5 man..... 16. Which is the most important reason that words in the dictionary are arranged alphabetically? I That is the easiest way to arrange them. 2 It puts the shortest words first. 3 It enables us to find any word quickly. 4 It is merely a custom. 5 It makes the printing easier . . ( 17. Which one of the five things below is most like these three: plum, apricot, apple? 1 tree, 2 seed, 3 peach, 4 juice, 5 ripe..... 18. At 4 cents each, how many pencils can be bought for 36 cents?..... 19. If a person walking in a quiet place suddenly hears a loud sound, he is likely to be (?) 1 stopped, 2 struck, 3 startled, 4 made deaf, 5 angered...... 20. A boy is to a man as a (?) is to a sheep. I wool, 2 lamb, 3 goat, 4 shepherd, 5 dog..... 21. One number is wrong in the following series. What should that number be? (Just write the correct number in the parentheses.) 22. Which of the five things below is most like these three: horse, pigeon, cricket? 1 stall, 2 saddle, 3 eat, 4 goat, 5 chirp..... 23. If the words below were rearranged to make a good sentence, with what letter would the last word of the sentence begin? (Make the letter like a printed capital.) nuts from squirrels trees the gather..... 24. A man who betrays his country is called a (?) I thief, 2 traitor, 3 enemy, 4 coward, 5 slacker..... 25. Food is to the body as (?) is to an engine. r wheels, 2 fuel, 3 smoke, 4 motion, 5 fire..... 26. Which tells best just what a pitcher is? I a vessel from which to pour liquid, 2 something to hold milk, 3 It has a handle, 4 It goes on the table, 5 It is easily broken.....

27.	If George is older than Frank, and Frank is older than James, then George is (?) James.  1 older than, 2 younger than, 3 just as old as, 4 (cannot say which)	(	)
28.	Count each 7 below that has a 5 next after it. Tell how many 7's you count.  7 5 3 ° 9 7 3 7 8 5 7 4 2 1 7 5 7 3 2 4 7 ° 9 3 7 5 5 7 2 3 5 7 7 5 4 7	·	· }
29.	If the words below were rearranged to make a good sentence, with what letter would the last word of the sentence begin? (Make the letter like a printed capital.)  leather shoes usually made are of		: /.
30.	An electric light is to a candle as a motorcycle is to (?)	(	)
31.	I bicycle, 2 automobile, 3 wheels, 4 speed, 5 police	(	)
32.	I march, 2 ocean, 3 horse, 4 paint, 5 elbow, 6 night, 7 flown	(	,
33.	I sister, 2 niece, 3 cousin, 4 aunt, 5 granddaughter  One number is wrong in the following series. What should that number be?	( '	)
34.	3 4 5 4 3 4 5 4 3 5	(	)
35.	If Paul is taller than Herbert and Paul is shorter than Robert, then Robert is (?) Herbert.  1 taller than, 2 shorter than, 3 just as tall as, 4 (cannot say which)	(	)
36.	What is the most important reason that we use clocks?  I to wake us up in the morning, 2 to regulate our daily lives, 3 to help us catch trains, 4 so that children will get to school on time, 5 They are ornamental	(	)
37.	A coin made by an individual and meant to look like one made by the government is called (?) 1 duplicate, 2 counterfeit, 3 imitation, 4 forgery, 5 libel	(	)
38.	A wire is to electricity as (?) is to gas.  1 a flame, 2 a spark, 3 hot, 4 a pipe, 5 a stove	( , ,	)
39.	If the following words were arranged in order, with what letter would the middle word begin?  Yard Inch Mile Foot Rod	. (	)
40.	One number is wrong in the following series. What should that number be?  5 10 15 20 25 29 35 40 45 50		`
41.	5 10 15 20 25 29 35 40 45 50	(	)
42.	Order is to confusion as (?) is to war.  1 guns, 2 peace, 3 powder, 4 thunder, 5 army	. (	· )
43.	In a foreign language, good food = Bano Naab good water = Heto Naab		,
	The word that means good begins with what letter?  The feeling of a man for his children is usually (?)	(	)
	1 affection, 2 contempt, 3 joy, 4 pity, 5 reverence	(	)
45.	Which of the five things below is most like these three: stocking, flag, sail?  1 shoe, 2 ship, 3 staff, 4 towel, 5 wash	(	)
46.	A book is to information as (?) is to money.  1 paper, 2 dollars, 3 bank, 4 work, 5 gold	( )	)
47.	If Harry is taller than William, and William is just as tall as Charles, then Charles is (?) Harry.  1 taller than, 2 shorter than, 3 just as tall as, 4 (cannot say which)	(	)
48.	If the following words were arranged in order, with what letter would the middle word begin?  Six Ten Two Eight Four	(	)
49.	If the words below were rearranged to make a good sentence, with what letter would the third word of the sentence begin? (Make the letter like a printed capital.)  men high the a wall built stone	( .	· . )
50.	If the suffering of another makes us suffer also, we feel (?)  1 worse, 2 harmony, 3 sympathy, 4 love, 5 repelled	•	
	In a foreign language, grass = Moki	.(	)
	green grass = Moki Laap  The word that means green begins with what letter?	. (	}
		`	,

52.	If a man has walked west from his home 9 blocks and then walked east 4 blocks, how many blocks is he from his home?	. (	)
53.	A pitcher is to milk as (?) is to flowers.  1 stem, 2 leaves, 3 water, 4 vase, 5 roots	(	)
54.	Do what this mixed-up sentence tells you to do. sum three Write two the four and of	(	)
55•	There is a saying, "Don't count your chickens before they are hatched." This means (?)  1 Don't hurry. 2 Don't be too sure of the future. 3 Haste makes waste. 4 Don't gamble	( -	)
56.	Which statement tells best just what a fork is?  I a thing to carry food to the mouth, 2 It goes with a knife, 3 an instrument with prongs at the end, 4 It goes on the table, 5 It is made of silver	(	, · , ·
57.	Wood is to a table as (?) is to a knife.  1 cutting, 2 chair, 3 fork, 4 steel, 5 handle	(	j
58.	Do what this mixed-up sentence tells you to do. sentence the letter Write last this in	(	)
59.	Which one of the words below would come last in the dictionary?  I alike, 2 admit, 3 amount, 4 across, 5 after, 6 amuse, 7 adult, 8 affect	(	)
60.	There is a saying, "He that scatters thorns, let him go barefoot." This means (?)  1 Let him who causes others discomforts bear them himself also. 2 Going barefoot toughens the feet. 3 People should pick up what they scatter. 4 Don't scatter things		
61.	around		'')
	Plaster Frame Wallpaper Lath Foundation	(	)
02.	In a foreign language, many boys = Boka Hepo many girls = Marti Hepo many boys and girls = Boka Ello Marti Hepo		
,	The word that means and begins with what letter?	(	)
03.	A statement which expresses just the opposite of that which another statement expresses is said to be a (?)	,	`
64.	I lie, 2 contradiction, 3 falsehood, 4 correction, 5 explanation	(	)
65.	age of a gift horse by his teeth.  Which one of the words below would come last in the dictionary?	(	
66.	I hedge, 2 glory, 3 label, 4 green, 5 linen, 6 knife, 7 honor		)
	I It ticks, 2 something to tell time, 3 a small, round object with a chain, 4 a vest-pocket-sized time-keeping instrument, 5 something with a face and hands	(	)
67.	Ice is to water as water is to what?  1 land, 2 steam, 3 cold, 4 river, 5 thirst	(	)
68.	Which statement tells best just what a window is?  I something to see through, 2 a glass door, 3 a frame with a glass in it, 4 a glass opening in the wall of a house, 5 a piece of glass surrounded by wood	· .	)
69.	Which of the five words below is most like these three: large, red, good?  1 heavy, 2 size, 3 color, 4 apple, 5 very	(	)
70.	Write the letter that follows the letter that comes next after M in the alphabet	(	ń
71.	One number is wrong in the following series. What should that number be?  1 2 4 8 16 24 64	(	)
72.	An uncle is to an aunt as a son is to a (?)  1 brother, 2 daughter, 3 sister, 4 father, 5 girl	. · (	)
73•	If I have a large box with 3 small boxes in it and 4 very small boxes in each of the small boxes, how many boxes are there in all?	· (	)
74.	One number is wrong in the following series. What should that number be?  1 2 4 5 7 8 10 11 12 14		)
75.	There is a saying, "Don't ride a free horse to death." This means (?)  1 Don't be cruel. 2 Don't abuse a privilege. 3 Don't accept gifts. 4 Don't be reckless.		)
	If you finish before the time is up, go back and make sure that every answer is right.	`	,

# OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

By ARTHUR S. OTIS, Ph.D.

Formerly Development Specialist with Advisory Board, General Staff, United States War Department

## MANUAL OF DIRECTIONS AND KEY (Revised)

For Intermediate and Higher Examinations

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#### INTRODUCTORY

Contents. In this manual will be found the complete directions for administering and scoring the Intermediate and Higher Examinations, directions for interpreting the scores in the light of the educational problems which the tests will help solve, and directions for applying the results of the test to the solution of those problems.

Scope. The Higher Examination together with the Intermediate Examination constitute the Otis Self-Administering Tests of Mental Ability, covering the range from the 4th grade to the university. The Higher Examination is designed for high school students and college freshmen. The Intermediate Examination is designed for Grades 4 to 9. The Higher and Intermediate Examinations are similar in form, but they differ in content and difficulty.

Forms. Each examination is issued in three alternative forms, Forms A, B, and C, alike except in content.

## SPECIAL FEATURES

Self-administration. In each of these examinations provision is made for the student to read for himself on the first page of the examination booklet all the directions needed for the examination. As the 75 items constituting each examination are in a single list, these are answered by the examinee without interruption. The examiner, therefore, has merely to distribute the blanks, see that all understand the printed directions, and give the signal to begin. He may then leave the class in charge of an assistant. For this reason the tests have been called "self-administering" tests.

Simplified scoring. In addition to the underlining of the correct one of several alternative answers, as is customary in group tests of mental ability, provision is made in these examinations for placing the number of the answer in a single column at the edge of each page. This simplifies the scoring to the extent that the whole examination can be scored in less than one minute.

Variety of test material. The form of the examinations admits of the use of a wide variety of types of questions instead of the limited number of types in the ordinary examination.

Flexible time limit. Provision is made for administering the examinations with a time limit of either 20 or 30 minutes. The 20-minute time limit may be used for general survey purposes or with normal school and college students. The 30-minute time limit should be used when time allows, as it will give a more accurate measure.

Ease of figuring IQ's. A chart is provided by which the IQ of the examinee can be found directly from the score and age in years and months merely by locating a point on the intersection of two lines. No arithmetical calculation or reference to tables is necessary.

Improved Percentile Graph. There is provided in each package of Examinations a new form of percentile graph on which percentile curves may be drawn, if desired, showing vividly the distributions of scores of any group or groups of examinees. With each percentile graph is furnished a scale chart by which the drawing of the percentile curves is reduced to the simplest terms.

Interpretation Chart. A chart is provided upon which the scores of a class or school may be plotted and the pupils divided into fast-moving, regular, and slow-moving groups and regraded within these groups, or otherwise classified, merely by drawing lines on the chart. Account is taken of mental ability, brightness, and chronological age in classifying by this method. It is not necessary to use the Interpretation Chart in order to interpret scores in these tests. However, it will be found a distinct aid and convenience.

## HISTORICAL

These examinations are modeled after a group test of mental ability designed by the author in January, 1918, for use in a large commercial establishment in Connecticut. In that test the principle of self-administration was embodied, involving the single list of questions, the printed initial directions, and the provision for answers in single columns.

62. (E)

58. (E)

## ACKNOWLEDGMENTS

The author is indebted to many persons for helpful suggestions and criticisms in connection with the Self-Administering Tests of Mental Ability. Special mention is due the following, who gave hearty cooperation in the administration of tests for standardization purposes: Mr. J. C. Amon, Bellevue, Pennsylvania; Mr. H. H. Murphy, Hastings, New York; Mr. T. H. Schutte, State Teachers' College, Moorhead, Minnesota; Dr. John P. Herring, Bloomsburg State Normal School, Bloomsburg, Pennsylvania; Dr. Virgil E. Dickson, Oakland, California; Dr. E. E. Lewis, Rockford, Illinois; Mr. Henry D. Rinsland, Ardmore, Oklahoma; Mr. E. D. Price, Enid, Oklahoma; and Mr. Franklin Thomas, Professor of Civil Engineering, California Institute of Technology, Pasadena, California. ) .89 Mrs. Otis has devoted many hours to scoring, tabulating, and correlating.

The author is indebted to Dr. E. E. Keener, Director of Instructional Research, Chicago Public Schools, and C. Everett Myers, Research Secretary, Pennsylvania State Education Association, for assistance in standardizing Form C.

#### DIRECTIONS FOR ADMINISTERING

Who may administer examination. Any teacher after a little preparation can satisfactorily administer either the Intermediate or Higher Examination. The best preparation for administering either is to take it. The principal should invite his teachers to take the examination and score their own papers. Any teacher who is interested in mental-ability testing should welcome the opportunity to experience the taking of an examination, as this will give her the best appreciation of what the examination tests. Those administering an examination should realize that it is very important that conditions be uniform throughout the school and must be the same in the school being tested as in every other school where the examination has been given. For this reason, everything which needs to be said in administering the test is given below in boldface type, and the teacher should give these instructions verbatim, reading if necessary. If one teacher urges the students to work as rapidly as possible and another teacher urges them to work as carefully as possible, the results may be entirely different and not comparable. The teacher, therefore, should say nothing that is not prescribed, except to make clear the meaning of what is on the first page of the examination blank.

When to give examination. The best time to give the examination is probably at the opening of school in the morning, although the time of day probably does not have a serious effect upon the score.

Directions for administering. To administer either the Intermediate or the Higher Examination, Form A, B, or C, begin by addressing the students as follows:

"We are going to give you this morning [afternoon] some new and interesting tests. We will now pass the test papers and as soon as you receive a paper you may begin to read the first page and do as it directs, filling the blanks, Do not open or turn over the paper. Part of the test is to see if you can follow directions."

side up. See that every student is supplied with two pencils (or a pen) and an eraser.

Have monitors pass the papers, one to each student, right

Allow a reasonable time for all to finish reading the first page and trying the samples. A few laggards may be disregarded. Then say, " Is there any one who does not understand the first page?" Give any explanations necessary to make sure that all understand what is explained on the first page.

If a time limit of 20 minutes is to be used, say, "This will be a short test. You will be told to stop at the end of 20 minutes instead of 30. Find the number 20 in the upper left-hand corner of the page and make a ring around it." Be sure that all do this.

Then say, "Now turn the page and begin," and note the exact time. No further instructions are necessary.

32.

If the principal or superintendent is administering the examination, he may now leave the class in charge of the teacher or an assistant, with instructions to give no further directions and answer no questions; to stop the work at the end of exactly 30 (or 20) minutes and have the papers collected. The person in charge during the examination will do well to move quietly about the room at the beginning of the examination and see that all are indicating the answers in a proper manner. If an examinee is found who is not placing the numbers in the parentheses, he should be told to do so.

#### DIRECTIONS FOR SCORING

The correct answers to the 75 items of both forms of the Intermediate and Higher Examinations are given on the margins of this manual. To score the examination, open the manual to the pages containing the answers to the form of the examination to be scored, fold open the manual and clip the pages together. Place the manual over the examination paper so that the appropriate Key is adjacent to the answers given on the examination paper. Place a check mark after each correct answer or a cross after each incorrect or omitted answer, or both checks and crosses.

If two answers are given for any one item, count the item wrong. This is quite likely to occur with Item 55 in Form A of the Higher Examination.

Number 37 in Form A and Number 57 in Form B of the Higher Examination count as wrong if the alphabet has been marked in any way.

If a paper is found in which the examinee has omitted to place the numbers in the parentheses but has otherwise indicated the answers, the scorer should write in the parentheses the numbers representing the answers of the examinee so far as these may be determined, and then score accordingly, but deduct one point from the total score for failure to follow the direction to place the numbers in the parentheses.

If the examinee has failed to make all his letters like printed capitals, score the paper as if all letters were printed capitals, but deduct one point for failure to follow the direction.

Whenever an examinee has used an irregular method of taking the examination, score the paper according to the obvious intent of the examinee and then deduct one point for each general direction not followed. Indicate such deduction by placing a - 1 with a circle around it opposite the first instance where the direction has not been followed. Let his score represent the fairest measure of his ability that can be estimated.

The score in the examination is the number of correct answers. First, count up the correct answers and write the number on

[2]

Forms A and C Intermediate

KEA

the margin of the last page. Then verify the score by counting the incorrect and omitted answers. Thus, suppose the number of correct answers counted is 40. Count the incorrect and omitted answers beginning 41, 42, etc., and see that you end with 75. Then enter the score in the space provided on the first page of the blank. Do not trust the counting of correct answers only, as it is very easy to make a mistake. The checking of correct answers should be gone over by a second scorer, for even the best scorers will make mistakes.

#### RECORDING SCORES

The Class Record. The scores should be entered on the Class Record which is provided with each package of examination blanks. Before entering the scores, arrange the papers of a class either in alphabetical order or in the order of magnitude of the score, according to preference. Next, enter the name of each student and his age in years and months. Then enter his score in the proper column according to the time limit used. Directions for filling the remaining columns will be given under "Interpretation of Results."

20-Minute time limit. If a 20-minute time limit has been used, the scores may be transmuted into terms of 30-minute time-limit scores in order that they may be compared with norms or other 30-minute scores. This may be done by means of Table 1.

TABLE 11

						1			
20- MIN.	30- MIN.								
	ı	16	20	31	40	46		61	
2	2	17	22	32	40 41		59 60	62	71
		18			-	47 48	61	1	71
3	4		23	33	43			63	72
4	5	19	24	34	44	49	62	64	72
5	6	20	26	35	45	50	63	65	73
_		1				}	2.5		
- 6	7	21	27	36	46	51	64	66	73
7	9	22	28	37	48	52	64	67	74
8	10	23	30	38	49	53	65	68	74
9	II	24	31	39	50	54	66	69	74
10	13	25	32	40	51	55	67	70	75
11	14	26	33	41	53	56	68	71	75
12	15	27	35	42	54	57	68		
13		28	35 36	1			69	72	75
_	17 18	l .		43	55	58		73	75
14		29	37	44	56	59	70	74	75
15	19	30	39	45	58	60	70	75	75
		1		1		I .		1.	

#### STANDARDIZATION

Selection of items. In selecting items for the Intermediate and Higher Examinations, the Advanced Examination was drawn upon freely. An equal number of items of other types, some of which are new, were included in order that the examination might cover a large variety of questions and therefore afford a more comprehensive measure of mental ability. Preliminary editions containing more than enough items were administered to about 1000 high school students in Oakland, California, and Rockford, Illinois, and to 1000 grammar school

pupils in Moorhead, Minnesota. These students were divided in each case into two groups, a "good group" and a "poor The same number were taken from each grade for both groups. The good group constituted the young students, and the poor group the old students. These groups had reached the same average educational status, therefore, but at different rates. Now it is the rate at which a student can progress through school that the mental-ability test is chiefly used to predict. Therefore this is believed to be the best criterion by which to judge the validity of each item that goes into the test. The number of times each item was passed by each group was then found and only those items chosen which showed a distinct gain in number of passes by the good group over the number of passes by the poor group in spite of the fact that the median age of the good group was over two years less than that of the poor group. Each item justified its inclusion, therefore, because it distinguished between students who progressed slowly and those who progressed rapidly.

Arrangement in order of difficulty. The items in each form of each examination have been arranged in the order of difficulty, according to the number of passes of each item by the students taking the preliminary editions.

## PRACTICE EFFECT

Whenever a second form of a test is given after a first form, especially when the two forms have been made very much alike, students tend to do better on the second test. The effect of the first test is generally termed "practice effect," but it may include a number of effects. Among these is general familiarity with the method, resulting in ability to get under way more quickly, lessened nervousness, memory of mode of attack of certain types of problems, etc.

A study was made of the effect of practice when a second form of the Intermediate or Higher Examination was given the next day after the first form. The average gain in the second score was 4 points in each case. Therefore in such a case 4 points would have to be subtracted from the score in the second test to make allowance for the effect of practice.

## Interpretation of Results

Mental ability and brightness. There are two aspects of the mental quality of an individual which must not be confused. One is his degree of mental ability and the other his degree of brightness. The term "mental ability" refers to that innate mental quality which increases with age, whereas the term "brightness" refers to that constant quality which determines the rate of growth of the mental ability of an individual and the degree of mental ability which he will eventually reach.

Mental ability is measured by the individual's score in the test. A measure of his brightness is obtained by comparing his score with that of others of his own age. The distinction is best shown by reference to the Interpretation Chart.

The Interpretation Chart. An Interpretation Chart is provided in each package of Examinations to facilitate the interpretation of scores. Interpretation Charts for the Intermediate and Higher Examinations are given on the two sides of the same sheet. In the sample Interpretation Chart shown in Figure 1 (page 9) a point is plotted for each of the 276 pupils in Grades 5 to 8 of a grammar school. The height of each point

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<sup>&</sup>lt;sup>1</sup> This table was derived from a study of 20- and 30-minute scores in the Higher Examination only. It is therefore only approximate for the Intermediate Examination. It is assumed, however, that the 20-minute time limit will seldom be used with the Intermediate Examination.

represents the score of an individual in the Intermediate Examination according to the scale at the left. The horizontal position of each point represents the age of the individual according to the scale at the foot of the chart.

The normal or "average" individual of the age of just 10 years is expected to make a score of just 23 points. The normal individual of the age of just 11 years is expected to make a score of just 31 points, etc., as indicated by the heavy curved line through the middle of the chart (best seen in the blank chart). This may be called the normal curve and shows the norm or normal score to be expected from an individual of any given age. The curve becomes level at the age of 18 years, as shown in the Interpretation Chart for the Higher Examination, and may be considered as extending to the right indefinitely beyond 18 years at the same level. The derivation of this curve will be described below.

Mental maturity. A child's mental ability increases from birth, year by year, month by month, just as does his height, until he reaches his maximum, when he is said to have reached mental maturity. The normal curve may be thought of as the curve of growth in mental ability of the hypothetical exactly normal individual.

The age at which mental maturity is reached is difficult to decide, since the amount of mental development during the last year in which there is any development is very slight. In the Interpretation Chart for the Higher Examination the age at which mental maturity is reached is taken to be 18 years.

While individuals may reach mental maturity at about the same age, they nevertheless reach it with widely differing amounts of mental ability, just as they reach mature adult stature at differing heights. The degree of mental ability at which the normal individual reaches mental maturity is also very difficult to determine, since it is not possible to obtain a large group of completely unselected individuals (chosen at random from the whole population) at the various ages between 15 and 18. The norm for adults (persons of 18 years or over), however, has been called 42 in the Higher Examination, as shown by the upper limit of the normal curve. This is the equivalent of 59 points in the Intermediate Examination. The choice of this norm for adults is only an estimate based on all available data.

**Derivation of norms.** The positions of the normal curves in the two charts were established according to the judgment of the author upon consideration of (1) the median scores of the various age groups among about 120,000 pupils whose scores in the Higher or Intermediate Examinations have been reported to date, (2) the median scores of the several grade groups in relation to the median ages of these grade groups, (3) the norms for the various ages obtained from the norm table for the Advanced Examination by means of tables for converting scores into terms of the Higher and Intermediate Examinations, (4) the correlations between scores in the Higher and Intermediate Examinations and mental ages by the Herring Revision of the Binet-Simon Tests, and (5) correspondence between the Intermediate and Higher Examinations themselves. The position of the normal curve in neither chart accords exactly with any of these data, but it constitutes in either case a sort of average of the various groups of data.

<sup>1</sup> Unless otherwise stated the score referred to is the 30-minute time-limit score.

The aim has been to establish scores which are normal for unselected age groups, not merely for public school pupils. The scores of high school students, therefore, tend to average somewhat higher than the norms.

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True mental age. Originally the term "mental age" referred to the degree of mental ability which is normal for a given age. Thus, "having a mental age of 15 years" meant "having a degree of mental ability just normal for the age of 15 years." This degree of mental ability is measured by a score of 36 in the Higher Examination. Having a mental age of 17, according to this definition, meant making a score just normal for 17-year-olds, which is a score of 41. Mental ages so found may be called true mental ages. Since the score of 42 is the norm for adults (taken to mean any person of 18 years or over), there is no age for which a score above 42 is the norm; therefore, of course, no score above 42 can be expressed as a true mental age.

The term "Mental Age" (capitalized), however, has now come to have a special meaning and to denote measures of mental ability—i.e., scores—in the Binet-Simon Tests. Binet Mental Ages below about 13 years are true mental ages. Above that, especially above 16 years, they are merely scores. They are called Mental Ages merely for the sake of consistency. The Binet Mental Age of 17, for example, represents a degree of mental ability considerably above that which is normal for the age of 17 or, indeed, for any age.

The Binet Mental Age of 16 years is generally taken as the norm for adults in figuring IQ's. There is a growing opinion among psychologists, however, that the Binet Mental Age which is the norm for adults is appreciably lower than 16 years.1 The correlations between the Binet Scale and the Higher Examination confirm this belief. The correspondence between Binet Mental Ages and Scores in the Higher Examination, as indicated in the Interpretation Chart, is based partly upon the correlation between the Higher Examination and the Herring Revision of the Binet-Simon Tests and partly upon the age norms. At any rate, Binet Mental Ages appear to express degrees of mental ability in excess of that normal for the corresponding chronological ages even below the age of 15 years. For this reason IQ's obtained by the method provided herein 2 may be slightly higher than those obtained by the Binet Scale for the older students, but it is believed that they more nearly correspond with what the Binet IO's of these students were when they were younger.3

Measures of mental ability. Each of the six scales at the left side of the Interpretation Chart for the Higher Examination is a measure of mental ability. The scales are so placed that values having the same height are corresponding measures of mental ability as far as may be determined. Thus a score of 40 points in the Higher Examination with a 30-minute time limit is the equivalent of a score of 31 in the Higher Examination with a 20-minute time limit, a score of 57 in the Intermediate Examination, a score of 120 in the Advanced Examination, a Binet Mental Age of 15 years 0 months, and a T-score of 62.4

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<sup>&</sup>lt;sup>1</sup> See Lewis M. Terman, "Mental Growth and the IQ," Journal of Educational Psychology, September, 1921.

<sup>&</sup>lt;sup>2</sup> See "Measures of brightness" below.

<sup>&</sup>lt;sup>3</sup> See "Validity of Mental Age equivalents" below.

<sup>&</sup>lt;sup>4</sup> For the meaning and significance of a T-score, see William A. McCall, "A Uniform Method of Scale Construction," *Teachers College Record*, January, 1921.

Any individual whose score is plotted above the normal curve may be considered as brighter than normal, and any individual whose score is plotted below the normal curve may be considered as duller than normal. The distance at any point above or below the normal curve is a measure of the brightness of the individual. A 14-year student making a score of 35 in the Higher Examination has a lesser degree of mental ability but a greater degree of brightness than a 15-year student making a score of 37.

Measures of brightness. Brightness is generally measured in terms of the Intelligence Quotient (IQ), which is customarily found by dividing the individual's Binet Mental Age by his chronological age (decimal point dropped). In the case of mental-ability tests other than the Binet Tests it is customary to give Binet Mental Age equivalents of scores in order that these may be used in finding IQ's. It has been found, however, that IQ's so derived have an appreciably wider range than those obtained by mean's of the Binet Tests and are therefore not comparable with the latter. Now the IQ was invented for use with the Binet Tests and should retain its original significance, or else it will become relatively meaningless. It seems that the term "Intelligence Quotient" is coming to have a legal recognition, but IQ's as sometimes derived from group tests of mental ability bear little relation to IQ's derived by the Binet Tests. It is the purpose of the author to use the term "IQ" only in its original significance.

Unless it is distinctly understood how IQ's were derived in any case, however, they should be designated by some means such as National IQ's, Otis IQ's, or Binet IQ's. The term "IO," when not so qualified or understood, must be interpreted as referring to actual Intelligence Quotients found by means of the Binet Tests.

Validity of Mental Age equivalents. It follows from the above statements regarding the greater range of IO's for each age group when obtained by group tests than when obtained by the Binet Tests, that Binet Mental Age equivalents are actual equivalents for normal children only. Thus a score of 38 in the Intermediate Examination corresponds to a Binet Mental Age of 12 years when made by a child of approximately 12 years. But if made by a 10-year child, for example, it represents a Binet Mental Age of only 11½ years, since according to the chart a 10-year child making a score of 38 has an IQ of only 115. This lack of constant correspondence between scores and Binet Mental Ages is inherent in all group tests and is due to the lesser accuracy of group tests. This phenomenon seems not to be generally appreciated, as witnessed by the now prevalent custom of converting scores into Binet Mental Age equivalents. There is no Binet Mental Age equivalent of a score in any group test of mental ability which is valid for all ages of individuals. For that reason it is believed that the most scientific method of obtaining IQ's from scores in group tests, which are comparable with Binet IQ's, is by comparison of the variabilities of scores of individuals of the various age groups in the group test and in Binet Tests, as described below.

Mental Age equivalents as such are not necessary to the use of the Higher or Intermediate Examinations. Scores are quite sufficient as measures of mental ability and IO's as measures of brightness. IO's can be obtained from scores in the Otis Self-Administering Tests without Mental Age equivalents.

In order to compare scores with Mental Age equivalents of scores in other group tests or to find IQ's comparable with those obtained from other group tests, however, Binet Mental Age equivalents are given to scores in both examinations. These may be obtained from the Interpretation Chart for the Higher Examination. Binet Mental Age equivalents of scores in the Intermediate and Higher Examinations are given also in Tables 2a and 2b.

BINET MENTAL AGE EQUIVALENTS OF SCORES IN THE INTER-MEDIATE EXAMINATION

TABLE 2a

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SCORE	MA	SCORE	МА	SCORE	MA	SCORE	MA	SCORE	МА	7. (3)
	7 <sup>-</sup> 4 7 <sup>-</sup> 5	16 17.	9- o 9- 2	31 32	11- 0 11- 2	46 47	13- 1 13- 3	61 62	15-11 16- 1	8. (3)
3	7-6 7-7	18	9- 3 9- 5	33	11- 3 11- 5	48 49	13- 5 13- 7	63	16- 3 16- 6	9. (3)
	7- 8	20	9- 7	35	11- 6	50	13-10	65	16-8	
	7- 9 7-10	2I 22	9- 8 9-10	36 37	11-10	51 52	14- o 14- 2	66 67	16-11 17- 2	то. (Н)
8	7-11 8- o	23	10~ 0 10~ 1	38	12- O 12- I	53	14- 4	68	17- 5	11. ( 1 )
	8- 2	24 25	10- 3	39 40	12- 1	54 55	14- 6 14- 8	70	17-10	• 1
	8- 4	26	10- 4 10- 6	41	12-4	56	14-10	71	18- o 18- 3	12. (W)
13	8- 5 8- 7	27	10- 7	42	12-6	57 58	15- 0 15- 2	72	18- 5	13. ( 8 )
	8–11 8–11	29 30	10-10	44 45	12-10 12-11	59 60	15- 5	74 75	18- 7 18- 9	
<del></del>		<del></del>				<del></del>		-		14. (4)

TABLE 2b 15. (1) BINET MENTAL AGE EQUIVALENTS OF SCORES IN THE HIGHER EXAMINATION

SCORE	MA	SCORE	MA	SCORE	MA	SCORE	MA	SCORE	MA
Ī	7-10	16	10-8	31	13-5	46	16- o	61	17-11
2	8- o	17	10-10	32	13- 7	47	16- 2	62	18- o
3	8- 2	18	11-0	33	13-10	48	16- 3	63	18- 2
4	8- 4	19	11-3	34	14-0	49	16- 5	64	18-3
5	8- 6	20	11- 5	35	14- 2	50	16- 6	65	18- 5
6	8-9	21	11- 7	36	14- 4	51	16- 8	66	18- 6
7	8-11	22	11-10	37	14- 6	52	16- 9	67	18-8
8	9- 2	23	12- o	38	14-8	53	16-10	68	18-9
9	9-4	24	12- 2	39	14-10	54	17-0	69	18-11
10	9- 7	25	12-4	40	15- o	55	17- 2	70	19- 0
II	' 9- g	26	12- 6	41	15-`2	56	17- 3	71	19- 2
I 2	10- 0	27	12-8	42	15- 4	57	17- 5	72	19-3
13	10- 2	28	12-10	43	15- 6	58	17- 6	73	19-4
14	10- 4	29	13-0	44	15-8	59	17-8	74	19- 5
15	10- 6	30	13-3	45	15-10	60	17- 9	75	19- 6

Age norms. The norms in the Intermediate or Higher Examination for the various ages may be read from the appropriate Interpretation Chart by noting the points at which the normal curve cuts the vertical age lines, or may be taken from Table 3 or Table 4.

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<sup>&</sup>lt;sup>1</sup> Here "normal" means exactly median in brightness. The term "normal," however, is often used to refer to all individuals whose scores are reasonably close to the norms for their respective ages.

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TABLE 3

AGE NORMS IN INTERMEDIATE EXAMINATION (30-MINUTE T	іме Сіміт)

	YEA	ırs	8	9	10	11	12	13	14	15	16	1,7	18 or over
-	N	0 .	7	15	23	31	38	44	49	53	56	58	59
		1 2	8 8	16 16	24 24	32 32	39	44	49 50	53	56 56	58 58	
		2	. "	10	24	32	39	45	50	53	-50	50	
		3	9	17	25	33	40	45	50	54	57	58	
		4	10	18	26	34	40	46	50	54	57	58	
	MONTHS	5	10	18	26	34	41	46	51	54	57	58	
	MOM	6	11	19	27	35	41	46	51	55	57	59	
		. 7 8	12	20	28	35	42	47	51	55	57	59	
		. 8	12	20	28	36	42	47	52	55	58	59	
		9	13	21	29	36	43	48	52	55	58	59	
		IO	14	22	30	37	43	48	52	56	58	59	
		11	14	22	30	37	43	49	53	56	58	59	

TABLE 4

AGE NORMS IN HIGHER EXAMINATION (30-MINUTE TIME LIMIT)

1 1							. ,
YEARS	12	13	14	15	16	17	18 or over
0	23	28	32	36	39	41	42
<b>, I</b>	24	28	32	36	39	41	
2	24	29	33	37	39	41	
3	25	29	33	37	40	41	
4	25	29	33	37	40	41	100
SHLNOW 6	25	30	34	37	40	41	
NOM 6	26	30	34	38	40	42	- 7
7	26	30	34	. 38	40	42	
8	27	31	35	38	40	42	
9	27	31	. 35	38	41	42	
10	27	31	35	39	41	42	
II	28	32	36	39	41	42	
	ı						

Norms for college students. The scores of 2516 college students in the Higher Examination have been reported to date from 21 colleges and universities. Ten of the 21 used 20-minute time limits. Reducing all the scores to a 30-minute basis, the median score of these 2516 students is 53 points. The median scores of the 21 colleges and universities were as follows (30-minute time limit): 37, 39, 45, 46, 51, 51, 52, 53, 53, 54, 55, 55, 56, 56, 57, 59, 61, 62, 62, 64, and 65.

Various percentile scores of the 2516 college students are shown in Table 5.

TABLE 5
SHOWING VARIOUS PERCENTILE SCORES OF 2516 COLLEGE
STUDENTS IN THE HIGHER EXAMINATION

	(Lowest)			(Median)				(H	(Highest)	
Percentile	0	3	10	25	50	75	90	97	100	
20-MINUTE BASIS	16	25	30	36	41	49	55	61	75	
30-MINUTE BASIS	20	32	39	46	53	62	67	71	75	

Derivation of IQ Scale. According to Dr. Terman, IQ's found by the Stanford Revision of the Binet-Simon Tests are distributed very closely in accordance with the law of normal distribution and with the middle 50 per cent falling within the range of IQ's from 92 to 108.

Due partly, no doubt, to the form of the Intermediate and the Higher Examinations, the steps in difficulty between items being smaller in the first part of each examination than in the last part, the distributions of scores of the several age groups have approximately the same variability, as far as can be determined. These distributions tend to be approximately normal, and are such that the middle 50 per cent of scores of each age group tend to fall within 8 points above and below the norm for that age. Fortunately, therefore, each point in the score of an individual above or below too. If an individual's score exceeds the norm for his age by 12 points, his IQ is 112.

How to find the IQ of an individual. The IQ of an individual may be found in either of two ways. One is as follows: Add to 100 the number of points by which a pupil's score exceeds the norm for his age, or subtract from 100 the number of points by which a pupil's score falls below the norm for his age. A simple and easy way to obtain the same result is to add 100 to the score of the individual and subtract from this sum the score which is the norm for his age. (The norm for individuals over 18 years may be taken as 42 points in the Higher Examination and as 59 points in the Intermediate Examination.) Thus, if a 15-year student's score in the Higher Examination is 34, the norm for his age being 36, his IQ is 34 + 100 - 36 = 98.

A second method of finding an IQ is to plot the score of the individual in the appropriate Interpretation Chart by placing a dot on the horizontal line representing his score and on the vertical line representing his age. If the dot falls on a curve, the IQ of the individual will be stated at the end of the curve in the IQ column at the right. Thus, if a student of 15 years, 4 months, makes a score of 31 in the Higher Examination, his IQ is 94. If the point falls between two curves, the IQ may be estimated closely enough by noting its position relative to the curve above or below.

The IQ of each student may be entered after his name on the Class Record, in the column headed "IQ."

Index of Brightness. A measure of brightness used in connection with the Otis Group Intelligence Scale is the Index of Brightness. The relation between IQ's obtained by the Higher Examination and the Index of Brightness as found by the Advanced Examination is shown in the IQ and IB columns in the Interpretation Chart. This same correspondence holds good for IQ's obtained by the Intermediate Examination. If IQ's are used, it is not necessary to find IB's. Both IQ's and IB's serve the same purpose.

Percentile Rank. Another measure of brightness is called the "Percentile Rank." If a student exceeds 75 per cent of unselected individuals of his own age in score, he is said to have a Percentile Rank (PR) of 75, and the same for any other per cent. The scale of Percentile Ranks extends, therefore, from o to 100. A PR of 50 represents exact normality and corresponds to an IQ or IB of 100.

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<sup>&</sup>lt;sup>1</sup> L. M. Terman, Measurement of Intelligence (Houghton Mifflin Company, Boston), page 79.

Assuming distributions of scores for the various age groups to be in accord with the law of normal distribution, the Percentile Rank of an individual may be found from his IQ or IB by reference to the PR column at the right of the Interpretation Chart for the Higher Examination. This correspondence holds also between IQ's, IB's, and PR's for the Intermediate Examination. If desired, the student's PR may be entered also on the Class Record. This is optional.

Grade status. Table 6 shows the grade status corresponding to various 30-minute scores in the Intermediate and Higher Examinations. For example, a score of 11 in the Intermediate Examination is a grade status of 3.5—that is, it is the norm for the end of the fifth month of the third grade; a score of 30 in

TABLE 6

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	INTER	HIGHER EXAM.					
SCORE	GRADE STATUS	SCORE	GRADE STATUS	SCORE	GRADE STATUS	SCORE	GRADE STATUS
11	3.5	26	5.0	41	7.0	30	8.0
12	3.6	27	5.1	42 .	7.2	31	8.2
13	3.7	28	5.2	43	7.3	32	8.5
14	3.8	29	5.3	44	7.5	33	8.7
15	3.9	30	5-5	45	7.6	34	9.0
16	4.0	31	5.6	46	7.8	35	9.4
17	4.1	32	5.7	47	7.9	36	9.8
18	4.2	33	5.8	48	8.1	37	10.0
19	4.3	34	6.0	49	8.3	38	10.4
20	4.4	35	6.1	50	8.5	39	10.8
21	4.5	36	6.3	51	8.7	40	11.0
22	4.6	37	6.4	52	9.0	41	11.6
23	4.7	38	6.6	53	9.2	42	12.0
24	4.8	39	6.7	54	9.5	43	12.6
25	4.9	40	6.9	55	9.8		

TABLE 7
Showing Distribution of Scores of 24,724 Pupils in the 6th Grade in the Intermediate Examination

	AGE								
SCORE	9	Io	11	12	13	14	15	16	TOTAL
	to	to	to	to	to	to	to	or	
	9-11	10-11	11-11	12-11	13–11	14-11	15-11	over	
 75			I					-	
70-74		3	19	8					3
65-69	}	31	116	49	10	6			21
60-64	r	66	344	193	28	2	3		63
55 <sup>-</sup> 59	3	97	551	336	87	24	5	1	110
50-54	3	142	912	586	197	79	21		194
45 <sup>–</sup> 49	7	183	1130	1084	340	138	34	7	292
40-44	6	162	1193	1061	491	208	50	11	318
35-39	6	207	1221	1241	668	28 <b>0</b>	106	11	374
30-34	9	155	1003	1180	761	338	150	24	362
25-29	7	115	784	935	700	360	171	27	309
20-24		83	457	612	556	328	179	. 8	222
15-19	1	34	241	341	353	220	117	26	133
10-14	I	7	75	134	150	89	58	14	52
5-9		2	11	27	25	31	23	6	12
0-4			6	7	4	4	4	2	2
Totals	44	1287	8064	7794	4370	2107	921	137	2472

Median age: 12 yr. 5 mo. Median score: 41.

the Higher Examination is the norm for the beginning of the eighth grade. These values are based on the tables of norms and Table 31 of Statistical Method in Educational Measurement (World Book Company).

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Tables 7, 8, and 9 show the distributions of scores in the Intermediate and the Higher Examinations. Similar data have been compiled for the other grades but cannot be given for lack of space.

TABLE 8

Showing Distribution of Scores of 35,278 Pupils in the 8th Grade in the Intermediate Examination

			*	AGE					
SCORE	11	12	13	14	15	16	17	18	TOTALS
,	to	tò	to 13-11	to 14-11	to 15-11	to 16-11	to 17-11	or	
									<u> </u>
75	1	I	3	6	T				/11
70-74	14	96	303	182	48	. 9			652
65-69	28	324	1177	740	213	50	4		2536
60-64	53	227	1710	1327	432	93	10		3852
55-59	39	426	1828	1753	. 732	. 168	. 16	2	4964
50-54	44	441	1771	1933	1025	219	42	2	547.7
45-49	22	313	1468	1822	1102	295	-54	2	5088
40-44	28	253	1187	1567	1052	313	38	6	4444
35-39	26	197	790	1122	849	268	50	10	3312
30-34	16	139	513	820	605		28	6	2364
25-29	9	76	244	393	423	160	28	2	1335
20-24	9	.38	146	242	221	106	28	10	800
15-19	1	17	60	102	63	50	4		297
10-14	1	7	12	33	28	13	4		97
5-9	2	I	10	5	7	4			29
0-4			, , 2	6	9	3			20
Totals	301	2556	11224	12053	6810	1988	306	40	35278

Median age: 14 yr. 3 mo. Median score: 49.

TABLE 9

Showing Distribution of Scores of 15,715 Pupils in the 12th Grade in the Higher Examination

	AGE									
SCORE	14 to 14-11	15 to	16 to 16-11	17 to 17-11	18 to 18-11	19 to 19–11	20 or over	TOTALS		
75		-5	I	-,	,	<del></del>				
70 <del>-</del> 74		5	19	11	5	. 2	ı	43		
65-69	2	31	78	128	43	10	4	296		
60-64	4	40	283	312	123	31	. 11	804		
55-59	3	75	465	454	227	62	23	1309		
50-54	10	125	628	970	484	147	52	2416		
45-49	7	96	770	1247	462	219	76	2877		
40-44	4	78	532	1280	750	227	92	2963		
35-39		40	415	960	686	268	101	2470		
30-34	r	28	211	495	455	172	66	1428		
25-29		10	85	213	216	112	43	679		
20-24	Ì	I	27	85	97	60	. 17	287		
15-19	1	5	11	31	- 27	18	5	97		
10-14			4	10	5	3	5	27		
5-9				5	. 4	4		13		
0-4				1	ı	2		4		
Totals	32	394	3529	6202	3585	1337	496	15715		

Median age: 17 yr. 7 mo. Median score: 44.

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#### APPLICATION OF RESULTS

Purposes of mental-ability tests. The chief administrative purposes for which mental-ability tests are given are: (1) the division of the pupils of a grade or the students of a class into more homogeneous divisions, usually in order that instruction of different degrees of enrichment may be given, (2) the regrading of pupils so that the pupils of each grade are more homogeneous in mental ability and are therefore more easily taught together, (3) the division of pupils of a school into groups which will progress at different rates.

The reader should consult *Intelligence Tests and School Reorganization*, by L. M. Terman and others (World Book Company), for a detailed discussion of the purposes and uses of tests of mental ability in regrading and classifying.

Division of classes. If it is desired to divide the students of a class into more homogeneous groups for instruction purposes, this may be done either on the basis of score or on the basis of IQ. Division on the basis of score would be made as follows:

Classification according to score. Find the distribution of the scores of the class. If the scores are plotted on the Interpretation Chart, this may be done by placing in the column under "Totals" at the left the number of dots on each horizontal line. (If desired, the frequencies of the various class intervals, 0-4, 5-9, etc., may be entered in the same column. These will be used in drawing a percentile curve on the Percentile Graph.) By means of this distribution the class may be divided into any number of divisions for differentiated instruction. Thus, let us suppose it is desired to divide a class into three divisions, A, B, and C, on the basis of score. This would be done as follows: Count down the distribution until one third the total number of scores has been counted. At this point draw a line across the distribution to mark the lower limit of score of Group A. Next count down another third and draw another line marking off Group B from Group C. Referring now to the Class Record, where each student's score appears opposite his name, the division designation, A, B, or C, may be placed opposite each student's name in the column headed "Classification."

This method is illustrated in the sample Interpretation Chart in Figure 2. Here 105 9th-year students are divided into three classes of 35 students each on the basis of score.

Classification according to brightness. If it is desired to divide the students of a class into divisions on the basis of brightness, this may be done by dividing the distribution of IQ's in the same way as suggested above for dividing the distribution of scores. To find the distribution of IQ's, count the dots between each two adjacent curves, including those which touch the lower but not the upper curve. Place the number of dots in the column headed "Totals" at the right, as shown in the sample charts. As a check on accuracy in counting the dots, it will be well to add these numbers and see that the sum corresponds to the number of students in the class.

Considerations governing method of classification. Two methods of classification have been described. Which should be used? It will be found that the dispersion of scores of any age group is so great in comparison with the rather narrow range of age norms for high school ages, that the resulting classifications by the two methods are very nearly the same. Even when classified by IQ, the superior division consists of students whose scores are nearly all higher than those of the

next division, etc. It remains for further research to discover which is the better method. It is possible that if the classification is made for the purpose of determining groups which will cover the curriculum of the high school in different amounts of time, classification on the basis of IQ may be the better method, whereas if it is to establish sections which will take work of differing degrees of intensity, classification on the basis of score may be the better.

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Regrading. If it is felt that the pupils of a school are very badly graded, so that the 6th grade, for example, is believed to contain some pupils who could do satisfactory work in the 7th or 8th grade and some who should be in the 5th grade to do the best work, the pupils may be regraded on the basis of score in a mental-ability test. The ideal grading would be that in which the pupils of the 6th grade all make scores higher than those in the 5th grade and lower than those in the 7th grade, etc. Practically this is impossible.

The next best procedure is to select those pupils from the 6th grade who make very high or very low scores and to promote or demote these. No hard and fast rule can be laid down for this. The number of pupils to be shifted depends partly on the amount of overlapping of ability between grades and partly on the character of the instruction possible in the school. Where relatively individual instruction is possible, homogeneous grouping is not so essential. It is probably best to begin regrouping slowly, taking first those whose scores deviate most from the median score of the grade and whose scholarship in the judgment of the teacher accords with their scores, and promoting or demoting these pupils one grade or one-half grade. If conditions warrant or seem to require it, they may be further promoted or demoted later. Later, also, more pupils may be regraded, until by degrees the grades will become more nearly homogeneous.

