

## ARITHMETIC

Tuesday, January 19, 1926 — 9.15 a. m. to 12.15 p. m., only

Write at top of first page of answer paper (a) name of school where you have studied, (b) grade of work completed in arithmetic.

The minimum requirement is the completion of the work of the seventh grade in arithmetic, as outlined in the 1910 syllabus for elementary schools.

Answer 10 questions, including two questions from each of the first three groups and four questions from the fourth group. Reduce each result to its simplest form and mark each answer Ans.

Questions 1 and 2 are given as tests for accuracy; no credit, therefore, will be allowed unless the answer is correct.

## Group I

Answer the two questions in this group.

1. Mental test on separate sheet. [10]
- 2 a Copy and add the following:  
 $18; 79; 4.65; 8.204; 936; 501.8; 7.62$  [2]
- b Subtract  $9\frac{3}{8}$  from  $14\frac{1}{2}$ . [2]
- c Multiply 736 by 208. [2]
- d Divide 74.4 by .24. [2]
- e Write in figures: one thousand two hundred seven and three hundredths. [2]

## Group II

Answer two questions from this group.

- 3 Find the square root of 45 correct to two decimal places. [10]
- 4 a Find the fourth term in the following proportion:  
 $5:12 = 15:?$  [5]
- b Find the average of the following numbers:  
 $32, 65, 43, 51$  [5]
- 5 a How many pints are there in 3 pecks 2 quarts? [2½]
- b Change 100 inches to yards and feet. [2½]
- c Subtract 2 pounds 6 ounces from 5