Multiple-track plan. A plan of school organization called the "multiple-track plan," in use in Oakland, California, and elsewhere, is one in which the pupils of the school are divided into groups (generally three, sometimes five) which progress at different rates. Thus there may be fast-moving, normal, and slow-moving classes, covering the first eight grades in say 7, 8, and 9 years, respectively.

A situation illustrating the need of reclassification is that shown in the sample Interpretation Chart in Figure 1. In this chart are plotted the scores of 276 pupils in Grades 5 to 8 of a grammar school. The scores of the different grades are plotted by different marks. It will be seen that the different grades overlap very markedly. Each grade contains both young pupils making high scores, who are therefore very bright, and old pupils making low scores, who are therefore very dull.

Division of pupils into groups to progress at different rates should be made on the basis of brightness. It is recommended by Terman that the brightest 15 per cent of the pupils of a school be placed in fast-moving classes (where numbers permit) and the dullest 15 per cent in slow-moving classes. The selection of these pupils should be made, therefore, on the basis of IQ (or IB or PR). A convenient method of making the division is illustrated in Figure 1 in the case of the 276 pupils. Of this number 15 per cent is about 40. Therefore the brightest 40 (according to IQ) should be placed in the fast-moving group and the dullest 40 in the slow-moving group.

The method of making the division by means of the chart

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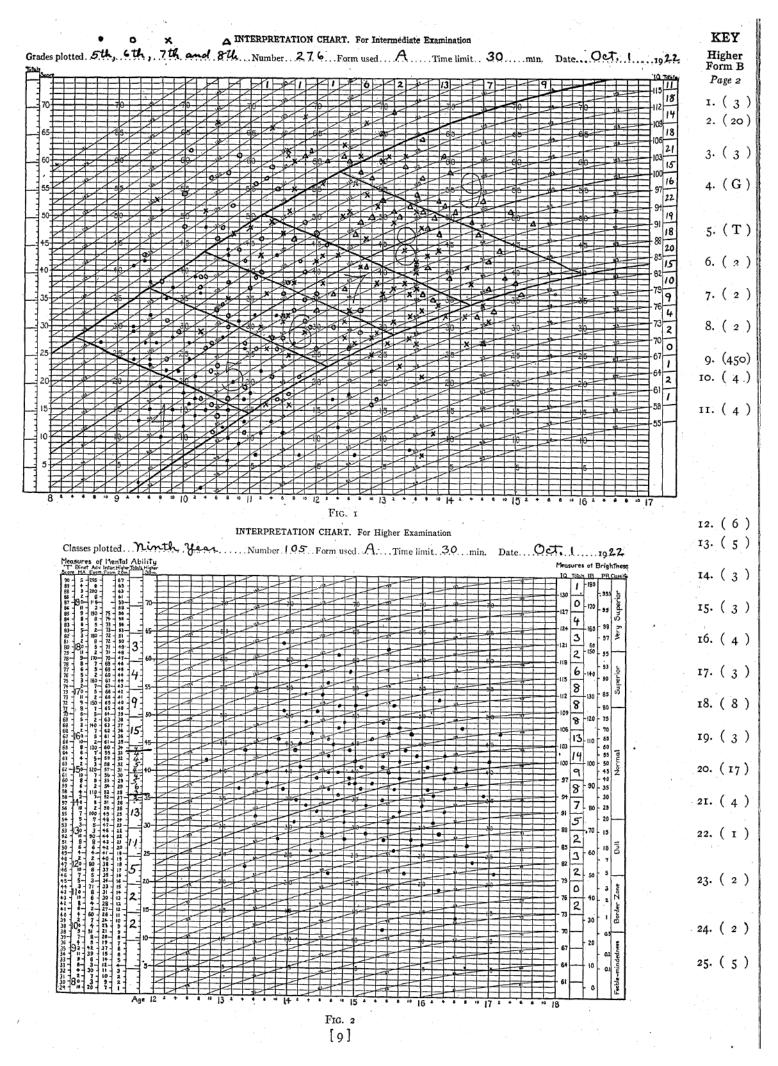
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Form B Higher KEY



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is as follows: Find the curve which separates the upper 40 cases according to IQ. If no curve cuts off approximately 40 cases, draw a curve which does, making it parallel to the printed ) . EL curves. The pupils whose scores are plotted above this curve

should be placed in the fast-moving class. Similarly find or draw a curve which separates the lower 40 cases according to IQ. The pupils whose scores are plotted below this curve

should be placed in the slow-moving group.

Grading within the group. The pupils of the three groups, fast-moving, normal, and slow-moving, are still to be graded. Ideally this would be done on the basis of score. Thus, if the 196 pupils in the normal group are to be placed in Grades 5, 6, 7, and 8, the lowest fourth or 49, according to score, would be placed in the 5th grade, the next 49, according to score, would be placed in the 6th grade, etc.

This would result, however, in placing in one grade pupils who, although very homogeneous as to score, had a very wide range of ages. The pupils of the 6th grade, for example, according to this plan, might range in age from a little over 9 years to nearly 16 years. Practically, therefore, it may seem more desirable to take some account of the age of the child. A very simple way to do this is by drawing lines across the middle band of the chart at a slight slant instead of horizontally, as shown in Figure 1; in this way age is automatically taken account of. The pupils represented by the dots in each area so marked out, while somewhat less homogeneous as to score. are much more homogeneous as to age. The greater the slant, the more weight is given to age.

In the sample chart provision is made for skipping certain pupils into the 9th grade, demoting others into the 4th grade, and dividing the remaining pupils into four groups of 40 each which would be placed in the 5th, 6th, 7th, and 8th grades.

If the slanting-line method is used, the dots plotted in the Interpretation Chart must be identified, or else it will be necessary to plot the score of each pupil again to determine in what grade he should be. It has been found feasible to do this by numbering the pupils consecutively on the Class Record and writing each pupil's number in small figures near the dot representing his score. If this is done, the pupils whose scores fall within a given area may be identified at once.

The number of cases represented in the sample chart is too small to illustrate the division of the fast- and slow-moving groups into grades — and, indeed, in a school of this size the establishment of fast- and slow-moving classes would doubtless entail grave administrative difficulties; but in a school where there are many more pupils, this would be done in exactly the same way as shown in the case of the normal group.

It must be remembered that the classification which would be effected by any of the above methods is rather in the nature of a goal to be worked toward gradually. It is doubtful whether it would ever be wise to reorganize a school completely on any of these plans at one time, especially on the basis of one test. It would be better, doubtless, to promote or demote extreme cases, as explained above, and as these show themselves to be properly placed others may be shifted. The teachers' independent judgments should weigh equally with the test results in determining which pupils should be regraded or in what grade any individual pupil should be placed. Indeed, the regrading should be done according to the judgment of the teachers in the light of the test results.

Educational and vocational guidance. In advising a young 27, high school student regarding his educational future or his vocation, his degree of brightness should be considered. It 28 seems probable that an entering student with a PR of 90 or higher may safely be permitted to attempt to finish high school 20, in 3½ or even 3 years. A student with a PR of 50 or less should certainly be prevented from attempting more than the regular course. Any one interested in research will do well to investigate the degree of brightness necessary to complete successfully the high school in  $3\frac{1}{2}$  or 3 years.

A boy or girl having a PR of 75 or over may be safely encouraged to go to college. Doubtless many whose PR's are between 50 and 75 will succeed in college if industrious. A boy or girl whose PR is less than 25 probably should be dis- 31. suaded from going to college. Here again there is need of research.

Similarly the degree of brightness of a student should be considered in advising him regarding a vocation. Bright stu-33. dents should be encouraged to enter the professions. Dull ones should be helped to choose a trade. The Stenquist Me- 34. chanical Aptitude Tests 1 may help to discover the proper trend of a boy's education.

Classification Test. If it is desired to give a general achievement test in any grade from the fourth to the ninth in addition 36. to the Intermediate Examination, it is recommended that the Classification Test be used. The Classification Test is a combination of the Intermediate Examination and a general 37. achievement test covering reading, arithmetic, spelling, grammar and diction, geography, history and civics, literature, 38 vocabulary, physiology and hygiene, and general information, including music and art. Form A of the Classification Test contains Form A of the Intermediate Examination, and Form B of the Classification Test contains Form B of the Intermediate Examination. The time limit on each of the two parts is one-half hour. The correlation of the Classification Test and the Stanford Achievement Test was found by Dr. E. E. Keener to be .83.

# THE PERCENTILE GRAPH

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In order to compare the score of any pupil with the scores of the class as a whole or to compare two or more classes, the most effective way is to draw a percentile curve for each grade 43or class on the Percentile Graph, a copy of which is included in each package of Examinations.

Definition of percentile curve. A percentile curve is a 45. smooth line having a horizontal length representing 100 per cent of the scores of any group of individuals and so drawn that any 46. point on the curve has a height representing the amount of a given score and a horizontal position on the graph representing the per cent of the scores of the group that is exceeded by the given score. The method of drawing a percentile curve is given in full below. One not familiar with percentile curves will appreciate their significance after studying the directions for

A percentile curve shows at a glance not only the median score of a class but also the range and variability of the scores. It shows at a glance just what per cent of the scores of the class is exceeded by the score of any given individual and just what per cent of the class attains or exceeds any given score. Two or

<sup>1</sup> Published by World Book Company, Yonkers-on-Hudson, New York.

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more curves on the same graph show very vividly the amount of overlapping of the scores of different classes.

DIRECTIONS FOR DRAWING A PERCENTILE CURVE

General procedure. The steps taken in drawing the percentile curve are: (1) distributing the scores, (2) finding the subtotals — number of cases to and including those in each class interval, (3) reducing these subtotals to per cents of the number of cases in the group, (4) locating points in the graph representing these per cents, and (5) drawing a smooth curve through these points.

Provision is made for distributing the scores of two groups of individuals on one Percentile Graph sheet, and from these distributions two percentile curves may be drawn. This does not mean, however, that only two curves may be drawn on one graph. The scores of additional groups may be distributed on other Percentile Graph sheets or any sheet of paper and as many curves drawn on one graph as may be conveniently distinguished.

Distributing the scores. In one of the columns headed "Tallying," distribute the scores of a class by putting a short mark opposite the interval of score within which the score of each individual falls. The sample Percentile Graph (Fig. 3) shows that in the freshman class two individuals had scores between 60 and 64, two had scores between 55 and 59, five had scores between 50 and 54, etc. If the scores of a class have been plotted on an Interpretation Chart, the number of scores falling within each interval of score may be copied directly on to the Percentile Graph sheet in figures, as shown in the sample in the case of the sophomore class. This will save distributing the scores again. The number of tallies or the figure in the Tallying column which tells the number of scores falling within any given interval of scores is called a "frequency." The frequency of freshman scores between 45 and 49, for example, is 8.

Finding the subtotals. Begin at the bottom of the column of frequencies and place in the square to the right of each frequency the sum of the frequencies up to and including those in that group. In the "Subtotal" column, under "Freshman," there is I score in the first interval, a subtotal of 2 to and including the second interval, a subtotal of 4 to and including the third interval, etc., and 50 to and including the last interval. This last "subtotal" (50) should equal the number of students in the class, as entered at the top of the column.

Reducing subtotals to per cents. In the column headed "Per cents," write opposite each subtotal the per cent that subtotal is of the whole number of students in the class. In the sample, under Freshman, 1 is 2 per cent of 50, 2 is 4 per cent of 50, 4 is 9 per cent of 50, etc., and 50 is 100 per cent of 50.

It is not necessary to reduce subtotals to per cents when use is made of the Scale Chart printed on the back of the Percentile Graph. The manner of using the Scale Chart is given below.

Locating points in the graph. First place a dot at the left edge of the graph on the horizontal line representing the lower limit of the lowest class interval containing a score. Next, place on the next line above, a dot having a distance to the right of the left margin of the graph equal to the first number in the per cents column, according to the scale at the foot of the graph. (In the sample the second dot in the percentile curve for the freshmen is placed 2 units from the edge of the graph.) Next, place on the next line above, a dot having a distance to

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the right of the margin representing the next per cent, etc. (The third dot represents 4 per cent, etc., and the last dot represents 100 per cent.)

Use of Scale Chart. The Scale Chart on the back of the Percentile Graph is provided to simplify the process of plotting the points in the graph. It is used as follows: Let us take the case of the freshman class, there being 50 students in the class. Find Scale 50 on the Scale Chart according to the numbers at the right. This line is divided into exactly 50 equal parts by the slanting lines in the chart. Each space, therefore, represents  $\frac{1}{10}$  or 2 per cent of the width of the graph. The second dot in the freshman percentile curve is to be placed just  $\frac{1}{10}$  of the distance to the right of the margin. This is just 1 space on Scale 50. The third dot is to be placed just 2 spaces to the right of the margin, the fourth point just 4 spaces to the right of the margin, etc., according to Scale 50 in the Scale Chart. By the use of Scale 41 the points have been plotted in the same way for the sophomore class.

By folding the Scale Chart on the proper scale and applying it to the Percentile Graph, the width of the graph may be divided into any number of equal parts from 40 to 100. By letting 2 or 4 graduations represent 1 unit or letting 1 graduation represent 2 units, the width of the graph may be divided into any number of equal parts from 10 to 200.

Drawing the curve. Draw a smooth curve through the dots plotted as described above. This is the percentile curve.

Finding median score of class. The point where the percentile curve cuts the 50-percentile line represents the median

<sup>1</sup> If only one Percentile Graph is at hand, the proper distances may be transferred from the Scale Chart on the back by means of a strip of paper.

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score of the group.¹ This may be read on the vertical scale along the 50-percentile line. The median scores of the freshman and sophomore classes in the sample are 40.5 and 45.5, respectively. These medians may be entered at the foot of the data columns as shown.

Finding variability of scores. The points at which the curve cuts the 25 and 75 percentile lines represent the lower and upper quartile scores of a distribution. The interval between these is the interquartile range — a very convenient measure of the scatter of the distributions. In the sample Percentile Graph the interquartile ranges for the two classes are about 14 points each (freshmen, 33.5 to 47, and sophomores, 39 to 53).

Overlapping of classes. It will be seen by a glance at the percentile curves that the sophomore class is only slightly better than the freshman class and that the distributions of scores of the two classes overlap very markedly. A convenient way to express this overlapping is to say that 30 per cent of the sophomore class fall below the median of the freshman class, or that 30 per cent of the freshman class exceed the median of the sophomore class.

Percentile rank in class. If an individual makes a score exceeding 25 per cent of the scores of his class, he is said to have a percentile rank of 25 in his class; and the same for other percentages. The percentile rank of any individual among the members of his class may be found from the percentile curve representing the scores of his class as follows: Suppose an individual in the sophomore class has made a score of 53. Find the point 53 on the vertical scale in the Percentile Graph and move the pencil horizontally to the point at the same height on the percentile curve. This point represents on the horizontal scale a percentile rank of 79. The percentile rank of the individual among the members of his class is, therefore, 79, which means that his score exceeds the scores of 79 per cent of his class. A score of 53 represents a Percentile Rank of 89 among the members of the freshman class.

In so far as mental ability, as measured by this examination, is an indication of the scholarship to be expected from a student, the percentile rank of a student in class may be taken as showing how he should stand in this regard to the class as a whole.

The meaning of "percentile rank in class" must be distinguished from that of "Percentile Rank," a measure of brightness, referring to the rank of an individual among a large unselected group of his own age.

### RELIABILITY AND VALIDITY

Reliability. By "reliability" is meant the degree to which the scores of the test are consistent in measuring whatever the test measures. Reliability is determined by means of correlation between different forms of the same test. The coefficients of correlation were found between Forms A and B of both examinations as follows:

Higher Examination, Grades 7 to 12:

Group I, Form A first, 128 cases, 
$$r = .917 \pm .009$$
 Group II, Form B first, 125 cases,  $r = .925 \pm .009$  avg. .921 Intermediate Examination, Grades 4 to 9:

Group I, Form A first, 215 cases, 
$$r = .953 \pm .006$$
  
Group II, Form B first, 212 cases,  $r = .943 \pm .007$  avg. .948

The values of the probable error of a score determined from these groups were respectively 2.56 and 2.68 points for the Higher Examination and 2.85 and 2.78 for the Intermediate Examination. The probable error of a score in either examination, therefore, is slightly over  $2\frac{1}{2}$  points. This means that the score in either examination will be correct within about  $2\frac{1}{2}$  points in half the cases. As has been shown, this means also that the probable error of an IQ is about  $2\frac{1}{2}$  points.

Validity. There is no direct method, of course, of finding the true validity of the tests — the degree to which they measure the hypothetical quality we call mental ability. The method of standardization is perhaps the best assurance as to the validity of the tests. Various other indications are available, however. The coefficient of correlation between the Higher Examination and the Advanced Examination taken two years earlier was .889 for 180 cases in Grades 7 to 12. The average of four coefficients of correlation between the Higher and Intermediate Examinations, averaging about 100 cases each in groups covering Grades 7 to 9, was .842. The correlation between scores in the Higher Examination and "scholarship" is reported by Clarence W. Proctor, Principal of High School, Bangor, Maine, as follows:

Grade 11, number of cases 240, r = .55Grade 12, number of cases 204, r = .57

The correlation between scores in the Higher Examination and scholarship as reported by the teachers of 157 high school freshmen in Oakland, California, was .59.

The correspondence between scores in the Higher Examination and letter ratings used in connection with Alpha is shown in Table 10.

			TABLE 10	)
ALPHA		, -	ALPHA	SCORES IN HIGHER
RATINGS			SCORES	EXAMINATION
Α			135-212	58-75
в			105-134	49-57
C+ .			75-104	39-48
С			45-74	28-38
C	•		25-44	20-27
D		•	15-24	15-19
E			0-14	0-14

A high score. One student has been reported to have made a perfect score of 75 points in the Higher Examination in 20 minutes. This student is characterized by the professor of educational psychology of the college as follows:

"The person is a young man just past 21 years of age. He had very poor high school training due to the fact that the schools in his section of North Carolina are not what they should be. He is finishing college in  $3\frac{1}{2}$  years with about 8 quarter-hours to spare. I have looked up his college record and find that he has grades of A's or B's. There are no C's, D's, or F's. He won the scholarship medal at college before he came to this institution. (He entered here as a senior.) He is a good mixer, and I do not believe that he puts in very many hours on his studies.

"The father is a rather successful farmer. In fact, from what I can gather, he is the best farmer in his neighborhood. An older brother is a professor in a college. I have had this young man in several classes. It is my firm conviction that he could finish the average college course in two years."

Test Service Bulletins. The reader is invited to send to the World Book Company for free copies of the Test Service Bulletins for further information about testing.

<sup>&</sup>lt;sup>1</sup> The value so found may not be exactly the same as the median found in the usual way by counting to the middle paper in order of score, but if not, the median score found by means of the curve is considered to represent the distribution better and to be in that sense more accurate.

# Bureau's Copy

Name of School .....

# **EVERY PUPIL SCHOLARSHIP CONTEST**

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# REPORT SHEET

TOWN
Name of Subject
Author of Text
Is this subject required?
Total number of pupils enrolled in subject
Record the scores and names of the three pupils having the
highest scores
1st place, Score Name
2nd place, Score
3rd place, Score Name
Record the names of the schools you are contesting with in this subject. If you are not contesting leave blank alone.
School State
School State
School City State
Important Statements.
<ol> <li>The "Report Sheets" must be sent to the Bureau within four days after the test is given.</li> <li>The Blue copy of the Scholarship Contest Report Sheet should be sent to the Bureau.</li> <li>In case you are contesting with another school and desire the Bureau's OK send Blue, White, and Pink copies of Report Sheet.</li> <li>If you have more than one section of a class, throw all the papers together.</li> <li>Record the scores of your test papers in column "A" according to directions found on the back of the White Record Sheet and on "General Directions."</li> </ol>
We certify that the test was given, the papers scored, rescored, checked and rechecked according to directions. We furthermore certify that the above distribution of scores is an accurate statement of the results. We certify that (if we are contesting with another school in this subject and desire the Bureau's OK), we are enclosing an exact copy of this report for each school and a copy for the Bureau. We are enclosing the 3 best papers.
Signatures:
Teacher of Subject
Supt. or Prin
Bur.OK Stamp DATE
(Directions for Recording Scores and Determining the Median will be found on

General Directions and on "White" Every Pupil Scholarship Contest Report Sheet.)

Your Copy
Keep it unless you are contesting with another school.

# EVERY PUPIL SCHOLARSHIP CONTEST

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# REPORT SHEET

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Name of Sub	ject			155
Author of To	xt		per the cross pagain sa	150
	t required?		The state of the s	145
		and the second second		140
Total number	r of pupils enrolled in			135
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Uichost Gaor	• ************************************			125
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four days aft	Report Sheets" must beer the test is given.			75
2. The B	lue copy of the Schol nt to the Bureau.	arship Contest Rep	ort Sheet	70
3. In case	e you are contesting wi			65
the Bureau's Sheet.	OK send Blue, White	e, and Pink copies	of Report	60
4. If you the papers to	have more than one	section of a class,	throw all	55
5. Record	d the scores of your te	st papers in column	n "A" ac-	50
	irections found on the "General Directions."		te Record	45
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1 Ex ( ) 3,24 ()	Signatures:		Baran 1984 - Arrigan Maria (1984)	· • • • • • • • • • • • • • • • • • • •
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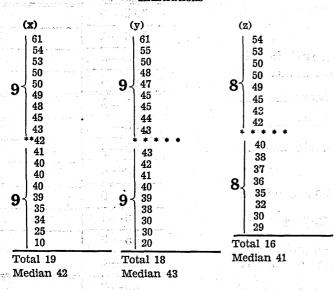
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10—4 5—9 0—4 Total No.		
5—9 0—4 Total No.		
Total No.		
Total No.		
of papers	Total No.	
Median score		

### METHOD OF DETERMINING MEDIAN

Classes will be ranked according to the median scores. Use the following method to determine the median score.

- 1. After all papers have been scored, rescored, checked, and rechecked, arrange the papers in a consecutive order according to the score—highest, next highest, etc.
- 2. If you have more than one section of a class throw all the papers together.
- 3. Count the total number of papers and record this as total number of papers at bottom of column "A."
- 4. Find the score on the middle paper when there is an odd number of papers; and the score halfway between the scores on the two middle papers when there is an even number of papers. This score will be the median score. Illustrations (x), (y), and (z) on this side of this sheet will make the above statement clear.
- 5. Place this determined median after median score at bottom of column "A."
- 6. Check and recheck your work. Know that you are right.

### Illustrations



# METHOD OF RECORDING SCORES

For convenience of the Bureau, record the scores in column "A" of Report Sheet according to the following method:

- 1. See that all papers are arranged in a consecutive order according to score.
- 2. Record in column "A," opposite the corresponding groups (0-4, 5-9, 10-4, 15-9, 20-4, 25-9, 30-4, etc.) the number of papers having respectively scores between 0 and 4.9, 5 and 9.9, 10 and 14.9, 15 and 19.9, 20 and 24.9, 25 and 29.9, 30 and 34.9, etc.
- 3. Samples I and II illustrate how this is done. Sample I represents the scores of the papers arranged in consecutive order. Sample II represents a portion of column "A" of Report Sheet.
- 4. In Sample I all of the papers have been grouped according to No. 2, and the number of papers in each group counted. The number of papers in each group has been recorded opposite the corresponding group in Sample II.

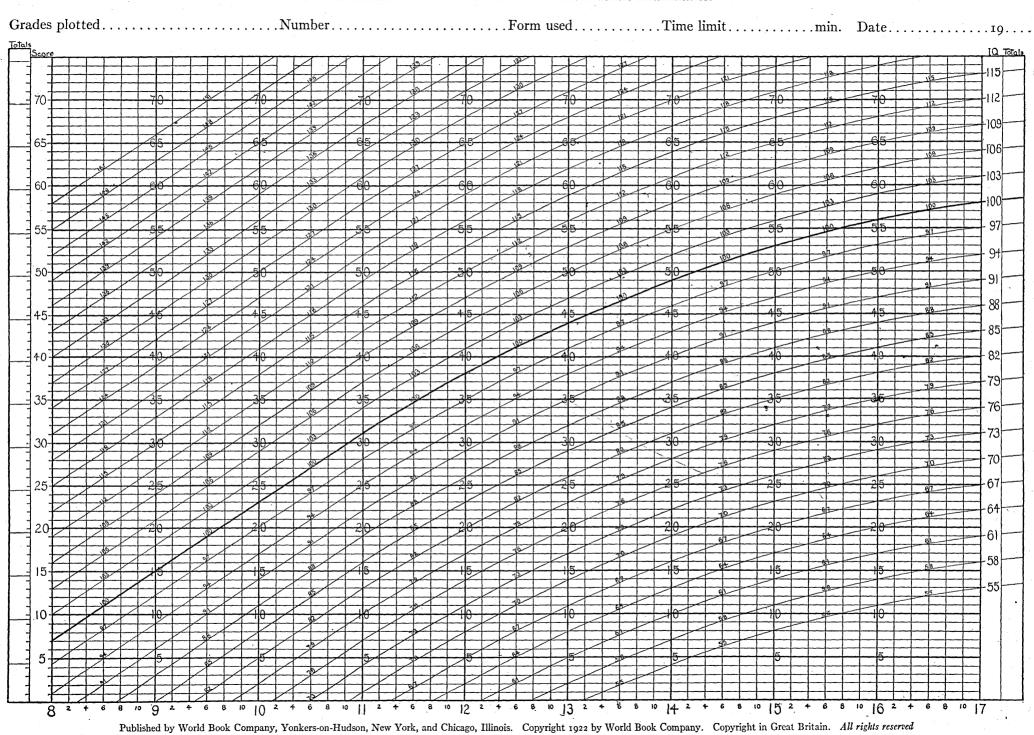
- 5. Recheck to make sure that there are no errors.
- 6. See that the total number of papers check.
- 7. The median must be recorded.

SAM	PLE I		SAMPLE II							
Scores on Papers ar- ranged in	Number of Papers in each group		Scores Between	Number of papers having scores between						
Consecutive Order			659	1						
		= '	60-4							
67	1	_	559	·						
54 50	2		50-4	2						
46			459	2						
45	2		40-4	8						
44			359	8						
41	8		304	. 2						
40	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	_	25—9	3						
39			204	2						
36 35	8		159							
33			104	1 1						
80	2		59	1						
29		_	0-4	1						
27 25	3		Total No.	21						
		_	of papers							
21 20	2		Median	85						
13	1	_	* A							
8	1		· ( .	Albert Berger						
4	1			•						
Total number of papers	21	<b>-</b> -								
Median	35	_	5							

### IMPORTANT STATEMENTS

- 1. The Every Pupil Scholarship Contest Report Sheet must be sent to the Bureau within four days after the test is given.
- 2. All Report Sheets must be certified by the teacher of the subject and by either the Superintendent or the Principal.
- 3. The Report Sheets will be of three colors—white, blue, and pink.
- 4. If you are not contesting with another school, be sure to return the Blue Scholarship Contest Report Sheet to the Bureau.
- 5. If you are contesting and desire the OK of the Bureau, return the following number of certified copies of the Scholarship Contest Report Sheet to the Bureau: A blue copy for the Bureau, a white copy for you, and a pink copy for each school you are contesting with. Suppose you are contesting with Athens High School in Algebra. You will send three certified copies (a white, a blue, and a pink) to the Bureau. If you are contesting with two high schools in Algebra, then you will send four certified copies (a white, a blue, and two pink) to the Bureau. The Bureau will check the records, stamp them, return the white copy to you, send the pink copies to the contesting schools, and keep the blue copy.
- 6. If you do not desire the OK of the Bureau, then send the pink copies directly to the school or schools you are contesting with. If you can do this it will save a delay in the exchange of your reports.

### INTERPRETATION CHART. For Intermediate Examination

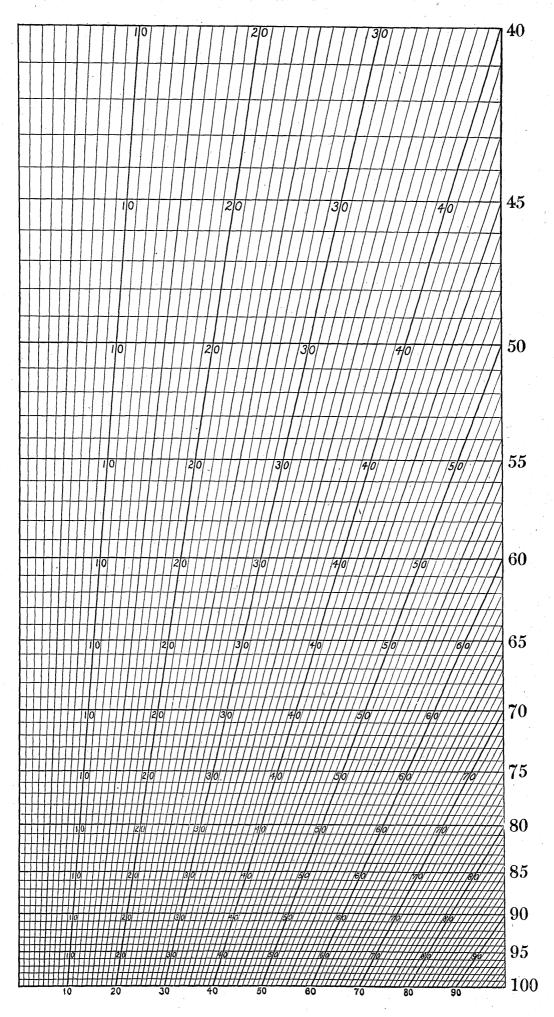


# OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

# PERCENTILE GRAPH

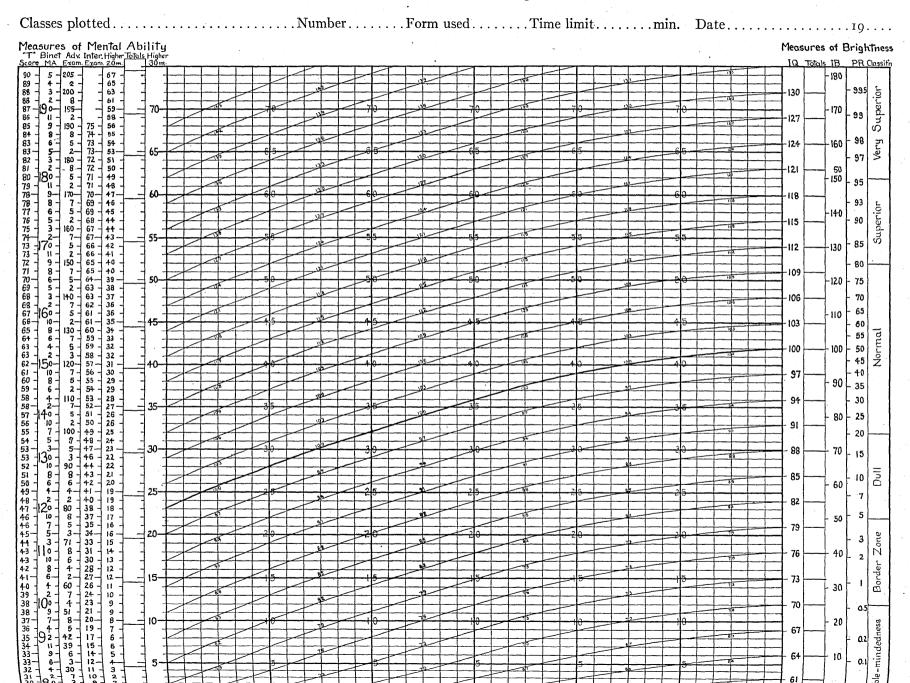
For Intermediate and Higher Examinations

Grade or Class							Examina	tion				·		•				
Number							School or	College			x							
Date of Exam.						1,1	Examine									,		
Form Used											$\mathbf{p}_{\circ}$			anh				
Time Limit											re	rcenti	le Gr	apn				
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70-74.			·								·							
65-69																	-	
60-64													- 60		?			
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50-54													-50					-
45-49													+ + + + + + 15					
40-44				<i>3</i>	,								40					
<b>3</b> 5-39										·			35					
<b>3</b> 0-34									,				-30					
<b>2</b> 5-29													25				,	
20-24													20					
15-19			•										15					
10-14								:	,				10	•				
5- 9					,		,						-5					
0- 4 Class Medians							0 1											



# OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

# INTERPRETATION CHART. For Higher Examination



# OTIS GROUP INTELLIGENCE SCALE

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# RECORD SHEET—(Continued)

No. of subject	Name	A	ge	Sco	re in e	ach of	o tests	(Adv.	Exam.	) or 8 t	ests (P	rim. Ez	ram.)	Total score	Norm	IB	DD
subject	Name	.	Mos.	I	2	3	4	5	б	7	8	9	10	score	Nom	-10	PR
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Directions: Follow the directions for each part. The time to be allowed is 5 minutes for each of parts I and II, and 3 minutes for each of parts III, IV, and V.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

PRIMARY ACHIEVEMENT TEST

By Mayme McCarter and Kathryn Kayser K. S. T. C., Emporia, Kansas.



TOTAL NUMBER POINTS

Name Warr	en Moss Jr.	29 vaoli∆) T'own≪	incoln!	
School Centr	alanin valar	Age	no et vid over he d Grad	le <u>Z</u>
Teacher 2	s.C. Scott	State	ans as Da	te April 4, 193
and work straight o	down in each row.	When you have wor	it where it belongs, ked the row of samp minutes for Part I.)	les wait for the gir-
· Samples		(6)	many (11) and [	.56 (16)
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		7		4
7		(7)		1000
	Add	Subtract	(12)	(17)
(b)	6	16	Multiply	Divide
Add	Zama feteb	-5 77	$3 \times 6 = /6$	
+ 2	0			2)12
72		(8)	oligerők (zájani arc	fi Aburou
	Add 6	Add 23	(13)	(18)
(c)	4	$\tilde{1} \tilde{0}$	Multiply	Divide
Subtract 4	43 W 19 5 Sent Sent	23	2 × 9 = ( 8	27 ÷ 3 =
	77	13/3		Vinne week
gairpi 27mii 11	degrée de proces	13/	(14)	(10)
	(4)	(9)	Multiply	(19) Divide
(d)	Subtract 7	Subtract 5 6 1	$0 \times 7 = 0$	Divide
Multiply 3	3	209		5)126
$\times 2$	4	7610	er de l'estate de la company de la compa	Large Court of State parties of the Court of
6	(5)	(10)şfega	(15)	
	Add	Add 600	Multiply	
	1.8	183	352	Divide
	<u> </u>	$\frac{216}{6}$	gov <del>ice de</del>	3)304

TARONO PART II.

DIRECTIONS: Read each line and think which word is left out where the blank is. The word left out is always a number. Write that number in the blank. When you have done the samples, wait for the signal to begin before you start on the

- 1. Three birds and two birds are ... birds.
- 2. Four chairs and two chairs are . 6 chairs.
- 3. Jack is six years old. Alice is four years old. Jack is . ... years older than Alice.
- 4. Mother said she had hidden 14 Easter eggs. I have found 8. . . . are left for me to find.
- 5. Helen had nine paper dolls. She cut 7 more. She had ./. 6. dolls.
- 6. Today is my birthday. I weigh 47 pounds. Last year I weighed 38 pounds. How many pounds have I gained? .9.
- 7. The book I am reading has 205 pages. I just finished 87 pages. How many pages have I to read?
- 8. Jane had 184 words in her spelling She had learned to spell 96. list.

Samples:

- (a) One boy and one boy are ....2.... boys.
- (b) Two apples and one apple are ...... apples.
- (c) If Mary has two apples and eats one apple, she has ..... apples left.

(Allow exactly 5 minutes for Part II.)

How many more had she to learn?

- 9. Jack put \$2.58 in the school bank. His father gave him \$1.29 more. How much did Jack have?
- 10. Walter sold 28 papers at 5c a copy. How much did he get for all?
- 11. Mary read a storybook through in 4 days. Each day she read 27 pages. There are .... pages in the book.
- 12. Billy's father paid 16 cents for postage stamps to mail some letters. Each stamp cost 2 cents. He mailed ...letters.
- 13. Jean earns 7c each day drying dishes. How long will it take her to earn enough to buy a doll that costs \$3.80?
- Joe earned \$8.50 in 4 weeks. earned .... per week.
- 15. Eight boys bought a tent costing \$14.80. If they share equally, how much must each boy pay? ....

# PART III.

DIRECTIONS: Draw a line under the word which is the correct answer to each question. Samples:

- (a) Which can see? chair dog
- (b) Which one is red? ice orange
- (c) Which one burns? water stone (Allow exactly 3 minutes for Part III.)
- 1. Which one is green? cat dog grass sheep
- 2. Which one can sing? rabbit dog fish bird

- 3. Which one can walk? ball boy nest house
- 4. Which one is tallest?

  tree daisy rose sunflower
- 5. Which one is white? coal brass gold snow
- 6. Which can go fastest? train horse dog airplane
- 7. Which one swims? chicken duck stone robin
- 8. Which one has wheels? sled wagon doll top
- 9. Which can we eat? clock table candle candy
- 10. Which is the oldest?
  father boy baby grand-father
- 11. Which one can hear?
  electric light woman picture
  snowball
- 12. Which one grows on a tree?

  apple potato carrot oyster
- 13. Which one can fly?

  building piano <u>eagle</u> truck
- 14. In which country is rice raised?
  Alaska England-China Africa
- 15. Which is most valuable? clay diamonds cabbage
- 16. Which grows in a garden?

  rag weed spinach cactus
- 17. In which do you ride?
  veranda temple jinrikisha
- 18. Who crossed the ocean in an airplane? Columbus Lincoln Lindbergh
- 19. Edison is:

  a musician a minister an inventor
- 20. Great Britain is:

  an island an ocean a continent

# PART IV.

**DIRECTIONS:** Put a cross like this (+) before each sentence that is true. Before a sentence that is not true put a straight line like this (—)

Samples: (+) (a) Birds can fly.

(—) (b) Cows can sing.
 (—) (c) A sheep can talk.
 (—) (d) Snow is white.

( ) (d) Snow is white.

Remember (+) means true and (—) means not true.

(Allow exactly 3 minutes for this part.)

- (-) 1. A rabbit has a long tail.
- (-) 2. The sun comes up at night.
- (+) 3. Birds can sing.
- (-) 4. All apples are yellow.
- (\(\frac{1}{2}\)) 5. I live in a house.
- (+) 6. Boys like to play.
- (+) 7. You must dress warm in win-
- ( 8. Trees are green in summr.
- (+) 9. Ice is colder than fire.
- (\_\_\_) 10. Christmas comes in the month of December.
- (#) 11. Twelve is more than thirteen.
- ( ) 12. A monkey is larger than an elephant.
- (†) 13. Iron is heavier than cotton.
- (+) 14. Wednesday comes before Thursday.
- ( †-) 15. People usually carry umbrellas when it rains.
- (--) 16. People sometimes light their homes with electricity.
- (\_\_) 17. Automobiles are more expensive than potatoes.
- ( ) 18. Patriotism is a love for one's country.
- dian tribe is a highly respected member of the tribe.
- (\_\_\_) 20. The Eskimo inhabits the desert regions.

PART V.

DIRECTIONS: First read the little story. Then read the sentences under the story and draw a line under the word or words which makes each cor-

Sample: Two birds had a nest in a tree. They sang all day. They sang because they were happy. In a few days there would be baby birds in the

(a) Some birds had a: nest worm string
 (b) They were: sad angry happy

(c) Little birds would be in the nest: in a day in a few days sin many weeks

(Allow exactly 3 minutes for this part.)

2. Brida er a**.L**ina

When Jack got up the ground was white with snow. He found his sled and went for a ride. Then he made a snow house.

- 1. Jack saw: the sky the snow the
- 2. He went for a ride on his: train sled pony
- 3. He made a house of: brick stone

Mary and Billy went to see their grand-mother. She lived in the country. Billy liked to drive the horses. Mary liked to throw grain to the chickens.

- 4. Mary and Billy went to see their: uncle grand-mother aunt
- 5. She lived: in town in the city on a farm
- 6. Billy wanted to drive the: borses chickens goats
- 7. Mary liked to give the chickens: sand water feed

Tom had a dog and a cat. The dog was white with black spots. The cat was black with white spots. One day the dog ran away. Tom didn't see him for a week.

8. Tom's dog was: brown black and white-

9. Tom could not find his: cat hen dog

10. His dog came back in: a year seven days a month

celV or more

Alice had a birthday party. Her friends brought gifts to her. Mary gave her a doll that could go to sleep. Jane gave her a story book about a fairy queen. James gave her a top that would sing.

11. Mary gave Alice a: walking doll sleeping doll stalking doll

12. James gift was a: singing top jumping top bouncing top

13. Jane gave Mary a book with stories about: Indians kings fairies

Aseria no e**V**oen eno deid

Children have good times when school is out. They sometimes take trips to the mountains. Some children go to the country. Others go to the city and visit the zoo.

- 14. Children have fun: in cars in winter in vacation
- 15. Some go to the: mountains sea-shore the meadows
- Some children like: the stories the street cars the animals.

A man who owned a store advertised for a boy to work for him. He wanted a helper who was industrious. Jack and John asked for the job. John was a boy who never wasted time. Jack played all

17. The man gave the job to: Jack John

Directions: Follow the directions for each part. The time to be allowed is 5 minutes for each of parts I and II, and 3 minutes for each of parts III, IV, and V.

# EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# PRIMARY ACHIEVEMENT TEST

By Mayme McCarter and Kathryn Kayser K. S. T. C., Emporia, Kansas.

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. 6	)			,		

TOTAL NUMBER POINTS

Name / Y	des To	Town	- Museum	***************************************
School 62		Age	Grad	le
Teacher		State Ko	MAN Dar	te 9 pril 41930
and work straight of	lown in each row.	When you have wor	it where it belongs. ked the row of sample minutes for Part I.)	les, wait for the sig-
Samples	(1)	(6)	heng .(11); shad	(16)
(a) Add 1 + 1	Add 4 + 3	Subtract 1 3 —6	Subtract 4567 1389	Multiply 483
(b) Add 1	(2) Add 6 +0	(7) Subtract 1 6	(12) Multiply 3 × 6 = 1	(17) Divide
+ 2 (c) Subtract 4 —1	(3) Add 6 4 2 5	(8) Add 23 10 77 23	(13) Multiply 2 × 9 = 1	(18) Divide 27÷3=0
(d) Multiply	(4) Subtract 7 —3	(9) Subtract 5 6 1 2 0 9	$ \begin{array}{c} (14) \\ \text{Multiply} \\ 0 \times 7 = 7 \end{array} $	(19) Divide 5) 1 2 6

(15)

DIRECTIONS: Read each line and think which word is left out where the blank is. The word left out is always a number. Write that number in the blank. When you have done the samples, wait for the signal to begin before you start on the others.

- 1. Three birds and two birds are . . . . birds.
- 3. Jack is six years old. Alice is four years old. Jack is . ... years older than Alice.
- 4. Mother said she had hidden 14 Easter eggs. I have found 8. are left for me to find.
- 5. Helen had nine paper dolls. She cut 7 more. She had . . . dolls.
- 6. Today is my birthday. I weigh 47 pounds. Last year I weighed 38 pounds. How many pounds have I gained? 715
- 7. The book I am reading has 205 pages. I just finished 87 pages. How many pages have I to read?
- 8. Jane had 184 words in her spelling list. She had learned to spell 96.

Samples:

(a) One boy and one boy are ....2... boys.

(b) Two apples and one apple are ...... apples.

(c) If Mary has two apples and eats one apple, she has .......... apples left.

(Allow exactly 5 minutes for Part II.)

How many more had she to learn?

- 9. Jack put \$2.58 in the school bank.
  His father gave him \$1.29 more.
  How much did Jack have?
- 10. Walter sold 28 papers at 5c a copy. How much did he get for all?
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- 13. Jean earns 7c each day drying dishes. How long will it take her to earn enough to buy a doll that costs \$3.80?
- 14. Joe earned \$8.50 in 4 weeks. He earned 6.70 per week.
- 15. Eight boys bought a tent costing \$14.80. If they share equally, how much must each boy pay

PART III.

**DIRECTIONS:** Draw a line under the word which is the correct answer to each question. Samples:

(a) Which can see? chair dog bed

- (b) Which one is red? ice orange apple (c) Which one burns? water stone coal (Allow exactly 3 minutes for Part III.)
  - 1. Which one is green? cat dog grass sheep
- 2. Which one can sing? rabbit dog fish bird

- 3. Which one can walk? ball boy nest house
- 4. Which one is tallest? tree daisy rose sunflower

5. Which one is white? coal brass gold

6. Which can go fastest? train horse dog airplane

7. Which one swims? chicken duck stone robin

8. Which one has wheels? doll top sled wagon

9. Which can we eat? clock table candle candy

10. Which is the oldest? father boy baby grand-father

11. Which one can hear? electric light woman picture snowball

12. Which one grows on a tree? apple potato carrot oyster

13. Which one can fly? building piano eagle truck

14. In which country is rice raised? Alaska England China Africa

15. Which is most valuable? clay diamonds cabbage

16. Which grows in a garden? rag weed spinach cactus

17. In which do you ride? temple jinrikisha veranda

8. Who crossed the ocean in an airplane? Columbus Lincoln Lindbergh

19. Edison is: a musician a minister an inventor

20. Great Britain is: an island an ocean a continent

## PART IV.

**DIRECTIONS:** Put a cross like this (+) before each sentence that is true. Before a sentence that is not true put a straight line like this (-)

Samples: (+) (a) Birds can fly. (a) Birds can hy.
(b) Cows can sing.
(c) (c) A sheep can talk.
(x) (d) Snow is white.

Remember (+) means true and (—) means not

(Allow exactly 3 minutes for this part.)

(-) 1. A rabbit has a long tail.

(-) 2. The sun comes up at night.

(1) 3. Birds can sing.

(-) 4. All apples are yellow.

( 5. I live in a house.

(+) 6. Boys like to play.

7. You must dress warm in winter.

8. Trees are green in summer.

9. Ice is colder than fire.

10. Christmas comes in the month of December.

(+) 11. Twelve is more than thirteen.

(-) 12. A monkey is larger than an elephant.

(-) 13. Iron is heavier than cotton.

(-) 14. Wednesday comes before Thursday.

(+) 15. People usually carry umbrellas when it rains.

(+) 16. People sometimes light their homes with electricity.

(1) 17. Automobiles are more expensive than potatoes.

(+) 18. Patriotism is a love for one's country.

(+) 19. The medicine man of the Indian tribe is a highly respected member of the tribe.

( 20. The Eskimo inhabits the desert regions.

### PART V.

DIRECTIONS: First read the little story. Then read the sentences under the story and draw a line under the word or words which makes each correct.

Sample: Two birds had a nest in a tree. They sang all day. They sang because they were happy. In a few days there would be baby birds in the nest.

(a) Some birds had a: nest worm string

(b) They were: sad angry happy(c) Little birds would be in the nest: in a day in a few days in many weeks

(Allow exactly 3 minutes for this part.)

When Jack got up the ground was white with snow. He found his sled and went for a ride. Then he made a snow house.

- 1. Jack saw: the sky the snow the
- 2. He went for a ride on his: train sled pony
- 3. He made a house of: brick stone snow

Mary and Billy went to see their grand-mother. She lived in the country. Billy liked to drive the horses. Mary liked to throw grain to the chickens.

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- 6. Billy wanted to drive the: horses chickens goats
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# III.

Tom had a dog and a cat. The dog was white with black spots. The cat was black with white spots. One day the dog ran away. Tom didn't see him for a week.

- 8. Tom's dog was: brown black black and white
- 9. Tom could not find his: cat
- 10. His dog came back in: a year seven days a month

Alice had a birthday party. Her friends brought gifts to her. Mary gave her a doll that could go to sleep. Jane gave her a story book about a fairy queen. James gave her a top that would sing.

- 11. Mary gave Alice a: walking doll sleeping doll talking doll
- 12. James gift was a: singing top jumping top bouncing top
- 13. Jane gave Mary a book with stories about: Indians kings fairies

# locita se ${f V}$ osposo :

Children have good times when school is out. They sometimes take trips to the mountains. Some children go to the country. Others go to the city and visit the zoo.

- 14. Children have fun: in cars winter in vacation
- 15. Some go to the: mountains sea-shore the meadows
- 16. Some children like: the stories the street cars the animals

A man who owned a store advertised for a boy to work for him. He wanted a helper who was industrious. Jack and John asked for the job. John was a boy who never wasted time. Jack played all day.

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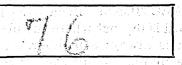
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# PRIMARY ACHIEVEMENT TEST By Mayme McCarter and Kathryn Kayser

K. S. T. C., Emporia, Kansas.



TOTAL NUMBER POINTS

Name Holows	Jun abbot	Town L	mcoln	
School Centre	1 <b>a</b> 1	Age 8		Grade Third
Teacher Miss.	Snapp	State Ka	nsas	Date aprily/908
DIRECTIONS: Find	the answer to each	PART I. example and write When you have worl s. (Allow exactly 5	ked the row of sa	ongs. Begin at the top amples, wait for the sig-
Samples	(1)	(6)	.(11).	(16)
(a) Add	Add 4 + 3	Subtract 1'3 —6	Subtract 4 5 6 7 1 3 8 9	Multiply 483
+1	(2)	7	3178	732 2 y sa 732
The section of the se	Add	Subtract	(12)	(17)
(b) Add	+0	16 —5	Multiply	Divide
1	6.		$3 \times 6 = 18$	2)62
1986   <u>4</u> 1909   1	(3)	(8)		ing it planses,
	Add 6	Add 23	(13)	(18)
(c)	4	$\frac{1}{7} \frac{0}{7} \frac{1}{7} \frac{1}$	Multiply	Divide
Subtract 4	5	23	2 × 9 = 18	27÷3=9
	17 18 20 <b>1.7</b> 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	/3 3		
	(4)	(9)	(14) Multiply	(19)
(d)	Subtract 7	Subtract 5 6 1	$0 \times 7 = 7$	Divide
Multiply	3	352	on the second se	5)126
3 × 2	<b>H</b>	0 2 2	Minima o minima Romanya sarah	in the second section of the second second section is a second section of the second s
6	(45)	(10) Add	(15)	(20)
	Add 1/8	604	Multiply 3 5 2	Divide
	7 4 7 4	$\frac{216}{1002}$	1056	.3)304

# PARTII.

DIRECTIONS: Read each line and think which word is left out where the blank is. The word left out is always a number. Write that number in the blank. When you have done the samples, wait for the signal to begin before you start on the others.

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# ins a card **V**roop and Ali

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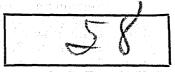
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EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# **GEOGRAPHY**



TOTAL NUMBER POINTS

actly 20 minutes. By J. B.	. Stroud,
K. S. T. C., I	Emporia, Kansas. TOTAL n Kansas Geography teachers.
Name Helin Page	Town John Own
	and the control of t The control of the control of
School Lincoln fr. High. Teacher miss alsen	Age /2 yrs Grade
	The state of the same of the same
Teacher Muss alsen	State Adamsa Dat
DIRECTIONS: Read the following sentences	$(+)^{27}$ . Ohio ranks second
carefully. If a statement is true, place a plus	
(+) in the parenthesis in front of the state-	
ment, as in example A below. If the statement	() 29. Cape Town is a cit
is false, make a minus (—) in the parenthesis	(+) 30. Milwaukee is the c
in front of it as in example B. Make the + and	bergue i sin. passadi belasa
the — small and clear.	( -) 31. Birmingham, Alaba
Examples: (+) A. Apples are good to eat.	leading cities in t
(—) B. Potatoes grow on trees.	(+4) 32. Indiana is a leading
PART I.	duction of iron ore
<ul> <li>( ) 1. Europe has no great cotton belt.</li> <li>( ) 2. North America has more people</li> </ul>	(+) 33. The St. Lawrence
	east.
than any other continent.	(+) 34. Snow never falls in
3. Japan's chief export is tea.	( - 35. The Island of Jam
( +) 4. Egypt is a country in Africa. ( -) 5. The Po River flows across the south-	t ga a greek ibbean Sea. 🕬 t 🤫
ern part of Russia.	
(-) 6. The Thames is a river in southeast-	boundary betwee
ern England.	Mexico. (+) 37. The Mississippi Ri
(-) 7. The chief industry in England is ag-	as far north as St.
riculture.	( —) 38. New York is the g
( - ) 8. The Rhine river flows south through	porting point in th
Germany.	(+) 39. The Amazon River
( - ) 9. Moscow is a city in Poland.	Atlantic Ocean.
( ) 10. Valparaiso is a city in Chile.	(-) 40. The Orinoco Rive
( -) 11. Vienna is a city in Italy.	river in South Am
( $\uparrow$ ) 12. The largest river in the world is the	(十) 41. Argentina is simi
Amazon.	climate.
( -) 13. Peking is a city in Japan.	(+) 42. Asia is called the 'tion."
( ) 14. The Nile flows south through Egypt.	7 ) 40 mi TTT1 11 TF 1
(-) 15. Ceylon is an island just off the coast	est range of moun
of South Africa.	
( ) 16. The Andes is the largest mountain in Mexico.	(+) 44. Pennsylvania is th
(~) 17. Plains covered with rich grass in	11 TI11- 1 Obsta 1
Argentina are called Tundras.	PART II.
( † ) 18. Belfast is a city in Ireland.	DIRECTIONS: Place the nu
<ul> <li>( † ) 18. Belfast is a city in Ireland.</li> <li>( † ) 19. Borneo is an island southeast of</li> </ul>	which makes the best answer
Indo-China.	in the parenthesis before the
(+) 20. Death Valley is in California.	(3) The largest city in Ame
21. The Missouri River touches Minne-	
sota.	4. Chicago.
(-) 22. Madrid is a city in southern France.	
(+) 23. Georgia is the greatest cotton pro-	York" is "3." The figure 3 h
ducing state in America.  (***) 24. Melbourne is a city in New Zealand.	
( 25. The capital of New Hampshire is	
Montpelier.	er. 2. Rhine River

(26. Georgia has the largest area of any state east of the Mississippi.

Directions:

easiest parts first.

back and work on the others. You will have ex-

Answer

the

Go

( +1) 52. Indiana is a leading state in the i	JI 0-
duction of iron ore.	ud Th
( +) 33. The St. Lawrence river flows not	rui-
east. $(+)$ 34. Snow never falls in the West Ind	÷00
( ) 34. Show hever tank in the west ind	.168. Tom
35. The Island of Jamaica is in the C	jar-
ibbean Sea. at a polytical	
( 7) 36. The Rio Grande River is a natu	ıraı
boundary between Arizona	and
era puite Mexico. Abail for interior	
(+) 37. The Mississippi River is naviga	iple
as far north as St. Paul.	
( —) 38. New York is the greatest cotton	ex-
porting point in the United State	s.
(+) 39. The Amazon River empties into	the
Atlantic Ocean.	
(-) 40. The Orinoco River is the large	gest
river in South America.	1
(+) 41. Argentina is similar to Kansas	in
climate. op blan bloger veld 1997 og	1.50
( + ) 42. Asia is called the "cradle of civil	iza-
and the control of th	
( -) 43. The White Mountains are the la	
est range of mountains east of	the
Mississippi.	
(+) 44. Pennsylvania is the second state	e in
the United States in population.	1000
PART II.	
DIRECTIONS: Place the number of the	art
which makes the best answer to the staten	ent
in the parenthesis before the statement.	\ .
(3) The largest city in America is: 1. Deta	roit.
2. Washington. 3. New You	ork.
4. Chicago.	
In this sample "New York" is the correct	an-
swer. The number in front of the word "I	Vew
York" is "3." The figure 3 has been place	d in
the parenthesis.	
(3) 45. Vienna is located on the: 1. Po	Riv.
er. 2. Rhine River. 3. Danube	Riv-
er. 4. Mediterranean Sea.	
(2) 46. A country that borders on the M	-bal
, 10. 11 country mas sorders on the h	LGu-

(+) 27. Ohio ranks second in wealth among the states of the United States.

( -31. Birmingham, Alabama, is one of the

(+1) 32. Indiana is a leading state in the pro-

leading cities in the production of

(+) 28. The capital of Oregon is Salem. (+) 29. Cape Town is a city in Africa. (+) 30. Milwaukee is the capital of Wiscon-

47. Madagascar belongs to: 1. England. 4. Asia.
2. France. 3. Germany. 4. Holland. (196). 62. The most important export of North America is: 1. petroleum.

warmer than the northern part of control of the contro protected from the winds. 2. it is nearer the equator. 3. it has more coast line. 4. It is warmed by winds (3) 49. Very little coal is needed for manufacturing in Switzerland because: 1. there are few factories. 2. all manufactured articles are shipped in. 1.3. the Swiss have harnessed the waterfalls and turned their power makinto electricity. 4.1 the Swiss need very few manufactured articles.

( / 50. The rivers of Siberia are of limited and to an commercial/value because: .11. they? are always frozen over. 2. they are too shallow. 3. there are too many -020 serapids. 4. they flow north toward a land of snow and ice. (-3) 51. Little is known about the Himalaya .asibai deshuttingwith: snow.a 2.opeople have -120 sale never tried to explore them. 3. travel is almost impossible 264: there is a language a scarcity of food.) of a off! .08. (4) 52. South America is a sparsely settled continent because of: 1. 1. hostile nasides van tives: 2. its surface and climate. 3. few navigable rivers. 4. the jun--to in the gles.com (3) 53. The United States gained control of

the Philippine Islands: 1. by purchase. 2. by annexation. 3. as a result of the Spanish American War. 4. by a treaty made with the native Queen.

( ) 54. The capital of Poland is: 1. Warsaw. 2. Moscow. 3. Lodz. 4. Reval.

( ) 55. An island city with canals for streets is: 1. Florence. 2. Corinth.

(4) 56. The capital of Egyptesis: 1. Alexbless handriands 2. Tunis. 3. Algiers. 4. Cairo.

(4) 67. The capital of Brazil is: 1. Santos. 2. Sao Paulo. 3. Bahia. 4. Rio de garage Janeiro.

(2) 58. The factories in the British Isles have grown chiefly because of: 1. energetic people. 2. the presence of coal and iron ore. 3. cool climate. 4. small countries.

(2) 59. The second country in Europe in manufacturing is: 1. Norway. 2. France. 3. Holland. 4. Germany.

( 3) 60. The Pyramids are found in: 1. Europe. 2. Australia. 3. Africa. 4. North America.

(4) 61. The continent which has the great-

iterranean Sea is: 1. Rumania. est area in square miles is: 1. South 2. France. 3. Austria. 4. Bulgaria. Africa. 2. Africa. 3. Australia.

America is: 1. petroleum. 2. cot-

North America because: 1: it is (2) 63. The cork-oak trees are found in abundance in: 1. Switzerland. 2. Portugal. 3. North America. 4. Russia.

from the Gulf Stream. 64. Spitzbergen belongs to: 1. Norway. 2. Sweden. 3. Holland. 4. Denmark.

(3) 65. The Sahara Desert is in: 1. Asia. 2. Europe. 3. Africa. 4. Australia.

( ) 66. A steppe is: 1. a flat plain with scanty grass. 2. an elevated plain. 3. a great region of hot grassland. 4. a marshy plain.

4. a marsny plain.

67. The chief export of Japan is:

1. bamboo. 2. rice. 3. silk. 4. tea.

(3) 68. The Yangtze Rivers is in: 1. India.

2. Japan. 3. China. 4. Indo-China.
) 69. The Himalaya Mountains are in:
1. Australia. 2. Africa. 3. Asia. 4. Europe. 1 6 2 3

(2) 70. The chief export of India is: 1. rice. 2. cotton. 3. cloth. 4. sugar. 5. silk.

(4) 71. The chief export of Java is: 1. to-bacco. 2. tea. 3. rubber. 4. sugar. bacco. 2. tea.: 3. rubber. 4. sugar.

(/) 72. The capital of Argentina is: 1. Buenos Aires. 2. Rio de Janeiro. 3. Santos. 4. Colombia.

73. The highest mountain peak in Europe is: 1. Mt. McKinley. 2. Mt. Everest. 3. Mt. Blanc. 4. Mt. Aconcagua.

(3) 74. The Kimberly diamond mines are in: 1. Europe. 2. Asia. 3. Africa. 4. South America.

(4) 75. The Johannesburg gold mines are in: 1. Australia. 2. North America. 3. Asia. 4. Africa.

(3) 76. The greatest coal exporter in the world is: 1. France. 2. United States. 3. England. 4. Germany.

(4) 77. The Scandinavians live in: 1. France. 2. Germany. 3. Holland. 4. Norway and Sweden.

( / ) 78. 1. The Kiel Canal. 2. The Suez Canal. 3. The Panama Canal. connects the Baltic Sea with the North Sea.

( \( \) 79. Locations of cities are determined by: 1. race. 2. nationality. MARKET A 3. winds. 4. a break in the transportation.

( 4) 80. The highest mountain peak in North America is: 1. Mt. Logan. 2. Mt. Rainier. 3. Mt. Shasta. 4. Mt. Mc-Kinley.

Titicaca is located in: (3) 81. Lake 1. France. 2. India. 3. Chile. 4. Spain.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 20 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# AMERICAN HISTORY

By W. H. Gray, K. S. T. C., Emporia, Kansas.

.. Date ..

Kansas teachers of history.

TOTAL NUMBER POINTS

With valuable assistance from
Name Rey re Douison.
School LOMIOR HIGHSTHED
Teacher Olimber much by
PART I.
DIRECTIONS: Read the following sentences carefully. If a statement is true, place a plus (+) in the parethesis in front of the statement, as in example A below. If the statement is false, make a minus (—) in the parenthesis in front of it as in example B. Make the + and the — small and clear.  Examples: (+) A. Apples are good to eat. (—) B. Potatoes grow on trees.
<ul> <li>(+) 1. Our city population has increased faster than our rural population since 1860.</li> <li>2. As a general policy the Democratic Party has always stood for low tar-</li> </ul>
riff.  3. The Non-Intercourse Act permitted trade with all countries except England and France.  4. The Sixteenth Amendment gave the negroes the right to vote.  5. The Alien law made it easier for foreigners to come to America.  6. It is generally accepted today that a state has the right to refuse to obey an act of the United States Congress if the state considers the act harmful to its welfare.
( ) 7. Great Britain enforced her Trade Laws more severely in the colonies after the close of the French and Indian War. ( ) 8. President Harding was opposed to leasing government-owned oil lands to private business concerns for the purpose of extracting the oil. ( ) 9. Maryland was the last state to rat- ify the Articles of Confederation. ( ) 10. The President appoints judges to the United States Supreme Court. ( ) 11. The colonies exported large quan- tities of manufactured goods during
colonial times.

\_ ) 12. The Puritans of Massachusetts Bay

13. The Soldiers' Bonus was allowed un-

uors.

Coolidge.

prohibited the use of alcoholic liq-

der the administration of Calvin

그리고 생물을 보는 하는 사용을 잃었다면 하는 것이 하는 것이 하는 것 같아.
( ) 14. The panic of 1837 was caused by
the total failure of wheat, corn, and
potatoes.
( \( \psi \)) 45. The "carpet bagger" was a southern
notification who want north to goin
politician who went north to gain
political privileges.
( + ) 16. Roosevelt as president was in favor
of the United States anonding money
of the United States spending money
to reclaim desert lands by irrigation.  ( ) 17. Congress has the constitutional
(-1) 17. Congress has the constitutional
power to lay a tax on any articles
power to lay a tax on any articles
exported from any state.
( ) 18. The "Liberator" was an abolitionist
paper published by William Lloyd
Garrison.
( 19. The Ku Klux Klan was organized
for the nurnose of bringing the
for the purpose of bringing the Southern States back into the Un-
ion.
() 20. The American Federation of Labor
organized laborers of separate
trades into local Unions.
(1) 21. Woman Suffrage was granted by
the nineteenth amendment to the
the inneceent amendment to the
constitution. ( 22 Woman Suffrage legislation confer-
( 22 Woman Suffrage legislation confer-
red citizenship on women.
/ Mon Tile Alabama Claiman and alaiman
(-+223. Th Alabama Claims were claims
presented to Congress by the State
presented to Congress by the State of Alabama for damages done to
presented to Congress by the State of Alabama for damages done to property in the Civil War.
presented to Congress by the State of Alabama for damages done to property in the Civil War.  (4) 24. The Missouri Compromise provided
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presented to Congress by the State of Alabama for damages done to property in the Civil War.  (4) 24. The Missouri Compromise provided that Missouri should enter the union as a slave state but all territory obtained from Louisiana west of Missouri and north of 36 degrees 30 minutes should be free.

# PART II.

trade agreement with France.

DIRECTIONS: Place the number of the correct word in the parenthesis before the statement. Look carefully at this sample.

(3) The first president of the United States 1. Harding. 2. Hamilton. 3. Washington. 4. Lincoln.

In this sample, "Washington" is the correct answer. The number in front of the word

"Washington" is 3. The figure 3 has been some metion. "Carpet baggers." Z. 14th Am Decision. 2. 14th Amendment. 4. Dred Scott placed in the parenthesis. Additional For Lonia Con (4) 26. America was discovered by: 1. Cortical Which one of the following was a tez. 2. Ponce de Leon. 3. La Salle. (3) 40. Which one of the following was a delegate to the First Continental Congress?

1. Thomas Jefferson. by W. H. Only, 4. Columbus. ( ) 27. The Constitution of the United States was ratified in: (1) 1788. 2. John Hancock. 3. Benjamin Franklin. 4. Patrick Henry. (2) 1787. (3) 1776. (4) 1789. (-4) 41. The Kansas-Nebraska Bill was (2) 28. The Mississippi River was explored passed in: (1) 1861. (2) 1854. by: 1. Samuel de Champlain. (3) 1864. (4) 1852. 2. Robert La Salle. 3. Francisco Coronado. 4. Ferdinand Magellan. (4) 42. The year 1812 is noted for: 1. compromise. 2. victory on Lake Erie. (2) 29. George Washington was connected with: 1. Purchase of Louisiana. 2. Valley Forge. 3. X. Y. Z. Affair. 3. Hartford Convention. 4. war with Canada. 🔠 ann area , 4. Gettysburg. (2) 43. The X. Y. Z. Affair pertained to: 1. a secret organization formed in ( ) 30. The New England colonies about 1765 derived most of their wealth the North to free slaves. 2. an attempt of French representatives to from: 1. trading and fishing. extort a bribe from men sent to rep-2. cotton manufactures. 3. bankcontain and Anata of the four milling. 5. dairy prosent us in France. 3. a secret aggreement between France and Spain ducts. (24) 31. The colonists resisted the Stamp Act because: 1. the stamps were too to re-capture the territory north of the St. Lawrence River. (2) 44. costly. 2. France urged them to resist. 3. they wished to separate from Great Britain. 4. they felt When America is spoken of as "A Melting Pot," it pertains to: 1. big dainhillioda noithiusen manufacturing. 2. Americanizing they were being taxed without their of foreigners. 0/3. the many hot side to an all springs a found a in a this is country. consent. 5. they wished to take rehezimpro venge for the Boston Massacre. 4. Southern states which become (4) 32. Which event happened the longest very hot in summer. time ago? 1. building of Panama ( ) ) 45. One of the chief reasons why the Canal. 2. building of Roosevelt Puritans came to America was: 1. to mode.I le Dam. 3. building of Baltimore and seek religious freedom. 2. to con-6000/1966 Ohio Railway. 4. building of Erie vert the Indians. 3. to get posses-Canal. sion of the land before the French What is annexation? 1. annihilasettled it. tion of property. 2. loss of territory. 3. addition of land. 4. an inaugura-To arbitrate means: 1. to rule ) 46. harshly. 2. to refuse to sell. 3. to offer for sale. 4. to boycott. 5. to tion. (5) 34: An armistice is: 1. a treaty. 2. the refer to disinterested parties for setsurrender of an army. 3. a temportlement. ary cessation of warfare. 4. an or-(4) 47. Which of the following events came der from a court. first: 1. annexation of Texas.

2. Mexican War. 3. administration ) 36. One part of Hamilton's financial scheme was to establish: 1. a U. S. of Zachary Taylor. 4. establishment of the Treasury System. treasury system as we have it to-day. 2. a U. S. Bank with the gov-( ) 48. As a general policy the Democratic ernment as a stockholder. 3. a num-Party has always: 1. stood for a ber of State Banks for the accommohigh protective tariff. 2. stood for dation of the citizens of the various a fariff for revenue only. 3. been states. 4) 37. Daniel Webster was associated with: 1. Dred Scott Decision. Against tariff of any kind. Cornwallis surrendered at: 1. Camden. 2. Charleston. 3. Yorktown. fight against nullification. 3. Clayton-Bulwer treaty. 4. Guilford Court House. -1900 self to souri Compromise. : 315 TUBBIG (5) 50. A provision of the Compromise of -(Z) 38. The Civil Service Reform was 1850 was: 1. Missouri should be passed during the administration admitted as a slave state. 2. all Theoterritory taken from Mexico in the and the dore Roosevelt. 3. Andrew Jack-Mexican War should be free. 3. Calson. 4. William Taft. and be admitted as a \*(0\10) 39. With which was Abraham Lincoln erivihia in slave state. 4. a more stringent fugbuild she associated? 1. Emancipation Proclaitive slave law should be passed.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 20 minutes.

colonial times.

Coolidge.

) 12. The Puritans of Massachusetts Bay

13. The Soldiers' Bonus was allowed un-

prohibited the use of alcoholic liq-

der the administration of Calvin

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# AMERICAN HISTORY

By W. H. Gray,

With valuable assistance from	
Name / unsan Baccus.	Town Linealn
School January (fight delod	Age 4 Grade F
- The Things	2/2 / Blank 11 /
Teacher weld Murphy	State Lason Date Dr. 4
DADTI	(-) 14 The manie of 1927 was coursed by
PART I.	(-) 14. The panic of 1837 was caused by the total failure of wheat, corn, and
DIRECTIONS: Read the following sentences	potatoes.
carefully. If a statement is true, place a plus (+) in the parethesis in front of the statement,	(-) 15. The "carpet bagger" was a southern
as in example A below. If the statement is	politician who went north to gain
false, make a minus (—) in the parenthesis in	political privileges.
front of it as in example B. Make the + and	(+) 16. Roosevelt as president was in favor
the — small and clear.	of the United States spending money
Examples: (+) A. Apples are good to eat.	to reclaim desert lands by irrigation.  () 17. Congress has the constitutional
(—) B. Potatoes grow on trees.	power to lay a tax on any articles
(+) 1. Our city population has increased	exported from any state.
faster than our rural population	(+) 18. The "Liberator" was an abolitionist
since 1860.	paper published by William Lloyd
(+) 2. As a general policy the Democratic	Garrison.
Party has always stood for low tar-	19. The Ku Klux Klan was organized
riff.	for the purpose of bringing the Southern States back into the Un-
(+) 3. The Non-Intercourse Act permitted	ion.
trade with all countries except England and France.	( ) 20. The American Federation of Labor
4. The Sixteenth Amendment gave the	organized laborers of separate
negroes the right to vote.	trades into local Unions.
(-) 5. The Alien law made it easier for	(+) 21. Woman Suffrage was granted by
foreigners to come to America.	the nineteenth amendment to the
(-) 6. It is generally accepted today that a	constitution. 22. Woman Suffrage legislation confer-
state has the right to refuse to obey	red citizenship on women.
an act of the United States Congress if the state considers the act harm-	( ) 23. The Alabama Claims were claims
ful to its welfare.	presented to Congress by the State
(+) 7. Great Britain enforced her Trade	of Alabama for damages done to
Laws more severely in the colonies	property in the Civil War.
after the close of the French and	1 (4) 24. The Missouri Compromise provided
Indian War.	that Missouri should enter the union as a slave state but all territory
( 8. President Harding was opposed to	obtained from Louisiana west of
leasing government-owned oil lands	Missouri and north of 36 degrees
to private business concerns for the purpose of extracting the oil.	30 minutes should be free.
(+) 9. Maryland was the last state to rat-	25. The Hartford Convention met in
ify the Articles of Confederation.	1814 to provide a more effective
(+) 10. The President appoints judges to	trade agreement with France.
the United States Supreme Court.	PART II.
( ) 11. The colonies exported large quan-	
tities of manufactured goods during	DIRECTIONS: Place the number of the cor-

**DIRECTIONS:** Place the number of the correct word in the parenthesis before the statement. Look carefully at this sample.

(3) The first president of the United States 1. Harding. Hamilton. 3. Washington. 4. Lincoln.

In this sample, "Washington" is the correct answer. The number in front of the word

"Washington" is 3. The figure 3 has been placed in the parenthesis. (4) 26. America was discovered by: 1. Cortez. 2. Ponce de Leon. 3. La Salle. 4. Columbus. 27. The Constitution of the United States was ratified in: (1) 1788 (2) 1787. (3) 1776. (4) 1789. <sub>1</sub> (2) 28. The Mississippi River was explored by: 1. Samuel de Champlain.

2. Robert La Salle. 3. Francisco Coronado. 4. Ferdinand Magellan.

(2) 29. George Washington was connected with: 1. Purchase of Louisiana. ad house 2. Valley Forge. 3. X. Y. Z. Affair. 4. Gettysburg. Line on

( /) 30. The New England colonies about 1765 derived most of their wealth miss of from: sw 1.5 trading and fishing. 2. cotton manufactures. 3. bank-TOVE A RESIDENCE 4. flour milling. 5. dairy pro-BOOK OF RE ducts. Same besimble

(4) 31. The colonists resisted the Stamp Act because: 1. the stamps were too costly. 2. France urged them to resist. 3. they wished to separate from Great Britain. 4. they felt they were being taxed without their consent. 5. they wished to take revenge for the Boston Massacre.

32. Which event happened the longest time ago? 1. building of Panama Canal. 2. building of Roosevelt Dam. 3. building of Baltimore and Ohio Railway. 4. building of Erie Canal.

3) 33. What is annexation? 1. annihilation of property. 2. loss of territory. 3. addition of land. 4. an inauguration.

34. An armistice is: 1. a treaty. 2. the surrender of an army. 3. a temporary cessation of warfare. 4. an order from a court.

36. One part of Hamilton's financial scheme was to establish: 1. a U.S. treasury system as we have it today. 2. a U. S. Bank with the government as a stockholder. 3. a number of State Banks for the accommodation of the citizens of the various states.

(2) 37. Daniel Webster was associated with: 1. Dred Scott Decision. fight against nullification. 3. Clayton-Bulwer treaty. 4. Missouri Compromise.

38. The Civil Service Reform was passed during the administration of: 1. Grover Cleveland. 2. Theodore Roosevelt. 3. Andrew Jackson. 4. William Taft.

) 39. With which was Abraham Lincoln associated? 1. Emancipation Procla-

2. "Carpet baggers." mation. 3. 14th Amendment. 4. Dred Scott Decision.

40. Which one of the following was a delegate to the First Continental Congress?

1. Thomas Jefferson. 2. John Hancock. 3. Benjamin Franklin. 4. Patrick Henry.

Bill was B) 41. The Kansas-Nebraska passed in: (1) 1861. (2) 1854. (3) 1864. (4) 1852.

(2) 42. The year 1812 is noted for: 1. compromise. 2. victory on Lake Erie. 3. Hartford Convention. 4. war with Canada.

(2-) 43. The X. Y. Z. Affair pertained to: 1. a secret organization formed in the North to free slaves. 2. an attempt of French representatives to extort a bribe from men sent to repsent us in France. 3. a secret aggreement between France and Spain to re-capture the territory north of the St. Lawrence River.

(2) 44. When America is spoken of as "A Melting Pot," it pertains to: 1. big manufacturing. 2. Americanizing of foreigners. 3. the many hot springs found in this country. 4. Southern states which become very hot in summer.

( / ) 45. One of the chief reasons why the Puritans came to America was: 1. to seek religious freedom. 2. to convert the Indians. 3. to get possession of the land before the French settled it.

(5) 46. To arbitrate means: 1. to rule harshly. 2. to refuse to sell. 3. to offer for sale. 4. to boycott. 5. to refer to disinterested parties for settlement.

47. Which of the following events came first: 1. annexation of Texas. 2. Mexican War. 3. administration of Zachary Taylor. 4. establishment of the Treasury System.

(2) 48. As a general policy the Democratic Party has always: 1. stood for a 4 900 high protective tariff. 2. stood for a tariff for revenue only. 3. been against tariff of any kind.

> 49. Cornwallis surrendered at: 1. Camden. 2. Charleston. 3. Yorktown. 4. Guilford Court House.

50. A provision of the Compromise of 1850 was: 1. Missouri should be admitted as a slave state. 2. all territory taken from Mexico in the Mexican War should be free. 3. California should be admitted as a slave state. 4. a more stringent fugitive slave law should be passed.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

A. 18

small.

4. Is that (1. her, 2. she)?

6. He has already (1. go,

(1. me, 2. I).

7. I (1. written,

3. gone).

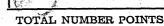
5. The apple fell between her and

2. have wrote,

### Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# LANGUAGE

By J. B. Stroud, K. S. T. C., Emporia, Kansas.



With valuable assistance from Kansas teachers of English.

Name Live Of Orion	Town Lineal
School	Age // Grade
Teacher Miss Smiles of	State Kanzan Date Aprily
DIRECTIONS: This test consists of a number of sentences like the following examples:	3. writed, 4. wrote) two letters to-
Example A. (3) Apples (1. grows, 2. grews, 3. grow) on trees.	(3) 8. It was (1. me, 2. myself, 3. I) who called you.
Of the three words in the parenthesis, the	9. The father called her and (1. he, 2. him, 3. himself). (1) 10. She was (1. borned, 2. born) in
one which makes the sentence correct is to be chosen. In this example the word "grow" makes a correct sentence: "Apples grow on trees." To	London.  (1) 11. Children (1. like, 2. love, 3. likes)
show that this word makes the sentence correct, its number, "3;" has been placed in the	to go on picnics.  ( ) 12. My apple is larger than (1. yours,
parenthesis before the sentence.  Example B. ( ) (1. These, 2. Them, 3. That,	2. yourn).  (2) 13. The girl divided her candy (1. between, 2. among) her four friends.
4. Them there) pictures are pretty.	(//) 14. Helen (1. will, 2. shall) be ten years
In example "B" the one word, of those in the parenthesis, which makes the sentence correct is "These." This makes the sentence "These	(2) 15. Charity (1. is when one gives, 2. means giving) to the poor.
pictures are pretty." To show that "These" is the correct word in this sentence, place the fig-	( ) 16. The murderer (1. admitted, 2. declared, 3. contended) he was guilty.
ure "1" in the parenthesis before it.  Example C. ( ) The boys (1. is, 2. are,	(2) 17. I (1. taken, 2. took, 3. tooked, 4. taked) the eggs to town.
3. was, 4. ain't) playing ball.	(2) 18. He gave it to John and (1. I,
In example "C" which word makes a correct sentence? Now write the number before it in the parenthesis.	3. more) useful, gold or silver?
In each sentence choose the one word, of	(*2) 20. Neither she nor he (1. is, 2. are, 3. have been) rich.
those in the parenthesis, which makes the sentence correct. Then write its number in the parenthesis before the sentence. Write noth-	marileo de <b>3. some).</b> El
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DO NOT BEGIN UNTIL THE SIGNAL TO START IS GIVEN.	(2) 24. Both of them (1. is, 2. are, 3. am) dear to me.
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the movie.  (2) 2. The dogs (1. is, 2. are, 3. am)	( 1) 26. Mother, (1. shall, 2. will) I put
barking. (3) 3. His wages (1. was 2. is, 3. are)	( ) 27. If I (1. were, 2. was) as large as

(2) 31. I (1. remember of, 2. remember) being there.

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?) 28. The hook is (1. hisn, 2. himself's,

( / ) 29. He is (1. John's, 2. Johns 3. Johns, 4. Johnses) brother.
( / ) 30. He sat (1. beside, 2. besides) me.

3. his).

(1) 32. Peaches are (1. plentiful, 2. plen- (4) 56. The boy (1. sat, 2. set, 3. sit, 4. seated) himself under the tree. ty) this season. 2) 33. I have many books (1. beside, 2. be- (2) 57. We (1. have got, 2. have) measles. (3) 34. The car hit the man (1. square, (3) 58. We shall (1. try to, 2. try and) win the game. (1) 35. The whistle blew (1. loudly, 2. loud, 2) 59. Our house is (1. het, 2. heat;
3. most loud).

(1) 36. Heat the hell (2. loudly, 2. loud, 2) 60. Denote the hell (2. loudly, 2. loudly, 2. loudly, 3. heated) with steam. (2) 60. Dorothy sings (1. good, 2. well, ( ) 36. Has the bell (1. rang, 2. rung, 3. fine). 3. ringed)? 61. The soldiers have (1. come, 2. came, 1) 37. She said she felt (1. ill, 2. illy). 3. went). (3) 62. How many dishes have you (1. breaked, 2. broke, 3. broken, 4. braked)? (2) 38. It was (1. me, 2. I, 3. myself) who called him. ) 39. Mother says that I (1. may, 2. can, 63. The old woman (1. can, 2. can't, 3. cannot, 4. couldn't) hardly hear. 3. kin) go. (2) 40. My pencil is longer (1. an, 2. than, (2) 64. Will you pick (1. them, 2. those, 3. these) flowers beyond the brook 3. then) yours. (2) 41. I (1. kindly, 2. rather, 3. sorter) for me?

(3) 65. The boys have (1. ate, 2. eat, 3. eaten) their supper. expected it. 1) 42. If it (1. were, 2. was) to rain he would go. 43. There (1. be, 2. am, 3. are, 4. is) ( 66. (1. Whom, 2. Who) did you see seven girls here. there? ( ) 44. He died (1. with, 2. of) pneumonia. (31) 45: He got (1. off, 2. off of, 3. from off ( ) 68. I am not so tall as (1. she, 2. her, of) the platform. 3. herself). Da off and be disding and (2) 46. Do you know who (1. done, 2. did, 3. had did) it? ( ) 69. The child has (1. sit, 2. sat, 3. set, 4. setted) down. (47. Everyone (1. were, 2. was, 3. have (3) 70. The teacher (1. teached, 2. learned, 3. taught) her pupils. been) at school today. 3. taught) her pupils. 48. Every boy knew (1. his, 2. their) ( ), ) 71. I like (1. this, 2. these, 3. those) lessons. (1) 1 49. I (1. saw, 2. seen, 3. seed) him do it. kind of apple. ( ) 72. The man said, "I will (1. lay, 2. lie) down." A page that the rate and at the age ( 50. Neither of the two (1. write, 2. written, 3. writes, 4. have writ-( / ) 73. The man (1. sat, 2. set, 3. sit) on ten) well. a bench. ( 3) 51. The boys (1. is, 2. was, 3. were) ( / ) 74. The balloon (1. burst, 2. bursted, 3. busted). Political of strategy of playing in the garden. (3) 75. He (1. sit, 2. sat, 3. set) the buck-(2) 52. Jack, (1. wasn't, 2. weren't, 3. was, 4. aren't) you in school yesterday?
( ( ) 53. James's hat (1. blew, 2. blown, et on the ground. (2) 76. (1. Can, 2. May, 3. Kin) I write 3. blowed) off. mer and a with your pencil? (3) 54. George (1. beginned, 2. begun, (2) 77. She (1. don't, 2. doesn't, 3. do not) 3. began) reading. star know her lessons. (2) 55. The boy has (1. ran, 2. run, (7) 78. The hen is (1. setting, 2. sitting) 3. runned) a mile. or sixteen eggs. Mann tox or farm in order file in the army in arms CART IS GIVEY. Plan i clare buck i date. 2. Kawa.

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# EVERY PUPIL SCHOLARSHIP CONTEST

Directions: Answer easiest parts first.

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Go

April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

back and work on the others. You will have except 15 minutes By J. B. S.	AGE	
K. S. T. C., Emp	oria, Kansas.	TOTAL NUMBER POINTS
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Teacher	State	William Date Langer Daf Glad 7
<b>DIRECTIONS:</b> This test consists of a number of sentences like the following examples:		3. writed, 4. wrote) two letters to-
Example A. (3) Apples (1. grows, 2. grews, 3. grow) on trees.	·	It was (1. me, 2. myself, 3. I) who called you.
그 사람하는 근목에는 그렇지만 하나는 전상을 제어하다는 그리를 받는 경험을 하는 생각이 있다는 것이라는	(	The father called her and (1. he, 2. him, 3. himself).
Of the three words in the parenthesis, the one which makes the sentence correct is to be	(**) 10.	She was (1. borned, 2. born) in
chosen. In this example the word "grow" makes		London.
a correct sentence: "Apples grow on trees." To show that this word makes the sentence cor-		Children (1. like, 2. love, 3. likes) to go on picnics.
rect, its number, "3," has been placed in the		My apple is larger than (1. yours, 2. yourn).
parenthesis before the sentence.	(12) 13.	The girl divided her candy (1. be-
Example B. ( ) (1. These, 2. Them, 3. That, 4. Them there) pictures are pretty.		tween, 2. among) her four friends.
- 출수시대통화, 대도 맞이 발표되었다. 대한 - 현 시간대의 전 시간 (1917 - 1917 - 1917 - 1917 -	(2) 14.	Helen (1. will, 2. shall) be ten years years old tomorrow.
In example "B" the one word, of those in the parenthesis, which makes the sentence correct	(-) 15.	Charity (1. is when one gives,
is "These." This makes the sentence "These		2. means giving) to the poor. The murderer (1. admitted, 2. de-
pictures are pretty." To show that "These" is the correct word in this sentence, place the fig-	,	clared, 3. contended) he was guil-
ure "1" in the parenthesis before it.		ty. of the last to made to the terms.
Example C. ( ) The boys (1. is, 2. are,	$(\mathcal{L})$ 11.	I (1. taken, 2. took, 3. tooked, 4. taked) the eggs to town.
3. was, 4. ain't) playing ball.	<del>( )</del> 18.	He gave it to John and (1. I,
In example "C" which word makes a correct	(B) 19.	2. me). Which is the (1. greatest, 2. most,
sentence? Now write the number before it in the parenthesis.		3. more) useful, gold or silver?
In each sentence choose the one word, of	( ) 20.	Neither she nor he (1. is, 2. are, 3. have been) rich.
those in the parenthesis, which makes the sen-	( 21.	I did not see (1. none, 2. any,
tence correct. Then write its number in the	· ,	3. some).  His fact hunts (1 had 2 hadles)
parenthesis before the sentence. Write nothing but the number.		His foot hurts (1. bad, 2. badly). Both of (1. us, 2. we) boys are go-
DO NOT BEGIN UNTIL THE SIGNAL TO	( ) 20.	ing.
START IS GIVEN.	(2) 24.	Both of them (1. is, 2. are, 3. am)
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( $\mathcal{L}$ ) 1. (1. Us, 2. We) girls are going to		3. flewed.)
the movie.  (a) 2. The dogs (1. is, 2. are, 3. am)	(2) 26.	Mother, (1. shall, 2. will) I put more coal in the stove?
barking.	( ) ) 27.	If I (1. were, 2. was) as large as
$( \underline{\beta} )$ 3. His wages (1. was 2. is, 3. are) small.	(2) 28	you, I could do it too.
4. Is that (1. her, 2. she)?	( ) / 48.	The hook is (1. hisn, 2. himself's, 3. his).
( 4) 5. The apple fell between her and	( ) 29.	He is (1. John's, 2. Johns',
(1. me, 2. 1).	( / ) 30.	3. Johns, 4. Johnses) brother. He sat (1. beside, 2. besides) me.
(3) 6. He has already (1. go, 2. went, 3. gone).	, <u>,                                   </u>	I (1. remember of, 2. remember)
7. I (1. written, 2. have wrote,		being there.

56. The boy (1. sat, 2. set, 3. set, 4. seated) himself under the tree. 32. Peaches are (1. plentiful, 2. plenty) this season. ( ) 57. We (1. have got, 2. have) measles. ( 2) 33. I have many books (1. beside, 2. besides) these. ( 1) 58. We shall (1. try to, 2. try and) win (1. square, the game. 2. most square, 3. squarely). (1) 59. Our house is (1. het, 2. heat. 35. The whistle blew (1. loudly, 2. loud, 3. heated) with steam. 3. most loud). (2) 60. Dorothy sings (1. good, 2. well. (1. rang, 2. rung, 3. fine). 3. ringed)? (1. ill, 2. illy). 3. went). ( g) 38. It was (1. me, 2. I, 3. myself) who (1. breaked, 2. broke, 3. broken, called him. ( ) 39. Mother says that I (1. may, 2. can, 4. braked)? 63. The old woman (1. can, 2. can't, 3. cannot, 4. couldn't) hardly bear 3. kin) go. (-6) 40. My pencil is longer (1. an, 2. than, 3. cannot, 4. couldn't) hardly hear. 3. then) yours. (1) 64. Will you pick (1. them, 2. those, 3. these) flowers beyond the brook (1) 41. I (1. kindly, 2. rather, 3. sorter) expected it. for me? 42. If it (1. were, 2. was) to rain he (3) 65. The boys have (1. ate, would go. 3. eaten) their supper. (19) 43. There (1. be, 2. am, 3. are, 4. is) 66. (1. Whom, 2. Who) did you see seven girls here. there?  $( \land )$  44. He died (1. with, 2. of) pneumonia. ( 67) 67. (1. Whom, 2. Who) was elected? 45. He got (1. off, 2. off of, 3. from off ( 68. I am not so tall as (1. she, 2. her, of) the platform. 3. herself). (1) 46. Do you know who (1. done, 2. did, 69. The child has (1. sit, 2. sat, 3. set, (2)3. had did) it? 4. setted) down. ( 2) 47. Everyone (1. were, 2. was, 3. have 70. The teacher (1. teached, 2. learned, 3. taught) her pupils. been) at school today. 71. I like (1. this, 2. these, 3. those) lessons. kind of apple. ( \ ) 49. I (1. saw, 2. seen, 3. seed) him do 7. 72. The man said, "I will (1. lay, 2. lie) ship and oit. spelands ( ) 50. Neither of the two (1. write, 2. written, 3. writes 4 have write down." 73. The man (1. sat, 2. set, 3. sit) on ten) well. a bench. 7) 74. The balloon (1. burst, 2. bursted, ( ()) 51. The boys (1. is, 2. was, 3. were) 3. busted). playing in the garden. (27 52. Jack, (1. wasn't, 2. weren't, 3. was, (6.9) 75. He (1. sit, 2. sat, 3. set) the buck-4. aren't) you in school yesterday? et on the ground. 53. James's hat (1. blew, 2. blown, 1) 76. (1. Can, 2. May, 3. Kin) I write 3. blowed) off. with your pencil? 名) 54. George (1. beginned, 2. begun, ( n ) 77. She (1. don't, 2. doesn't, 3. do not)

know her lessons.

on sixteen eggs.

(1) 78. The hen is (1. setting, 2. sitting)

3. began) reading.

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A. Mediles) and

55. The boy has . (1. ran, 2. run,

# EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# **LANGUAGE**

By J. B. Stroud,

K. S. T. C., Emporia, Kansas. With valuable assistance from Kansas teachers of English.

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**DIRECTIONS:** This test consists of a number of sentences like the following examples:

Example A. (3) Apples (1. grows, 2. grews, 3. grow) on trees.

Of the three words in the parenthesis, the one which makes the sentence correct is to be chosen. In this example the word "grow" makes a correct sentence: "Apples grow on trees." To show that this word makes the sentence correct, its number, "3," has been placed in the parenthesis before the sentence.

Example B. ( ) (1. These, 2. Them, 3. That, 4. Them there) pictures are pretty.

In example "B" the one word, of those in the parenthesis, which makes the sentence correct is "These." This makes the sentence "These pictures are pretty." To show that "These" is the correct word in this sentence, place the figure "1" in the parenthesis before it.

Example C. (2) The boys (1. is,3. was, 4. ain't) playing ball.

In example "C" which word makes a correct sentence? Now write the number before it in the parenthesis.

In each sentence choose the one word, of those in the parenthesis, which makes the sentence correct. Then write its number in the parenthesis before the sentence. Write nothing but the number.

DO NOT BEGIN UNTIL THE SIGNAL TO START IS GIVEN.

- 1. (1. Us, 2. We) girls are going to the movie.
- 2. The dogs (1. is, 2. are, barking.
- 3. His wages (1. was 2. is, 3. are) small.
- 4. Is that (1. her, 2. she)?
- 5. The apple fell between her and (1. me, 2. I).
- 6. He has already (1. go, 2. went, 3. gone).
- 7. I (1. written, 2. have wrote, (M)

- 3. writed, 4. wrote) two letters today.
- (3) 8. It was (1. me, 2. myself, 3. I) who called you.
- (2) 9. The father called her and (1. he, 2. him, 3. himself).
- (2) 10. She was (1. borned, 2. born) in London.
- ( /) 11. Children (1. like, 2. love, 3. likes) to go on picnics.
- ( / ) 12. My apple is larger than (1. yours, 2. yourn).
- (2) 13. The girl divided her candy (1. be-
- tween, 2. among) her four friends.

  ( ) 14. Helen (1. will, 2. shall) be ten years years old tomorrow.
- (2) 15. Charity (1. is when one gives, 2. means giving) to the poor.
- (/ ) 16. The murderer (1. admitted, 2. declared, 3. contended) he was guil-
- ( ) 17. I (1. taken, 2. took, 3. tooked, 4. taked) the eggs to town.
- (5) 18. He gave it to John and (1. I, 2. me).
- (3) 19. Which is the (1. greatest, 2. most, 3. more) useful, gold or silver?
- (2) 20. Neither she nor he (1. is, 2. are, 3. have been) rich.
- $(\Omega)$  21. I did not see (1. none, 3. some).
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- ) 25. The airplane has (1. flew, 2. flown, 3. flewed.)
- ) 26. Mother, (1. shall, 2. will) I put more coal in the stove?
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(2) 41. I (1. kindly, 2. rather, 3. sorter) (2) 64. Will you pick (1. them, 2. those, 3. these) flowers beyond the brook expected it. for me? (/) 42. If it (1. were, 2. was) to rain he (2) 65. The boys have (1. ate, 2. eat, would go. 3. eaten) their supper. (49) 43. There (1. be, 2. am, 3. are, 4. is) (/ ) 66. (1. Whom, 2. Who) did you see seven girls here. there? 44. He died (1. with, 2. of) pneumonia. (2) 67. (1. Whom, 2. Who) was elected? ( ) 45. He got (1. off, 2. off of, 3. from off (1) 68. I am not so tall as (1. she, 2. her, of) the platform. 3. herself). He make gray last t ( ) 46. Do you know who (1. done, 2. did, (2) 69. The child has (1. sit, 2. sat, 3. set, 3. had did) it? 4. setted) down. (1. were, 2. was, 3. have (3) 70. The teacher (1. teached, 2. learned, been) at school today. ( ) 48. Every boy knew (1. his, 2. their) 3. taught) her pupils. A Street (/) 71. I like (1. this, 2. these, 3. those) lessons. ( ) 49. I (1. saw, 2. seen, 3. seed) him do kind of apple. din a w it. (A) 72. The man said, "I will (1. lay, 2. lie) ( ). 50. Neither of the two (1. write, 2. written, 3. writes, 4. have writdown." ) 73. The man (1. sat, 2. set, 3. sit) on ten) well. a bench. (3) 51. The boys (1. is, 2. was, 3. were) ) 74. The balloon (1. burst, 2. bursted, playing in the garden. 3. busted). ( 52. Jack, (1. wasn't, 2. weren't, 3. was, ( ?) 75. He (1. sit, 2. sat, 3. set) the buck-4. aren't) you in school yesterday? et on the ground. ) 53. James's hat (1. blew, 2. blown, (2) 76. (1. Can, 2. May, 3. Kin) I write with your pencil? 3. blowed) off. (3) 54. George (1. beginned, 2. begun, ( A) 77. She (1. don't, 2. doesn't, 3. do not) 3. began) reading. know her lessons. (2) 55. The boy has (1. ran, 2. run, 78. The hen is (1. setting, 2. sitting) 3. runned) a mile. on sixteen eggs.

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(2) 57. We (1. have got, 2. have) measles.

(2) 58. We shall (1. try to, 2. try and) win

the game.

ty) this season.

sides) these.

( ) 33. I have many books (1. beside, 2. be-

(3) 34. The car hit the man (1. square,

2. most square, 3. squarely).

#### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

and this cry.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

#### READING

By W. H. Gray, K. S. T. C., Emporia, Kansas.

With valuable assistance from Kansas teachers of reading.



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You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

#### Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 1. Roy. 2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church.
2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is ban "school." Hence a "2" has been placed before that statement.

How did the boy travel? 1. on foot. 2. on horseback. 3. on skates. 4. by automobile. 5. by horse and buggy.

What is the correct answer to question No. 3? Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes.

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- (3) Joe liked to ride with his: 1. cousin.
   dog. 3. father. 4. playmates.
   mother.
- 2. (2) The time of year was: 1. spring.
  2. summer. 3. autumn. 4. winter.
- 3. (/) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

#### II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 4. (3) The three boys were: 1. faithful.
  2. industrious. 3. lazy. 4. fat.
  5. handsome.
- 5. (2.) They lived in the: 1. palace.
  2. country. 3. city. 4. village.
- 6. (3) The king needed a: 1. baker.
  2. gardner. 3. caretaker. 4. hunter.

#### III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. (3) The dragon-flies flew like: 1. robins.
  2. locusts. 3. airplanes. 4. kites.
  5. fairies.
- 8. (2) The time of day was: 1. early morning. 2. near noon. 3. late afternoon. 4. evening. 5. night.
- 9. (4) The big dragon-fly was: 1. blue.
  2. green. 3. ugly. 4. beautiful.
  5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

- 10. (4) Birds should be given water in winter because: 1. they need a bath. 2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.
- 11. (4) The best way to feed the birds is to put the crumbs: 1. on the snow. 2. on the open ground. 3. in a dish on the ground. 4. in a box on a post.
- 12. (2) Cats can catch birds more easily when the birds are: 1. on a post. 2. on the ground. 3. flying. 4. sitting in a tree.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some of them seemed to waste little thought upon the and sheathan the World Wars about and strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns. Carrie Spirit

- 13. (4) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.
- ) She was taught to: 1. play ball. 2. ride horseback. 3. make bead ornaments. 4. jump the rope. 5. wear moccasins.

15. (3) The Indians were wealthy because they had: 1. much money. 2. good crops. 3. many horses. 4. herds of buffalo. 5. slaves.

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- 16. (4) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
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Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." . He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

19. (5) Whom did Boris save? 1. girl. 2. lady. 3. pet. 4. dog. 5. boy.

20. ( 3 ) Boris rescues people by: 1. barking at them. 2. tearing their bathing suits. 3. dragging them to shore. 4. preventing them from entering the water.

The Newfoundland is: 1. small and wiry. 2. afraid of cats. 3. large and 4. very short-haired. strong. 5. long and lanky.

#### VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one with the rotted tomato remained until all the others were sold. Then I removed the spoiled tomato. That basket contained at least a dozen more good tomatoes than any of the others, yez the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

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27. (4) What are the river banks covered with? 1. trees. 2. green grass.
3. drifting logs. 4. cakes of ice. 5. snow.

#### Х.

The sense of time as we know it seems to be spared to animals. They have no fears of what the future may hold; they don't consciously their courtship of Cordelia, now that she was think over the happy days of youth gone by. under her father's displeasure, and had no for-

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to spring when their victim again comes into sight.

28. ( $\mathcal{L}$ ) Which animals have a notion of the very near future? 1. those that eat grass. 2. those that live in the ground. 3. those raised by man. 4. those that kill other animals. 5. those that live in trees.

Most of the lower animals: the future. 2. have memories of the past. 3. have little conception of the future. 4. think continuously of tomorrow.

When the prey disappears animals: spring at once.
 run away.
 get very nervous.
 get ready to spring when the prey reappears. 5. lie down and sleep.

#### XI.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. (2) The imprint of automobile tires is: 1. no help in detecting crime. 2. valuable in detecting crime. 3. a hindrance in detecting crime. 4. an aid to the criminal.

Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax impressions.

The data are: 1. filed away in boxes. 2. published in newspapers. 3. sent to the criminal. 4. compared with marks on record in the sheriff's office.

#### XII.

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in

would not take her to wife upon such a condi- 30r grinding the grain in the holes. tion, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away

The hominy-holes are generally:

1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of different shapes.

The places where the aborigines ground their grain are called: like water.

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In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these springs was known long ago to Indian tribes, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity also, and it is estimated that their total daily flow is easily between three and four million gallons.

- 37. ( ) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build hoats build boats.
- 39. ( ) The water flows from the springs: 1. in huge quantities. 2. slowly. 3. intermittently. 4. in pipes. 5. in thin streams.

## TAXIV.

Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form (1) 46. Mental tests are: 1. rating scales. of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use.

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In gatesies. 2. gatesies.

1. gatesies. 2. gatesies.

2. gatesies.

3. descriptions in words only. 4. watching the individual take the tests.

tune to recommend her. The Duke of Burgundy postles which were evidently used for crushing

- ground their grain are called: 1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
- ish" person's friendship is: 1. last-42. ( ) The grinding places were located ing. 2. worthless. 3. pleasant. in: 1. sand. 2. clay. 3. stone. 4. desirable. 4. trees. 5. buildings.

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding woods. A wild thing generally pauses at an obstacle, at a road, at a pathway, at a turn. Both a deer and a fox will usually pause at a fence, less to get a stance for jumping than just to look about.

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#### XVI.

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores.

- 2. estimates of ability. 3. measuring devices . 4. guesses.

#### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

#### READING

By W. H. Gray,

TOTAL NUMBER POINTS

K. S. T. C., Emporia, Kansas. With valuable assistance from Kansas teachers of reading.

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acher Miss Emilystate 1000 Date april4-19

DIRECTIONS: This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

### Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 1. Roy. 2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church.2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is "school." Hence a "2" has been placed before that statement.

3. (a) How did the boy travel? 1. on foot.
2. on horseback. 3. on skates. 4. by
automobile. 5. by horse and buggy.

What is the correct answer to question No. 3? Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes.

T.

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- 1. (3) Joe liked to ride with his: 1. cousin.
  2. dog. 3. father. 4. playmates.
  5. mother.
- 2. (2) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.
- 3. ( / ) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

#### II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 4. (3) The three boys were: 1. faithful.
  2. industrious. 3. lazy. 4. fat.
  5. handsome.
- 5. (2) They lived in the: 1. palace.
  2. country. 3. city. 4. village.
- 6. (3) The king needed a: 1. baker.
  2. gardner. 3. caretaker. 4. hunter.

#### III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. ( ) The dragon-flies flew like: 1. robins.
  2. locusts. 3. airplanes. 4. kites.
  5. fairies.
- 8. (2) The time of day was: 1. early morning. 2. near noon. 3. late afternoon.
  4. evening. 5. night.
- 9. (4) The big dragon-fly was: 1. blue.
  2. green. 3. ugly. 4. beautiful.
  5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

- 10. (4) Birds should be given water in winter because: 1. they need a bath.
  2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.
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#### V.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

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The Newfoundland is: 1. small and wiry. 2. afraid of cats. 3. large and strong. 4. very short-haired. 5. long and lanky.

#### VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one with the rotted tomato remained until all the others were sold. Then I removed the spoiled tomato. That basket contained at least a dozen more good tomatoes than any of the others, yet the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

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X.

The sense of time as we know it seems to be spared to animals. They have no fears of what the future may hold; they don't consciously think over the happy days of youth gone by.

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#### XII.

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in their courtship of Cordelia, now that she was under her father's displeasure, and had no for-

tune to recommend her. The Duke of Burgundy would not take her to wife upon such a condition, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water.

- 34. ( ) This story teaches that a "waterish" person's friendship is: 1. lasting. 2. worthless. 3. pleasant. 4. desirable.
- 35. ( ) The Duke of Burgundy valued Cordelia for her: 1. fortune. 2. self. 3. beauty. 4. virtues.
- 36. (2) The true lover was revealed because of Cordelia's: 1. beauty.
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#### XIII.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these springs was known long ago to Indian tribes, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity also, and it is estimated that their total daily flow is easily between three and four million gallons.

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### XIV.

Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use. In or near such holes may usually be found the

postles which were evidently used for crushing or grinding the grain in the holes.

- 1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of different shapes.
- The places where the aborigines ground their grain are called: 1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
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- ( ) 47. Test results are compared by means of: 1. numerical devices. 2. teachers' judgments. 3. descriptions in words only. 4. watching the individual take the tests.

#### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

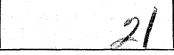
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#### READING

By W. H. Gray, K. S. T. C., Emporia, Kansas.

With valuable assistance from Kansas teachers of reading.



TOTAL NUMBER POINTS

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Teacher Miss Emily Centistate Tansas Date a pully	193.
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**DIRECTIONS:** This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

#### Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church. 2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is "school." Hence a "2" has been placed before that statement.

3. (1) How did the boy travel? 1. on foot. at any 2. on horseback. 3. on skates. 4. by -not east automobile. 5. by horse and buggy.

What is the correct answer to question No. 3? Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes. gebold day it which &

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- 1. (3) Joe liked to ride with his: 1. cousin. 2. dog. 3. father. 4. playmates. 5. mother.
- (1) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.
- The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 4. (2) The three boys were: 1. faithful. 2. industrious. 3. lazy. 5. handsome.
- 5.  $(\searrow)$  They lived in the: 1. palace. 2. country. 3. city. 4. village.
- 6. (3) The king needed a: 1. baker. 2. gardner. 3. caretaker. 4. hunter.

#### III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. ( 3) The dragon-flies flew like: 1. robins. 2. locusts. 3. airplanes. 4. kites. 5. fairies.
- 8. ( ) The time of day was: 1. early morning. 2. near noon. 3. late afternoon. 4. evening. 5. night.
- 9. (4) The big dragon-fly was: 1. blue. 2. green. 3. ugly. 4. beautiful. 5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

10. (4) Birds should be given water in winter because: 1. they need a bath.
2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.

11. () The best way to feed the birds is to put the crumbs: 1. on the snow.
2. on the open ground. 3. in a dish on the ground. 4. in a box on a post.
12. () Cats can catch birds more easily when the birds are: 1. on a post.
2. on the ground. 3. flying. 4. sitting in a tree.

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When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

13. ( ) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.

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### negati kalendekse istologiska kilek**VI.**

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The sense of time as we know it seems to be spared to animals. They have no fears of what the future may hold; they don't consciously think over the happy days of youth gone by.

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to spring when their victim again comes into sight.

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29. ( ) Most of the lower animals: 1. fear the future. 2. have memories of the past. 3. have little conception of the future: 4. think continuously of tomorrow.

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3. get very nervous. 4. get ready to spring when the prey reappears. 5. lie down and sleep.

#### XI.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. ( ) The imprint of automobile tires is: 1. no help in detecting crime.
2. valuable in detecting crime.
3. a hindrance in detecting crime.
4. an aid to the criminal aid to the criminal.

32. ( ) Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax impressions.

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The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in their courtship of Cordelia, now that she was under her father's displeasure, and had no for-

tune to recommend her. The Duke of Burgundy would not take her to wife upon such a condition, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water.

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- 35. ( ) The Duke of Burgundy valued Cordelia for her: 1. fortune. 2. self. 3. beauty. 4. virtues.
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#### XIII.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these springs was known long ago to Indian tribes, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity also, and it is estimated that their total daily flow is easily between three and four million gallons.

- 37. ( ) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build boats.
- 38. ( ) The hot springs are in: 1. California. 2. Nebraska. 3. Colorado. 4. Wyoming. 5. New Mexico.
- 39. ( ) The water flows from the springs: 1. in huge quantities. 2. slowly. 3. intermittently. 4. in pipes. 5. in thin streams.

## xiv.

Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such ( ) 47. Test results are compared by means shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and ers' judgments. 3. descriptions in generally worn smooth and deep by long use. visite words only. 4. watching the indi-In or near such holes may usually be found the and widual take the tests.

pestles which were evidently used for crushing or grinding the grain in the holes.

- 1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of different shapes.
- 41. ( ) The places where the aborigines ground their grain are called:
  1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
- 42. ( ) The grinding places were located in: 1. sand. 2. clay. 3. stone. 4. trees. 5. buildings. to the first section of the first section .

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding woods. A wild thing generally pauses at an obstacle, at a road, at a pathway, at a turn. Both a deer and a fox will usually pause at a fence, less to get a stance for jumping than just to look about.

- .43. ( ) When being pursued a fox acts as if: 1. he had no enemies. 2. he were surrounded by enemies. 4. all his enemies were just behind him. 5. all his enemies were in front of him.
- 44. ( ) When he comes to an obstruction សារិទីទៅ។ -អស់ សា ស he: 1. runs around it. 2. jumps over it quickly. 3.crawls under it. 4. sets garen daa his fore-feet upon it. 5. turns back.
- 45. ( ) A deer and a fox pause at an obstacle to: 1. get a stance for jump-, aene Kalinev ing. 2. to look about. 3. to mislead mosth, sre their enemies. 4. to rest.

#### XVI.

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores.

- (1) 46. Mental tests are: 1. rating scales. 2. estimates of ability. 3. measuring devices. 4. guesses.

#### EVERY PUPIL SCHOLARSHIP CONTEST

April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

#### READING

By W. H. Gray,

K. S. T. C., Emporia, Kansas.

With valuable assistance from Kansas teachers of reading.



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## Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 1. Roy. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church. 2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is "school." Hence a "2" has been placed before that statement.

3. (1) How did the boy travel? 1. on foot. 2. on horseback. 3. on skates. 4. by automobile. 5. by horse and buggy.

What is the correct answer to question No. 3? Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes: 2 year is togic their to

I.

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- 1. (3) Joe liked to ride with his: 1. cousin. 2. dog. 3. father. 4. playmates. 5. mother.
- 2. (2) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.
- 3. () The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

#### IT.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 4. (3) The three boys were: 1. faithful. 2. industrious. 3. lazy. 5. handsome.
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When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

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### da vigit divadi da ad **VI.**

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#### VIII.

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The breaking of the ice on the large northern rivers has some peculiar features. Quite suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in, trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating ice drifted ashore.

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#### XII.

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in their courtship of Cordelia, now that she was under her father's displeasure, and had no for-

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  3. intermittently. 4. in pipes. 5. in thin streams.

## gavag begg it i**xiv.** had begg (1.5) is

Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use. In or near such holes may usually be found the

pestles which were evidently used for crushing or grinding the grain in the holes.

- 1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of different shapes.
- 41. (4) The places where the aborigines ground their grain are called:
  1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
- 42. (3) The grinding places were located in: 1. sand. 2. clay. 3. stone.

## are bill to be statement $\mathbf{X}\mathbf{V}_i$ by the May it follows:

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding woods. A wild thing generally pauses at an obstacle, at a road, at a pathway, at a turn. Both a deer and a fox will usually pause at a fence, less to get a stance for jumping than just to look about.

- 43. (2) When being pursued a fox acts as if: 1. he had no enemies. 2. he were surrounded by enemies. 4. all his enemies were just behind him. 5. all his enemies were in front of him.
- 44. (4) When he comes to an obstruction he: 1. runs around it. 2. jumps over it quickly. 3.crawls under it. 4. sets his fore-feet upon it. 5. turns back.
- his tore-neet upon 1...

  A deer and a fox pause at an obstacle to: 1. get a stance for jumping. 2. to look about. 3. to mislead their enemies. 4. to rest.

#### XVI.

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores.

- 46. Mental tests are: 1. rating scales.
  2. estimates of ability. 3. measuring devices. 4. guesses.
- (/) 47. Test results are compared by means of: 1. numerical devices. 2. teachers' judgments. 3. descriptions in words only. 4. watching the individual take the tests.

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

#### EVERY PUPIL SCHOLARSHIP CONTEST

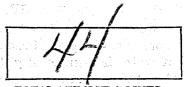
April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

#### READING

By W. H. Gray,

K. S. T. C., Emporia, Kansas.
With valuable assistance from Kansas teachers of reading.



TOTAL NUMBER POINTS

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You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

#### Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 1. Roy.
2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church.
2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is born as "school." Hence a "2" has been placed before that statement.

3. (112) How did the boy travel? 1. on foot.
2. on horseback. 3. on skates. 4. by
3. What is the correct answer to question No.
3. Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes.

I.

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- 1. (?) Joe liked to ride with his: 1. cousin.
  2. dog. 3. father. 4. playmates.
  5. mother.
- 2. (2) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.
- 3. ( ) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

#### II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 4. (3) The three boys were: 1. faithful.
  2. industrious. 3. lazy. 4. fat.
  5. handsome.
- 5. (2) They lived in the: 1. palace.
  2. country. 3. city. 4. village.
- 6. (3) The king needed a: 1. baker.
  2. gardner. 3. caretaker. 4. hunter.

#### III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. (3) The dragon-flies flew like: 1. robins.
  2. locusts. 3. airplanes. 4. kites.
  5. fairies.
- 8. (2) The time of day was: 1. early morning. 2. near noon. 3. late afternoon.
  4. evening. 5. night.
- 9. (4) The big dragon-fly was: 1. blue.
  2. green. 3. ugly. 4. beautiful.
  5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish crops. 3. many horses. 4. herds of of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

10. (4) Birds should be given water in winter because: 1. they need a bath. 2. the ground is frozen. 3. water outside is too dirty. 4. they cannot ម្ភាក់ មា find anv.

11. (4) The best way to feed the birds is to put the crumbs: 1. on the snow. 2. on the open ground. 3. in a dish on the ground. 4. in a box on a post. 12. ( ) Cats can catch birds more easily when the birds are: 1. on a post. 2. on the ground. 3. flying. 4. sitting in a tree.

· V.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns. and the nate of

13. () Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun 4. a blue

checked dress. 5. a fur coat.

14. ( ) She was taught to: 1. play ball. 2. ride horseback. 3. make bead ornaments. 4. jump the rope. 5. wear moccasins.

The Indians were wealthy because they had: 1. much money. 2. good buffalo. 5. slaves.

In the early days of our country, the old stagecoach carried Uncle Sam's mail. stagecoach, drawn by four mules, lumbered along at the rate of six miles per hour, travelling three thousand miles in about five hundred hours. Three thousand miles is about the distance from coast to coast across the United States. After railroads were built across the -country, Uncle Sam sent his mail by railway trains. Fast trains steamed over the rails at the rate of thirty miles an hour, making the trip -across the continent in about one hundred hours. After the world war, Uncle Sam began using the airplane to help carry the mail. To--day airplanes fly overhead at the rate of one hundred miles per hour, crossing the country in thirty hours. This continue well a merican were

- 16. ( ) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
- 17. (3) A stage coach traveled about: 1. nine miles per hour. 2. thirty miles per hour. 3. six miles per hour. 4. one hundred miles per hour. 5. twelve miles per hour. LUA I
- 18. (42) The airplane was used to carry ai 1. ... mail: 1. before the World War. 3. after and an admosthe World Warle bearings and Hill

## the her w.Woing to : 1. church.

Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

19.1 (<)) Whom did Boris save? 1. girl. 2. lady. 3. pet. 4. dog. 5. boy.

20. (2) Boris rescues people by: 1. barking at them. 2. tearing their bathing suits. 3. dragging them to shore. 4. preventing them from entering

4. preventing them from entering the water.

21. (3) The Newfoundland is: 1. small and wiry. 2. afraid of cats. 3. large and strong. 4 yery short-haired wiry. 2. afraid of cats. 3. large and strong. 4. very short-haired. 5. long and lanky.

#### entines, the expectator VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one with the rotted tomato remained until all the others were sold. Then I removed the spoiled tomato. That basket contained at least a dozen more good tomatoes than any of the others, yet the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

22. ( ) The tomato at the top of the basket had: 1. a very smooth skin. 2. a decayed spot. 3. deep grooves.
4. green spots. 5. a large stem.

23. (11.) Baskets of tomatoes which sell readily are those which: 1. contain the most fruit. 2. have beautiful decorations. 3. have blemishes on the fruit. 4. have perfect fruit.

The material tested was: 1. wheat.
2. iron ore. 3. sugar.
4. garden

The breaking of the ice on the large northern rivers has some peculiar features. Quite suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in, trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating ice drifted ashore.

ashore.

25. (5) The ice breaks into: 1. tiny pieces.

2. ice-bergs. 3. cubes. 4. thin slices.

5. huge blocks.

26. ( ) The banks are cut away by: 1. ice moving freely. 2. blocked ice.
3. fast flowing water. 4. ice freezing suddenly.

27. ( ) What are the river banks covered with? 1. trees. 2. green grass. 291692 30163. drifting logs. 4. cakes of ice. THESE ST. S. Snow. It was a second

net decleos X el gresses. The sense of time as we know it seems to be spared to animals. They have no fears of what the future may hold; they don't consciously think over the happy days of youth gone by.

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to spring when their victim again comes into sight.

28. ( ) Which animals have a notion of the very near future? 1. those that eat grass. 2. those that live in the ground. 3. those raised by man. 4. those that kill other animals. 5. those that live in trees.

Most of the lower animals: 1. fear the future. 2. have memories of the past. 3. have little conception of the future. 4. think continuously of tomorrow.

30. (4) When the prey disappears animals:
1. spring at once. 2. run away. 1. spring at once. 2. run away.
3. get very nervous. 4. get ready to -longur A spring when the prey reappears. 5. lie down and sleep.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. ( ) The imprint of automobile tires is: 1. no help in detecting crime. 3. a hindrance in detecting crime. 4. an aid to the criminal.

32. () Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax im-

pressions.

33. (f) The data are: 1. filed away in boxes. 2. published in newspapers. 3. sent to the criminal. 4. compared with marks on record in the sheriff's ad et est cofficera unide to nuoe raturale el nuoe estarace el nuoe estarace el fever entel recomment el mais el fever entel recomment el mais entel el fever entel recomment el mais entel el fever entel recomment el mais entel el mais el mais entel el fever el mais el m

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in their courtship of Cordelia, now that she was under her father's displeasure, and had no fortune to recommend her. The Duke of Burgundy would not take her to wife upon such a condition, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water.

- 34. (2) This story teaches that a "waterish" person's friendship is: 1. lasting: 2. worthless. 3. pleasant. 4. desirable. country's ad
- 35. (1) The Duke of Burgundy valued Cordelia for her: 1. fortune. 2. self.
- 3. beauty. 4. virtues.

  36. (The true lover was revealed because of Cordelia's: 1. beauty.

  3. beauty. 4. virtues.

  3. beauty. 4. virtues.

  3. a. beauty. 4. misfor-2. wealth. 3. prosperity. 4. misfor-នៅមានក្រកួយ។ tune. ១៩៤ ១៩១៣ និយាជា។ ក្រុម មេខាងក្រុមក្រុម ១៣៩៤ និយាជា

#### XIII.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these springs was known long ago to Indian tribes, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity also, and it is estimated that their total daily flow is easily between three and four million gallons.

- 37. (2) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build boats.
- 38. (1) The hot springs are in: 1. California. 2. Nebraska. 3. Colorado. 4. Wyoming. 5. New Mexico.
- .39. ( ). The water flows from the springs: 1. in huge quantities. 2. slowly.
  3. intermittently. 4. in pipes. 5. in thin streams. to poiled

ni verve Sulfi i rXIV. dais od) ( ) .Sk Resupressor di beligicità ( ) .Sk Les Evidences Evidences of what apparently represents a peculiar method used by aboriginal Americans processes and combined or compared with in grinding corn or other materials are to be other numerical scores. found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use. In or near such holes may usually be found the Me of the dividual take the tests.

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#### XVI.

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		PAR	r II	
25	1. O Ans.	Frank sold 25 sheep and had 10 left. How many had he at first?	14.	many frees are there in the orchard.
	-m2.	George raised 3 prize pumpkins which weighed as follows: 14½ lbs., 13 lbs., and 16½ lbs. Find the average weight.	Ans.	*At 3½ percent what will be the fee for selling a shipment of goods valued at \$1,008?
	3r	To make a trapeze, we need a steel bar 4 ft. 6 in. long. Find the cost if one foot is worth 60 cents.	Ans.	A Commence of the American State of the Commence of the Commen
		On a map in Mary's geography two cities are 2 in. apart. What is the actual distance between the cities, if 1/4 in. on the map represents 25 miles?	Ans.	A bridge is 90 ft. long and 20 ft. wide How many board feet of lumber will it take to lay a floor on it if the planks used
		George has 70 rabbits; he sold 18 of them, then bought 23. How many rabbits has he now?	Ans.	Mrs. Brown bought a bolt of curtain material containing 17 yards. How many
	Ans.	Robert and James deliver packages on Saturday. Robert worked for 1¼ hrs. for Cook and 1¼ hrs. for Brown. James worked at Smith's for 1¾ hrs. Which boy	Ans.	curtains each containing 4½ yds. can she make from it?
	Ans.	worked longer?  Walter was paid 20 cts. an hour last summer for mowing lawns. If he earned	Ans. .20-	Frank and James took care of a lawn one summer for \$9. Frank mowed it 6 times and James 12 times. How much money should Frank receive?
	Ans.	Coleman bought a \$16.50 Boy Scout suit from his uncle who gave him a 35% discount. How much did the suit cost Cole-	Ans. 21.	And the second of the second o
	70 <b>9</b> 7	John Smith borrowed \$450 from Jack Jones at 6% per annum. How much did he owe Mr. Jones at the end of 1 year?	22	How much will the excavation for a cellar 30 ft. by 40 ft. and 6 ft. deep cost at 40 cents per cu. yd.?
	Ans.	Lucile has \$8.25. How much more must she save in order to buy a \$4.50 hat and a \$15.00 coat?	23.**	*How many rods of wire are needed to build a 5 wire fence around a piece of ground 20 rd. square?
	Ans.	There are 1,223 pupils in our grade schools. If the total cost to maintain the school for one year is \$46,877.59, what is the average cost per pupil?	-24-	A farmer has a cylindrical silo which is 10 ft. in diameter and 25 feet high. How many cu. ft. will it hold? (Use $\pi$ =3.14.)
	<b>42</b>	I borrowed \$1,000 at 5½ % for 1 yr. What was the cost for the use of this money?	Ans. 25.	In an examination, Susie tried 32 examples. This was 80% of the whole examination. How many examples were there in the examination?
		A suit of clothes was marked \$45, which was 50% more than the cost. What was the cost?	Ans.	Find the weight of an iron bar that is 4 in wide, 3 in. thick and 60 ft. long, if 1 cu. ft. weighs 480 lbs.
	Ans.		Ans.	

		HOLARSHIP CONTEST		Score
Directions: Answer the easiest parts first. Go	Bureau of Educational	il 4, 1930 Measurements and Standards	Į vai	Part I 2
back and work on the others. You will have ex-	† 18 milional a Alabah in Property (b. 11 milion	chers College, Emporia	154H .	Part II
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The state of the s	e correct answer to as n		on.	Write the anguers in
the spaces left for them	near each example. M	ake your answers stand	out c	clearly.
	PA	RT I.		ger nach mag de sten. Habet seingen fijnen als holde
1. Add		-21. Add		
9 1. Aud	12. $2135 \div 7 = 303$	131/6	33.	$200 \div .622 =$
vicus <b>4</b> ye Bi (klasso) (k)	pyca o somegle popy - 251 Lightedaiges (election	6.6 6.6 6.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6	2.3	an new percent
str <u>rebra</u> nk of residen	13. Add	$ \begin{array}{c c} 5\frac{1}{4} \\ 16\frac{1}{4} \end{array} $	0.4	497 12 017 12 007
1 11	$\begin{smallmatrix}4&8&0&6\\&&3&9&1\end{smallmatrix}$	rg 41 m. ser resting	34.	$4\frac{3}{8} \times 2\frac{1}{8} \times 6\frac{7}{8} =$
2. $19-5=164$	8743	22. Subtract	.W = 75 ,1•*€0	용의 - 그리고 하고 해 작용하는 - 사이의 - 충용 설치 - 충용 - 충용 - , 하는 등 - 는
$3.  7 \times 8 = 5  6$	7625 2/565	5 Q 1 0	35.	Subtract
4. $27 \div 9 = 3$		2635		4 yr. 3 mo. 20 da.
	14. Multiply	2075		2 yr. 6 mo. 10 da.
$5.  \begin{array}{c} 541 \\ \times 2 \end{array}$	5 3 8 2 5	23 1/2 - 1/4 = 1/4		
1062	2'690	#		
6. Subtract	10 76	$\frac{24}{5}$ $\frac{3}{5}$ $\frac{24}{5}$	36.	Add
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427	15. $700 \div 10 = 10$	26. 5% ÷ 5 = 4 7	: , ' · Y	6 yd. 2 ft. 6 in.
ススス	16. Divide	20. 98 - 9 9		Total Control
7. Divide	SJZ	27.28% - 3% = 45	Warner 18	
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8. Add	36	71/5	37.	Divide
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$\begin{smallmatrix}6&1&4\\4&3&2\end{smallmatrix}$	17. $900 \times 100 = 9$	225/.	43.3	7) 40 lb. 6 oz.
1799	7.0 M14:1			
9. Divide	18. Multiply 875	29 Divide		
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	$\times 100$	$32.$ $8\frac{1}{2} \times 2\frac{1}{2} =$	40.	$0\times 832 =$
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## PART II.

1.	Frank sold 25 sheep and had 10 left. How many had he at first?	14.	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how many trees are there in the orchard?
2.	George raised 3 prize pumpkins which weighed as follows: 14½ lbs., 13 lbs., and 16½ lbs. Find the average weight.	Ans.	At 31/4 percent what will be the fee for selling a shipment of goods valued at \$1,008?
Ans.	To make a trapeze, we need a steel bar 4 ft. 6 in. long. Find the cost if one foot is worth 60 cents.	Ans/ 16.	
Ans. 4.	On a map in Mary's geography two cities are 2 in. apart. What is the actual distance between the cities, if ¼ in. on the map represents 25 miles?	Ans.	A bridge is 90 ft. long and 20 ft. wide. How many board feet of lumber will it take to lay a floor on it if the planks used
<b></b> 5.	he now?	Ans.	Mrs. Brown bought a bolt of curtain material containing 17 yards. How many
Ans.	Robert and James deliver packages on Saturday. Robert worked for 11/4 hrs. for Cook and 11/4 hrs. for Brown. James	Ans.	curtains each containing 4½ yds. can she make from it?  A box of 25 apples cost \$2.75. How much
Ans.	worked at Smith's for 134 hrs. Which boy worked longer?  Walter was paid 20 cts. an hour last sum-	Ans. 20.	Frank and James took care of a lawn one summer for \$9. Frank mowed it 6 times
Ans.	mer for mowing lawns. If he earned \$5.40, how many hours did he work?	Ans.	and James 12 times. How much money should Frank receive?
-8	Coleman bought a \$16.50 Boy Scout suit from his uncle who gave him a 35% discount. How much did the suit cost Coleman?	21.	Over how many sq. yd. can a horse graze if tied to a post by a rope 25 ft. long? (Let $\pi=3.14$ .) Make no allowance for fastening the rope.
	John Smith borrowed \$450 from Jack Jones at 6% per annum. How much did he owe Mr. Jones at the end of 1 year?	Ans. 22.	How much will the excavation for a cellar 30 ft. by 40 ft. and 6 ft. deep cost at 40 cents per cu. yd.?
Ans.	Lucile has \$8.25. How much more must she save in order to buy a \$4.50 hat and a \$15.00 coat?	Ans. 23.	How many rods of wire are needed to build a 5 wire fence around a piece of ground 20 rd. square?
	There are 1,223 pupils in our grade schools. If the total cost to maintain the school for one year is \$46,877.59, what is	Ans. 24.	A farmer has a cylindrical silo which is 10 ft. in diameter and 25 feet high. How many cu. ft. will it hold? (Use $\pi=3.14$ .)
12:	I borrowed \$1,000 at 5½% for 1 yr. What was the cost for the use of this money?	Ans. 25.	In an examination, Susie tried 32 examples. This was 80% of the whole examination. How many examples were there in the examination?
	A suit of clothes was marked \$45, which was 50% more than the cost. What was the cost?	Ans. 26.	The state of the s
Ans.	122150	Ans.	Taxaa aa

	ESTEDAY NAMES CO	HOT ADOUTE CONTEST	y de la companya de l
Directions: Answer the	7	CHOLARSHIP CONTEST	Score
easiest parts first. Go back and work on the	Kansas State Tea	Measurements and Standards ichers College, Emporia	Part I 2 7
others. You will have ex- actly 15 minutes for each	네^^ 보다 하고 보고 원호생기는 첫,원급, <b>없</b>	HMETIC	Part II 7
part.	By J.	B. Stroud, Emporia, Kansas.	Total 3 4
the product of the last		rom Kansas arithmetic teach	ers, is in Angel
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DIRECTIONS: Get th	e correct answer to as r	. 31 — Sabilia Herrit Holico Andro	can. Write the answers in
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3. 7×8=56	13565	5010	35. Subtract
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and come to the property along	14. Multiply	2377	2 yr. 6 mo. 10 da.
5. 541 × 2	19   18   18   18   18   18   18   18	23. $\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$	lan di gaziù eza essò esson i l' La construir expensione
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6. Subtract	1 1 7 6 200 1000	$24. \ \ \frac{3}{5} + \frac{2}{5} = 1$	36 Add
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& 2 a	16. Divide	$26. \ \ \frac{5}{8} + 5 = \frac{1}{6}$	
7. Divide	265	27. 83% - 35% = 343	Asir Jaso Alipin Adaj - s
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37.4	90	28. Add 71/2	37. Divide
8. Add 753	3 40	12 3/4 = 24	oli oli alla suolee ja takka sa
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/03	0000	30. Multiply	× 387/8
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3	$\frac{\times 100}{100}$	$32. 8\frac{1}{2} \times 2\frac{1}{2} =$	$40.0 \times 832 =$
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### PART II.

			사용 이 통한 그것 같습니다.
1.	Frank sold 25 sheep and had 10 left. How many had he at first?	14.~	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how
	B5 sleep	e cymai	many trees are there in the orchard?
2.	George raised 3 brize pumpkins which	Ans.	At 21/ nament what will be the fee for
	weighed as follows: 14½ lbs., 13 lbs., and 16½ lbs. Find the average weight.	19.	At 31/4 percent what will be the fee for selling a shipment of goods valued at \$1,008?
Ans.	Control Contro	10 to	
3.00	To make a trapeze, we need a steel bar 4	Ans.	
	ft. 6 in. long. Find the cost if one foot is worth 60 cents.	10.	A citizen owns property which is assessed at \$5,860. The rate of tax is \$2.50 per
•	40,46		\$100. What is his semi-annual tax?
			A Commence of the commence of
<b>:</b>	On a map in Mary's geography two cities are 2 in. apart. What is the actual dis-	Ans.	A bridge is 90 ft. long and 20 ft. wide
	tance between the cities, if 1/4 in. on the	T. P. S. S.	How many board feet of lumber will it
	map represents 25 miles?	子品点。	take to lay a floor on it if the planks used
Ans.	9 6 0 miles		are 2 in. thick?
5.	George has 70 rabbits; he sold 18 of them,	Ans.	The management of the same of
	then bought 23. How many rabbits has		Mrs. Brown bought a bolt of curtain ma-
	he now?		terial containing 17 yards. How many
Ans.	70 robby		curtains each containing 4½ yds. can she
6.	Robert and James deliver packages on		make from it?
-	Saturday. Robert worked for 11/4 hrs. for	Ans.	
	Cook and 1¼ hrs. for Brown. James worked at Smith's for 1¾ hrs. Which boy	19	A box of 25 apples cost \$2.75. How much
	worked longer?		was that for each apple?
•	$(\mathcal{A}, \mathcal{A})_{\alpha} \cup \mathcal{A}_{\alpha}$	Ans.	
Ans.	·	~ 20. ~	Frank and James took care of a lawn one
7.	Walter was paid 20 cts. an hour last summer for mowing lawns. If he earned	1 1	summer for \$9. Frank mowed it 6 times and James 12 times. How much money
	\$5.40, how many hours did he work?		should Frank receive?
A	an 1)-	Ans.	A CONTRACTOR OF THE CONTRACTOR
Ans.	Coleman bought a \$16.50 Boy Scout suit	-21	Over how many sq. yd. can a horse graze
	from his uncle who gave him a 35% dis-		if tied to a post by a rope 25 ft. long? (Let
	count. How much did the suit cost Cole-		$\pi$ =3.14.) Make no allowance for fasten-
	man?		ing the rope.
Ans.	101.081	Ans.	
9.	John Smith borrowed \$450 from Jack	22:	How much will the excavation for a cellar
	Jones at 6% per annum. How much did		30 ft. by 40 ft. and 6 ft. deep cost at 40
	he owe Mr. Jones at the end of 1 year?		cents per cu. yd.?
Ans.			
10.	Lucile has \$8.25. How much more must	~23: <del>~</del>	How many rods of wire are needed to
	she save in order to buy a \$4.50 hat and a		build a 5 wire fence around a piece of ground 20 rd. square?
	\$15.00 coat?		
Ans.	A11, 25	Ans.	A farmer has a cylindrical silo which is 10
11.	There are 1,223 pupils in our grade	440	ft. in diameter and 25 feet high. How
	schools. If the total cost to maintain the school for one year is \$46,877.59, what is		many cu. ft. will it hold? (Use $\pi=3.14$ .)
	the average cost per pupil?	Ans.	
Ans.	the average cost per pupil?  L borrowed \$1,000 at 516% for 1 yr. What	25.	In an examination, Susie tried 32 ex-
12.	I borrowed \$1,000 at $5\frac{1}{2}$ % for 1 yr. What		amples. This was 80% of the whole ex-
	was the cost for the use of this money?		amination. How many examples were
Ans.			there in the examination?
	A suit of clothes was marked \$45, which	Ans.	Find the maintee of a second s
	was 50% more than the cost. What was	26.	Find the weight of an iron bar that is 4 inwide, 3 in. thick and 60 ft. long, if 1 cu. ft.
~	the cost?		weighs 480 lbs.
Ans.	<u> </u>	Ans	

Directions:	Answer	the
easiest part back and others. You actly 15 mir	ts first. work on will have	Go the ex-
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## EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

### ARITHMETIC

	Score
Part I	21
Part II	9
Total	4/1
	7

part.		. B. Stroud.	Total
] Parti	-¹ K. S. T. C.,	Emporia, Kansas,	
	with valuable assistance f	rom Kansas arithmetic teach	iers.
or The	21 19 20	13	Grade 7th classiff.
Name	de le	Age/	Grade GANDJA.
- C		200	Date april 4 th.
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	0	and the second of the second o	1 11 11
DIRECTIONS: Get th	e correct answer to as i	nany examples as you	can. Write the answers in
the spaces left for then	n near each example. A	Iake your answers stand	l out clearly.
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arra 19 de la trada de la Tr	12. 2135 + 7 = 303	131/2	33. $200 \div .622 = .32 \xrightarrow{1)7}$
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3. 1 × 8 – 5 ¢	01565	5010	35. Subtract
1. $27 \div 9 = 3$		2635	4 yr. 3 mo. 20 da.
	14. Multiply	2,375	2 yr. 6 mo. 10 da.
5. 541	5 3 8	HERRITANA MANGERY IN	101, 9mo, 10da.
$\times 2$	25	$23.  \frac{1}{2} - \frac{1}{4} = \frac{1}{4}$	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
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649	15. $700 \div 10 = 70$	25. $\frac{3}{5} \times \frac{1}{2} = \frac{3}{16}$	2 yd. 2 ft. 10 in. 3 yd. 1 ft. 8 in.
427	19. 7.00 - 10 = 5°.		6 yd. 2 ft. 6 in.
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## PART II.

- 57	#60N를 하시는 것은 하는	atan a	
1.	many had he at first?	14.	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how many trees are there in the orchard?
Ans.	<u> </u>	ry 147	many trees are there in the orchard.
2.	George raised 3 prize pumpkins which	Ans.	Yang banasan a salah sa masa sa
an mis	weighed as follows: 14½ lbs., 13 lbs., and 16½ lbs. Find the average weight.		At 31/4 percent what will be the fee for selling a shipment of goods valued at
Ans.	14 % St.		\$1,008?
3.	To make a trapeze, we need a steel bar 4	Ans.	#378 X
	ft. 6 in. long. Find the cost if one foot is	16.	A citizen owns property which is assessed
*****	worth 60 cents.		at \$5,860. The rate of tax is \$2.50 per
	H & DA		\$100. What is his semi-annual tax?
Ans.			Many from the second second
4.	On a map in Mary's geography two cities	Ans.	H146,50 1
23206134	are 2 m. apart. What is the actual dis-	17.	A bridge is 90 ft. long and 20 ft. wide.
	tance between the cities, if 1/4 in. on the	- tra - 18	How many board feet of lumber will it
		EAN.	take to lay a floor on it if the planks used
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	George has 70 rabbits; he sold 18 of them,		Ni -
	then bought 23. How many rabbits has	Ans.	
	he now?	18.	Mrs. Brown bought a bolt of curtain ma-
	N 201	ì	terial containing 17 yards. How many
Ans.			curtains each containing 4½ yds. can she
6.	Robert and James deliver packages on		make from it?
	Saturday. Robert worked for 11/4 hrs. for	Ans.	TUV XI OF STREET
	Cook and 11/4 hrs. for Brown. James	19.	A box of 25 apples cost \$2.75. How much
	worked at Smith's for 134, hrs. Which boy		was that for each apple?
	worked longer?		
	THE REPORT OF THE PROPERTY OF	Ans.	
Ans.	COON	20.	Frank and James took care of a lawn one
7.	Walter was paid 20 cts. an hour last sum-		summer for \$9. Frank mowed it 6 times
	mer for mowing lawns. If he earned		and James 12 times. How much money
	\$5.40, how many hours did he work?		should Frank receive?
A	2 h de ha	Ans.	The second secon
Ans.	Colomon hought - C1C TO D - C - 1	21.	Over how many sq. yd. can a horse graze
8.	Coleman bought a \$16.50 Boy Scout suit	21.	if tied to a post by a rope 25 ft. long? (Let
	from his uncle who gave him a 35% dis-	1.00	$\pi=3.14$ .) Make no allowance for fasten-
	count. How much did the suit cost Cole-		ing the rope.
	man?	i	ing the tope.
Ans.	#10.22 X	Ans.	
9.	John Smith borrowed \$450 from Jack	22.	How much will the excavation for a cellar
•	Jones at 6% per annum. How much did	1	30 ft. by 40 ft. and 6 ft. deep cost at 40
	he owe Mr. Jones at the end of 1 year?	1	cents per cu. yd.?
	4 2/22	A	
Ans.	477		TT
10.	Lucile has \$8.25. How much more must	23.	How many rods of wire are needed to
	she save in order to buy a \$4.50 hat and a		build a 5 wire fence around a piece of
	\$15.00 coat?	10.00	ground 20 rd. square?
Ans.	# 11.25	Ans.	
11.	There are 1,223 pupils in our grade	24.	A farmer has a cylindrical silo which is 10
	schools. If the total cost to maintain the		ft. in diameter and 25 feet high. How
	school for one year is \$46,877.59, what is		many cu. ft. will it hold? (Use $\pi=3.14$ .)
	the average cost per pupil?	A ~	and the control of th
Ang	# 3.81.33 Per pupir.	Ans.	In an arramination Cusic twick 90 arr
*	1.7	25.	In an examination, Susie tried 32 ex-
12.	I borrowed \$1,000 at $5\frac{1}{2}$ % for 1 yr. What		amples. This was 80% of the whole ex-
	was the cost for the use of this money?	Ť	amination. How many examples were
A ===	مهر من اسل	-	there in the examination?
Ans.		Ans.	¥ 1
TO.	A suit of clothes was marked \$45, which	26.	Find the weight of an iron bar that is 4 in.
	was 50% more than the cost. What was		wide, 3 in. thick and 60 ft. long, if 1 cu. ft.
	the cost?	1	weighs 480 lbs.
Δng	- <b>キリスクマラリー かん</b> 1500 Meg - 139 1 mg	'A .	T 0 6 b 4 c 1 €

Directions: Answer the canceter parts first first foot back and work on the next part.   Substitute   Subs		EVERY PUPIL SO	CHOLARSHIP CONTEST		1 Score
Dack and work on the cotters. You will have exactly 15 minutes for each part   ARITHMETIC		Taketebe browlete with <b>Ap</b>	ril 4, 1930	ah kariba ka <del>Majada</del>	Score
School   S	back and work on the	Kansas State Tea	Measurements and Standards schers College, Emporia	Part I	3/-
With valuable assistance from Kansas attimetic teachers.   With valuable assistance from Kansas attimetic teachers.   Age				Part II	16
With valuable assistance from Kanasa arithmetic teachers   Name	part.			Total	47
School School Part of the spaces left for them near each example. Make your answers stand out clearly.  PART I.  1. Add 9 12. $2135+7=305$ 21. Add $13\frac{1}{2}\frac{1}{2}\frac{1}{2}$ 33. $200+622=37$ 34. Add $13\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}$ 34. $4\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}$		with valuable assistance f	rom Kansas arithmetic teach	ers.	4
Town School Teacher Teacher Teacher Write the answers in the spaces left for them near each example. Make your answers stand out clearly.  PART I.  1. Add 9	Name Sola	Spear	Age	Grade S	4
School	Town Jine	- 15			1.4.1931
DIRECTIONS: Get the correct answer to as many examples as you can. Write the answers in the spaces left for them near each example. Make your answers stand out clearly.  PART I.  1. Add 9 4 6 13. Add 13. Add 13. Add 16. 16. 16. 16. 16. 16. 16. Divide 2) $6. 8$ 15. $3 8$ 22. Subtract 6427 15. $3 8$ 25. $3 8$ 26. $4 8$ 27. $4 8$ 28. Add 75. 8. Add 75.	The state of the s	The state of the s	4	Melir	12 12 11
the spaces left for them near each example. Make your answers stand out clearly.  PART I.  1. Add 9 4 6 13. Add 48 0 6 3 9 1 14 8 0 6 3 9 1 15 7 4 3 8 7 6 2 5 2 1 9 - 5 = 1/4 3. 7 8 8 - 5 6 4. 27 + 9 = 3 14. Multiply 5. 541 22. Subtract 5 0 1 0 2 6 3 5 2 1 1 2 1 3 7 5 5 0 1 0 2 6 3 5 2 1 1 2 1 3 7 5 6 Subtract 649 427 15 3 7 0 0 + 10 = 1/1  7 5 3 6 8. Add 7 16. Divide 2) 6 2 8 3 1 4 3 2 7 9 9 16. Divide 2) 16 2 8 3 6 1 4 4 3 2 7 9 9 17 9 0 0 × 1 0 0 = 7 18. Multiply 9. Divide 19. Divide 19	DIRECTIONS: Get th	e correct answer to as n	nany examples as you	can. Write the ar	iswers in
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5. $541$ $\times 2$ $106 \ 2$ 6. Subtract $649$ $427$ $101 \ 2$ 7. Divide $2 \ 16 \ 2 \ 3 \ 1 \ 1 \ 1 \ 1 \ 1 \ 1 \ 1 \ 1 \ 1$	$4. \ \ 27 \div 9 = 3$	2 / DO 3		4 yr. 3 mo. 2	0 da.
5. $\frac{541}{2 \sqrt{98}}$ 6. Subtract 649 427 2 \frac{15}{3700} \frac{5}{0} + 10 = 70  16. Divide 2 \frac{6}{15} \frac{2}{3} \frac{7}{17} \		14. Multiply	2375		
6. Subtract $ \begin{array}{ccccccccccccccccccccccccccccccccccc$			Estrona addition of	64r, 9mo. 3	ioha.
6. Subtract $ \begin{array}{ccccccccccccccccccccccccccccccccccc$		2.5	$23. \frac{1}{2} - \frac{1}{4} = \frac{1}{4}$		
6. Subtract $ \begin{array}{ccccccccccccccccccccccccccccccccccc$		,269	24. $\frac{3}{5} + \frac{2}{5} = 5$	36. Add	STATE OF STA
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		1070		医子宫 医抗原性抗原	
7. Divide $2 \cdot 16 \cdot 28 \cdot 3 \cdot 14$ 8. Add $7 \cdot 5 \cdot 3 \cdot 6 \cdot 14 \cdot 4 \cdot 32 \cdot 17 \cdot 7 \cdot 19 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$		$15.3700 \div 10 = 70$	$25. \ \% \times \% = \frac{1}{10}$	3 yd. 1 ft. 3	Blin.
7. Divide $2 ) 6 2 8 \ 3 / 4$ 8. Add $7 5 3 \ 61 4 \ 43 2 \ 7 9 0 0 \times 10 0 = 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 $	170	70,74 (9)8 mail	$26. \ \ \frac{5}{6} \div 5 = \frac{1}{6}$	6 yd. 2 ft.	in.
2) $\frac{628}{3/7}$ 8. Add  7 5 3 61 4 4 3 2 7 7 9 9. Divide  5) $\frac{915}{\sqrt{375}}$ 10. Subtract 6 9 2 5 3 8 7 4 3 0 5 / 11. Multiply 7 4 1  20. 1 7 0 . 6  21. $\frac{393}{393} - 393 = 17$ 28. Add 77/6 11 $\frac{1234}{316}$ 29. Divide 29. Divide $\frac{875}{\sqrt{375}}$ 30. Multiply $\frac{5.44}{6.2}$ $\frac{6.2}{\sqrt{978}}$ 31. $\frac{3247}{2487} + 814 = 3$ 37. Divide 37. Divide $\frac{57}{\sqrt{375}}$ 38. $\frac{689}{689}$ 6 8 9 6 39. $\frac{38.7}{395}$ 39. $\frac{38.7}{395}$ 39. $\frac{38.7}{395}$ 39. $\frac{38.7}{395}$	T. Dinida	16. Divide	~ /8/	1/yd.5/t. 2	Home.
8. Add 7 5 3 6 1 4 4 3 2 7 9 0 0 × 1 0 0 = 9 18. Multiply 9. Divide 5 ) 9 1 5 10. Subtract 6 9 2 5 3 8 7 4 3 0 5 / 11. Multiply 7 4 1  28. Add 7 1/6 12 3/4 3 3/6 29. Divide		260	27.8% - 3% = 4%		Real to go
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9. Divide $875$ $\frac{5}{10.5}$ $\frac{18. \text{ Multiply}}{\frac{875}{3500}}$ $\frac{10. \text{ Subtract}}{\frac{6925}{3874}}$ $\frac{6925}{30.5}$ $\frac{3874}{305}$ $\frac{19. 41)1107}{11. \text{ Multiply}}$ $\frac{31. 2454 + 814}{240.5} = 3$	432	11. 300 × 100 = 7	773	1 / 4 0 15. 0	2)
9. Divide $5 ) 915 / (83)$ 10. Subtract $6925 / (375) / (11. Multiply)$ 11. Multiply $741$ 12. 170.6  1875	1799	18. Multiply			
10. Subtract $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					un din din din din din din din din din di
10. Subtract $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	5)915	504	16.1	7.34	uder i
10. Subtract $ \begin{array}{c c} 6 & 9 & 2 & 5 \\ 3 & 8 & 7 & 4 \\ \hline 3 & 0 & 5 & 7 \end{array} $ 11. Multiply $ \begin{array}{c c} 7 & 1 & 7 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3$	183 - 183 - Bar	3 500	· · · · · · · · · · · · · · · · · · ·	38. 6896 × 3876	t Areas Posta o parti
$ \begin{array}{c c}  & 6925 \\ \hline 3874 \\ \hline 305/ \\ 11. & \text{Multiply} \\ \hline 741 \\ \end{array} $ $ \begin{array}{c c}  & 19. & 41 \\ \hline  & 1107 \\ \hline  & 3267 \\ \hline  & 3267$	10. Subtract	4375		5 - 1681	
11. Multiply 741 20. 170.6 $325 \frac{3}{24} \frac{3}{4} = 3$ 39. $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$ $39.$	6925	4410027		200	
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741 20. 170.6	305/		32640	39. 83.2 -2	006=8/195
			31. $24\frac{1}{4} \div 8\frac{1}{4} = 3$		
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2222	1112		04. 81/2 × 21/2 = 2/3	40. $0 \times 832 = 7$	5 3 2
2223 17060.0	2 225	1 106 0.0			
			**************************************	$\mathcal{J}_{i}$	

	nood   -		rest villi
1.	Frank sold 25 sheep and had 10 left. How	14.	An orchard contained 120 apple trees. If
11.	many had he at first?	smili luc	40% of all the orchard is in apples, how
A	transfer to the contract of th	(Bustable)	many trees are there in the orchard?
Ans.		ALTER	A 3 A A Proce for exhautes of which
2.	George raised 3 prize pumpkins which	Ans.	At 81/ manager what will be the fee for
12.0mm	weighed as follows: 14½ lbs., 18 lbs., and	15.	At 31/4 percent what will be the lee 101
	16½ lbs. Find the average weight.	141/02 (**	selling a shipment of goods valued at
Ans.	1432100.		\$1,008?
3.	To make a trapeze, we need a steel bar 4	Ans.	
	ft. 6 in. long. Find the cost if one foot is	16.	A citizen owns property which is assessed
فيهجمه إ	worth 60 cents.	đ Tili il	at \$5,860. The rate of tax is \$2.50 per
	V81 77		\$100. What is his semi-annual tax?
Ans.		I	1110 Kn
4.	On a map in Mary's geography two cities	Ans.	
121 8	are 2 in apart. What is the actual dis-	17.	A bridge is 90 ft. long and 20 ft. wide
	tance between the cities, if 1/4 in. on the	MITIGE :	How many board feet of lumber will it
	map represents 25 miles?	THAT	take to lay a floor on it if the planks used
Ang	and the contract of the first contract and the contract of the		are 2 in. thick?
	George has 70 rabbits; he sold 18 of them,	18110	
	then bought 23. How many rabbits has	Ans.	Mrs. Promy hought a halt of curtain ma
4	he now?	18.	Mrs. Brown bought a bolt of curtain ma
	me now j	# *	terial containing 17 yards. How many
Ans.		ź.	curtains each containing 4½ yds. can she
6	Robert and James deliver packages on		make from it?
	Saturday. Robert worked for 11/4 hrs. for	Ans.	210
	Cook and 11/4 hrs. for Brown. James	19.	A box of 25 apples cost \$2.75. How much
	worked at Smith's for 13/4 hrs. Which boy		was that for each apple?
	worked longer?		$\lambda = 1/\lambda$
	Da Roof 13/ his longer	Ans.	
Ans.	1797 (797)	20.	Frank and James took care of a lawn one
7.	Walter was paid 20 cts. an hour last sum-		summer for \$9. Frank mowed it 6 times
	mer for mowing lawns. If he earned		and James 12 times. How much money
	\$5.40, how many hours did he work?	. 4	should Frank receive?
1	510	Ans.	# 3,00
Ans.		21.	Over how many sq. yd. can a horse graze
, 8.	Coleman bought a \$16.50 Boy Scout suit		if tied to a post by a rope 25 ft. long? (Let
	from his uncle who gave him a 35% dis-		$\pi=3.14$ .) Make no allowance for fasten-
	count. How much did the suit cost Coleman?		ing the rope.
	Man:	(18)	
Ans.	T00.72	Ans.	500 for C 10 for
9.	John Smith borrowed \$450 from Jack	22.	How much will the excavation for a cellar
	Jones at 6% per annum. How much did		30 ft. by 40 ft. and 6 ft. deep cost at 40
, •	he owe Mr. Jones at the end of 1 year?	194	cents per cu. yd.?
A	$\mathbf{R} \mathbf{A} \mathbf{A} \mathbf{A} \mathbf{A} \mathbf{A} \mathbf{A} \mathbf{A} A$	Ans.	
Ans.		23.	How many rods of wire are needed to
10.	Lucile has \$8.25. How much more must	20.	build a 5 wire fence around a piece of
	she save in order to buy a \$4.50 hat and a		ground 20 rd, square?
	\$15.00 coat?	ĺ	Bround 20, 1d. Briano.
Ans.	$\beta$ 1/, $\lambda$ 3	Ans.	
11.	There are 1,223 pupils in our grade	24.	A farmer has a cylindrical silo which is 10
	schools. If the total cost to maintain the	1	ft. in diameter and 25 feet high. How
	school for one year is \$46,877.59, what is	- 1	many cu. ft. will it hold? (Use $\pi = 3.14$ .)
	the average cost per pupil?	Ans.	and the same of th
Ans.	<b>5.3.2.3.3</b>	25.	In an examination, Susie tried 32 ex-
	A Committee Contraction of the C		amples. This was 80% of the whole ex-
12.	I borrowed \$1,000 at 51/2 % for 1 yr. What		amination. How many examples were
	was the cost for the use of this money?	į	there in the examination?
Ans.	455.00	A	ZI N. The state of
	A suit of clothes was marked \$45, which	Ans.	
	was 50% more than the cost. What was	26.	Find the weight of an iron bar that is 4 in.
	the cost?	1.14	wide, 3 in. thick and 60 ft. long, if 1 cu. ft.
	A A 3413		weighs 480 lbs.
Ans.	22.510 a a la	Ans.	

#### Directions: Answer easiest parts first. Go back and work on the others. You will have exthe actly 15 minutes.

#### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards

4 certanly

TOTAL NUMBER POINTS

Kansas State Teachers College, Emporia SPELLING By W. H. Gray,

K. S. T. C., Emporia, Kansas. Name. School DIRECTIONS: In each row across the page you will find four spellings of the same word. Only one of these is correct. Find the correct one and place the number before this word in the parenthesis at the left. 3. gurl 4. girll Example: 1. gril 2. girl In this example the second word is the one spelled correctly. Hence the figure "2" has been placed in the parenthesis. Do all of the rows the same way. You will have exactly 15 minutes. 2 severl 3 severel 4 sevral 1. 1 several 1) 2 separate 3 seprate 4 seperrate 🖰 ) — 2. 1 seperate 4 enofe 3 enought enough 3. 1 enuf 2 sissers 3 sisers 4 scissors 4. 1 sissors 4 surplus 2 serplus 3 sirplus 5. 1 sirpluse 3 libray 4 libary 6. 1 library 2 libery 3 lettus 4 lettes 2 lettuce 7. 1 lettas 2 gipsey 4 jipsy 8. 1 gipsy gypsy 2 gauze gause 4 goze 9. 1 gose 2 electrict electrick 4 eletric 10. 1 electric funest 4 funniest 11. 1 funnyest 2 funnest 3 enginer 4 enginere ) 12. 1 enginear 2 engineer 4 magizene 1) 13. 1 magazine 2 magzine magazen 3 develup 4 develop 4) 14. 1 develp 2 develope 4 estemate 2) 15. 1 estimate 2 estmate 3 estamate 2 bisket 3 biscut 4 biskut (4-)-16. 1 biscuit 3 belive 4 beleve 2 believe  $\rightarrow$  )\_17. 1 beleave (3) 18. 1 certen 3 certain 4 sertan 2 surten 3 apitite 4 appetite 4) 19. 1 appitite 2 apatite 3 tellagram 4 tellgram 20. 1 telegram telagram 3 cabbage 4 cabbige (A) 21. 1 cabbeg 2 cabage 2 building 3 bulding 4 biulding a.) 22. 1 bilding autom . 4 auttum 2 autumn 9) 23. 1 autum 3 mention 4 menshion 2 menchin 24. 1 menchen ache acke 4 ach 25. 1 ake 3 ballon 4 bollon 2 bloon 26. 1 balloon 3 complet 4 comeplet 27. 1 complete 2 compleat á) 28. 1 pumpkin 2 punkin 3 pumkin 4 punken 4 domonoes 29. 1 dominos 2 dominoes 3 domanoes 2 molaces molases 4 molasses 30. 1 mollasses desendent 4 decendant 2 descendant 31. 1 decendent 3 deckorate 4 decarate (3) 32. 1 decorate 2 decrate

3 certenly

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(4) 33. 1 sertenly

( 1 ) 34. 1 manafacturing 2 ( 1 ) 35. 1 cemetery 2	manufactering 3 cemetary 3	manufactoring 4 cematary 4	manufacturing sematary
(3) 36. 1 sufishent 2 (4) 37. 1 califlower 2 (4) 38. 1 govenor 2 (5) 39. 1 artifishel 2	sufficent 3 colaflower 3 governor 3	safishent 4 cauliflower 4 govener 4 artifical 4	sufficient calaflower governer artificial accomodate
(2) 41. 1 generaly 2 (2) 42. 1 foriegn 2 (34) 43. 1 faucet 2 (14) 44. 1 praire 2	generally 3 forn 3 foset 3 prairie 3	generly         4           foren         4           fosit         4           prarie         4	genarly foreign fosset prairy
	plummer 3 eracer 3 association 3 encourge 3	plumber 4 earser 4 associon 4 incurage 4	experience plomer ereaser accoation encourage millanary
(d) 51. 1 furlow 2 (3) 52. 1 disagreeble 2 (2) 53. 1 bachler 2 (2) 54. 1 hickry 2	furlough 3 disgreeable 3 bachelor 3 hicory 3	furlo 4 disagreeable 4 batchler 4 hickery 4	ferlow disagreable bachlor hickory counterfite
(1) 56. 1 acquainted 2 (2) 57. 1 oppisite 2 (1) 58. 1 barracks 2 (1) 59. 1 exticy 2	opposit 3 barricks 5 ecstasy 3	barraks 4 extecy 4	aqquainted oppisit barax extisy mahogany
(人) 62. 1 cresent 2 (人) 63. 1 poultice 2 (人) 64. 1 garantee 2	crescent 3 poltis 3 garentee 3	cressent 4 poltus 4 gaurantee 4	desernable cresant poltice guarantee demension
(2) 67. 1 apologise 2 (4) 68. 1 tortoise 2 (3) 69. 1 privilege 2	dissapointment 3 apologize 3 tortus 3 privilage 3 incessent 3	appologize 4 tortise 4 priviledge 4 insessent 4	dissappointment apoligize tortis privelage incessant
(2) 72. 1 confedercy 2 (2) 73. 1 varieties 2 (4) 74. 1 slauter 2	termenal 3 confederacy 3 varities 3 slotter 3 separator 3	confedersy 4 verities 4 slaughter 4	termanel confedericy varietys sloter separater
( ) 77. 1 sive 2 ( ) 78. 1 luxuriant 2 ( ) 79. 1 pnemonia 2	rediculas 3 seive 3 luxurant 3 pneumonia 3 molicious 3	sieve 4 luxurent 4 newmonia 4	ridiculous scive luxurient pnewmonia mulishes
. 0	cristalize 3 commity 3 amature 3 bargain 3	committe 4 amiture 4	christlize committee ameture bargian

# Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

#### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

#### SPELLING

By W. H. Gray, K. S. T. C., Emporia, Kansas. TOTAL NUMBER POINTS

4 sertan

4 appetite

4 tellgram

4 cabbige

4 certanly

Town School **DIRECTIONS:** In each row across the page you will find four spellings of the same word. Only one of these is correct. Find the correct one and place the number before this word in the parenthesis at the left. (2) Example: 1. gril 2. girl 3. gurl 4. girll In this example the second word is the one spelled correctly. Hence the figure "2" has been placed in the parenthesis. Do all of the rows the same way. You will have exactly 15 minutes. 3 severel 1. 1 several 2 severl 4 sevral 2 separate seprate 2. 1 seperate 3 4 seperrate 7 enought 3. 1 enuf enough 4 enofe 4. 1 sissors 2 sissers sisers 4 scissors 3 sirplus 5. 1 sirpluse 2 serplus 4 surplus libery libray 4 libary 6. 1 library 2 lettuce 3 lettus 4 lettes 7. 1 lettas 8. 1 gipsy 2 3 gipsey 4 jipsy gypsy 2 3 9. 1 gose gauze gause goze 10. 1 electric 2 electrict electrick 4 eletric 3 ) 11. 1 funnyest 2 funnest funest 4 funniest 2 engineer 3 enginer 4 enginere ) 12. 1 enginear 3 ) 13. 1 magazine magzine magazen 4 magizene develope 14. 1 develp 2 develup 4 develop estmate estamate 4 estemate 15. 1 estimate 3 biscut 4 biskut ) 16. 1 biscuit bisket (2) 17. 1 beleave 2 3 belive 4 beleve believe

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(2)29. 1 dominos2 dominoes3 domanoes4 domonoes(1)30. 1 mollasses2 molaces3 molases4 molasses

 $\mu$ ) 31. 1 decendent 2 descendant 3 desendent 4 decendant 1) 32. 1 decorate 2 decrate 3 deckorate 4 decarate

33. 1 sertenly

 $\langle f_i \rangle$ 

( <) 18. 1 certen

) 19. 1 appitite

/) 20. 1 telegram

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(3)	34. 1 35. 1			manufactering 3		manufactoring cematary		manufacturing sematary
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	57. 1 58. 1 59. 1	oppisite 2 barracks 2 exticy 2	2 2 2	opposit s barricks s ecstasy	3	aquanted opposite barraks extecy mahogony	444	aqquainted oppisit barax extisy mahogany
(1) (2) (4)	61. 1 62. 1 63. 1 64. 1	discernable cresent poultice garantee 2	$\frac{2}{2}$	disearnable	3 3 3	discernible cressent poltus gaurantee dimension	4 4	desernable cresant poltice guarantee demension
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(	82. 1 83. 1	comittee	2 2 2 2	cristalize commity amature bargain	3 3 3	cristlize committe amiture bargan	4	christlize committee ameture bargian

Directions: Answer easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

#### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## SPELLING

By W. H. Gray, K. S. T. C., Emporia, Kansas.

TOTAL NUMBER POINTS

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one of thesis Examp In	these is correct. Find at the left.  ole: (2) 1. grint this example the second	the correct one and 2. girl 3. 3. 3. 3. 4. 5. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	place the number bef gurl 4. girll belied correctly. Hen	s of the same word. Only ore this word in the paren- ce the figure "2" has been have exactly 15 minutes.
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	6. 1 library 7. 1 lettas 8. 1 gipsy 9. 1 gose 10. 1 electric	2 libery 2 lettuce 2 gypsy 2 gauze 2 electrict	3 libray 3 lettus 3 gipsey 3 gause 3 electrick	4 libary 4 lettes 4 jipsy 4 goze 4 eletric
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	16. 1 biscuit 17. 1 beleave 18. 1 certen 19. 1 appitite 20. 1 telegram	<ul><li>2 bisket</li><li>2 believe</li><li>2 surten</li><li>2 apatite</li><li>2 telagram</li></ul>	3 biscut 3 belive 3 certain 3 apitite 3 tellagram	4 biskut 4 beleve 4 sertan 4 appetite 4 tellgram
	<ul> <li>21. 1 cábbeg</li> <li>22. 1 bilding</li> <li>23. 1 autum</li> <li>24. 1 menchen</li> <li>25. 1 ake</li> </ul>	<ul><li>2 cabage</li><li>2 building</li><li>2 autumn</li><li>2 menchin</li><li>2 ache</li></ul>	<ul><li>3 cabbage</li><li>3 bulding</li><li>3 autom</li><li>3 mention</li><li>3 acke</li></ul>	4 cabbige 4 biulding 4 auttum 4 menshion 4 ach
	<ul><li>26. 1 balloon</li><li>27. 1 complete</li><li>28. 1 pumpkin</li><li>29. 1 dominos</li><li>30. 1 mollasses</li></ul>	<ul><li>2 bloon</li><li>2 compleat</li><li>2 punkin</li><li>2 dominoes</li><li>2 molaces</li></ul>	<ul><li>3 ballon</li><li>3 complet</li><li>3 pumkin</li><li>3 domanoes</li><li>3 molases</li></ul>	4 bollon 4 comeplet 4 punken 4 domonoes 4 molasses
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	(2)		1 apologise	2	apologize	3	appologize		apoligize
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	(J)		1 privilege	2	privilage	3	priviledge		privelage
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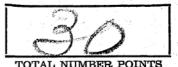
Directions: Answer easiest parts first. the Go back and work on the others. You will have exactly 15 minutes.

## EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## SPELLING

By W. H. Gray, K. S. T. C., Emporia, Kansas.



TOTAL NUMBER POINTS

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( 2) 16. 1 biscuit ( 2) 17. 1 beleave ( 3) 18. 1 certen ( 5) 19. 1 appitite ( 5) 20. 1 telegram	2 bisket 2 believe 2 surten 2 apatite 2 telagram	3 biscut 3 belive 3 certain 3 apitite 3 tellagram	4 biskut 4 beleve 4 sertan 4 appetite 4 tellgram
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Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

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## EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educa'ional Measurements and Standards Kansas State Teachers College, Emporia

## **SPELLING**

By W. H. Gray,

TOTAL NUMBER POINTS

4 certanly

K. S. T. C., Emporia, Kansas ...Town State . DIRECTIONS: In each row across the page you will find four spellings of the same word. Only one of these is correct. Find the correct one and place the number before this word in the parenthesis at the left. 2. girl 3. gurl 4. girll Example: 1. gril In this example the second word is the one spelled correctly. Hence the figure "2" has been placed in the parenthesis. Do all of the rows the same way. You will have exactly 15 minutes. 1. 1 several 2 severl 3 severel 4 sevral ( | 3 seprate 4 seperrate  $\mathfrak{D}$ 2. 1 seperate 2 separate 3. 1 enuf 2 enough 3 enought 4 enofe 3 sisers sissers 4 scissors 4. 1 sissors 3 sirplus 4 surplus serplus 5. 1 sirpluse 6. 1 library libery 3 libray 4 libary lettus 4 lettes 7. 1 lettas lettuce 3 gipsey 4 jipsy 8. 1 gipsy gypsy 9. 1 gose gauze gause 4 goze 2 electrict 3 electrick 10. 1 electric 4 eletric 11. 1 funnyest 2 funnest funest 4 funniest 3 enginer 4 enginere ) 12. 1 enginear engineer magzine 3 magazen 4 magizene 13. 1 magazine develup develope 4 develop 14. 1 develp 15. 1 estimate estamate 4 estemate estmate 2 bisket 3 biscut 4 biskut 16. 1 biscuit 3 belive 4 beleve 2) 17. 1 beleave 2 believe 3 certain 4 sertan 2 surten 18. 1 certen apatite 3 apitite 4 appetite 19. 1 appitite 3 tellagram 4 tellgram 20. 1 telegram 2 telagram 3 cabbage 4 cabbige 21. 1 cabbeg 2 cabage 2 building 3 bulding 4 biulding 22. 1 bilding 3 autom 4 auttum 23. 1 autum 2 autumn 3 mention 4 menshion 2 menchin 24. 1 menchen 3 acke 4 ach 2 ache 25. 1 ake 3 ballon 4 bollon 26. 1 balloon 2 bloon 3 complet 4 comeplet ) 27. 1 complete 2 compleat 3 pumkin 4 punken ) 28. 1 pumpkin 2 punkin 4 domonoes 3 domanoes ( 1 dominos 2 dominoes 3 molases 4 molasses 2 molaces 30. 1 mollasses 4 decendant 2 descendant desendent 31. 1 decendent 3 deckorate 4 decarate 2 decrate 32. 1 decorate

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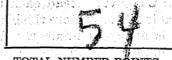
Directions: Follow the directions for each part.
The time to be allowed is
minutes for each of
parts I and II, and 3 minutes for each of parts III, IV, and V.

## EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# PRIMARY ACHIEVEMENT TEST By Mayme McCarter and Kathryn Kayser

K. S. T. C., Emporia, Kansas.



TOTAL NUMBER POINTS

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Teacher 7/11/22	midell Di	Managen State	Da	te Mar. 4
nd work straight d	lown in each row.	When you have wor	it where it belongs. ked the row of samp minutes for Part I.)	les, wait for the sig-
Samples	(1)	(6)	(11)	(16)
(a)	Add	Subtract /	Subtract	Multiply
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. 2	(2)	(7)		
	(2) Add	(7) Subtract	(12)	(17)
(b)	Add 6	1 6	Multiply	Divide /
Add	+0		3 × 6 =	Divide;
1 + 2			3 × 6 =	2)12
	(3) (3) (5) (4)	(8)		
	Add	Add	(13)	(18)
(c)	6 · · · · · · · · · · · · · · · · · · ·	2.3	Multiply	Divide
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	(4)	(9)	(14)	(19)
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	(5)	(10)	(15)	(20)
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word is left out where the blank is. The word left out is always a number. Write that number in (b) Two apples and one apple are ......... apples. the blank. When you have done the samples, (c) If Mary has two apples and eats one apple, wait for the signal to begin before you start on the

- 1. Three birds and two birds are .7. birds.
- 2. Four chairs and two chairs are where it belongs. Bog.sriado c tor
  - 3. Jack is six years old. Alice is four ( How much did Jack have? . . . . years old. Jack is . V. years older than Alice.
  - 4. Mother said she had hidden 14 Easter eggs. I have found 8. Q... are left for me to find.
  - 5. Helen had nine paper dolls. She cut 7 more. She had ./. .. dolls.
  - 6. Today is my birthday. I weigh 47 pounds. Last year I weighed 38 pounds. How many pounds have I gained? .4. .
  - 7. The book I am reading has 205 pages. I just finished 87 pages. How many pages have I to read? ...
  - 8. Jane had 184 words in her spelling list. She had learned to spell 96.

- (a) One boy and one boy are ....2.... boys.
- she has ..... apples left.

(Allow exactly 5 minutes for Part II.)

How many more had she to learn?

- 9. Jack put \$2.58 in the school bank. His father gave him \$1.29 more.
- 10. Walter sold 28 papers at 5c a copy. How much did he get for all? ....
  - 11. Mary read a storybook through in 4 days. Each day she read 27 pages. There are . . . . pages in the book.
  - 12. Billy's father paid 16 cents for postage stamps to mail some letters. Each stamp cost 2 cents. He mailed .... letters.
  - 13. Jean earns 7c each day drying dishes. How long will it take her to earn enough to buy a doll that costs \$3.80? . . . .
  - 14. Joe earned \$8.50 in 4 weeks. He earned . . . . per week.
  - 15. Eight boys bought a tent costing \$14.80. If they share equally, how much must each boy pay? ....

## PART III.

DIRECTIONS: Draw a line under the word which is the correct answer to each question. Samples:

- (a) Which can see? chair dog bed
- (b) Which one is red? ice orange (c) Which one burns? water stone (Allow exactly 3 minutes for Part III.)
- 1. Which one is green? dog
- 2. Which one can sing? rabbit dog fish

- 3. Which one can walk? ball boy nest house
- 4. Which one is tallest? tree daisy rose sunflower
- 5. Which one is white? coal brass gold snow
  - 6. Which can go fastest? train horse dog airplane
- 7. Which one swims? chicken duck stone robin
- 8. Which one has wheels? sled wagon doll top (4)
- 9. Which can we eat? clock table candle candy
- 10. Which is the oldest? father boy baby grand-father
- 11. Which one can hear? electric light woman picture snowball
- 12. Which one grows on a tree? apple potato carrot oyster
- 13. Which one can fly? building piano eagle truck
- 14. In which country is rice raised? Alaska England China Africa
- 15. Which is most valuable? clay diamonds cabbage
- 16. Which grows in a garden? rag weed spinach cactus
- 17. In which do you ride? veranda temple jinrikisha
- 18. Who crossed the ocean in an airplane? Columbus Lincoln Lindbergh
- -1-9. Edison is: a musician a minister an inventor
- 20. Great Britain is: an island an ocean a continent

## PART IV.

**DIRECTIONS:** Put a cross like this (+) before each sentence that is true. Before a sentence that is not true put a straight line like this (—)

Samples: (+) (a) Birds can fly.

(—) (b) Cows can sing.

( ) (c) A sheep can talk.

( ) (d) Snow is white.

Remember (+) means true and (—) means not

(Allow exactly 3 minutes for this part.)

- -) 1. A rabbit has a long tail.
- 2. The sun comes up at night.
- 3. Birds can sing.
  - 4. All apples are yellow.
- 5. I live in a house.
- ) 6. Boys like to play.
- 7. You must dress warm in win-
- 8. Trees are green in summr.
- ( ) 9. Ice is colder than fige.
- (+) 10. Christmas comes in the month of December.
- ( 11. Twelve is more than thirteen.
- ( -) 12. A monkey is larger than an elephant.
- (+) 13. Iron is heavier than cotton.
- (+) 14. Wednesday comes Thursday.
- (+) 15. People usually carry umbrellas when it rains.
- (4) 16. People sometimes light their homes with electricity.
- (4) 17. Automobiles are more expensive than potatoes.
- (-) 18. Patriotism is a love for one's country.
- (\_\_\_) 19. The medicine man of the Indian tribe is a highly respected member of the tribe.
- (\_\_\_)\_20\_The Eskimo inhabits the desert regions.

## PART V.

DIRECTIONS: First read the little story. Then read the sentences under the story and draw a line under the word or words which makes each cor-

Sample: Two birds had a nest in a tree. They sang all day. They sang because they were happy. In a few days there would be baby birds in the

- (a) Some birds had a: nest worm string(b) They were: sad angry happy
- (c) Little birds would be in the nest: in a day in a few days in many weeks

(Allow exactly 3 minutes for this part.)

# geria**k**ees zin iii - f

When Jack got up the ground was white with snow. He found his sled and went for a ride. Then he made a snow house.

- 1. Jack saw: the sky the snow the
- sled pony
- 3. He made a house of: brick snow

Mary and Billy went to see their grand-mother. She lived in the country. Billy liked to drive the horses. Mary liked to throw grain to the chickens.

- 4. Mary and Billy went to see their: uncle grand-mother aunt
- 5. She lived: in town in the city on a farm
- 6. Billy wanted to drive the: horses chickens goats
- 7. Mary liked to give the chickens: sand water feed

Tom had a dog and a cat. The dog was white with black spots. The cat was black with white spots. One day the dog ran away. Tom didn't see him for a week.

- 8. Tom's dog was: brown black black and white
- 9. Tom could not find his: cat hen dog
- 10. His dog came back in: a year seven days a month

# ministration of the second of

Alice had a birthday party. Her friends brought gifts to her. Mary gave her a doll that could go to sleep. Jane gave her a story book about a fairy queen. James gave her a top that would sing.

- 11. Mary gave Alice a: walking doll sleeping doll talking doll
- 12. James' gift was a: singing top jumping top bouncing top
- 2. He went for a ride on his: train 13. Jane gave Mary a book with stories about: Indians kings fairies

## an divini eno

Children have good times when school is out. They sometimes take trips to the mountains. Some children go to the country. Others go to the city and visit the zoo.

- 14. Children have fun: in cars in vacation winter
- 15. Some go to the: mountains sea-shore the meadows
- 16. Some children like: the stories the street cars the animals

A man who owned a store advertised for a boy to work for him. He wanted a helper who was industrious. Jack and John asked for the job. John was a boy who never wasted time. Jack played all day.

17. The man gave the job to: Jack Tohn

Directions: Follow the di-
rections for each part.
The time to be allowed is
5 minutes for each of
parts I and II, and 3 min-
utes for each of parts III,
IV, and V.

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Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# PRIMARY ACHIEVEMENT TEST By Mayme McCarter and Kathryn Kayser

K. S. T. C., Emporia, Kansas.

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TOTAL NUMBER POINTS

Name Kathalogn a Start	ulo own Lincoln	
Name Kathaloon g. Storb School Central	Age 2	Grade VI
Teacher	State 9/ansas	
T Cachiel	App 7	

PART I.

DIRECTIONS: Find the answer to each example and write it where it belongs. Begin at the top and work straight down in each row. When you have worked the row of samples, wait for the signal to begin before you start on the others. (Allow exactly 5 minutes for Part I.)

nar to begin before y	ou start on the other	G. (Milow Exactly b	min (11) shall	(16)
Samples	(1)	(6)		
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## PART II

DIRECTIONS: Read each line and think which word is left out where the blank is. The word left out is always a number. Write that number in the blank. When you have done the samples, wait for the signal to begin before you start on the others.

- 1. Three birds and two birds are .5... birds.
- 2. Four chairs and two chairs are . . . . chairs.
  - 3. Jack is six years old. Alice is four years old. Jack is . . 2. years older than Alice.
  - 4. Mother said she had hidden 14 Easter eggs. I have found 8. . . . are left for me to find.
  - 5. Helen had nine paper dolls. She cut 7 more. She had ..... dolls.
  - 6. Today is my birthday. I weigh 47 pounds. Last year I weighed 38 pounds. How many pounds have I gained? .9.
  - 7. The book I am reading has 205 pages. I just finished 87 pages. How many pages have I to read? ...
  - 8. Jane had 184 words in her spelling list. She had learned to spell 96.

## Samples:

- (a) One boy and one boy are ....2.... boys.
- (b) Two apples and one apple are \_3... apples.

(Allow exactly 5 minutes for Part II.)

How many more had she to learn?

- 9. Jack put \$2.58 in the school bank.

  His father gave him \$1.29 more.

  How much did Jack have?....
- 10. Walter sold 28 papers at 5c a copy. How much did he get for all?....
- 11. Mary read a storybook through in 4 days. Each day she read 27 pages. There are . . . . pages in the book.
- 12. Billy's father paid 16 cents for postage stamps to mail some letters. Each stamp cost 2 cents. He mailed . . . . letters.
- 13. Jean earns 7c each day drying dishes. How long will it take her to earn enough to buy a doll that costs \$3.80? ....
- 14. Joe earned \$8.50 in 4 weeks. He earned .... per week.
- 15. Eight boys bought a tent costing \$14.80. If they share equally, how much must each boy pay? ....

## PART III.

**DIRECTIONS:** Draw a line under the word which is the correct answer to each question. Samples:

- (a) Which can see? chair dog bed
- (b) Which one is red? ice orange apple (c) Which one burns? water stone coal (Allow exactly 3 minutes for Part III.)
  - 1. Which one is green? cat dog grass sheep
- 2. Which one can sing? rabbit dog fish bird

- 3. Which one can walk? ball boy nest house
- 4. Which one is tallest? tree daisy rose sunflower
- 5. Which one is white? coal brass gold snow
- 6. Which can go fastest? train horse dog airplane
- 7. Which one swims? chicken duck stone robin
- 8. Which one has wheels? sled wagon doll top
  - 9. Which can we eat? clock table candle candy
- 10. Which is the oldest?

  father boy baby grand-father
- 11. Which one can hear?
  electric light woman picture
  snowball
- 12. Which one grows on a tree? apple potato carrot oyster
- 13. Which one can fly? building piano eagle truck
- 14. In which country is rice raised?
  Alaska England China Africa
- 15. Which is most valuable? clay diamonds cabbage
- 16. Which grows in a garden?
  rag weed spinach cactus
- 17. In which do you ride? veranda temple jinrikisha
- 18. Who crossed the ocean in an airplane? Columbus Lincoln Lindbergh
- 19. Edison is:

  a musician a minister an inventor
- 20. Great Britain is:

  an island an ocean a continent

## PART IV.

**DIRECTIONS:** Put a cross like this (+) before each sentence that is true. Before a sentence that is not true put a straight line like this (—)

Samples: (+) (a) Birds can fly.

(—) (b) Cows can sing.

(—) (c) A sheep can talk.

(—) (d) Snow is white.

Remember (+) means true and (—) means not true.

(Allow exactly 3 minutes for this part.)

- (-) 1. A rabbit has a long tail.
- (+) 2. The sun comes up at night.
- (+) 3. Birds can sing.
- (—) 4. All apples are yellow.
- (+) 5. I live in a house.
  - (+) 6. Boys like to play.
  - (+) 7. You must dress warm in win-
  - (+) 8. Trees are green in summer.
  - (+) 9. Ice is colder than fire.
  - (★) 10. Christmas comes in the month of December.
  - (—) 11. Twelve is more than thirteen.
  - (---) 12. A monkey is larger than an elephant.
- (+) 13. Iron is heavier than cotton.
- (+) 14. Wednesday comes before Thursday.
- (+) 15. People usually carry umbrellas when it rains.
- (=) 16. People sometimes light their homes with electricity.
- (+) 17. Automobiles are more expensive than potatoes.
- (+) 18. Patriotism is a love for one's country.
- (+) 19. The medicine man of the Indian tribe is a highly respected member of the tribe.
- (—) 20. The Eskimo inhabits the desert regions.

## PART V.

DIRECTIONS: First read the little story. Then read the sentences under the story and draw a line under the word or words which makes each cor-

Sample: Two birds had a nest in a tree. They sang all day. They sang because they were happy. In a few days there would be baby birds in the

- (a) Some birds had a: nest worm string

(b) They were: sad angry happy(c) Little birds would be in the nest: in a day in a few days in many weeks

(Allow exactly 3 minutes for this part.)

## 3. Midda dallah sirau

When Jack got up the ground was white with snow. He found his sled and went for a ride. Then he made a snow house.

- 1. Jack saw: the sky the snow the
- 2. He went for a ride on his: train sled\_pony
- 3. He made a house of: brick

# 

Mary and Billy went to see their grand-mother. She lived in the country. Billy liked to drive the horses. Mary liked to throw grain to the chickens.

- 4. Mary and Billy went to see their: uncle grand-mother aunt
- 5. She lived: in town in the city on a farm
- 6. Billy wanted to drive the: horseschickens goats
- 7. Mary liked to give the chickens: sand water feed

Tom had a dog and a cat. The dog was white with black spots. The cat was black with white spots. One day the dog ran away. Tom didn't see him for a week.

- 8. Tom's dog was: brown black black and white
- 9. Tom could not find his: cat dog
- 10. His dog came back in: a year seven days a month

Alice had a birthday party. friends brought gifts to her. Mary gave her a doll that could go to sleep. Jane gave her a story book about a fairy queen. James gave her a top that would sing.

- 11. Mary gave Alice a: walking doll sleeping doll talking doll
- 12. James' gift was a: singing top jumping top bouncing top
  - 13. Jane gave Mary a book with stories about: Indians kings fairies

# Thirt a no m ${f V}$ relation ${f i}$

Children have good times when school is out. They sometimes take trips to the mountains. Some children go to the country. Others go to the city and visit the zoo.

- 14. Children have fun: in cars winter in vacation
- 15. Some go to the: mountains sea-shore the meadows
- 16. Some children like: the stories the street cars the animals

A man who owned a store advertised .for a boy to work for him. He wanted a helper who was industrious. Jack and John asked for the job. John was a boy who never wasted time. Jack played all day.

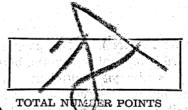
17. The man gave the job to: Jack JohnDirections: Follow the directions for each part. The time to be allowed is 5 minutes for each of parts I and II, and 3 minutes for each of parts III, IV, and V.

## EVERY PUPIL ŚĆHOŁARŚHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## PRIMARY ACHIEVEMENT TEST

By Mayme McCarter and Kathryn Kayser K. S. T. C., Emporia, Kansas.



Name Yemble Urhans	Town Lindan
School Notelly	Age 8 Grade Thuck
Teacher Ola Pulls	State Xanzos Date april 1930
Teacher	PART I

DIRECTIONS: Find the answer to each example and write it where it belongs. Begin at the top and work straight down in each row. When you have worked the row of samples, wait for the signal to begin before you start on the others. (Allow exactly 5 minutes for Part I.)

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	Add	Subtract	(12)	(17)
(b)	6 Add	16		
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## PART II.

**DIRECTIONS:** Read each line and think which word is left out where the blank is. The word left out is always a number. Write that number in the blank. When you have done the samples, wait for the signal to begin before you start on the

- 1. Three birds and two birds are . ). birds.
- 2. Four chairs and two chairs are . . . . . . . . . got, e chairs. walk should it enough it ett
  - 3. Jack is six years old. Alice is four years old. Jack is . . . years older than Alice.
  - 4. Mother said she had hidden 14 Easter eggs. I have found 8. ... are left for me to find.
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  - 6. Today is my birthday. I weigh 47 pounds. Last year I weighed 38 pounds. How many pounds have I gained? . .
  - 7. The book I am reading has 205 pages. I just finished 87 pages. How many pages have I to read? | S
  - 8. Jane had 184 words in her spelling She had learned to spell 96.

- (a) One boy and one boy are ....2.... boys.
- (c) If Mary has two apples and eats one apple, she has ........ apples left.

(Allow exactly 5 minutes for Part II.)

How many more had she to learn?

- 9. Jack put \$2.58 in the school bank. His father gave him \$1.29 more. How much did Jack have?
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- 13. Jean earns 7c each day drying dish-How long will it take her to earn enough to buy a doll that costs \$3.80?
- 14. Joe earned \$8.50 in 4 weeks. He earned ) | ?! per week.
- 15. Eight boys bought a tent costing \$14.80. If they share equally, how much must each boy pay?

PART III.

DIRECTIONS: Draw a line under the word which is the correct answer to each question. Samples:

- chair dog bed (a) Which can see?
- ice orange
- (b) Which one is red?(c) Which one burns? water stone (Allow exactly 3 minutes for Part III.)
- 1. Which one is green? cat dog grass sheep
- 2. Which one can sing? rabbit dog fish bird

- 3. Which one can walk? ball boy nest house
- 4. Which one is tallest? sunflower tree daisy rose
- 5. Which one is white? coal brass gold snow.
- 6. Which can go fastest? train horse dog airplane
- 7. Which one swims? chicken duck stone robin
- 8. Which one has wheels? sled wagon doll top
- 9. Which can we eat? clock table candle candy
- 10. Which is the oldest? father boy baby grand-father
- 11. Which one can hear? electric light woman picture snowball
- 12. Which one grows on a tree? apple potato carrot oyster
- 13. Which one can fly? building piano eagle truck
- 14. In which country is rice raised? Alaska England China Africa
- 15. Which is most valuable? clay diamonds cabbage
- 16. Which grows in a garden? rag weed spinach cactus
- 17. In which do you ride? veranda temple jinrikisha
- 18. Who crossed the ocean in an airplane? Columbus Lincoln Lindbergh
- 19. Edison is: a musician a minister an in-
- 20. Great Britain is: an island an ocean a continent

## PART IV.

**DIRECTIONS:** Put a cross like this (+) before each sentence that is true. Before a sentence that is not true put a straight line like this (—)
Samples: (+) (a) Birds can fly.

(→) (b) Cows can sing.
 (→) (c) A sheep can talk.
 (←) (d) Snow is white.

Remember (+) means true and (-) means not true. mies onen in bid skid skies is

(Allow exactly 3 minutes for this part.) ob a mi isan ad ni od bisov abde dimi

- ) 1. A rabbit has a long tail.
- 2. The sun comes up at night.
- 3. Birds can sing.
- (—) 4. All apples are yellow.
- 5. I live in a house.
- 6. Boys like to play.
- 7. You must dress warm in winl. Jack Barri üler ak ter.
- (+) 8. Trees are green in summr.
- 9. Ice is colder than fire.
- 10. Christmas comes in the month of December.
- ( -) 11. Twelve is more than thirteen.
- (-) 12. A monkey is larger than an elephant.
- (1) 13. Iron is heavier than cotton.
- ( ) 14. Wednesday comes before Thursday.
- (+) 15. People usually carry umbrellas when it rains.
- (+) 16. People sometimes light their homes with electricity.
- (→) 17. Automobiles are more ex-
- pensive than potatoes.

  (+) 18. Patriotism is a love for one's country.
- dian tribe is a highly respect-(†) 19. The medicine man of the In-
- ( ) 20. The Eskimo inhabits the desert regions.

## PART V.

**DIRECTIONS:** First read the little story. Then read the sentences under the story and draw a line under the word or words which makes each correct.

Sample: Two birds had a nest in a tree. They sang all day. They sang because they were happy. In a few days there would be baby birds in the nest.

- (a) Some birds had a: nest worm string
  (b) They were: sad angry happy
- (c) Little birds would be in the nest: in a day

in a few days in many weeks (Allow exactly 3 minutes for this part.)

3. Birds chi-

When Jack got up the ground was white with snow. He found his sled and went for a ride. Then he made a snow house.

- 1. Jack saw: the sky the snow the
- 2. He went for a ride on his: train şled pony
- 3. He made a house of: brick stone snow

II

Mary and Billy went to see their grand-mother. She lived in the country. Billy liked to drive the horses. Mary liked to throw grain to the chickens.

- 4. Mary and Billy went to see their: uncle grand-mother aunt
- 5. She lived: in town in the city on a farm
- 6. Billy wanted to drive the: horses chickens goats
- 7. Mary liked to give the chickens:

III.

Tom had a dog and a cat. The dog was white with black spots. The cat was black with white spots. One day the dog ran away. Tom didn't see him for a week.

- 8. Tom's dog was: brown black black
- 9. Tom could not find his: cat hen dog
- 10. His dog came back in: a year seven days a month

Tradity of about the Ville

Alice had a birthday party. Her friends brought gifts to her. Mary gave her a doll that could go to sleep. Jane gave her a story book about a fairy queen. James gave her a top that would sing.

- 11. Mary gave Alice a: walking doll sleeping doll talking doll
- 12. James gift was a: singing top jumping top bouncing top
- 13. Jane gave Mary a book with stories about: Indians kings fairies

V

Children have good times when school is out. They sometimes take trips to the mountains. Some children go to the country. Others go to the city and visit the zoo.

- 14. Children have fun: in cars in winter in vacation
- 15. Some go to the: mountainssea-shore the meadows
- 16. Some children like: the stories the street cars the animals

VI

A man who owned a store advertised for a boy to work for him. He wanted a helper who was industrious. Jack and John asked for the job. John was a boy who never wasted time. Jack played all day.

17. The man gave the job to: Jack

## Directions: Answer the easiest parts first. back and work on the others. You will have ex-

Montpelier.

26. Georgia has the largest area of any

state east of the Mississippi.

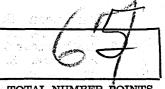
actly 20 minutes.

## EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## GEOGRAPHY

By J. B. Stroud, K. S. T. C., Emporia, Kansas.



TOTAL NUMBER POINTS

With valuable assistance from Kansas Geography teachers. ..Town .. School .. State ....A.M.M. -) 27. Ohio ranks second in wealth among DIRECTIONS: Read the following sentences carefully. If a statement is true, place a plus the states of the United States. ) 28. The capital of Oregon is Salem. (+) in the parenthesis in front of the statement, as in example A below. If the statement ) 29. Cape Town is a city in Africa. -) 30. Milwaukee is the capital of Wisconis false, make a minus (-) in the parenthesis in front of it as in example B. Make the + and 31. Birmingham, Alabama, is one of the the - small and clear. Examples: (+) A. Apples are good to eat.
(—) B. Potatoes grow on trees. leading cities in the production of 32. Indiana is a leading state in the pro-PART I. duction of iron ore. 1. Europe has no great cotton belt. 33. The St. Lawrence river flows north-2. North America has more people than any other continent. 34. Snow never falls in the West Indies. 3. Japan's chief export is tea. ) 35. The Island of Jamaica is in the Car-4. Egypt is a country in Africa. ibbean Sea. 5. The Po River flows across the south-The Rio Grande River is a natural ern part of Russia. boundary between Arizona and 6. The Thames is a river in southeast-Mexico. ern England. 37. The Mississippi River is navigable 7. The chief industry in England is agas far north as St. Paul. riculture. ) 38. New York is the greatest cotton ex-The Rhine river flows south through porting point in the United States. Germany. ) 39. The Amazon River empties into the 9. Moscow is a city in Poland. Atlantic Ocean. 10. Valparaiso is a city in Chile. ) 40. The Orinoco River is the largest river in South America. 11. Vienna is a city in Italy. 41. Argentina is similar to Kansas in (+) 12. The largest river in the world is the climate. Amazon. 42. Asia is called the "cradle of civiliza-—) 13. Peking is a city in Japan. tion." 14. The Nile flows south through Egypt. -) 43. The White Mountains are the larg-) 15. Ceylon is an island just off the coast est range of mountains east of the of South Africa. Mississippi. 16. The Andes is the largest mountain (1) 44. Pennsylvania is the second state in in Mexico. the United States in population. 17. Plains covered with rich grass in Argentina are called Tundras. PART II. DIRECTIONS: Place the number of the part 18. Belfast is a city in Ireland. which makes the best answer to the statement 19. Borneo is an island southeast of in the parenthesis before the statement. Indo-China. (3) The largest city in America is: 1. Detroit. -) 20. Death Valley is in California. 2. Washington. 3. New York. -) 21. The Missouri River touches Minne-4. Chicago. sota. In this sample "New York" is the correct an--) 22. Madrid is a city in southern France. swer. The number in front of the word "New 23. Georgia is the greatest cotton pro-York" is "3." The figure 3 has been placed in ducing state in America. the parenthesis. 24. Melbourne is a city in New Zealand. ) 25. The capital of New Hampshire is 3) 45. Vienna is located on the: 1. Po Riv-

er. 4. Mediterranean Sea. ( ) 46. A country that borders on the Med-

er. 2. Rhine River. 3. Danube Riv-

iterranean Sea is: 1. Rumania.

2. France. 3. Austria. 4. Bulgaria.

Africa. 2. Africa. 3. Australia. Africa. 2. Africa. 3. Australia.

4. Asia.

2. France. 3. Germany. 4. Holland. (1) 62. The most important export of North

America is: 1 potentials. 2. Australia.

America is: 1 potentials. 3. Australia. 4. Asia. America is: 1. petroleum. 2. of warmer than the northern part of con. 3. tobacco. 4. wheat. North America because: 1. it is (6) 63. The cork-oak trees are found in protected from the winds. 2. it is abundance in: 1. Switzerland. nearer the equator. 3. it has more coast line. 4. It is warmed by winds from the Gulf Stream. 64. Spitzbergen belongs to: 1. Norway. 3) 49. Very little coal is needed for manufacturing in Switzerland because: 1. there are few factories. 2. all mones at manufactured, articles, are shipped in. 3. the Swiss have harnessed the motiwaterfalls and turned their power Bosinto electricity. 100 4.5 the Swiss need \ ( ) 50. The rivers of Siberia are of limited commercial value because: 1. they 39 (1000) are always frozen over. 2. they are too shallow. 3. there are too many -তাৰ আট srapids.স.4.hthey flow north toward a ) land of snow and ice. (3) 51. Little is known about the Himalaya Mountains because: .31.5 they are as but to shut in with snow in 2 cpeople have - rad add ineverstried to explore them. 3. trav-) el is almost impossible. 4. there is a familiar s scarcity of food.) oid oif 2.38 % ( ) 52. South America is a sparsely settled continent because of: 12. hostile naold any and tives: 2. its surface cand climate. 3. few navigable rivers. 34. the jun--xe koffeeglesisere odi di droff woM .88 ( 📖 ) (3) 53. The United States gained control of and other Philippine of Islands: 111. by purchase. 2. by annexation. 3. as a result of the Spanish American War: 4. by a treaty made with the (/) 54. The capital of Polandis: 1. War--cultive isaw.s 2. Moscow.s 3. Lodz. 4. Reval.) (3) 55. An island city with canals for wash all streets is: p(1.4 Florence.d 2. Corinth.) out to 3. Venice. 4. Rome. 2. Corinta.)

(4) 56. The capital of Egyptais: 1. Alexaid state andria. 4. Cairo. south and a factorial and a facto (4) 67. The capital of Brazil is: 1. Santos. 2. Sao Paulo. 3. Bahia. 4. Rio de Janeiro.

The factories in the British Isles. have grown chiefly because of: 1. energetic people. 2. the presence of coal and iron ore. 3. cool climate. 4. small countries: 1 language in 59. The second country in Europe in manufacturing is: 1: Norway. 2. France. 3. Holland. 4. Germany. (3) 60. The Pyramids are found in: 1. Europe. 2. Australia. 3. Africa. 4. North America. (4) 61. The continent which has the great-

America is: 1. petroleum. 2. cot-

2. Portugal. 3. North America. 4. Russia.

2. Sweden. 3. Holland. 4. Denmark.

(3) 65. The Sahara Desert is in: 1. Asia. 20 July 2. Europe. 3. Africa. 4. Australia. (1) 66. A steppe is: 1. a flat plain with scanty grass. 2. an elevated plain. 3. a great region of hot grassland.

4. a marshy plain.
(3) 67. The chief export of Japan is:
1. bamboo. 2. rice. 3. silk. 4. tea. (3) 68. The Yangtze Rivers is in: 1. India.

2. Japan. 3. China. 4. Indo-China. 3) 69. The Himalaya Mountains are in:
1. Australia. 2. Africa. 3. Asia. 4. Europe.

(5) 70. The chief export of India is: 1. rice. 2. cotton 13. cloth. 4. sugar. 5. silk.

( H) 717. The chief export of Java is: 1. to-

()) 72. The capital of Argentina is:
1. Buenos Aires. 2. Rio de Janeiro. 3. Santos. 4. Colombia.

(3) 73. The highest mountain peak in Europe is: 1. Mt. McKinley. 2. Mt. Everest. 3. Mt. Blanc. 4. Mt. Aconcagua.

(3) 74. The Kimberly diamond mines are in: 1. Europe. 2. Asia. 3. Africa. 4. South America.

(4) 75. The Johannesburg gold mines are in: 1. Australia. 2. North America. 3. Asia. 4. Africa.

The greatest coal exporter in the world is: 1. France. 2. United States. 3. England. 4. Germany.

( ) 77. The Scandinavians live in: 1. France. 2. Germany. 3. Holland. 4. Norway and Sweden.

) 78. 1. The Kiel Canal. 2. The Suez Canal. 3. The Panama Canal. connects the Baltic Sea with the North Sea.

( ) 79. Locations of cities are determined by: 1. race. 2. nationality. 3. winds. 4. a break in the transportation.

( ) 80. The highest mountain peak in North America is: 1. Mt. Logan. 2. Mt. Rainier. 3. Mt. Shasta. 4. Mt. Mc-

Kinley.

(4) 81. Lake Titicaca is located in:

1. France. 2. India. 3. Chile. 4. Spain.

EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: the Answer easiest parts first. Go back and work on the others. You will have exactly 20 minutes.

colonial times.

uors.

Coolidge.

+) 12. The Puritans of Massachusetts Bay

der the administration of Calvin

( + ) 13. The Soldiers' Bonus was allowed un-

prohibited the use of alcoholic liq-

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## **AMERICAN HISTORY**

By W. H. Gray,

K. S. T. C., Emporia, Kansas.

TOTAL NUMBER POINTS

With valuable assistance from	그 한 사이트 그는 그는 사람들은 사람들은 사람들이 가장 그렇게 되는 것이 되었다. 그는 사람들이 되었다.
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	Town Address Address
School Local Or Mah.	
School	Age/ 2 Grade 7
Teacher Victor Murphy	State Africa Date of 14. 1930
reacher Ulchar Illurgoly	State Admir O. Date Office 4. 1930
The first contract $g$ is the $g$	(+) 14. The panic of 1837 was caused by
DIRECTIONS: Read the following sentences	the total failure of wheat, corn, and
carefully. If a statement is true, place a plus	Tangal Verbapotatoes.
(+) in the parethesis in front of the statement,	( + ) 15. The "carpet bagger" was a southern
as in example A below. If the statement is	politician who went north to gain political privileges.
false, make a minus (—) in the parenthesis in	political privileges.
front of it as in example B. Make the + and	(+) 16. Roosevelt as president was in favor
the — small and clear.	of the United States spending money
Examples: ( ) A. Apples are good to eat.	to reclaim desert lands by irrigation.  ( ) 17. Congress has the constitutional
(-1) B. Potatoes grow on trees.	power to lay a tax on any articles
하는 사람들이 사용하는 물을 내용하는 사람들이 가장 하는 사람들은 사람들이 모르는 사람들이 가장 하는 것이다.	exported from any state.
(+) 1. Our city population has increased	( ) 18. The "Liberator" was an abolitionist
faster than our rural population	paper published by William Lloyd
since 1860.  2. As a general policy the Democratic	Garrison.
Party has always stood for low tar-	( -) 19. The Ku Klux Klan was organized
	for the purpose of bringing the
3. The Non-Intercourse Act permitted	Southern States back into the Un-
trade with all countries except Eng-	Borren C. ion. while it is a secure of the
land and France.	( \( \rightarrow \)) 20. The American Federation of Labor
(-) 4. The Sixteenth Amendment gave the	organized laborers of separate
negroes the right to vote.	trades into local Unions.
(-) 5. The Alien law made it easier for	(十) 21. Woman Suffrage was granted by
foreigners to come to America.	the nineteenth amendment to the
(-) 6. It is generally accepted today that a	constitution.
state has the right to refuse to obey	(—) 22. Woman Suffrage legislation confer-
an act of the United States Congress	red citizenship on women.
if the state considers the act harm-	( \( \) 23. Th Alabama Claims were claims
ful to its welfare.	presented to Congress by the State of Alabama for damages done to
(+) 7. Great Britain enforced her Trade	property in the Civil War.
Laws more severely in the colonies	( \( \) 24. The Missouri Compromise provided
after the close of the French and	that Missouri should enter the un-
Indian War.	ion as a slave state but all territory
(-) 8. President Harding was opposed to	obtained from Louisiana west of
leasing government-owned oil lands	Missouri and north of 36 degrees
to private business concerns for the purpose of extracting the oil.	30 minutes should be free.
( ) 9. Maryland was the last state to rat-	(十) 25. The Hartford Convention met in
ify the Articles of Confederation.	1814 to provide a more effective
(+) 10. The President appoints judges to	trade agreement with France.
the United States Supreme Court.	
(-) 11. The colonies exported large quan-	PART II.
tities of manufactured goods during	DIRECTIONS: Place the number of the cor-

rect word in the parenthesis before the statement. Look carefully at this sample.

(3) The first president of the United States was: 1. Harding. Hamilton. 3. Washington. 4. Lincoln.

In this sample, "Washington" is the correct answer. The number in front of the word

"Washington" is 3. The figure 3 has been mation. "Carpet baggers." placed in the parenthesis. placed in the parenthesis.

(4) 26. America was discovered by: 1. Cortez. 2. Ponce de Leon. 3. La Salle. (3) 40. Which one of the following was a delegate to the First Continental delegate to the First Continental Congress? 1. Thomas Jefferson. 2. John Hancock. 3. Benjamin 4. Columbus. (121) 27. The Constitution of the United States was ratified in: (1) 1788. Franklin. 4. Patrick Henry. (2) 1787. (3) 1776. (4) 1789. (2) 28. The Mississippi River was explored (1) 41. The Kansas-Nebraska Bill was passed in: (1) 1861. by: 1. Samuel de Champlain. (3) 1864. (4) 1852. 2. Robert La Salle. 3. Francisco ( 中 ) 42. The year 1812 is noted for: 1. com-Coronado. 4. Ferdinand Magellan. promise. 2. victory on Lake Erie. (2) 29. George Washington was connected with: 1. Purchase of Louisiana. 3. Hartford Convention. 4. war with Canada. (2) 43. The X. Y. Z. Affair pertained to: bus ....... . 4. Gettysburg. . ...... ( ) 30. The New England colonies about 1765 derived most of their wealth 1. a secret organization formed in the North to free slaves. 2. an atfrom: 1. trading and fishing. tempt of French representatives to extort a bribe from men sent to repal december) 2. cotton manufactures. 3. banknevel at as ing. 4. flour milling. 5. dairy prosent us in France. 3. a secret agwaster and ducts. greement between France and Spain M beimbrod: to re-capture the territory north of (4) 31. The colonists resisted the Stamp Act JEO Of hothe St. Lawrence River. because: 1. the stamps were too costly. 2. France urged them to re-(2) 44. When America is spoken of as "A Melting Pot," it pertains to: 1. big sist. 3. they wished to separate delinerated from Great Britain. 4. they felt neithing manufacturing. 2. Americanizing they were being taxed without their of foreigners. 3. the many hot consent. 5. they wished to take resprings found in this country. venge for the Boston Massacre. -13 4. Southern states which become 2) 32. Which event happened the longest very hot in summer. time ago? 1. building of Panama (1) 45. One of the chief reasons why the 2. building of Roosevelt Puritans came to America was: 1. to Dam. 3. building of Baltimore and seek religious freedom. 2. to con-Ohio Railway. 4. building of Erie vert the Indians. 3. to get posses-Canal. sion of the land before the French ( / ) 33/ What is annexation? 1. annihilasettled it. tion of property. 2. loss of territory. ) 46. To arbitrate means: 1. to rule 3. addition of land. 4. an inauguraharshly. 2. to refuse to sell. 3. to tion. offer for sale. 4. to boycott. 5. to (2) 34. An armistice is: 1. a treaty. 2. the refer to disinterested parties for setsurrender of an army. 3. a temportlement. ary cessation of warfare. 4. an or-/ ) 47. Which of the following events came der from a court. 1. annexation of Texas. (2) 36. One part of Hamilton's financial scheme was to establish: 1. a U. S. 2. Mexican War. 3. administration of Zachary Taylor. 4. establishtreasury system as we have it toment of the Treasury System. day. 2. a U. S. Bank with the gov-(1) 48. As a general policy the Democratic Party has always: 1. stood for a high protective tariff. 2. stood for ernment as a stockholder. 3. a number of State Banks for the accommodation of the citizens of the various a tariff for revenue only. 3. been states. against tariff of any kind. (2) 37. Daniel Webster was associated with: 7 1. Dred Scott Decision. (3) 49. Cornwallis surrendered at: 1. Camfight against nullification. den. 2. Charleston. 3. Yorktown. 3. Clayton-Bulwer treaty. 4. Mis-4. Guilford Court House. (4) 50. A provision of the Compromise of souri Compromise. (/) 38. The Civil Service Reform was passed during the administration 1850 was: 1. Missouri should be admitted as a slave state. 2. all of: 1. Grover Cleveland. 2. Theoterritory taken from Mexico in the Mexican War should be free. 3. Caldore Roosevelt. 3. Andrew Jackson. 4. William Taft. ifornia should be admitted as a allowed the (3) 39. With which was Abraham Lincoln slave state. 4. a more stringent fugassociated? 1. Emancipation Proclaitive slave law should be passed.

EVERY PUPIL SCHOLARSHIP CONTEST

April 4, 1930

Directions: Answer the Bureau of Educational Measurements and Standards easiest parts first. Kansas State Teachers College, Emporia back and work on the AMERICAN HISTORY others. You will have ex-

By W. H. Gray,

actly 20 minutes. K. S. T. C., Emporia, Kansas. TOTAL NUMBER POINTS With valuable assistance from Kansas teachers of history. Marshall Town Lincoln High Age /3 Grade & Teacher Victor Murphy State Kanson Date April 4

PART I.

**DIRECTIONS:** Read the following sentences carefully. If a statement is true, place a plus (+) in the parethesis in front of the statement, as in example A below. If the statement is false, make a minus (—) in the parenthesis in front of it as in example B. Make the + and the — small and clear.

Examples: (+) A. Apples are good to eat.
(—) B. Potatoes grow on trees.

- 1. Our city population has increased faster than our rural population since 1860.
- 2. As a general policy the Democratic Party has always stood for low tar-
- 3. The Non-Intercourse Act permitted trade with all countries except England and France.
- (+)4. The Sixteenth Amendment gave the negroes the right to vote.

5. The Alien law made it easier for foreigners to come to America.

(—) 6. It is generally accepted today that a state has the right to refuse to obey an act of the United States Congress if the state considers the act harmful to its welfare.

(+) 7. Great Britain enforced her Trade Laws more severely in the colonies after the close of the French and Indian War.

( ≠) 8. President Harding was opposed to leasing government-owned oil lands to private business concerns for the purpose of extracting the oil.

+) 9. Maryland was the last state to ratify the Articles of Confederation.

- ( ) 10. The President appoints judges to the United States Supreme Court.
- -) 11. The colonies exported large quantities of manufactured goods during colonial times.
- 12. The Puritans of Massachusetts Bay prohibited the use of alcoholic liquors.
- ) 13. The Soldiers' Bonus was allowed under the administration of Calvin Coolidge. and the unit is worth

(+) 14. The panic of 1837 was caused by the total failure of wheat, corn, and potatoes.

(-) 15. The "carpet bagger" was a southern politician who went north to gain political privileges.

( +) 16. Roosevelt as president was in favor of the United States spending money to reclaim desert lands by irrigation.

( - ) 17. Congress has the constitutional power to lay a tax on any articles

exported from any state.

(+) 18. The "Liberator" was an abolitionist paper published by William Lloyd Garrison.

-) 19. The Ku Klux Klan was organized for the purpose of bringing the Southern States back into the Union.

( -) 20. The American Federation of Labor organized laborers of separate trades into local Unions.

) 21. Woman Suffrage was granted by the nineteenth amendment to the constitution.

) 22. Woman Suffrage legislation conferred citizenship on women.

) 23. Th Alabama Claims were claims presented to Congress by the State of Alabama for damages done to property in the Civil War.

( ) 24. The Missouri Compromise provided that Missouri should enter the union as a slave state but all territory obtained from Louisiana west of Missouri and north of 36 degrees 30 minutes should be free.

(+) 25. The Hartford Convention met in 1814 to provide a more effective trade agreement with France.

## PART II.

DIRECTIONS: Place the number of the correct word in the parenthesis before the statement. Look carefully at this sample.

(3) The first president of the United States was: 1. Harding. 2. Hamilton. 3. Washington. 4. Lincoln.

In this sample, "Washington" is the correct answer. The number in front of the word

"Washington" is 3. The figure 3 has been 30512 1750 mation. 2. "Carpet baggers." placed in the parenthesis. 3. 14th Amendment. 4. Dred Scott Charles and characters of the contracte ( † ) 26. America was discovered by: 1. Cortez. 2. Ponce de Leon. 3. La Salle. (2) 40. Which one of the following was a delegate to the First Continental Congress? 1. Thomas Jefferson. 2. John Hancock. 3. Benjamin Franklin. 4. Patrick Henry. 4. Columbus. (/\*) 27. The Constitution of the United States was ratified in: (1) 1788. (2) 1787. (3) 1776. (4) 1789. (7) (2) 41. The Kansas-Nebraska Bill was (2) 28. The Mississippi River was explored passed in: (1) 1861. (2) 1854. (3) 1864. (4) 1852. by: 1. Samuel de Champlain.
2. Robert La Salle. 3. Francisco (2) 42. The year 1812 is noted for: 1. com-Coronado. 4. Ferdinand Magellan. promise. 2. victory on Lake Erie. 29. George Washington was connected with: 71. Purchase of Louisiana. 2. Valley Forge. 3. X. Y. Z. Affair. 4. Gettysburg. 3. Hartford Convention. 4. war (2) 43. The X. Y. Z. Affair pertained to: with Canada. 4. Gettysburg. ( ) 30. The New England colonies about ming of 11 1765 derived most of their wealth Januaria the North to free slaves. 2. an atat Juganota tempt of French representatives to from: 1. trading and fishing. 2. cotton manufactures. 3, bankni shadhacextort a bribe from men sent to reping. 4. flour milling. 5. dairy products.

(6) 31. The colonists resisted the Stamp Act bus 4 out sentius in France. 3. a secret aggreement between France and Spain the territory north of because: 1. the stamps were too costly. 2. France urged them to retain out sist. 3. they wished to separate by a mail from Great Britain. 4. they felt the St. Lawrence River. (2) 44. When America is spoken of as "A Melting Pot," it pertains to: 1. big manufacturing. 2. Americanizing of foreigners. 3. the many hot they were being taxed without their consent. 5. they wished to take revenge for the Boston Massacre.
(3) 32. Which event happened the longest springs found in this country.

-131 viol 36 4. Southern states which become very hot in summer. ( / ) 45. One of the chief reasons why the Puritans came to America was: 1. to time ago? 1. building of Panama
Canal. 2. building of Roosevelt
Dam. 3. building of Baltimore and seek religious freedom. 2. to conyave the Ohio Railway. 4. building of Erie vert the Indians. 3. to get posses-( ) 33. What is annexation? 1. annihilasion of the land before the French god with settled it.

(5) 46. To arbitrate means: 1. to rule tion of property. 2. loss of territory. 3. addition of land. 4. an inauguraharshly. 2. to refuse to sell. 3. to tion. offer for sale. 4, to boycott. 5. to ( ) 34. An armistice is: 1. a treaty. 2. the -nits is refer to disinterested parties for setsurrender of an army. 3. a temportlement. They are of for ary cessation of warfare. 4. an or-(4) 47: Which of the following events came first: 1. annexation of Texas. der from a court. (2) 36. One part of Hamilton's financial had decode 2. Mexican War. 3. administration -(1) conscheme was to establish: 1. a U. S. of Zachary Taylor. 4. establishment of the Treasury System. treasury system as we have it today. 2. a U. S. Bank with the govesages of ernment as a stockholder. 3. a num-(2) 48. As a general policy the Democratic ber of State Banks for the accommo-Party has always: 1. stood for a high protective tariff. 2. stood for dation of the citizens of the various a tariff for revenue only. 3. been states. ( ) 37. Daniel Webster was associated with: 1. Dred Scott Decision.
2. fight against nullification. . all against tariff of any kind. ( 3) 49. Cornwallis surrendered at: 1. Camden. 2. Charleston. 3. Yorktown. 4. Guilford Court House. 3. Clayton-Bulwer treaty. 4. Mis-(4) 50. A provision of the Compromise of 1850 was: 1. Missouri should be -200 fill lo souri Compromise. ( ) 38. The Civil Service Reform was passed during the administration admitted as a slave state. 2. all of: 1. Grover Cleveland. 2. Theoterritory taken from Mexico in the dore Roosevelt. 3. Andrew Jack-Mexican War should be free. 3. Calson. 4. William Taft. ifornia should be admitted as a Mylich In (1) 39. With which was Abraham Lincoln associated? 1. Emancipation Proclaslave state. 4. a more stringent fugassociated? 1. Emancipation Proclaitive slave law should be passed.

## EVERY PUPIL SCHOLARSHIP CONTEST

April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## LANGUAGE

By J. B. Stroud, K. S. T. C., Emporia, Kansas. With valuable assistance from Kansas teachers of English.

TOTAL NUMBER POINTS

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DIRECTIONS: This test consists of a number of sentences like the following examples:

Example A. (3) Apples (1. grows, 2. grews, 3. grow) on trees.

Of the three words in the parenthesis, the one which makes the sentence correct is to be chosen. In this example the word "grow" makes a correct sentence: "Apples grow on trees." To show that this word makes the sentence correct, its number, "3," has been placed in the parenthesis before the sentence.

Example B. (1) (1. These, 2. Them, 3. That, 4. Them there) pictures are pretty.

In example "B" the one word, of those in the parenthesis, which makes the sentence correct is "These." This makes the sentence "These pictures are pretty." To show that "These" is the correct word in this sentence, place the figure "1" in the parenthesis before it.

Example C. (2) The boys (1. is, 2. are, 3. was, 4. ain't) playing ball.

In example "C" which word makes a correct sentence? Now write the number before it in the parenthesis.

In each sentence choose the one word, of those in the parenthesis, which makes the sentence correct. Then write its number in the parenthesis before the sentence. Write nothing but the number.

DO NOT BEGIN UNTIL THE SIGNAL TO START IS GIVEN.

- (Q) 1. (1. Us, 2. We) girls are going to the movie.
- 2. The dogs (1. is, 2. are, 3. am) barking.
- (3) 3. His wages (1. was 2. is, small.
- 4. Is that (1. her, 2. she)? (9)
- 5. The apple fell between her and
- (1. me, 2. I). 6. He has already (1. go, 3. gone).
- 7. I (1. written, 2. have wrote,

- 3. writed, 4. wrote) two letters today.
- (2) 8. It was (1. me, 2. myself, 3. I) who called you.
- (2) 9. The father called her and (1. he, 2. him, 3. himself).
- (2) 10. She was (1. borned, 2. born) in London.
- () 11. Children (1. like, 2. love, 3. likes) to go on picnics.
- ) 12. My apple is larger than (1. yours, 2. yourn).
- (2) 13. The girl divided her candy (1. between, 2. among) her four friends.
  (1) 14. Helen (1. will, 2. shall) be ten years
- years old tomorrow.
- (1. is when one gives, 2. means giving) to the poor.
- ( $\backslash$  ) 16. The murderer (1. admitted, 2. declared, 3. contended) he was guil-
- ty. (≺) 17. I (1. taken, 2. took, 3. tooked, 4. taked) the eggs to town.
- $(\mathfrak{Q})$  18. He gave it to John and (1. I, 2. me).
- (2) 19. Which is the (1. greatest, 2. most, 3. more) useful, gold or silver?
- 20. Neither she nor he (1. is, 2. are, 3. have been) rich.
- (2) 21. I did not see (1. none, 3. some).
- ( ) 22. His foot hurts (1. bad, 2. badly).
- 23. Both of (1. us, 2. we) boys are go-
- (9) 24. Both of them (1. is, 2. are, 3. am) dear to me.
- 25. The airplane has (1. flew, 2. flown, 3. flewed.)
- () ) 26. Mother, (1. shall, 2. will) I put more coal in the stove?
- ) 27. If I (1. were, 2. was) as large as you, I could do it too.
- (3) 28. The hook is (1. hisn, 2. himself's, 3. his).
- () 29. He is (1. John's, 2. Johns'. 3. Johns, 4. Johnses) brother.
- ( ) 30. He sat (1. beside, 2. besides) me.
- 31. I (1. remember of, 2. remember) being there.

sides) these. ( ) 58. We shall (1. try to, 2. try and) win 3) 34. The car hit the man (1. square, the game. 2. most square, 3. squarely). (3) 59. Our house is (1. het, 2. heat, 3 heated) with steam. ( ) 35. The whistle blew (1. loudly, 2. loud, 3. heated) with steam. 3. most loud). (2) 60. Dorothy sings (1. good, 2. well. ( 36. Has the bell (1. rang, 2. rung, 3. fine). 3. ringed)? ( 61. The soldiers have (1. come, 2. came, (1) 37. She said she felt (1. ill, 2. illy). 3. went). (2) 62. How many dishes have you (1. breaked, 2. broke, 3. broken, 4. braked)? (2) 38. It was (1. me, 2. I, 3. myself) who called him. (\) 39. Mother says that I (1. may, 2. can, () 63. The old woman (1. can, 2. can't, 3. cannot, 4. couldn't) hardly hear. 3. kin) go. (2) 40. My pencil is longer (1. an, 2. than, 3. then) yours.
(2) 41. I (1. kindly, 2. rather, 3. sorter) ( <u>9</u> ) 64. Will you pick (1. them, 2. those, 3. these) flowers beyond the brook expected it. for me? (3) 65. The boys have (1. ate, 3. eaten) their supper. ( \ ) 42. If it (1. were, 2. was) to rain he would go. (3) 43. There (1. be, 2. am, 3. are, 4. is)  $(\ \ \ \ \ \ )$  66. (1. Whom, 2. Who) did you see seven girls here. there? ( 2) 44. He died (1. with, 2. of) pneumonia. (2) 67. (1. Whom, 2. Who) was elected? (2) 45. He got (1. off, 2. off of, 3. from off (1) 68. I am not so tall as (1. she, 2. her, of) the platform. 3. herself) as a still evoluted alwarings no (5) 46. Do you know who (1. done, 2. did, (2) 69. The child has (1. sit, 2. sat, 3. set, 4. setted) down.

(1) 70. The teacher (1. teached, 2. learned, 3. taught) her pupils. 3. had did) it? (2) 47. Everyone (1. were, 2. was, 3. have been) at school today. (2) 48. Every boy knew (1. his, 2. their) ( ) 71. I like (1. this, 2. these, 3. those) kind of apple. lessons. () 49. I (1. saw, 2. seen, 3. seed) him do (2) 72. The man said, "I will (1. lay, 2. lie) eday d**it.** ( ( ) 50. Neither of the two (1. write, 2. written, 3. writes, 4. have writdown." (\) 73. The man (1. sat, 2. set, 3. sit) on a bench. ten) well. (3) 51. The boys (1. is, 2. was, 3. were) (1) 74. The balloon (1. burst, 2. bursted, playing in the garden. rtoo z z 3. busted). Sylaw (13. olegisme) ( ) 52. Jack, (1. wasn't, 2. weren't, 3. was, (2) 75. He (1. sit, 2. sat, 3. set) the bucket on the ground. et on the ground.
(2) 76. (1. Can, 2. May, 3. Kin) I write 4. aren't) you in school yesterday? ( ) 53. James's hat (1. blew, 2. blown, 3. blowed) off. with your pencil? (3) 54. George (1. beginned, 2. begun, (2) 77. She (1. don't, 2. doesn't, 3. do not) 3. began) reading. know her lessons. (2.) 55. The boy has (1. ran, 2. run, 3. runned) a mile. ( 78. The hen is (1. setting, 2. sitting) on sixteen eggs. Frank B. Baka B. S. KILTU & GIVEL ir ve iku je gardini ili kalandari ili derbiji ili je ikuwa.

to:

Sic

.\$ 15°

( ) 32. Peaches are (1. plentiful, 2. plen- ( ) 56. The boy (1. sat, 2. set, 3. ty) this season.

4. seated) himself under the tree.

( 2) 33. I have many books (1. beside, 2. be-

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Peddet Milliand de College (1987) de College (1987) Transport de College (1987) de College Transport de College (1987) de College

Bradensche Bragericher bei gefall in

3. sit,

(3) 57. We (1. have got, 2. have) measles.

## EVERY PUPIL SCHOLARSHIP CONTEST

Directions: Answer the back and work on the others. You will have exactly 15 minutes. April 4, 1930

Bureau of Educational Measurements and Standards
Kansas State Teachers College, Emporia

# LANGUAGE (1)

By J. B. Stroud,

K. S. T. C., Em	poria, Kansas. TOTAL NUMBER POINTS
With valuable assistance from	Kansas teachers of English.
(je) 60. Artily dees (j. 1900), Ja vidi	The second of th
Name Irvin Petterson	Town Lincoln
School Lina lu In Nigh	Age Grade
Teacher Mis Roll	State Dy anas Date apml
DIRECTIONS: This test consists of a number	3. writed, 4. wrote) two letters to-
of sentences like the following examples:	day.
	(3) 8. It was (1. me, 2. myself, 3. I) who
Example A. (3) Apples (1. grows, 2. grews,	called you.
3. grow) on trees.	$(\mathcal{D})$ 9. The father called her and (1. he,
Of the three words in the parenthesis, the	2. him, 3. himself).
one which makes the sentence correct is to be	(2) 10. She was (1. borned, 2. born) in
chosen. In this example the word "grow" makes	London.
a correct sentence: "Apples grow on trees." To	( // ) 11. Children (1. like, 2. love, 3. likes)
show that this word makes the sentence cor-	to go on picnics.  (/) 12. My apple is larger than (1. yours,
rect, its number, "3," has been placed in the	2. yourn).
parenthesis before the sentence.	(2) 13. The girl divided her candy (1. be-
Example B. (/) (1. These, 2. Them, 3. That,	tween, 2. among) her four friends.
4. Them there) pictures are pretty.	(2) 14. Helen (1. will, 2. shall) be ten years
In example "B" the one word, of those in the	years old tomorrow.
parenthesis, which makes the sentence correct	(2) 15. Charity (1. is when one gives,
is "These." This makes the sentence "These	2. means giving) to the poor.
pictures are pretty." To show that "These" is	(/) 16. The murderer (1. admitted, 2. de-
the correct word in this sentence, place the fig-	clared, 3. contended) he was guil-
ure "1" in the parenthesis before it.	(2) 17. I (1. taken, 2. took, 3. tooked,
Example C. (2) The boys (1. is, 2. are,	4. taked) the eggs to town.
3. was, 4. ain't) playing ball.	18. He gave it to John and (1. I,
	2
In example "C" which word makes a correct	(3) 19. Which is the (1. greatest, 2. most,
sentence? Now write the number before it in the parenthesis. Language and no se	3. more) useful, gold or silver?
na kata ali ny ari ny ara-ara-ara-ara-ara-ara-ara-ara-ara-ara	( / ) 20. Neither she nor he (1. is, 2. are,
In each sentence choose the one word, of	3. have been) rich.
those in the parenthesis, which makes the sen-	21. I did not see (1. none, 2. any,
tence correct. Then write its number in the	
parenthesis before the sentence. Write noth-	
ing but the number.	( ) 23. Both of (1. us, 2. we) boys are go-
DO NOT BEGIN UNTIL THE SIGNAL TO	ing.
START IS GIVEN.	24. Both of them (1. is, 2. are, 3. am)
	dear to me. (2) 25. The airplane has (1. flew, 2. flown,
(2) 1. (1. Us, 2. We) girls are going to	
the movie.	(/) 26. Mother, (1. shall, 2. will) I put
(2) 2. The dogs (1. is, 2. are, 3. am)	more coal in the stove?
barking.	(/) 27. If I (1. were, 2. was) as large as
(3) 3. His wages (1. was 2. is, 3. are)	you, I could do it too.
small.	(3) 28. The hook is (1. hisn, 2. himself's,
4. Is that (1. her, 2. she)?	3. his).
5. The apple fell between her and	29. He is (1. John's, 2. Johns', 3. Johns', 4. Johnses) brother
(1. me, 2. 1).	/ / SO II / / I - I - O J - I - I
(3) 6. He has already (1. go, 2. went,	(/) 30. He sat (1. beside, 2. besides) me.
3. gone).	(2) 31. I (1. remember of, 2. remember)

being there.

(// ) 7. I (1. written, 2. have wrote,

(/) 32. Peaches are (1. plentiful, 2. plen- (4) 56. The boy (1. sat, 2. set, ty) this season. 4. seated) himself under the tree. (2) 33. I have many books (1. beside, 2. be-(2) 57. We (1. have got, 2. have) measles. sides) these. (3) 34. The car hit the man (1. square, (3) 58. We shall (1. try to, 2. try and) win the game. 2. most square, 3. squarely). (3) 59. Our house is (1. het, 2. heat, 3. heated) with steam. 2. most square, 3. squarely).

( ) 35. The whistle blew (1. loudly, 2. loud, 3. most loud). (2) 60. Dorothy sings (1. good, 2. well, (-) 36. Has the bell (1. rang, 2. rung, 3. ringed)? (/) 37. She said she felt (1. ill, 2. illy). 3. fine). ( ) 61. The soldiers have (1. come, 2. came, 3. went). (3) 62. How many dishes have you (1. breaked, 2. broke, 3. broken, (2) 38. It was (1. me, 2. I, 3. myself) who called him. ('')' 39. Mother says that I (1. may, 2. can, 4. braked)? —) 63. The old woman (1. can, 2. can't, 3. kin) go. (3. The old woman (3. ) hardly hear. (2) 40. My pencil is longer (1. an, 2. than, (1. them, 2. those, 3. then) yours. (2) 41. I (1. kindly, 2. rather, 3. sorter) 3. these) flowers beyond the brook for me? (2) 42. If it (1. were, 2. was) to rain he (\*\*) 65. The boys have (1. ate, would go. 3. eaten) their supper. (3) 43. There (1. be, 2. am, 3. are, 4. is) ( ) 66. (1. Whom, 2. Who) did you see there? seven girls here. (2) 44. He died (1. with, 2. of) pneumonia. (1. Whom, 2. Who) was elected? ( /) 45. He got (1. off, 2. off of, 3. from off (----) 68. I am not so tall as (1. she, 2. her, of) the platform. (news) 69. The child has (1. sit, 2. sat, 3. set, 4. setted) down. (2) 46. Do you know who (1. done, 2. did, 3. had did) it? (Q) 47. Everyone (1. were, 2. was, 3. have 70. The teacher (1. teached, 2. learned, 3. taught) her pupils. been) at school today. (9/) 48. Every boy knew (1. his, 2. their) 71. I like (1. this, 2. these, 3. those) kind of apple.

(2. The man said, "I will (1. lay, 2. lie) down" and lessons. ( / ) 49. I (1. saw, 2. seen, 3. seed) him do charette St electronic de vice guilfe (1. write, down." 2. written, 3. writes, 4. have written) well. (--) 73. The man (1. sat, 2. set, 3. sit) on a bench. (3) 51. The boys (1. is, 2. was, 3. were) (\_\_\_) 74. The balloon (1. burst, 2. bursted, playing in the garden. retroo 's a 3. busted). Halder "Q" alore and ( ) 52. Jack, (1. wasn't, 2. weren't, 3. was, ( 3. set) the buck-4. aren't) you in school yesterday? et on the ground. . Fixed having add (/) 53. James's hat (1. blew, 2. blown, (\_\_\_\_) 76. (1. Can, 2. May, 3. Kin) I write 3. blowed) off. with your pencil? (3) 54. George (1. beginned, 2. begun, ( -) 77. She (1. don't, 2. doesn't, 3. do not) .(yibada**3. began) reading.** 1984 (98) -died etial/know her lessons. Tolled granificand (2) 55. The boy has (1. ran, 2. run, (\_\_\_) 78. The hen is (1. setting, 2. sitting) OT JAKEN Sixteen eggs. HOBE TON OC 3. runned) a mile. (1977) Bit Both of Chem (1. is all are, 2. am) SHART IS CHYBN. sain et sreb The chainer has (i. flow. i. hows. it (i. Us, 12. We), girls are point to 28. Modes, (in deal), 2 will) I put more out in the day dure? The movie: 2. The dogs (I. is B. are, D. am) The state of the s สูงได้เหน้า as spend to (any in the sould it) for Marchine 3. He barrey (I. were 2. In Tarret 5 (eds & god I) inii W A (1) Ed. Hall Hall (E. Fakari). B. Jaharik E. Fahasi S. Libares) brother K.) 2012 Ether E. Earleis, J. Englisher) Dyn. Ses van geomied Hei ween odit d. (1. pus, 2. It.) Br He, bas already (I. gs, 2. vest)

T. I. Miller, willes, ashing the tar

(radoceran 11 ) is interested it in respect to

## EVERY PUPIL SCHOLARSHIP CONTEST

April 4, 1930

Directions: the Answer easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

> 3. gone). 7. I (1. written,

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# LANGUAGE

By J. B. Stroud, K. S. T. C., Emporia, Kansas.

(2) 31. I (1. remember of, 2. remember)

being there.

TOTAL NUMBER POINTS

With valuable assistance from	Kansas teachers of English.
- Mark & Juras Herrich Mittel & Mark	
Name Madanna Malen	Town Isseels
School Line alm Ju Kigh	Age 73 Grade SEL
Teacher Miss Rase	State Tansas Date Opril 4
DIRECTIONS: This test consists of a number of sentences like the following examples:	3. writed, 4. wrote) two letters to-
Example A. (3) Apples (1. grows, 2. grews, 3. grow) on trees.	8. It was (1. me, 2. myself, 3. I) who called you.  (5) 9. The father called her and (1. he,
Of the three words in the parenthesis, the one which makes the sentence correct is to be	2. him, 3. himself). (2) 10. She was (1. borned, 2. born) in
chosen. In this example the word "grow" makes a correct sentence: "Apples grow on trees." To show that this word makes the sentence cor-	London.  ( / ) 11. Children (1. like, 2. love, 3. likes) to go on picnics.
rect, its number, "3," has been placed in the parenthesis before the sentence.	(/) 12. My apple is larger than (1. yours, 2. yourn).
Example B. ( / ) (1. These, 2. Them, 3. That, 4. Them there) pictures are pretty.	(2) 13. The girl divided her candy (1. between, 2. among) her four friends. (1) 14. Helen (1. will, 2. shall) be ten years
In example "B" the one word, of those in the parenthesis, which makes the sentence correct	years old tomorrow.  (2) 15. Charity (1. is when one gives, 2. means giving) to the poor.
is "These." This makes the sentence "These pictures are pretty." To show that "These" is the correct word in this sentence, place the figure "1" in the parenthesis before it.	(/) 16. The murderer (1. admitted, 2. declared, 3. contended) he was guilty.
Example C. (2) The boys (1. is, 2. are, 3. was, 4. ain't) playing ball.	(2) 17. I (1. taken, 2. took, 3. tooked, 4. taked) the eggs to town.  (1) 18. He gave it to John and (1. I,
In example "C" which word makes a correct sentence? Now write the number before it in the parenthesis.	2. me). (3) 19. Which is the (1. greatest, 2. most, 3. more) useful, gold or silver? (3) 20. Neither she nor he (1. is, 2. are,
In each sentence choose the one word, of those in the parenthesis, which makes the sen-	3. have been) rich. (②) 21. I did not see (1. none, 2. any,
tence correct. Then write its number in the parenthesis before the sentence. Write nothing but the number.	3. some).  (
DO NOT BEGIN UNTIL THE SIGNAL TO START IS GIVEN.	(2) 23. Both of (1. us, 2. we) boys are going. (2) 24. Both of them (1. is, 2. are, 3. am)
	dear to me.  (2) 25. The airplane has (1. flew, 2. flown,
(2) 1. (1. Us, 2. We) girls are going to	3. flewed.)
the movie. ( 2) 2. The dogs (1. is, 2. are, 3. am)	(/) 26. Mother, (1. shall, 2. will) I put more coal in the stove?
barking. (3.) 3. His wages (1. was 2. is, 3. are)	27. If I (1. were, 2. was) as large as you, I could do it too.
small. (//) 4. Is that (1. her, 2. she)?	(3) 28. The hook is (1. hisn, 2. himself's, 3. his).
( / ) 5. The apple fell between her and	( / ) 29. He is (1. John's, 2. Johns', 3. Johns, 4. Johnses) brother.
(1. me, 2. I). 6. He has already (1. go, 2. went,	(/) 30. He sat (1. beside, 2. besides) me.

2. have wrote,

1) 32. Peaches are (1. plentiful, 2. plen- (...) 56. The boy (1. sat, 2. set, 3. sit, tv) this season.

4. seated) himself under the tree. 2) 33. I have many books (1. beside, 2. be-(2) 57. We (1. have got, 2. have) measles. sides) these. ( / ) 58. We shall (1. try to, 2. try and) win the game. (3) 59. Our house is (1. het, 2. heat, (/) 35. The whistle blew (1. loudly, 2. loud, 3. heated) with steam. 3. most loud). (3) 60. Dorothy sings (1. good, 2. well, (2) 36. Has the bell (1. rang, 2. rung, 3. fine). 3. ringed)? ( ) 61. The soldiers have (1. come, 2. came, (/) 37. She said she felt (1. ill, 2. illy). 3. went). (3) 62. How many dishes have you (1. breaked, 2. broke, 3. broken, 4. braked)? 38. It was (1. me, 2. I, 3. myself) who called him. () 39. Mother says that I (1. may, 2. can, (/) 63. The old woman (1. can, 2. can't, 3. cannot, 4. couldn't) hardly hear. 3. kin) go. (2) 40. My pencil is longer (1. an, 2. than, 3. then) yours. (2.) 64. Will you pick (1. them, 2. those, 3. these) flowers beyond the brook (2) 41. I (1. kindly, 2. rather, 3. sorter) expected it. wow hallow for me? (3) 65. The boys have (1. ate, 2. eat, 2. eat, 3. eaten) their supper and their supper and the control of the c 42. If it (1. were, 2. was) to rain he would go. (3) 43. There (1. be, 2. am, 3. are, 4. is) (1) 66. (1. Whom, 2. Who) did you see there?
(2) 67. (1. Whom, 2. Who) was elected? seven girls here. .no. 100 (1) 44. He died (1. with, 2. of) pneumonia. (1.6) 45. He got (1. off, 2. off of, 3. from off (1/) 68. I am not so tall as (1. she, 2. her, of) the platform. 3. herself). Sa only syrous desired sixed (2) 46. Do you know who (1. done, 2. did, (2) 69. The child has (1. sit, 2. sat, 3. set, 3. had did) it? (2) 47. Everyone (1. were, 2. was, 3. have 4. setted) down. (3) 70. The teacher (1. teached, 2. learned, 3. taught) her pupils. been) at school today. ( ) 48. Every boy knew (1. his, 2. their) ( ) 71. I like (1. this, 2. these, 3. those) kind of apple. lessons. lessons.
(/) 49. I (1. saw, 2. seen, 3. seed) him do ( 2) 72. The man said, "I will (1. lay, 2. lie) or rit. Conformitus (3) 50. Neither of the two (1. write, 2. written, 3. writes, 4. have writdown." ( /) 73. The man (1. sat, 2. set, 3. sit) on a bench. seten) well, a god (credict de (3) 51. The boys (1. is, 2. was, 3. were) (5) 74. The balloon (1. burst, 2. bursted, 3. busted). (2. sat, 3. set) the buckplaying in the garden. (1. wasn't, 2. weren't, 3. was, 4. aren't) you in school yesterday? et on the ground. blandament of (/) 53. James's hat (1. blew, 2. blown, (2) 76. (1. Can, 2. May, 3. Kin) I write with your pencil? 3. blowed) off. (3) 54. George (1. beginned, 2. begun, (2) 77. She (1. don't, 2. doesn't, 3. do not) 3. began) reading. know her lessons.

(2) 78. The hen is (1. setting, 2. sitting) (2) 55. The boy has . (1. ran, 2. run, 3. runned) a mile. OT LAKO on sixteen eggs. Manga 1000 00 the deficiency (i.e., a gray, 2, aga) WART IS GEVEN. doar to mil. Problem de host (1 down 11 Benku Torons and it is the second of in the tier 2, We still are contribe S. The dept (L. is, fi see, S. acr) RE ORDER EN COME TO CONTROL OF A STRUCTURE OF THE CONTROL OF THE C 3, TH: redges (In west files, 3 ere)

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## EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

the Answer easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Directions:

THEFT

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## READING By W. H. Gray,

TOTAL NUMBER POINTS

K. S. T. C., Emporia, Kansas. With valuable assistance from Kansas teachers of reading.

Name Muna (Mar Puli)	A Town Incon
School lientral	아는 사용물을 가는 축하다는 결 중앙이어에 대상하다는 그런 사람들이 없는 그는 그렇게 하는 사람이 되는 것 같습니다.
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DIRECTIONS. This is a test in Silent Readir	

TIONS: This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-fead a paragraph to find the correct answers. Hery appropriate was

## Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? Virginia 2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is "school." Hence a "2" has been nord soon m bliff, a placed before that statement.

3. (1) How did the boy travel? 1. on foot. a on old 2. on horseback. 3. on skates. 4. by automobile. 5. by horse and buggy. What is the correct answer to question No. 3? Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes.go 206 & .30g Meg. wheller even

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an old-

fashioned rail fence. (3) Joe liked to ride with his: 1. cousin. 2. dog. 3. father. 4. playmates. 5. mother.

( 2) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.

3. (1) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

## II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

4. (3) The three boys were: 1. faithful. 2. industrious. 3. lazy. 5. handsome.

5. ( 2 ) They lived in the: 2. country. 3. city. 4. village.

6. (3) The king needed a: 1. baker. 2. gardner. 3. caretaker. 4. hunter.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

7. (3) The dragon-flies flew like: 1. robins. 2. locusts. 3. airplanes. The bond 5. fairies.

8. (2) The time of day was: 1. early morning. 2. near noon. 3. late afternoon. 4. evening. 5. night.

9. (4) The big dragon-fly was: 2. green. 3. ugly. 4. 3. ugly. 2. green. 4. beautiful. 5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

- 10. ( ) Birds should be given water in winter because: 1. they need a bath.
  2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.
- 11. (Y) The best way to feed the birds is to put the crumbs: 1. on the snow.
  2. on the open ground. 3. in a dish on the ground. 4. in a box on a post.
- 12. (2) Cats can catch birds more easily when the birds are: 1. on a post.
  2. on the ground. 3. flying. 4. sitting in a tree.

## V.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

- 13. (4) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.
- 14. ( ) She was taught to: 1. play ball.
  2. ride horseback. 3. make bead ornaments. 4. jump the rope.
  5. wear moccasins.

them, and a dish crops. 3. many horses. 4. herds of buffalo. 5. slaves.

## VI.

In the early days of our country, the old stagecoach carried Uncle Sam's mail. stagecoach, drawn by four mules, lumbered along at the rate of six miles per hour, travelling three thousand miles in about five hundred Three thousand miles is about the distance from coast to coast across the United States. After railroads were built across the country, Uncle Sam sent his mail by railway trains. Fast trains steamed over the rails at the rate of thirty miles an hour, making the trip across the continent in about one hundred hours. After the world war, Uncle Sam began using the airplane to help carry the mail. Today airplanes fly overhead at the rate of one hundred miles per hour, crossing the country in thirty hours.

- 16. (以) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
- 17. (3) A stage coach traveled about:

  1. nine miles per hour. 2. thirty
  miles per hour. 3. six miles per
  hour. 4. one hundred miles per
  hour. 5. twelve miles per hour.
- 18. (5) The airplane was used to carry mail: 1. before the World War.
  2. during the World War. 3. after the World War.

## r in winding VII. r wrattend

Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

19. (5) Whom did Boris save? 1. girl. 2. lady. 3. pet. 4. dog. 5. boy.

20. (2) Boris rescues people by: 1. barking at them. 2. tearing their bathing suits. 3. dragging them to shore. 4. preventing them from entering the water.

21. (3) The Newfoundland is: 1. small and wiry. 2. afraid of cats. 3. large and strong. 4. very short-haired. 5. long and lanky.

## VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one with the rotted tomato remained until all the others were sold. Then I removed the spoiled tomato. That basket contained at least a dozen more good tomatoes than any of the others, yet the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

22.  $(\mathcal{P})$  The tomato at the top of the basket had: 1. a very smooth skin. 2. a decayed spot. 3. deep grooves. 4. green spots. 5. a large stem.

23. ( 4) Baskets of tomatoes which sell readily are those which: 1. contain the most fruit. 2. have beautiful decorations. 3. have blemishes on the fruit. 4. have perfect fruit.

24. (4) The material tested was: 1. wheat. 2. iron ore. 3. sugar. 4. garden produce.

## IX.

The breaking of the ice on the large northern rivers has some peculiar features. suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in, trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating ice drifted ashore.

ashore.

25. (3) The ice breaks into: 1. tiny pieces.
2. ice-bergs. 3. cubes. 4. thin slices.
5. huge blocks.
26. (1) The banks are cut away by: 1. ice moving freely. 2. blocked ice.
3. fast flowing water. 4. ice freez-ing auddenly

ing suddenly.

27. ( ) What are the river banks covered with marks on record in the sheriff's with?

28. sent to the criminal. 4. compared with marks on record in the sheriff's office.

29. ( ) What are the river banks covered with marks on record in the sheriff's office.

21. The showing water. 4. Ite freezeron in the wspapers. 22. Published in the wspapers. 3. sent to the criminal. 4. compared with marks on record in the sheriff's office.

21. ( ) What are the river banks covered with marks on record in the sheriff's office.

22. ( ) What are the river banks covered with marks on record in the sheriff's office. vargerig (§ 5. snow. 12 harded to

The sense of time as we know it seems to be think over the happy days of youth gone by. under her father's displeasure, and had no for-

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to spring when their victim again comes into sight.

28. (4) Which animals have a notion of the very near future? 1. those that eat grass. 2. those that live in the ground. 3. those raised by man. 4. those that kill other animals. 5. those that live in trees.

Most of the lower animals: 1. fear the future. 2. have memories of the past. 3. have little conception of the future. 4. think continuously of tomorrow.

When the prey disappears animals: 1. spring at once. 2. run away.
3. get very nervous. 4. get ready to spring when the prey reappears. 5. lie down and sleep.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. (2) The imprint of automobile tires is: 1. no help in detecting crime. 2. valuable in detecting crime. 3. a hindrance in detecting crime. 4. an aid to the criminal.

32. (5) Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax impressions.

33. ( ) The data are: 1. filed away in boxes. 2. published in newspapers.

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughspared to animals. They have no fears of what ter and to know whether they would persist in the future may hold; they don't consciously their courtship of Cordelia, now that she was

tune to recommend her. The Duke of Burgundy pestles which were evidently used for crushing would not take her to wife upon such a condiwould not take her to wife upon such a condition, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water.

1. The places where the aborigines ground their grain are called: 1. grist mills. 2. choppers. 3. caverrs. 4 hominy holes 5 needles.

- 34. ( ) This story teaches that a "water-ish" person's friendship is: 1. last-42. ( ) The grinding places were located ing. 2. worthless. 3. pleasant. 4. trees. 5. buildings.

  4. desirable.

  35. ( ) This story teaches that a "water-erns. 4. hominy-holes. 5. pestles. 4. hominy-holes. 5. pestles. 5. buildings. 4. trees. 5. buildings.
- 4. desirable. equation of Burgundy valued Cor-desired edition of the delia for her: 1. of ortune. 2. self. one edited with the XV. 3. beauty. 4. virtues.
- 36. ( ) The true lover was revealed because of Cordelia's: 1. beauty. 2. wealth. 3. prosperity. 4. misfortune.

## XIII.

ley, 25 miles below the canyon through which pause, and, enjoying the advantage of a slight the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot woods. A wild thing generally pauses at an obsprings. The great medicinal value of these stacle, at a road, at a pathway, at a turn. Both springs was known long ago to Indian tribes, a deer and a fox will usually pause at a fence, and the surrounding land has been one of their less to get a stance for jumping than just to favorite camping grounds. One of the springs has been found to produce over a million gal-lons of water a day, others are of great capacity also, and it is estimated that their total daily

When being pursued a fox acts as
if: 1. he had no enemies. 2. he
were surrounded by enemies. 4. all flow is easily between three and four million gallons.

- 37. ( ) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build boats.

  38. ( ) The hot springs are in: 1. California. 2. Nebraska. 3. Colorado. 4. Wyoming. 5. New Mexico.

  39. ( ) The water flows from the springs: 37. () The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3 thought the
- 39. ( ) The water flows from the springs: 1. in huge quantities. 2. slowly.
  3. intermittently. 4. in pipes. 5. in thin streams.

23 ( ) The Calivin to Mad have in books in the Calivin and the case of the Calivin and the cal in grinding corn or other materials are to be other numerical scores. found in certain parts of Kentucky in the form (1) 46. Mental tests are: 1. rating scales. of ancient mortars commonly known as "hom- 2. estimates of ability. 3. measuriny-holes." They occur on the floor of rock shelters or in boulders at the entrance to such ( ) 47. Test results are compared by means shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use.

In or near such holes may usually be found the In or near such holes may usually be found the wed once a vidual take the tests.

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such In the upper reaches of the North Platte val- as a fallen log, he will set his forefeet upon it, elevation, will scrutinize the surrounding look about.

- his enemies were just behind him. 5. all his enemies were in front of northean var him.

XVI.
Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical Evidences of what apparently represents a which can be manipulated by mathematical processes and combined or compared with

- ing devices. 4. guesses.

# Danson vallage a second of Every Pupil scholarship contest

April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## **READING** By W. H. Gray,

K. S. T. C., Emporia, Kansas.

With valuable assistance from Kansas teachers of reading.

TOTAL NUMBER POINTS

Go

Directions: Answer the

back and work on the

others. You will have ex-

easiest parts first.

actly 15 minutes.

alodi sed garabela t

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

1. (3) Joe liked to ride with his: 1. cousin. 2. dog. 3. father. 4. playmates. 5. mother.

() The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.

3. (2) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

4. (3) The three boys were: 1. faithful. 2. industrious. 3. lazy. 4. fat. os vigilit 5. handsome. In the care was

5. (2) They lived in the: 1. palace. side accountry. 3. city. 4. village.

6. (3) The king needed a: 1. baker. 2. gardner. 3. caretaker. 4. hunter.

III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

7. (3) The dragon-flies flew like: 1. robins. 2. locusts. 3. airplanes. 4. kites. 5. fairies.

) The time of day was: 1. early morning. 2. near noon. 3. late afternoon. 4. evening. 5. night.

9. (4) The big dragon-fly was: 2. green. 3. ugly. 4. beautiful. 5. quiet.

**DIRECTIONS:** This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers. To have a volume of a grant and in

## Tigatiosa Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm. A one lundred

1. (3) What was the boy's name? Wilson et 2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church. 2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is hom keep "school." Hence a "2" has been ni binio placed before that statement.

3. ( ) How did the boy travel? 1. on foot. zi one ov.2. on horseback. 3. on skates. 4. by -well and automobile. 5. by horse and buggy.

What is the correct answer to question No. 3?" Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes. To dead the doc it and the late of

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish crops. 3. many horses. 4. herds of of water is a grateful gift for dry little throats and all that can not find any that has not been frozen into solid ice. Scattering crumbs on the snown mark scantal stdenies divVI. or the open ground is well enough, and you will be thanked for it; but it is much better to put it: into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

- 10. ( ) Birds should be given water in winter because: 1. they need a bath. 2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.
- 11. ( ) The best way to feed the birds is to put the crumbs: 1. on the snow. - misuos d 2. on the open ground. 3. in a dish on the ground. 4. in a box on a post. 12. (2) Cats can catch birds more easily
- when the birds are: 1.0...
  2. on the ground. 3. flying. 4. sitting in a tree.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept hereas one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

- 13. ( A) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.
- 14. ( ) She was taught to: 1. play ball. 2. ride horseback. 3. make bead ornaments. 4. jump the rope. 5. wear moccasins.

15. (3) The Indians were wealthy because they had: 1. much money. 2. good buffalo. 5. slaves.

In the early days of our country, the old stagecoach carried Uncle Sam's mail. The stagecoach, drawn by four mules, lumbered along at the rate of six miles per hour, travelling three thousand miles in about five hundred hours. Three thousand miles is about the distance from coast to coast across the United States. After railroads were built across the country, Uncle Sam sent his mail by railway trains. Fast trains steamed over the rails at the rate of thirty miles an hour, making the trip across the continent in about one hundred hours. After the world war, Uncle Sam began using the airplane to help carry the mail. Today airplanes fly overhead at the rate of one hundred miles per hour, crossing the country in thirty hours. If bank of agreement a best or was

- 16. ( 4) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
- 17. (3) A stage coach traveled about: 1. nine miles per hour. 2. thirty miles per hour. 3. six miles per hour. 4. one hundred miles per i. Roy. hour. 5. twelve miles per hour.
- 18. (3) The airplane was used to carry at I of mail: 101. cbefore the World War. 2. during the World War. 3. after ed chedinthe World War. is cred rad [10] and

## and the local wall visual of the chards.

for within statement, a

Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

19. (5) Whom did Boris save? 1. girl. 2. lady. 3. pet. 4. dog. 5. boy.

20. (3) Boris rescues people by: 1. barking at them. 2. tearing their bathing suits. 3. dragging them to shore.

4. preventing them from entering the water.

21. (3) The Newfoundland is: 1. small and wiry. 2. afraid of cats. 3. large and strong. 4. very short-haired.

5. long and lanky. 5. long and lanky. 3.007

## kolikog 🥻 kadoli- VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one with the rotted tomato remained until all the others were sold. Then I removed the spoiled tomato. That basket contained at least a dozen more, good tomatoes than any of the others, yet the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

22. (fin) The tomato at the top of the basket had: 1. a very smooth skin. 2. a decayed spot. 3. deep grooves. anihuse 4. green spots. 5. a large stem.

23. ( ) Baskets of tomatoes which sell read-nited which: 1. contain the most fruit. 2. have beautiful decoof the rations. 3. have blemishes on the fruit. 4. have perfect fruit.

24. (4) The material tested was: 1. wheat.
24. iron ore. 3. sugar. 4. garden
the based state of ixon or ixon o

The breaking of the ice on the large northern rivers has some peculiar features. Quite suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating ice drifted ashore.

25. (5) The ice breaks into: 1. tiny pieces. 2. ice-bergs. 3. cubes. 4. thin slices. 5. huge blocks.

26. (92) The banks are cut away by: 1. ice moving freely. 2. blocked ice. 3. fast flowing water. 4. ice freezing suddenly.

with? 1. trees. 2. green grass.
3. drifting logs. 4. cakes of ice.

X.

The sense of time as we know it seems to be spared to animals. They have no fears of what

spared to animals. They have no fears of what the future may hold; they don't consciously think over the happy days of youth gone by.

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to spring when their victim again comes into sight.

28. (Which animals have a notion of the very near future? 1 those that eat grass. 2. those that live in the ground. 3. those raised by man.
4. those that kill other animals.

4. those that kill other animals.
5 those that live in trees.
29. (1) Most of the lower animals: 1. fear the future. 2. have memories of the past. 3. have little conception of the future. 4. think continuously of tomorrow.

30. (4) When the prey disappears animals: 1. spring at once. 2. run away.
3. get very nervous. 4. get ready to spring when the prey reappears. 5. lie down and sleep.

## XI.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. (2) The imprint of automobile tires is: 1. no help in detecting crime.
2. valuable in detecting crime.
3. a hindrance in detecting crime.
4. an aid to the criminal.

32. ( ) Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax im-

pressions.

33. (4) The data are: 1. filed away in boxes. 2. published in the second s 3. sent to the criminal. 4. compared with marks on record in the sheriff's ed or ers. office. or a file or a so gradulty to among the state of th

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in their courtship of Cordelia, now that she was under her father's displeasure, and had no fortune to recommend her. The Duke of Burgundy would not take her to wife upon such a condition, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water food soon S. sharp

34. (3) This story teaches that a "waterish" person's friendship is: 1. lasting. 2. worthless. 3. pleasant. 4. desirable.

35. (3) The Duke of Burgundy valued Corto vincentidelia for her: 1. fortune. 2. self. 3. beauty. 4. virtues.

36.s (1) The true lover was revealed beof Mison to 2. wealth. 3. prosperity. 4. misforrassagned tune. Tell field brings

## XIII.

all lie down and sloup.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these springs was known long ago to Indian tribes; and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity also, and it is estimated that their total daily flow is easily between three and four million graphs are taken. gallons. where when prodit

37. (3) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build boats.

38. ( ) The hot springs are in: 1. California. 2. Nebraska. 3. Colorado. 4. Wyoming. 5. New Mexico.

39. () The water flows from the springs: 1. in huge quantities. 2. slowly. 3. intermittently. 4. in pipes. 5. in thin streams.

pressing

Ab. (44) The data VIX I field away in the state of the st Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use. In or near such holes may usually be found the postles which were evidently used for crushing or grinding the grain in the holes.

40.1(3) The hominy-holes are generally: 1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of bas llaces different shapes.

The places where the aborigines ground their grain are called: ground their grain are called: 1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.

42.7 (2) The grinding places were located in: 1. sand. 2. cclay. 3. stone. oremon one4, trees. 5. buildings. personant trees. 5. buildings. 5. b

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding woods. A wild thing generally pauses at an obstacle, at a road, at a pathway, at a turn. Both a deer and a fox will usually pause at a fence, less to get a stance for jumping than just to look about. The first by advalous tring

43. (7.1) When being pursued a fox acts as as buy it if: 1. he had no enemies. 2. he were surrounded by enemies. 4. all his enemies were just behind him. 5. all his enemies were in front of miediron erhim. if no en no

When he comes to an obstruction he: 1. runs around it. 2. jumps over it quickly. 3.crawls under it. 4. sets his fore-feet upon it. 5. turns back.

A deer and a fox pause at an obstacle to: 1. get a stance for jumpstacle to: 1. get a stance for jumping. 2. to look about. 3. to mislead their enemies. 4. to rest.

## XVI.

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores. T. Haiya

(96 ) 46. Mental tests are: 1. rating scales. 2. estimates of ability. 3. measuring devices ... 4. guesses.

) 47. Test results are compared by means of of sau of: 1. numerical devices. 2. teachvisuous words only. 4. watching the indivd ener vidual take the tests.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

### READING

By W. H. Gray,

K. S. T. C., Emporia, Kansas.

With valuable assistance from Kansas teachers of reading.

TOTAL NUMBER POINTS

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errowere the company of the company	2State Lansas Date april 4,1930

**DIRECTIONS:** This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

### Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 2. William. 3. John. 4. Dick.

The correct answer to question No. 1 is an arranged "John" and this is answer No. 3. Hence a fig- 5. (2) They lived in the: 1. palace. ure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church. 2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is bum ason "school." Hence a "2" has been ni bline a placed before that statement.

3. (14.) How did the boy travel? 1. on foot. at one old 2. on horseback. 3. on skates. 4. by automobile. 5. by horse and buggy. What is the correct answer to question No. 3? Write the correct number in the parenthe-

sis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possi-4. evening. 5. night. ble and answer as many of the statements as 9. (4) The big dragon-fly was: 1. blue. von can. You will be allowed exactly fifteen 2. green. 3. ugly. 4. beautiful. you can. You will be allowed exactly fifteen minutes. To jet to the Magabary and . Class

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- 1. (3) Joe liked to ride with his: 1. cousin. 2. dog. 3. father. 4. playmates. 5. mother.
- 2. (2) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.
- () The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

### II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 1. Roy. 4. ( $\mathfrak{D}$ ) The three boys were: 1. faithful. 2. industrious. 3. lazy. 5. handsome.
  - 2. country. 3. city. 4. village.
  - 6. (3) The king needed a: 1. baker. -erosi 2. gardner. 3. caretaker. 4. hunter.

### III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. (3) The dragon-flies flew like: 1. robins. 2. locusts. 3. airplanes. Une her a 5. fairies.
- 8. (2) The time of day was: 1. early morning. 2. near noon. 3. late afternoon.
  - 5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

10. (2) Birds should be given water in winter because: 1. they need a bath. 2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.

11. ( $\mathcal{U}$ ) The best way to feed the birds is to put the crumbs: 1. on the snow. 2. on the open ground. 3. in a dish on the ground. 4. in a box on a post.

U) Cats can catch birds more easily when the birds are: 1. on a post. 2. on the ground. 3. flying. 4. sitting in a tree.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so of them seemed to waste little thought upon the world War. strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

13. (4) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.

She was taught to: 1. play ball. 2. ride horseback. 3. make bead ornaments. 5. wear moccasins.

The Indians were wealthy because they had: 1. much money. 2. good crops. 3. many horses. 4. herds of buffalo. 5. slaves.

In the early days of our country, the old stagecoach carried Uncle Sam's mail. stagecoach, drawn by four mules, lumbered along at the rate of six miles per hour, travelling three thousand miles in about five hundred Three thousand miles is about the distance from coast to coast across the United After railroads were built across the country, Uncle Sam sent his mail by railway trains. Fast trains steamed over the rails at the rate of thirty miles an hour, making the trip across the continent in about one hundred hours. After the world war, Uncle Sam began using the airplane to help carry the mail. Today airplanes fly overhead at the rate of one hundred miles per hour, crossing the country in thirty hours.

- 16. (4) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
- 17. (3) A stage coach traveled about: 1. nine miles per hour. 2. thirty miles per hour. 3. six miles per hour. 4. one hundred miles per hour. 5. twelve miles per hour.
- 18. (3) The airplane was used to carry mail: 1. before the World War. oddly unlike their rough black locks. But most and a control of 2. during the World War. 3. after

# vitanies VII.

Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

4. jump the rope. 19:1(5) Whom did Boris save? 1. girl. 2. lady. 3. pet. 4. dog. 5. boy.

20. (3) Boris rescues people by: 1. barking Only animals which hunt their prey have some the water.

21. (3) The Newfoundland is: 1. small and spring when their victim again comes into sight. wiry. 2. afraid of cats. 3. large and 28. ( ) Which animals have a notion of the strong. 4. very short-haired. very near future? 1. those that eat grass 2. those that live in the 5. long and lanky.

### VIII.

To test the value of marketing only perfect 5. those that live in trees. fruit and vegetables, I heaped one basket of to- 29. ( ) Most of the lower animals: 1. fear matoes especially full, then added one tomato with a rotted spot in it at the top of the basket.

I had 30 baskets of tomatees on sale but the one the future. 4. think continuously of the future. with the rotted tomato remained until all the others were sold. Then I removed the spoiled 30. ( ) When the prey disappears animals: the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

22. (?) The tomato at the top of the basket had: 1. a very smooth skin. 2. a decayed spot. 3. deep grooves. 4. green spots. 5. a large stem.

Baskets of tomatoes which sell readily are those which: 1. contain the most fruit. 2. have beautiful decorations. 3. have blemishes on the fruit. 4. have perfect fruit.

24. ( 1.) The material tested was: 1. wheat. 2. iron ore. 3. sugar. 4. garden produce.

### IX.

grid Sabied led could

The breaking of the ice on the large northern rivers has some peculiar features. Quite suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in, trees and all. River shores, ground cave in, trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating

with? 1. trees. 2. green grass.

3. sent to the criminal. 4. compared with marks on record in the sheriff's office.

3. drifting logs. 4. cakes of ice.

The Vine of France and the Polysof Report of

spared to animals. They have no fears of what beter and to know whether they would persist in the future may hold; they don't consciously their courtship of Cordelia, now that she was think over the happy days of youth gone by. under her father's displeasure, and had no for-

at them. 2. tearing their bathing conception of the very near future. When waitsuits. 3. dragging them to shore. ing for moving prey to reappear from behind 4. preventing them from entering some obstacle, they estimate at least a short time interval and hold themselves ready to

> grass. 2. those that live in the ground. 3. those raised by man. 4. those that kill other animals.

> the future. 2. have memories of the tomorrow.

tomato. That basket contained at least a dozen 1. spring at once. 2. run away. more good tomatoes than any of the others, yet 3. get very nervous. 4. get ready to spring when the prey reappears. spring when the pr 5. lie down and sleep.

### XI.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

) The imprint of automobile tires is: 1. no help in detecting crime. 2. valuable in detecting crime. 3. a hindrance in detecting crime. 4. an aid to the criminal.

ashore.

25. ( ) The ice breaks into: 1. tiny pieces.

25. ( ) The ice breaks into: 1. tiny pieces.

26. ( ) The ice breaks into: 1. tiny pieces.

27. ice-bergs. 3. cubes. 4. thin slices.

28. ( ) Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just

2. ice-pergs. c. cases.

2. ice-pergs. c. cases.

5. huge blocks.

26. (24) The banks are cut away by: 1. ice pressions.

726. (32) The banks are cut away by: 1. ice pressions.

727. The data are: 1. filed away in boxes. 2. published in newspapers.

728. (29) The data are: 1. filed away in boxes. 2. published in newspapers.

729. (20) The data are: 1. filed away in boxes. 2. published in newspapers.

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5. snow.

5. snow.

1. Super the King of France and the Duke of Burgundy were now called in to hear the determination of King Lory about his youngest daugh-The sense of time as we know it seems to be ation of King Lear about his youngest daugh-

tune to recommend her. The Duke of Burgundy pestles which were evidently used for crushing would not take her to wife upon such a condi- or grinding the grain in the holes. would not take her to whe upon such a condi-tion, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his 41. ( ) The places where the aborigines love for Cordelia had in a moment all run away 21. ( ) ground their grain are called: blike water. and the said of the said said of the said

- 34. ( ) This story teaches that a "waterish" person's friendship is: 1. last-42. ( ) The grinding places were located ing. 2. worthless. 3. pleasant. ( ) The grinding places were located in: 1. sand. 2. clay. 3. stone. 4. desirable.
- 35. (\*, \*) The Duke of Burgundy valued Cor- Jones and to go the XV. Additional Section 1. fortune. 2. self. 3. beauty. 4. virtues.
- 36. ( ) The true lover was revealed because of Cordelia's: 1. beauty. 2. wealth. 3. prosperity. 4. misfortune.

### XIII.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these stacle, at a road, at a pathway, at a turn. Both springs was known long ago to Indian tribes, a deer and a fox will usually pause at a fence, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million galhalso, and it is estimated that their total daily flow is easily between three and four million gallons.

- 37. ( ) The Indians camped near the springs because they: 1. liked to see their enemies. 3. thought the water
- nia. 2. Nebraska. 3. Colorado.

  4. Wyoming. 5. New Mexico.

  ing. 2. to look about. 3. to mislea their enemies. 4. to rest.
- 39. ( ) The water flows from the springs: 1. in huge quantities. 2. slowly.
  3. intermittently. 4. in pipes. 5. in thin streams.

# ni vana kali de de XIV tabe all' ( ) & 8

allumanist ord

Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock iny-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes excavated in the rock and six of conical holes e generally worn smooth and deep by long use. The words only. 4. watching the indi-In or near such holes may usually be found the and anos dividual take the tests.

- ground their grain are called: 1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
- cturned one 4. trees. 5. buildings.

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding woods. A wild thing generally pauses at an obless to get a stance for jumping than just to look about.

- 43. ( ) When being pursued a fox acts as lons of water a day, others are of great capacity and the if: 1. he had not enemies. 2. he were surrounded by enemies. 4. all his enemies were just behind him. 5. all his enemies were in front of gradition and him.
  - The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown the water flow. 2. could drown the water flow. 2. could drown the springs because they: 1. liked to see they: 1. runs around it. 2. jumps over it quickly. 3.crawls under it. 4. sets it quickly. 3.crawls under it. 4. sets his fore-feet upon it. 5. turns back.
- good for their health. 4. could his fore-feet upon it. 5. turns back. build boats. 45. ( ) A deer and a fox pause at an obstacle to: 1. get a stance for jumpnia. 2. Nebraska 3. Colorada ing. 2 to look about 2. to look about 3. to look 3. to

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores.

- ) 46. Mental tests are: 1. rating scales. 2. estimates of ability. 3. measur-

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

### READING

By W. H. Gray,

K. S. T. C., Emporia, Kansas. With valuable assistance from Kansas teachers of reading.



TOTAL NUMBER POINTS

Town School ... Age ... Teacher ..... State ...

DIRECTIONS: This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

## Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

vatton of 12. William. 3. John. 4. Dick.

The correct answer to question No. 1 is "John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church. 2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is "school." Hence a "2" has been ai blide a uplaced before that statement.

3.2(i) How did the boy travel? 1. on foot. 21 ORO ON 25 on horseback. 3. on skates. 4. by automobile. 5. by horse and buggy.

What is the correct answer to question No. 3? Write the correct number in the parenthesis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as 9. (4) The big dragon-fly was: 1. blue. you can. You will be allowed exactly fifteen minutes, and good No good An arient 1886

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an oldfashioned rail fence.

- 1. (3) Joe liked to ride with his: 1. cousin. 2. dog. 3. father. 4. playmates. 5. mother.
- 2. (2) The time of year was: 1. spring. 2. summer. 3. autumn. 4. winter.
- 3. ( ) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

### II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 1. (3) What was the boy's name? 1. Roy. 4. (3) The three boys were: 1. faithful. 2. industrious. 3. lazy. 5. handsome.
  - 5. (g) They lived in the: 1. palace. 2. country. 3. city. 4. village.
  - 6. (3) The king needed a: 1. baker. 2. gardner. 3. caretaker. 4. hunter.

### TII.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big. handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. (8) The dragon-flies flew like: 1. robins. 2. locusts. 3. airplanes. 5. fairies.
- 8. The time of day was: 1. early morning. 2. near noon. 3. late afternoon. 4. evening. 5. night.
- 3. ugly. 2. green. 4. beautiful. 5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish was as a of water is a grateful gift for dry little throats that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack of a sneaking cat.

- 10. (4) Birds should be given water in winter because: 1. they need a bath. 2. the ground is frozen. 3. water outside is too dirty. 4. they cannot find any.
- 11. (4) The best way to feed the birds is to put the crumbs: 1. on the snow. 2. on the open ground. 3. in a dish on the ground. 4. in a box on a post.
- 12. (2) Cats can catch birds more easily when the birds are: 1. on a post. 2. on the ground. 3. flying. 4. sitting in a tree.

### v.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast wealth, which is counted by the number of horses each family owns.

- 13. ( H) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.
- 14. ( ) She was taught to: 1. play ball. 2. ride horseback. 3. make bead 4. jump the rope. ornaments. 5. wear moccasins.

The Indians were wealthy because they had: 1. much money. 2. good crops. 3. many horses. 4. herds of buffalo. 5. slaves.

In the early days of our country, the old stagecoach carried Uncle Sam's mail. stagecoach, drawn by four mules, lumbered along at the rate of six miles per hour, travelling three thousand miles in about five hundred hours. Three thousand miles is about the distance from coast to coast across the United States. After railroads were built across the country, Uncle Sam sent his mail by railway trains. Fast trains steamed over the rails at the rate of thirty miles an hour, making the trip across the continent in about one hundred hours. After the world war, Uncle Sam began using the airplane to help carry the mail. Today airplanes fly overhead at the rate of one hundred miles per hour, crossing the country in thirty hours. That had a principle a had

- 16. (4) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
- 17. (3) A stage coach traveled about: 1. nine miles per hour. 2. thirty miles per hour. 3. six miles per hour. 4. one hundred miles per No. Rays. hour. 5. twelve miles per hour.
- 18. ( ) The airplane was used to carry bold ones even touched her bright soft hair so a mail: 1. before the World War. 2. during the World War. 3. after and the World War.

### VII.

Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in number of people, was very rich in Indian the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

> 19. (5) Whom did Boris save? 1. girl. 2. lady. 3. pet. 4. dog. 5. boy.

20. ( 3) Boris rescues people by: 1. barking at them. 2. tearing their bathing suits. 3. dragging them to shore. 4. preventing them from entering the water.

21. (3) The Newfoundland is: 1. small and spring when their victim again comes into signt. wiry. 2. afraid of cats. 3. large and 28. (x) Which animals have a notion of the strong. 4. very short-haired. 5. long and lanky.

### VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one the future. 4. think continuously of with the rotted tomato remained until all the others were sold. Then I removed the spoiled 30. (4) When the prey disappears animals: tomato. That basket contained at least a dozen
more good tomatoes than any of the others, yet
3. get very nervous. 4. get ready to the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

22. (3) The tomato at the top of the basket had: 1. a very smooth skin. 2. a decayed spot. 3. deep grooves. 4. green spots. 5. a large stem.

23. (4) Baskets of tomatoes which sell readily are those which: 1. contain the most fruit. 2. have beautiful decorations. 3. have blemishes on the fruit. 4. have perfect fruit.

24. (4) The material tested was: 1. wheat. 2. iron ore. 3. sugar. 4. garden produce.

### IX.

The breaking of the ice on the large northern rivers has some peculiar features. Quite suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in, trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating ice drifted

1. no help in detecting crime. 2. valuable in detecting crime. 3. a hindrance in detecting crime. 4. an aid to the criminal. genuine excavations. Stretches of surface ashore.

26. ( ) The banks are cut away by: 1. ice moving freely. 2. blocked ice. 3. fast flowing water. 4. ice freez-

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to

very near future? 1. those that eat grass. 2. those that live in the ground. 3. those raised by man. 4. those that kill other animals.

5. those that live in trees.

Most of the lower animals: 1. fear the future. 2. have memories of the past. 3. have little contained. tomorrow.

spring when the prey reappears. 5. lie down and sleep.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. ( ) The imprint of automobile tires is:

32. ( ) Tire imprints are examined by 25. ( ) The ice breaks into: 1. tiny pieces.
2. ice-bergs. 3. cubes. 4. thin slices.
5. huge blocks.

25. ( ) The ice breaks into: 1. tiny pieces.
26. ( ) means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax impressions.

3. fast flowing water. 4. ice freezing suddenly.

What are the river banks covered with? 1. trees. 2. green grass.
3. drifting logs. 4. cakes of ice.

53. (K) The data are: 1. filed away in boxes. 2. published in newspapers. 3. sent to the criminal. 4. compared with marks on record in the sheriff's office.

XII.

5. snow.

The King of France and the Duke of Burgundy were now called in to hear the determination of King Lear about his youngest daughspared to animals. They have no fears of what ter and to know whether they would persist in the future may hold; they don't consciously their courtship of Cordelia, now that she was think over the happy days of youth gone by. under her father's displeasure, and had no fortune to recommend her. The Duke of Burgundy postles which were evidently used for crushing would not take her to wife upon such a condi- or grinding the grain in the holes. tion, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be

The hominy-holes are generally:

1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of queen of him and of fair France. He called the bas Home Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water.

- 34. (2) This story teaches that a "water-ish" person's friendship is: 1. last-42. (3) The grinding places were located ing. 2. worthless. 3. pleasant. (3) In: 1. sand. 2. clay. 3. stone. 4. desirable.
- 35. ( ) The Duke of Burgundy valued Cordelia for her: 1. fortune. 2. self. 3. beauty. 4. virtues.
- 36. ( ) The true lover was revealed because of Cordelia's: 1. beauty. 6) wealth. 3. prosperity. 4. misforsanagemen tune. od assiw muri

## ា.ខ្លួននៅសំណាត់ទៅ ទៅ .ស័ XIII.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot woods. A wild thing generally pauses at an obsprings. The great medicinal value of these springs was known long ago to Indian tribes, a deer and a fox will usually pause at a fence, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity balso, and it is estimated that their total daily -flow is easily between three and four million tanongi eng. gallons.

- 37. (3) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build boats.
- 38. (X) The hot springs are in: 1. California. 2. Nebraska. 3. Colorado.

  4. Wyoming. 5. New Mexico. 4. Wyoming. 5. New Mexico.
- ..39. ( ) The water flows from the springs: 1. in huge quantities. 2. slowly.
  3. intermittently. 4. in pipes. 5. in thin streams.

  XIV.

Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such ( ) 47. Test results are compared by means shelters in the cliff regions of the state, and con- of the state of: 1. numerical devices. 2. teach-In or near such holes may usually be found the and sold dividual take the tests.

- different shapes.
- 41. ( ) The places where the aborigines ground their grain are called: 1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
- change and 4. trees. 5. buildings.

# one erb h f else ne koo XV.

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding stacle, at a road, at a pathway, at a turn. Both less to get a stance for jumping than just to look about.

- 43. (2) When being pursued a fox acts as if: 1. he had no enemies. 2. he were surrounded by enemies. 4. all antrag (t his enemies were just behind him. 5. all his enemies were in front of medimon avit**him.**
- 44. ( ) When he comes to an obstruction he: 1. runs around it. 2. jumps over it quickly. 3.crawls under it. 4. sets his fore-feet upon it. 5. turns back.
- A deer and a fox pause at an obstacle to: 1. get a stance for jump-Wersels Tovi ing. 2. to look about. 3. to mislead their enemies. 4. to rest.

### XVI.

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores.

- 46. Mental tests are: 1. rating scales. 2. estimates of ability. 3. measuring devices. 4. guesses.
- sist of conical holes excavated in the rock and leader ers' judgments. 3. descriptions in generally worn smooth and deep by long use. This bear words only, 4. watching the indi-

# EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## READING

By W. H. Gray,

K. S. T. C., Emporia, Kansas.

45

TOTAL NUMBER POINTS

Name Solon Bond Town Town
School Lines In X and Age Grade
Teacher Mins Pank Royal State X and Date April 4

DIRECTIONS: This is a test in Silent Reading. You will find a number of exercises like the sample below. Read these one at a time as rapidly as possible. After each exercise you will find a number of statements, or questions, on what you have read. For each of these statements there are several answers. Only one of these is correct. Decide which is the right answer and place the number before it in the parenthesis before the statement. If necessary, you may re-read a paragraph to find the correct answers.

# Now read Example A.

Example A: Little John ran down the road. He had a reading book in one hand, a spelling book in the other, and a lunch-box under his right arm.

1. (3) What was the boy's name? 1. Roy.

"John" and this is answer No. 3. Hence a figure "3" has been placed in the parenthesis before the statement.

2. (2) The boy was going to: 1. church.
2. school. 3. a party. 4. a circus.

The correct answer to statement No. 2 is income a conscious Hence a "2" has been in bline placed before that statement.

3.5 ( ) How did the boy travel? 1. on foot.
2. on horseback. 3. on skates. 4. by
3.6 What is the correct answer to question No.
3.7 Write the correct number in the parenthe-

sis before the question.

Now, when the signal to begin is given, read as many of the following paragraphs as possible and answer as many of the statements as you can. You will be allowed exactly fifteen minutes.

Joe was very fond of riding to the mill with his father. One very hot day as we drove along the dusty road we saw a boy sitting on an old-

fashioned rail fence.

1. (3) Joe liked to ride with his: 1. cousin.
2. dog. 3. father. 4. playmates.
5. mother.

- 2. (2) The time of year was: 1. spring.
  2. summer. 3. autumn. 4. winter.
- 3. ( /) The fence was made of: 1. wood. 2. stone. 3. wire. 4. cement. 5. rope.

### II.

Once upon a time there was a farmer who had three sons. They were all idle fellows, and helped their father very little. One day the oldest son, named Peter, heard that the king wanted someone to take care of his rabbits.

- 4. (3) The three boys were: 1. faithful.
  2. industrious. 3. lazy. 4. fat.
  5. handsome.
- 5. (2) They lived in the: 1. palace.
  2. country. 3. city. 4. village.
- 6. (3) The king needed a: 1. baker.
  2. gardner. 3. caretaker. 4. hunter.
  III.

The sun was getting high, and it was warm. Birds sang and flitted about in the alders along the shore. Beautiful dragon-flies darted about over the water like little airplanes. One big, handsome dragon-fly kept dipping her tail in the water every few seconds.

- 7. (3) The dragon-flies flew like: 1. robins.
  2. locusts. 3. airplanes. 4. kites.
  5. fairies.
- 8. (2) The time of day was: 1. early morning. 2. near noon. 3. late afternoon. 4. evening. 5. night.
- 9. (4) The big dragon-fly was: 1. blue.
  2. green. 3. ugly. 4. beautiful.
  5. quiet.

How to Feed the Snowbirds—The crumbs from our tables are feasts for them, and a dish crops. 3. many horses. 4. herds of of water is a grateful gift for dry little throats FGASA that can not find any that has not been frozen into solid ice. Scattering crumbs on the snow or the open ground is well enough, and you will be thanked for it; but it is much better to put it into a box on top of a post, where the little feasters will not be subject to the sudden attack. of a sneaking cat.

- 10. ( ) Birds should be given water in winter because: 1. they need a bath. 2. the ground is frozen. 3. water outside is too dirty. 4. they cannot rove sloper find any.
- 11. (4) The best way to feed the birds is to put the crumbs: 1. on the snow. 2. on the open ground. 3. in a dish on the ground. 4. in a box on a post.
- 12. (2) Cats can catch birds more easily when the birds are: 1. on a post. 2. on the ground. 3. flying. 4. sitting in a tree.

When Mary Anne finally came running out, however, they seemed to forget that she was different and to accept her as one of themselves. One or two stroked her dress with curious fingers, and then felt of their own scanty garments of tanned leather, as though wondering how there could be such a difference. Some bold ones even touched her bright soft hair so oddly unlike their rough black locks. But most of them seemed to waste little thought upon the strangeness of her white skin and her blue checked dress, but fell to teaching her how to play their games of ball or showing her their ponies, brown and black, pinto and dapple gray. The horses were grazing in a scattered herd all about the group of lodges for Gray Eagle's village, while it contained no very vast number of people, was very rich in Indian wealth, which is counted by the number of horses each family owns.

- 13. (4) Mary Anne was dressed in: 1. tanned leather garments. 2. a red calico dress. 3. homespun. 4. a blue checked dress. 5. a fur coat.
- 14. ( ) She was taught to: 1. play ball. 2. ride horseback. 3. make bead ornaments. 4. jump the rope. 5. wear moccasins.

IV. The Indians were wealthy because they had: 1. much money. 2. good ารา เกาะกระบุ เทศกุริญี ในกระการีสมสตาก buffalo. 5. slaves.

In the early days of our country, the old stagecoach carried Uncle Sam's mail. stagecoach, drawn by four mules, lumbered along at the rate of six miles per hour, travelling three thousand miles in about five hundred hours. Three thousand miles is about the distance from coast to coast across the United States. After railroads were built across the country, Uncle Sam sent his mail by railway trains. Fast trains steamed over the rails at the rate of thirty miles an hour, making the trip across the continent in about one hundred hours. After the world war, Uncle Sam began using the airplane to help carry the mail. Today airplanes fly overhead at the rate of one hundred miles per hour, crossing the country in thirty hours and bear an arrangement of the control of the control

- 16. (4) The stage coach was used for carrying: 1. lumber. 2. machinery. 3. mules. 4. mail. 5. food.
- 17. (3) A stage coach traveled about:
  1. nine miles per hour. 2. thirty miles per hour. 3. six miles per hour. 4. one hundred miles per Noff it hour. 5. twelve miles per hour.
- 18. (3) The airplane was used to carry mail: 1. before the World War. -20 g and 2. during the World War. 3. after and disselfuthe World War, becaused and off one

# . double to a of the VII. sv. you shift ( 1 )

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Once upon a time, Boris saved a boy from drowning, and was praised and rewarded richly for his deed. Ever since, Boris goes mad with joy whenever he catches sight of a child in the water. He has a passion for life-saving, as some dogs have for getting sticks. No one is safe in swimming, with Boris about. The Newfoundland is huge and powerful. He dives in, fastens his teeth in his vicitm's bathing suit and drags his victim to shore. He does not stop at one "rescue." He cleans out the lake or swimming hole. He tears bathing suits and spoils all thought of fun in the water when he is about.

19. (5) Whom did Boris save? 2. lady. 3. pet. 4. dog. 5. boy. 20. (3) Boris rescues people by: 1. barking at them. 2. tearing their bathing suits. 3. dragging them to shore. 4. preventing them from entering the water.

the water.

21. (3) The Newfoundland is: 1. small and wiry. 2. afraid of cats. 3. large and strong. 4. very short-haired.

5. long and lanky. 5. long and lanky.

# ississy i sich VIII.

To test the value of marketing only perfect fruit and vegetables, I heaped one basket of tomatoes especially full, then added one tomato with a rotted spot in it at the top of the basket. I had 30 baskets of tomatoes on sale but the one with the rotted tomato remained until all the others were sold. Then I removed the spoiled tomato. That basket contained at least a dozen more good tomatoes than any of the others, yet the spoiled one offset them, proof enough that one spoiled vegetable, fruit, or egg will prevent the sale of at least a dozen of its kind.

22. (2) The tomato at the top of the basket that: 1. a very smooth skin. 2. a decayed spot. 3. deep grooves. minute 4. green spots. 5. a large stem.

23. (4) Baskets of tomatoes which sell readmost fruit. 2. have beautiful decoof integrations. 3. have blemishes on the fruit. 4. have perfect fruit.

24. (4) The material tested was: 1. wheat:
24. (4) The material tested was: 1. wheat:
25. iron ore. 3. sugar. 4. garden
26. iron ore. 1X.

The breaking of the ice on the large northern rivers has some peculiar features. Quite suddenly, the ice sheet breaks into huge blocks obstructing the current. The water rises immediately. Blocked ice in all streams cuts away great pieces of the steeper banks, producing genuine excavations. Stretches of surface ground cave in, trees and all. River shores, from the upper currents down to the mouth, are covered with masses of floating ice drifted ashore.

25. (5) The ice breaks into: 1. tiny pieces. 2. ice-bergs. 3. cubes. 4. thin slices. 5. huge blocks.

26. (2) The banks are cut away by: 1. ice moving freely. 2. blocked ice. 3. fast flowing water. 4. ice freezing suddenly.

27. (4) What are the river banks covered with? 1. trees. 2. green grass. 3. drifting logs. 4. cakes of ice. 5. snow.

y mil i company i **x**, dobry do bail ym mil i company a dobry dobry i chil The sense of time as we know it seems to be spared to animals. They have no fears of what the future may hold; they don't consciously think over the happy days of youth gone by.

Only animals which hunt their prey have some conception of the very near future. When waiting for moving prey to reappear from behind some obstacle, they estimate at least a short time interval and hold themselves ready to spring when their victim again comes into sight.

28. (4) Which animals have a notion of the very near future? 1. those that eat grass. 2. those that live in the ground. 3. those raised by man.
4. those that kill other animals. 5. those that live in trees.

29. ( ) Most of the lower animals: 1: fear the future. 2. have memories of the

past. 3. have little conception of the future. 4. think continuously of tomorrow.

30. (4) When the prey disappears animals: 1. spring at once. 2. run away.
3. get very nervous. 4. get ready to spring when the prey reappears. 5. lie down and sleep.

### XI.

Criminals and felons can be apprehended under certain circumstances by the imprint of their automobile tires. From a scientific study of the tire imprint and comparisons with marks on record in the sheriff's office, it is possible to determine the make and size of the tire, which wheel it is on, and the approximate type, load, and speed of the suspected car at the time the felony was committed. When suspicious-looking tire marks are discovered near the scene of a crime, a try-square is placed on the ground beside the marks, and measurements and photographs are taken. These data are compared with office records of the 450 different kinds of tire-tread patterns now in use. After determining the make, size, and position of the suspected tire, officers watch for cars having the distinguishing tire or tires.

31. (2) The imprint of automobile tires is: 1. no help in detecting crime.
2. valuable in detecting crime.
3. a hindrance in detecting crime.
4. an aid to the criminal.

aid to the criminal.

32. ( ) Tire imprints are examined by means of: 1. measurements. 2. a telescope. 3. a microscope. 4. just looking at them. 5. taking wax im-

pressions.
33. (4) The data are: 1. filed away in boxes. 2. published in newspapers. 3. sent to the criminal. 4. compared with marks on record in the sheriff's

office. XII. gundy were now called in to hear the determination of King Lear about his youngest daughter and to know whether they would persist in their courtship of Cordelia, now that she was under her father's displeasure, and had no fortune to recommend her. The Duke of Burgundy would not take her to wife upon such a condition, but the King of France, saying that her virtues were a dowry above a kingdom, bade Cordelia take farewell of her father and be queen of him and of fair France. He called the Duke of Burgundy a waterish duke because his love for Cordelia had in a moment all run away like water. Timir (enont 1.0)

- 34. (2) This story teaches that a "waterish" person's friendship is: 1. lasting. 2. worthless. 3. pleasant.
  4. desirable.
  35. (1) The Duke of Burgundy valued Cor-
- 3. beauty. 4. virtues. 36. (4.) The true lover was revealed because of Cordelia's: 1. beauty.

  2. wealth. 3. prosperity. 4. misforspecial trees the trees proposed in

### XIII.

In the upper reaches of the North Platte valley, 25 miles below the canyon through which the river enters the state of Wyoming and near the little town of Saratoga, is a series of hot springs. The great medicinal value of these springs was known long ago to Indian tribes, and the surrounding land has been one of their favorite camping grounds. One of the springs has been found to produce over a million gallons of water a day, others are of great capacity also, and it is estimated that their total daily flow is easily between three and four million

- gallons.

  37. (3) The Indians camped near the springs because they: 1. liked to see the water flow. 2. could drown their enemies. 3. thought the water good for their health. 4. could build boats.
- 38. (4) The hot springs are in: 1. California. 2. Nebraska. 3. Colorado.
  4. Wyoming. 5. New Mexico.
- 39. ( ) The water flows from the springs: 1. in huge quantities. 2. slowly.
  3. intermittently. 4. in pipes. 5. in thin streams.

Bar (1999) Black dotter vix 15 filed and from Evidences of what apparently represents a peculiar method used by aboriginal Americans in grinding corn or other materials are to be found in certain parts of Kentucky in the form of ancient mortars commonly known as "hominy-holes." They occur on the floor of rock shelters or in boulders at the entrance to such shelters in the cliff regions of the state, and consist of conical holes excavated in the rock and generally worn smooth and deep by long use. In or near such holes may usually be found the

pestles which were evidently used for crushing or grinding the grain in the holes.

- 40. (3) The hominy-holes are generally: 1. square. 2. shallow. 3. smooth and deep. 4. full of water. 5. of ions Home different shapes.
- 41. (4) The places where the aborigines ground their grain are called: 1. grist mills. 2. choppers. 3. caverns. 4. hominy-holes. 5. pestles.
- erns. 4. hominy-noies. 5. pessies.
  42. (3) The grinding places were located in: 1. sand. 2. clay. 3. stone. warren og 4. trees. 5. buildings.

### Joseph & with to not only by it at logal better a direct one off upo of a to XV. to be fire of the first

It is sport to watch a fox expend the riches of his craftiness upon the matter of pauses. Scores of times I have watched foxes in the wilds, either when they were just normally moving about or when they were being pursued. A fox acts as if one enemy were just behind him, another right in front of him, and several on each side. If he comes to a slight obstruction, such as a fallen log, he will set his forefeet upon it, pause, and, enjoying the advantage of a slight elevation, will scrutinize the surrounding woods. A wild thing generally pauses at an obstacle, at a road, at a pathway, at a turn. Both a deer and a fox will usually pause at a fence, less to get a stance for jumping than just to look about. The tree around the last

- 43. ( ) When being pursued a fox acts as nobject if: 1. he had no enemies. 2. he were surrounded by enemies. 4. all his enemies were just behind him. 5. all his enemies were in front of e recent and a northern
- 44. (4) When he comes to an obstruction he: 1. runs around it. 2. jumps over he: 1. runs around it. 2. june it quickly. 3.crawls under it. 4. sets his fore-feet upon it. 5. turns back.
- 45. (2) A deer and a fox pause at an obstacle to: 1. get a stance for jump-ging. 2. to look about. 3. to mislead bolling of their enemies. 4. to rest.

### XVI.

Mental tests are instruments of measurement and not means of making guesses or estimates. They are therefore to be distinguished from methods of rating individual abilities by means of rating scales. They issue in numerical scores which can be manipulated by mathematical processes and combined or compared with other numerical scores.

- (3) 46. Mental tests are: 1. rating scales. 2. estimates of ability. 3. measuring devices . 4. guesses.
- ( ) 47. Test results are compared by means of: 1. numerical devices. 2. teachers' judgments. 3. descriptions in words only. 4. watching the individual take the tests.

Directions: Answer easiest parts first. Go back and work on the others. You will have exactly 15 minutes for each part.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930 ,

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## ARITHMETIC

By J. B. Stroud, very segrence of the first

	Score
Part I	9 5
Part II	1
Total	109

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	Frank sold 25 sheep and had 10 left. How many had he at first?	aldania.	40% of all the orchard is in apples, how
Ans.	George raised 3 prize pumpkins which		life the same of the contract
	weighed as follows: $14\frac{1}{2}$ lbs., 13 lbs., and $16\frac{1}{2}$ lbs. Find the average weight.	15.	At 31/4 percent what will be the fee for selling a shipment of goods valued a
Ans.	424	f	\$1,008?
3	To make a trapeze, we need a steel bar 4 ft. 6 in. long. Find the cost if one foot is worth 60 cents.	Ans.	A citizen owns property which is assessed
1 2 2	340	ere	at \$5,860. The rate of tax is \$2.50 per \$100. What is his semi-annual tax?
	On a map in Mary's geography two cities	À	rakangan merapakan kacamatan sebagai di diangkan pelakut dibunat dan 1998.
	are 2 in. apart. What is the actual distance between the cities, if 1/4 in. on the map represents 25 miles?	Ans.	A bridge is 90 ft. long and 20 ft. wide How many board feet of lumber will i take to lay a floor on it if the planks used
Ans.		to the	are 2 in. thick?
5.	George has 70 rabbits; he sold 18 of them,	Ans.	
Ans.	then bought 23. How many rabbits has he now?	.18.	Mrs. Brown bought a bolt of curtain material containing 17 yards. How many curtains each containing 4½ yds. can she
6.	Robert and James deliver packages on Saturday. Robert worked for 14 hrs. for		make from it?
	Cook and 1¼ hrs. for Brown. James worked at Smith's for 1¾ hrs. Which boy	Ans. 19	A box of 25 apples cost \$2.75. How much was that for each apple?
	worked longer?	Ans.	
Ans. 7.		20a	Frank and James took care of a lawn one summer for \$9. Frank mowed it 6 times and James 12 times. How much money
	\$5.40, how many hours did he work?		should Frank receive?
Ans.		Ans. 21.	Over how many sq. yd. can a horse graze
	from his uncle who gave him a 35% discount. How much did the suit cost Coleman?		if tied to a post by a rope 25 ft. long? (Let $\pi=3.14$ .) Make no allowance for fastening the rope.
Ans.		Ans.	
*9A	John Smith borrowed \$450 from Jack Jones at 6% per annum. How much did he owe Mr. Jones at the end of 1 year?	.22.	How much will the excavation for a cellar 30 ft. by 40 ft. and 6 ft. deep cost at 40 cents per cu. yd.?
Ans.		Ans.	
10.	Lucile has \$8.25. How much more must	23.	How many rods of wire are needed to
*	she save in order to buy a \$4.50 hat and a \$15.00 coat?		build a 5 wire fence around a piece of ground 20 rd. square?
	Mb on and 1000	Ans.	A farmer has a cylindrical silo which is 10
<b>11.</b>	There are 1,223 pupils in our grade schools. If the total cost to maintain the school for one year is \$46,877.59, what is	****	ft. in diameter and 25 feet high. How many cu. ft. will it hold? (Use $\pi$ =3.14.)
Ans.	the average cost per pupil?	Ans. 25.	In an examination, Susie tried 32 ex-
	I borrowed \$1,000 at 5½% for 1 yr. What was the cost for the use of this money?	<b>40%</b>	amples. This was 80% of the whole examination. How many examples were there in the examination?
Ans.		Δng	oncie in one examination!
<i>₌</i> 13.	A suit of clothes was marked \$45, which was 50% more than the cost. What was the cost?	Ans. 26.	Find the weight of an iron bar that is 4 in wide, 3 in. thick and 60 ft. long, if 1 cu. ft. weighs 480 lbs.
Ans.		Ang	WASID TOV IND.

DIRECTIONS: Get the	Bureau of Educational II Kansas State Tea ARIT By J. K. S. T. C., I with valuable assistance fr	any examples as you o	Grade 5	04,1930
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# PART II.

	1.	Frank sold 25 sheep and had 10 left. How many had he at first?	14.	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how
		35 sheep.	MMTH	many trees are there in the orchard?
4	-2	George raised 3 prize pumpkins which	Ans.	At 21/ page of what will be the fee for
		weighed as follows: 14½ lbs., 13 lbs., and 16½ lbs. Find the average weight.	15	At 31/4 percent what will be the fee for selling a shipment of goods valued at \$1,008?
	Ans.		A	334.76
	٥.	To make a trapeze, we need a steel bar 4 ft. 6 in. long. Find the cost if one foot is	Ans.	A citizen owns property which is assessed
	i kamaniga	worth 60 cents.	*** #** <b>*</b>	at \$5,860. The rate of tax is \$2.50 per
	Ans.	51.70	gr	\$100. What is his semi-annual tax?
***	4.	On a map in Mary's geography two cities	Ans.	
		are 2 in. apart. What is the actual distance between the cities, if 1/4, in. on the	14	A bridge is 90 ft. long and 20 ft. wide.
		map represents 25 miles?		How many board feet of lumber will it take to lay a floor on it if the planks used
	Ans.	Statement allera vidi millijal in valendarskiptova vitim – istalini njem sa jevatno ligenom interasionam valenda og va similio anje a		are 2 in. thick?
	5.	George has 70 rabbits; he sold 18 of them,	Ans.	
		then bought 23. How many rabbits has	18.	Mrs. Brown bought a bolt of curtain ma-
		he now?		terial containing 17 yards. How many curtains each containing 4½ yds. can she
	Ans.	Robert and James deliver packages on		make from it?
	٠.	Saturday. Robert worked for 11/4 hrs. for	Ans.	4 12 Beartains
		Cook and 11/4 hrs. for Brown. James	. 19	A box of 25 apples cost \$2.75. How much
		worked at Smith's for 13/4 hrs. Which boy worked longer?		was that for each apple?
			Ans.	11 @ aloch.
		Walter was paid 20 cts. an hour last sum-	20.	Frank and James took care of a lawn one summer for \$9. Frank mowed it 6 times
	•	mer for mowing lawns. If he earned	2 T	and James 12 times. How much money
		\$5.40, how many hours did he work?		should Frank receive?
	Ans.	27 hrs.	Ans.	
	8.	Coleman bought a \$16.50 Boy Scout suit	21.	Over how many sq. yd. can a horse graze if tied to a post by a rope 25 ft. long? (Let
		from his uncle who gave him a 35% discount. How much did the suit cost Cole-	32	$\pi=3.14$ .) Make no allowance for fasten-
		man?	as I	ing the rope.
	Ans.		Ans.	
	9.	4 - 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22.	How much will the excavation for a cellar
		Jones at 6% per annum. How much did he owe Mr. Jones at the end of 1 year?	00	30 ft. by 40 ft. and 6 ft. deep cost at 40 cents per cu. yd.?
	Ama	#2 7.0 0	Ans.	
	10.	Lucile has \$8.25. How much more must	23.	How many rods of wire are needed to
		she save in order to buy a \$4.50 hat and a		build a 5 wire fence around a piece of
		\$15.00 coat?		ground 20 rd. square?
****	Ans.	11.25	Ans. 24.	A farmor has a avlindrical sile which is 10
	Lite	There are 1,223 pupils in our grade schools. If the total cost to maintain the	44.	A farmer has a cylindrical silo which is 10 ft. in diameter and 25 feet high. How
		school for one year is \$46,877.59, what is		many cu. ft. will it hold? (Use $\pi$ =3.14.)
	Ang	the average cost per pupil?	Ans.	7
		The state of the s	25.	In an examination, Susie tried 32 examples. This was 80% of the whole ex-
	Me Zigoria	I borrowed \$1,000 at $5\frac{1}{2}$ % for 1 yr. What was the cost for the use of this money?		amination. How many examples were
	L	1 /		there in the examination?
		A suit of clothes was marked \$45, which	Ans.	Find the project of an in- 1 - 11 - 1.
-	-	was 50% more than the cost. What was	26.	Find the weight of an iron bar that is 4 in. wide, 3 in. thick and 60 ft. long, if 1 cu. ft.
		the cost?		weighs 480 lbs.
	Ans	Byrazione	Ans.	

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# EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

ARITHMETIC

By J. B. Stroud,

K. S. T. C., Emporia, Kansas.

with valuable assistance from Kansas arithmetic teachers.

	Score	1
Part I	27	26
Part II	3	5
Total	32	
	1 1 1 1 1	. 5 /

Name Trances Lewis Age 1/ Grade Sil
Town Gincoly State Nanoas Date april 4
School Contral Teacher Mr. Rienking,
DIPECTIONS. Get the correct enginer to as many examples as you can. Write the engineers in

the spaces left for the	he correct answer to as m near each example.	Make your answers sta	ou can. Write the answers and out clearly.
1. Add 9 4	12. 2 1 3 5 ÷ 7 = 30	13½ 6 5¼,	38. 200 + .622 =
) Q 2. 19 — 5 = 14	4806 391	1614 1914 = 1	34. 43/8 × 21/8 × 67/8 =
3. $7 \times 8 = 56$	8743 7625 71,565	22. Subtract 5'0'1'0	25. Subtract
4. 27 ÷ 9 = 3	14. Multiply	$\frac{2635}{2,375}$	4 yr. 3 mo. 20 da. 2 yr. 6 mo. 10 da.
5. 541 ×2	538	23. $\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$	The transfer of the control of the c
7,087 6. Subtract	13450	$24. \ \ \frac{3}{5} + \frac{2}{5} = \frac{5}{5} = \frac{1}{5}$	36. Add 2 yd. 2 ft. 10 in.
649 427 ママン	15. $700 \div 10 = )0$	$\begin{vmatrix} 25. & \frac{3}{5} \times \frac{1}{2} = \frac{1}{70} \\ 26. & \frac{5}{8} \div 5 = \frac{1}{3} \end{vmatrix}$	3 yd. 1 ft. 8 in. 6 yd. 2 ft. 6 in.
7. Divide 2) 628	16. Divide	$27. 8\frac{3}{8} - 3\frac{5}{8} =$	d Decusion diving union
314	45) 11700	28. Add 71/5	379. Divide
3. Add 753 614	is above a 220 in	12 <sup>3</sup> / <sub>4</sub> 3 <sup>1</sup> / <sub>6</sub>	7) 40 lb. 6 oz.
$\frac{432}{5799}$	17. 900×100= 9000 18. Multiply	2 2 29. Divide	7 4 0 10. 6 02.
Divide 5) 9 <sup>4</sup> 1 '5	875 504	.04).648	- All Sign - Biblio III - Street Instruction United Signature (Signature) - Signature Signature (Signature) - Signature (Signature)
$\frac{183}{0. \text{ Subtract}}$	4575 441.000	30. Multiply 5.44	6896 × 387/8
6 9 2 5 3 8 7 4	$\begin{array}{c c} 775000 & 27 \\ \hline 19. & 41)1107 \end{array}$	6.2	is the sum of the second substitution of the sec
3,067 1. Multiply	287 287	31.  24% + 8% = 31.  24% + 8% = 31.  24% + 8% = 31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  31.  3	83.2 - 2.006 =
741 3 7,223	$ \begin{array}{c c}     170.6 \\     \times 100 \\     \hline     170.6 \end{array} $	32. $8\frac{1}{2} \times 2\frac{1}{2} = 2$	

	eres ( ) PAR	1 11.	
1.	Frank sold 25 sheep and had 10 left. How many had he at first?	14.	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how
Ans.	350 Meagle.	Sarar.	many trees are there in the orchard?
2.	George raised 3 prize pumpkins which	Aps.	
Ans.	weighed as follows: 14½ lbs., 13 lbs., and 16½ lbs. Find the average weight.	16.	At 31/4 percent what will be the fee for selling a shipment of goods valued at \$1,008?
ა.	To make a trapeze, we need a steel bar 4	Ans.	A - 11
****	ft. 6 in. long. Find the cost if one foot is worth 60 cents.	16.	A citizen owns property which is assessed
	worth of cents.		at \$5,860. The rate of tax is \$2.50 per
Ans.	$\mathbf{D}'\mathbf{L}_1 \cdot \mathbf{I}'\mathbf{D}$		\$100. What is his semi-annual tax?
4.	On a map in Mary's geography two cities	Ans.	ter time to the transfer of the control of the cont
THE TARREST	are 2 in. apart. What is the actual dis-	17.	A bridge is 90 ft. long and 20 ft. wide.
	tance between the cities, if 1/4 in. on the		How many board feet of lumber will it
en alle en	map represents 25 miles?	redig.	take to lay a floor on it if the planks used
Ana	Company of the National State of the State o	i i a a i a a a Linguage a a a a a a a a a a a a a a a a a a	are 2 in. thick?
Ans.		30/	are 2 m. billon:
	George has 70 rabbits; he sold 18 of them,	Ans.	
	then bought 23. How many rabbits has	<b>1</b> 8.	Mrs. Brown bought a bolt of curtain ma-
* 1	he now?		terial containing 17 yards. How many
Ans.	932000		curtains each containing $4\frac{1}{2}$ yds. can she
6.	Robert and James deliver packages on	. )	make from it?
	Saturday. Robert worked for 11/4 hrs. for	Aris.	ナード した事業後に、背景 さっしょうしょうしょう
	Cook and 11/4 hrs. for Brown. James	19.	A box of 25 apples cost \$2.75. How much
	worked at Smith's for 134 hrs. Which boy	ÚT.	was that for each apple?
	worked longer?		
A	RHOUT	Aprs.	
Ans.	- M. C	20.	Frank and James took care of a lawn one
7.	Walter was paid 20 cts. an hour last sum-		summer for \$9. Frank mowed it 6 times
	mer for mowing lawns. If he earned	-50 L	and James 12 times. How much money
	\$5.40, how many hours did he work?	1	should Frank receive?
Ans.	2 /h	Azīs.	
* 8.	Coleman bought a \$16.50 Boy Scout suit	<b>2</b> 1.	Over how many sq. yd. can a horse graze
	from his uncle who gave him a 35% dis-	47	if tied to a post by a rope 25 ft. long? (Let
	count. How much did the suit cost Cole-		$\pi$ =3.14.) Make no allowance for fasten-
	man?	1	ing the rope.
Ans.	A16.15	Δήσ	
Alls.	John Smith borrowed \$450 from Jack	22	How much will the excavation for a cellar
	Jones at 6% per annum. How much did	₹_`	30 ft. by 40 ft. and 6 ft. deep cost at 40
	he owe Mr. Jones at the end of 1 year?		cents per cu. vd.?
	4 0 0 0		
Ans.		Ans.	
10.	Lucile has \$8.25. How much more must	23.	How many rods of wire are needed to
M. C. Comp.	she save in order to buy a \$4.50 hat and a		build a 5 wire fence around a piece of
1.	\$15.00 coat?	j :	ground 20 rd. square?
Ans.	111.26	Ans.	2 Anna Carlos Anna Anna Anna Anna Anna Anna Anna Ann
11.	There are 1,223 pupils in our grade	24.	A farmer has a cylindrical silo which is 10
	schools. If the total cost to maintain the	*	ft. in diameter and 25 feet high. How
	school for one year is \$46,877.59, what is		many cu. ft. will it hold? (Use $\pi=3.14$ .)
	the average cost per pupil?	Aris.	Sheem within head size
Ans.		25.	In an examination, Susie tried 32 ex-
12.	Thomassad C1 000 at E1/ of Can t	\$	amples. This was 80% of the whole ex-
Andrew .	I borrowed \$1,000 at 5½ % for 1 yr. What	1	amination. How many examples were
	was the cost for the use of this money?		there in the examination?
Ans.		Ans.	and the second s
18.	A suit of clothes was marked \$45, which	26.	Find the weight of an iron bar that is 4 in.
the many	was 50% more than the cost. What was	*	wide, 3 in. thick and 60 ft. long, if 1 cu. ft.
1. The state of th	the cost?	,	weighs 480 lbs.
And		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
77.		Ans.	And the second s
		7	

Directions: Answer easiest parts first. back and work on others. You will have actly 15 minutes for epart.	the ex-
ja danka ming	fe.

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

ARITHMETIC By J. B. Stroud,

	Score				
Part I	23				
Part II	3				
Total	1/1/13				
	7				

parc.	K. S. T. C.,	Emporia, Kansas.	(in the walls)
	with valuable assistance f		
Name Many S	Leene		
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	m near each example. N		
has since exclude.	ro sel e vel oj evo PA	RT I.	tottes ett i var sekjers gam
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kaja 9 letres de givetje	12. $2135 \div 7 = 305$	131/2	33. 200 + . 622 = 432 /3/1/
Velde <b>4</b> - welf in the con-	1 jakale tuos iskes 13.55 Add: aainissis	6 5½	The state of the s
79	4806 0840	161/	$34. \ 4\frac{3}{8} \times 2\frac{1}{8} \times 6\frac{7}{8} =$
2. 19 — 5 = 4	391	y willed Michael So.	
$3.  7 \times 8 = 56$	8743 7625	22. Subtract	
$7 \times 8 = J V$	21565	5010	35. Subtract
$4. 27 \div 9 = 5$	14. Multiply	2635	4 yr. 3 mo. 20 da. 2 yr. 6 mo. 10 da.
	5 3 8 m inc	2365	fyr. 7mw. 10 da. X
× 2	i daget il <b>2 5</b> % hivone	$23.  \frac{1}{2} - \frac{1}{4} = \frac{1}{4}$	The state of the s
1082	13,450	$24. \ \ \frac{3}{5} + \frac{2}{5} = 1$	36. Add
3. Subtract	o portugi i de la propio por la compaña de la compaña La compaña de la compaña d	[하는 원임이 현광대학 시대] 원리	2 yd. 2 ft. 10 in.
$\begin{array}{c} 649 \\ 427 \end{array}$	$  15. 700 \div 10 = 70$	$25. \ \ \frac{3}{5} \times \frac{1}{2} = \frac{70}{10}$	3 yd. 1 ft. 8 in.
222	16. Divide	26. $\frac{5}{8} \div 5 = \frac{1}{8}$	6 yd. 2 ft. 6 in. /3a/d. / Lt. 0 in
7. Divide	Set the during part is	27. 83% - 35% = 1	Livery of the said
2)628	$(45)\overline{11700}$	27. 83% - 35% =	description of the second
3/4		28. Add 71/5	37. Divide
3. Add	Polyton yana mali	2 <b>12 3 4</b> . To so the part of	Pl 121-20.
10 <b>7 5 3</b> 1	$17. 900 \times 100 =$	31/6	7) 40 lb. 6 oz.
432	9000		
1791-2010 1-014	18. Multiply	29. Divide	pag 159s, bows exell 11
Divide 5) 915	875	.0 4,) .6 4,8	le Araku i da jih i i Ararias Muhamba i i i i i inangan
183	103500	16.2	38. 6896
0. Subtract		30. Multiply 5.44	$\times 38\%$
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3874	19. 41) 1107	326×8	
		3 37 2 8	39. 83.2 - 2.006 = 8/./9

Multiply 741

11.

20.

39. 83.2—2.006 = 81.194

32.  $8\frac{1}{2} \times 2\frac{1}{2} = \frac{31}{4}$  40.  $0 \times 832 = 0$ 

### PART II.

	trois   The state of the state	3000	ANTENIE TO THE TOTAL CONTROL OF THE
1	Frank sold 25 sheep and had 10 left. How	14	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how
Ang	35 sheer	the state of the	many trees are there in the orchard?
2.	George raised 3 prize pumpkins which	1	A though the continue of green
	weighed as followers 141/ lbs 12 lbs and	Ans.	At 01/
داد شیع داد	weighed as follows: 14½ lbs., 13 lbs., and	тэ.√	At 31/4 percent what will be the lee for
	16½ lbs. Find the average weight.	TANK D	
Ans.	V4 lb.		\$1,008?
3.	r paga 1909 sering di selah di terdik di Kabandari di Kabandari 🔪 🔪 kabupatan dalah sering di di kabandari kelabah di Kabandari kelab	A 200	SHEET COMMENTS OF THE PROPERTY
٥.	ft 6 in long. Find the cost if one feet is	Ans.	
engerenes	ft. 6 in. long. Find the cost if one foot is	16.	A citizen owns property which is assessed
	worth 60 cents.		at \$5,860. The rate of tax is \$2.50 per
Ans.	72,70 referen		\$100. What is his semi-annual tax?
4.	On a man in Manual	13/77	The transfer of the control of the c
: 🛍 (	CANADA BARA BARA BARAN B	Ans.	
	tance between the cities, if ¼ in. on the	17.	A bridge is 90 ft. long and 20 ft. wide.
	man represents 25 miles?		How many board feet of lumber will it
	map represents 25 miles?		take to lay a floor on it if the planks used
Ans.	200 miles.	d respectively.	*are 2 in. thick? we were replaced a strategy of the control of th
5.	Coover had 70 validity, he gold 10 of them.	۸	e and No. A and the second of the second
	The state of the s	Ans.	To De la la la la Companya de la
	he now?	18.	Mrs. Brown bought a bolt of curtain ma-
	ne now.	į	terial containing 17 yards. How many
Ans.	4 Drathal	1	curtains each containing 4½ yds. can she
6.	Robert and James deliver packages on		make from it?
	Cotundar Debout wented for 11/ how for	A	
	Casla 1 11/ 1 C D T	Ans.	
	worked at Smith's for 134 hrs. Which boy	19.	A box of 25 apples cost \$2.75. How much
	worked longer?	1	was that for each apple?
		Ans.	
Ans.		20.	Frank and James took care of a lawn one
	Walter was paid 20 cts. an hour last sum-	20.	summer for \$9. Frank mowed it 6 times
••	mer for mowing lawns. If he earned	1	and James 12 times. How much money
	\$5.40, how many hours did he work?		should Frank receive?
	\$5.40, now many nours did ne work!		Should Flank leceive:
Ans.	29 Hours	Ans.	
8.		21.	Over how many sq. yd. can a horse graze
•	from his uncle who gave him a 35% dis-		if tied to a post by a rope 25 ft. long? (Let
	count. How much did the suit cost Cole-		$\pi$ =3.14.) Make no allowance for fasten-
	man?		ing the rope.
	MIA 2 2		ing the rope.
Ans.	110.13 Cott Coleman.	Ans.	<u>XX</u>
9.	John Smith borrowed \$450 from Jack	22.	How much will the excavation for a cellar
	Jones at 6% per annum. How much did		30 ft. by 40 ft. and 6 ft. deep cost at 40
	he owe Mr. Jones at the end of 1 year?	- 1	cents per cu. yd.?
	MITTER TO THE STATE OF THE STAT		
Ans.		Ans.	<u></u>
10.	Lucile has \$8.25. How much more must	23.	How many rods of wire are needed to
	she save in order to buy a \$4.50 hat and a		build a 5 wire fence around a piece of
	\$15.00 coat?		ground 20 rd. square?
A	11/25	Ans.	
Ans.			A form on hog a cirlindrical sile high in 10
11.	race are rises pupils in our grade	24.	A farmer has a cylindrical silo which is 10
	schools. If the total cost to maintain the	1	ft. in diameter and 25 feet high. How
	school for one year is \$46,877.59, what is	1	many cu. ft. will it hold? (Use $\pi=3.14$ .)
	the average cost per pupil?	Ans.	Maryin company and
Ans.		25.	In an examination, Susie tried 32 ex-
12.	I horrowed \$1 000 of 51/ 07 for 1 TITL-1		amples. This was 80% of the whole ex-
14,	I borrowed \$1,000 at 5½% for 1 yr. What		amination. How many examples were
	was the cost for the use of this money?		there in the examination?
Ans.	<u> </u>	2.5	and the second s
	A quit of clother and and a lother		775- 3 41 - X-1-314 - 6 1 - 1 - 1 - 1 - 1
	was 50% more than the cost. What was		Find the weight of an iron bar that is 4 in.
	the cost?		wide, 3 in. thick and 60 ft. long, if 1 cu. ft.
	VIII COSU:		weighs 480 lbs.
Anc	STORES OF ROOM OF WELL OF THE MODE MAKE OF		

		VT FERMIN A ST	
		HOLARSHIP CONTEST	Score
Directions: Answer the easiest parts first. Go back and work on the		ril 4, 1930 Measurements and Standards whers College, Emporia	
others. You will have ex- actly 15 minutes for each		HMETIC	Part II //
part.	K.S.T.C.,	B. Stroud, Emporia, Kansas.	Total 49
	0. 0. 0. 0.	om Kansas arithmetic teach	
Name Conforma	. 🔥 - Grand College of the College	Age 13	Grade 8 Date Obsalt
Town Admond			
School Juscolal	V A	Teacher Lacte	nati alba ni 🦰 ti al (Mai alba) i di d
	n near each example. M	lake your answers stand	can. Write the answers in lout clearly.
	o (200) A relation PA	RT I.	
1. Add	12. 2135÷7=3で	21. Add	33. 200 ÷ . 622 = 1 1. 1/V
6	13. Add	51/4 161/4	
2. 19 — 5 = 1 1	$egin{array}{c} 4806 \\ 391 \\ 8743 \\ \hline \end{array}$	A rolf Cook it has been	$34.  4\% \times 2\% \times 6\% = $
3. $7 \times 8 = 56$	$\frac{7625}{7625}$	22. Subtract 5 0 1 0	35. Subtract.
4. $27 \div 9 = 3$	14. Multiply	2635	4 yr. 3 mo. 20 da. 2 yr. 6 mo. 10 da.
5. 541	5.3 8	2375	9 4 1 10
× 2	25	$23.  \frac{1}{2} - \frac{1}{4} = \frac{1}{4}$	
6. Subtract	1 676	$24. \ \ \frac{3}{5} + \frac{2}{5} = 1$	36. Add
649 427	$\frac{3450}{15.700 + 10 = 70}$	25. $\frac{3}{5} \times \frac{1}{2} = \frac{7}{10}$	2 yd. 2 ft. 10 in. 3 yd. 1 ft. 8 in.
222	16. Divide	26. $\frac{5}{8} \div 5 = 5$	13 nd 1er 0 m
7. Divide 2)628		27. $8\% - 3\% = 1$	resulted in the state of the st
314	45)11700	28. Add 71/5 V	37. Divide
8. Add 753	de noter Jaj999e3 : ernet erke kjajjadeskij	$12\frac{3}{4}$	526.71
$\begin{array}{c} 614 \\ 432 \\ \hline \end{array}$	17. 900×100=	je i <del>Translati</del> er en er i Al en er i de la deweg ge	7) 4 0 lb. 6 oz.
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9. Divide 5 ) 9 1 5	$\begin{array}{c} 875 \\ 504 \end{array}$	.0 4 ) .6 4 8/	s to the S C Z to tomas
183	1/3/25	30. Multiply	38. 5 (6896 : 3 % od) 
10. Subtract 6 9 2 5	77000	$\begin{array}{c} 5.44 \\ -6.2 \end{array}$	28868 -268682
3874	19. 41) 1107	3/2/2	-263034 -263034
11. Multiply	- 0 F 7	31. 2434 + 814 = 3	39. 83.2 - 2.006 = 31'177
$\begin{array}{c} 741 \\ \underline{} \\ 3 \end{array}$	20. $170.6 \times 100$	32. $8\frac{1}{2} \times 2\frac{1}{2} = \frac{21}{2}$	40. $0 \times 832 = \emptyset$
222.3	170600	lada kana 4'	
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	PA	RT II.	
1	Frank gold 25 cheen and had 10 left Ho	TOT 1 1 /	An orchard contained 120 apple trees. If 40% of all the orchard is in apples, how many trees are there in the orchard?
Ans	3.5	THE SERVICE	many trees/are there in the orchard?
	"" " " " " " " " " " " " " " " " " " "	IU IU.	At 31/4 percent what will be the fee for selling a shipment of goods valued at \$1,008?
3.	To make a trapeze, we need a steel bar ft. 6 in. long. Find the cost if one foot worth 60 cents.	is 16.	A citizen owns property which is assessed at \$5,860. The rate of tax is \$2.50 per
Ans.	H 2,00	, where	\$100. What is his semi-annual tax?
4	On a map in Mary's geography two citi	es Ans.	23/25 South
1913 1915 1915	are 2 in apart. What is the actual ditance between the cities, if 1/4 in on the map represents 25 miles?	s- 17. ie	A bridge is 90 ft. long and 20 ft. wide.  How many board feet of lumber will it take to lay a floor on it if the planks used
	George has 70 rabbits; he sold 18 of ther	redir	are 2 in thick?
	then bought 23. How many rabbits ha	n, Ans. as 18.	Mrs. Brown bought a bolt of curtain ma-
	he now?		terial containing 17 yards. How many
Ans.	Robert and James deliver packages		curtains each containing 4½ yds. can she make from it?
0.	Saturday. Robert worked for 11/4 hrs. fo	$\mathbf{or}$ Ans.	3.727
	Cook and 1% hrs. for Brown. Jamworked at Smith's for 134 hrs. Which be worked longer?	es 19.	A box of 25 apples cost \$2.75. How much was that for each apple?
Ans. 7.	Walter was paid 20 cts. an hour last sur mer for mowing lawns. If he earne	Ans. 20. n- d	Frank and James took care of a lawn one summer for \$9. Frank mowed it 6 times and James 12 times. How much money
	\$5.40, how many hours did he work?		should Frank receive?
Ans. 8.	Coleman bought a \$16.50 Boy Scout su from his uncle who gave him a 35% di count. How much did the suit cost Col	S-	Over how many sq. yd. can a horse graze if tied to a post by a rope 25 ft. long? (Let $\pi=3.14$ .) Make no allowance for fasten-
	man? abban, b	10	ing the rope.
Ans. 9.	John Smith borrowed \$450 from Jac Jones at 6% per annum. How much di	k 22.	How much will the excavation for a cellar 30 ft. by 40 ft. and 6 ft. deep cost at 40
	he owe Mr. Jones at the end of 1 year?	1.88	cents per cu. yd.?
Ans. 10.	Lucile has \$8.25. How much more mu	Ans.	How many rods of wire are needed to
	she save in order to buy a \$4.50 hat and \$15.00 coat?	a	build a 5 wire fence around a piece of ground 20 rd. square?
Ans.	811.25	Ans.	the state of the s
11.	There are 1,223 pupils in our grad	e 24.	A farmer has a cylindrical silo which is 10
	schools. If the total cost to maintain the school for one year is \$46,877.59, what the average cost/per-pupil?	ie is Ans.	ft. in diameter and 25 feet high. How many cu. ft. will it hold? (Use $\pi=3.14$ .)
Ans.		25.	In an examination, Susie tried 32 ex-
	I borrowed \$1,000 at 5½% for 1 yr. What was the cost for the use of this money?	ıt	amples. This was 80% of the whole examination. How many examples were there in the examination?
Ans. 13.	A suit of clothes was marked \$45, which	h $\frac{\text{Ans.}}{26}$	Find the weight of an iron bar that is 4 in.
5	was 50% more than the cost. What was the cost?	is in	wide, 3 in. thick and 60 ft. long, if 1 cu. ft. weighs 480 lbs.
Ans.	(2, 2,50 ) - Company	Ans.	2400 160

### Directions: Answer the easiest parts first Go back and work on the others. You will have exactly 15 minutes.

(2) 33. 1 sertenly

heimin institut

John Stadlander (1)

### March Committee EVERY PUPIL SCHOLARSHIP CONTEST 1 4 15 media April 4, 1930 ته ليف و لم الريالية . في ال

wiren to incom

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

# SPELLING By W. H. Gray

TOTAL NUMBER POINTS

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one of	these is correct. Fir	nd the correct one	and place the number be	fore this word in the paren
	at the left.	2017/02/04/04/04/04/04/04 0.00/21/04/04/04/04/04/04/04/04/04/04/04/04/04/	20 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	The Administration of the Assett of
Examp	le: (2) 1. gr	nl Z. giri cond word is the	3. gurl 4. girll	nce the figure "2" has been
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62	26. 1 balloon	2 bloon	3 ballon.	4 bollon
	27. 1 complete	2 compleat	3 complet	4 comeplet
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talle in the second of the second in the second of the sec	- Inger Mysela By		· 18、 [ \$4.66 \$4.66 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5 \$1.5
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( 1 ) 61. 1 discernable	2 disearnable	discernible	4 desernable
( 2 ) 62. 1 cresent	2 crescent	3 cressent	4 cresant
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( $\mathcal{U}$ ) 64. 1 garantee	2 garentee	gaurantee	4 guarantee
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(2) 66. 1 disappointment	2 dissapointment 3	disapointment ·	4 dissappointment
( 1/1)-67. 1 apologise	<ol> <li>\$250 M T \$6 \$0 42 23 67 86</li> </ol>	appologize	4 apoligize
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(2-)-69. 1 privilege		priviledge	4 privelage
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( 9 ) 72. 1 confedercy	and the state of t	confedersy	4 confedericy
( / ) 73. 1 varieties		verities	4 varietys
( 1) 74. 1 slauter	2 slotter		4 sloter
( 2) 75. 1 seperator	2 separator 3	seperater	4 separater
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( ) 77. 1 sive	2 seive	sieve	4 scive
( ) 78. 1 luxuriant	2 luxurant	luxurent	4 luxurient
( ) 79. 1 pnemonia	2 pneumonia 3	newmonia	4 pnewmonia
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( ) 83. 1 amateur	2 amature	. British Barratan Kalandara (Kalandara)	4 ameture
( ) 84. 1 bargin	2 bargain	bargan bargan	4 bargian
With the second	2 pargam	vargan	TANKATON TO A GOVERN

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

11'

( ) 32. 1 decorate

(2) 33. 1 sertenly

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## SPELLING

By W. H. Gray, K. S. T. C., Emporia, Kansas.

TOTAL NUMBER POINTS

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rame.	Oh	0000	<b>`</b>	- (-U)
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placed	in the parenthesis.	Do all of the rows the	same way. You will	have exactly 15 minutes.
( / )	1. 1 several	2 severl	3 severel	4 sevral
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	12. 1 enginear	2 engineer	3 enginer	4 enginere
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(3)	24. 1 menchen	2 menchin	3 mention	4 menshion
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, .	27. 1 complete	2 compleat	3 complet	4 comeplet
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(4) 51. 1 furlow (4) 52. 1 disagreeble (5) 53. 1 bachler (4) 54. 1 hickry (-) 55. 1 counterfit	2 disgreeable 2 bachelor 2 hicory	3 disagreeable 3 batchler 3 hickery 3 conterfit	4 ferlow 4 disagreable 4 bachlor 4 hickory 4 counterfite
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Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

### krádovětském roku 2. – Přiniská at naced Rochadovich EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

SPELLING
By W. H. Gray,
K. S. T. C., Emporia, Kansas.

TOTAL NUMBER POINTS

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one of these thesis at the <b>Example:</b> In this	e is correct. Find to left.  (2) 1. gril example the secon	he correct one and  2. girl  3. d word is the one si	place the number be gurl 4. girll pelled correctly. He	gs of the same word. Only fore this word in the paren- nce the figure "2" has been have exactly 15 minutes.
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(3) 12. (1) 13. (2) 14.	1 funnyest 1 enginear 1 magazine 1 develp 1 estimate	<ul><li>2 funnest</li><li>2 engineer</li><li>2 magzine</li><li>2 develope</li><li>2 estmate</li></ul>	3 funest 3 enginer 3 magazen 3 develup 3 estamate	4 funniest 4 enginere 4 magizene 4 develop 4 estemate
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Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

(2) 33. 1 sertenly

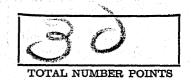
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### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educational Measurements and Standards Kansas State Teachers College, Emporia

## SPELLING

By W. H. Gray, K. S. T. C., Emporia, Kansas.



Name 94 ish %	night	Town Land	
School Junian	Waget .	Age/3 /	Grade >A
Teacher 2000	<u> </u>	State Kana	Date Of Elo
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( $\hat{\mu}$ ) 4. 1 sissors	2 sissers	3 sisers	4 scissors
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( /) 16. 1 biscuit	2 bisket	3 biscut	4 biskut
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( 19. 1 appitite	2 apatite	3 apitite	4 appetite
( ) 20. 1 telegram	2 telagram	3 tellagram	4 tellgram
( J) 21. 1 cabbeg	2 cabage	3 cabbage	4 cabbige
(2 ) 22. 1 bilding	2 building	3 bulding	4 biulding
( ) 23. 1 autum	2 autumn	3 autom	4 auttum
(3) 24. 1 menchen	2 menchin	3 mention	4 menshion
(2) 25. 1 ake	2 ache	3 acke	4 ach
() 26. 1 balloon	2 bloon	3 ballon	4 bollon
( / ) 27. 1 complete	2 compleat	3 complet	4 comeplet
(   ) 28. 1 pumpkin	2 punkin	3 complet 3 pumkin	4 punken
(3) 29. 1 dominos	2 dominoes	3 domanoes	4 domonoes
(1) 30. 1 mollasses	2 molaces	3 molases	4 molasses
		en fix a plan appet to Ministra	
31. 1 decendent	2 descendant	3 desendent	4 decendant
( ) 32. 1 decorate	2 decrate	3 deckorate	4 decarate

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(34. 1 m	anafacturing	2 manufactering	3 manufactoring	4 manufacturing
( 35. 1 ce	metery	2 cemetary	3 cematary	4 sematary
( <b>¼</b> ) 36. 1 su	fishent	2 sufficent	3 safishent	4 sufficient
(1) 37. 1 ca		2 colaflower	9°9 , - "	4 calaflower
(2) 38.1 gc	Note that the second of the se	2 governor	3 govener	4 governer
(-3) 39. 1 ar		2 artfishel	3 artifical	4 artificial
(1) 40. 1 ac		2 acomodate	3 acomadate	4 accomodate
	eneraly		3 generly	4 genarly
( 42. 1 fo		2 forn	3 foren	4 foreign
( 43. 1 fa		2 foset	3 fosit	4 fosset
(-4) 44. 1 pr (-2) 45. 1 ex		2 prairie 2 experince	3 prarie 3 experiance	4 prairy 4 experience
(46. 1 pl (47. 1 er	umer to availle :	2 plummer 1 2 May 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 plumber	4 plomer 4 ereaser
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				4 millanary
( <b>)</b> 51: 1 fu		2 furlough	3 furlo	4 ferlow
( ) 52. 1 di		2 disgreeable	3 disagreeable	4 disagreable
(-5.) 53. 1 ba	chler	2 bachelor	3 batchler	4 bachlor
(4) 54. 1 hi	ckry	2 hicory	3 hickery	4 hickory
( ) 55. 1 co	unterfit	2 counterfeit	3 conterfit	4 counterfite
( ) 56. 1 ac		2 aquainted	3 aquanted	4 aqquainted
(3) 57.1 or		2 opposit	3 opposite	4 oppisit
(4) 58. 1 ba		2 barricks	3 barraks	4 barax
(7) 59. 1 ex		2 ecstasy	3 extecy	4 extisy
( ) 60. 1 m	5 f	2 mohogony	3 mahogony	4 mahogany
		2 disearnable	3 discernible	4 desernable
(4) 62. 1 cr		2 crescent	3 cressent	4 cresant
(4) 63. 1 pc	•	2 poltis 2 garentee	3 poltus	4 poltice
( ) 64. 1 ga ( ) 65. 1 de	mention	2 dimention	3 gaurantee	4 guarantee
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(*****) 68. 1 to		2 tortus	3 tortise	4 tortis
( 69. 1 pi	rivilege	2 privilage	3 priviledge	4 privelage
(—) 70. 1 in		2 incessent	3 insessent	4 incessant
(***) 71. 1 te		2 termenal	3 terminal .	4 termanel
() 72. 1 cd		2 confederacy	3 confedersy	4 confedericy
() 73. 1 va		2 varities	3 verities	4 varietys
() 74. 1 sl	auter	2 slotter	3 slaughter	4 sloter
(——) 75. 1 se	perator	2 separator	3 seperater	4 separater
(		2 rediculas	3 rediculious	4 ridiculous
( <b>~~)</b> 77. 1 si		2 seive	3 sieve	4 scive
() 78. 1 lu	xuriant	2 luxurant	3 luxurent	4 luxurient
(—) 79. 1 pi		2 pneumonia	3 newmonia	4 pnewmonia
() 80.1° m	State of the state	2 molicious	3 malicious	4 mulishes
(******) 81. 1 cr		2 cristalize	3 cristlize	4 christlize
( <b>***</b> 82. 1 cc		2 commity	3 committe	4 committee
() 83. 1 an		2 amature	3 amiture	4 ameture
() 84. 1 ba	argin	2 bargain	3 bargan	4 bargian

Directions: Answer the easiest parts first. Go back and work on the others. You will have exactly 15 minutes.

### EVERY PUPIL SCHOLARSHIP CONTEST April 4, 1930

Bureau of Educa ional Measurements and Standards Kansas State Teachers College, Emporia

### **SPELLING**

TOTAL NUMBER POINTS

By W. H. Gray, K. S. T. C., Emporia, Kansas. Town Grade .. Teacher. State Date **DIRECTIONS:** In each row across the page you will find four spellings of the same word. Only one of these is correct. Find the correct one and place the number before this word in the parenthesis at the left. 2. girl 3. gurl 4. girll Example: (2) 1. gril In this example the second word is the one spelled correctly. Hence the figure "2" has been placed in the parenthesis. Do all of the rows the same way. You will have exactly 15 minutes. 3 severel 2 severl 4 sevral 1. 1 several (I)2) 2 separate 3 seprate 4 seperrate 2. 1 seperate enought 4 enofe 3. 1 enuf enough 2 sissers sisers 4 scissors 4. 1 sissors sirplus 4 surplus 5. 1 sirpluse serplus 2 libery 3 libray 4 libary 6. 1 library 2 7. 1 lettas lettuce 3 lettus 4 lettes 2 3 gipsey 4 jipsy 8. 1 gipsy gypsy gause 4 goze 9. 1 gose gauze 3 electrick 4 eletric electrict 10. 1 electric 2 3 funest 4 funniest 11. 1 funnyest funnest 12. 1 enginear 3 enginer 4 enginere engineer 3 magazen 4 magizene magzine 13. 1 magazine develup 3 4 develop develope 14. 1 develp 2 3 estamate 4 estemate 15. 1 estimate estmate 3 2 biscut 4 biskut bisket 16. 1 biscuit 2 3 belive 4 beleve believe 17. 1 beleave 3 certain 2 surten 4 sertan 18. 1 certen 2 3 apitite 4 appetite apatite 19. 1 appitite telagram 3 tellagram 4 tellgram 20. 1 telegram 3 cabbage 4 cabbige ) 21. 1 cabbeg cabage 3 bulding 4 biulding 2 ) 22. 1 bilding building 4 auttum 2 autumn 3 autom ) 23. 1 autum 2 3 mention 4 menshion menchin 24. 1 menchen 3 acke 2 4 ach ) 25. 1 ake ache 2 3 ballon 4 bollon 26. 1 balloon bloon compleat 3 complet 4 comeplet 27. 1 complete 3 pumkin 4 punken 28. 1 pumpkin punkin ) 2 dominoes domanoes 4 domonoes ) 29. 1 dominos 3 molases 4 molasses 30. 1 mollasses molaces

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(2)	36. 1	sufishent	2	sufficent			4	sufficient
(3)	37. 1	califlower	2	colaflower				calaflower
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						millenary is all		
		furlow				furlo		ferlow
		disagreeble		disgreeable		disagreeable		disagreable
		bachler				batchler		bachlor
		hickry	2	hicory	3	hickery	4	hickory
( <b>1</b> )	<b>55.</b> 1	counterfit	2	counterfeit	3	conterfit	4	counterfite
(I)	56. 1	acquainted	2	aquainted	3	aquanted.	4	aqquainted
(3)		oppisite		opposit	3	opposite		oppisit
		barracks	2	barricks	3	barraks	4	barax
$(\mathcal{Z})$		exticy	2	ecstasy	3	extecy		extisy
$(y^r)$	60. 1	mohogany	2	mohogony	3	mahogony	4	mahogany
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(1)		disappointment	2		3	disapointment		dissappointment
		apologise				appologize tortise		apoligize
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(11)		insesent	2	incessent	3	insessent		incessant
(2)	1	termanal	ີ ດ	maiguide o		terminal	- 13	termanel
(3) (a)		confedercy		termenal confederacy		confedersy		confedericy
(1)		varieties		varities		verities		varietys
(2)		slauter	2	slotter		slaughter		sloter
(W)		seperator	2	separator	3	seperater		separater
(4)		rediculous	2	rediculas	3	rediculious		ridiculous
$(\mathfrak{S})$	77. 1	and the second control of the second	2	7.4 ( 3.1 ( 3.1 ) )	3	sieve, Coto S		scive
(7)		luxuriant		luxurant		luxurent	5.0	luxurient
(Q)		pnemonia	2	pneumonia	3	newmonia		pnewmonia
(3)	80. 1	malicous	2	molicious	3	malicious	4	mulishes
(1)	81. 1	crystalize	2	cristalize	3	cristlize	4	christlize
()		comittee	2	1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、	3	committe		committee
(1)		amateur	2	amature	3	amiture		ameture
- (2)	84. 1	bargin	2	bargain	3	bargan	4	bargian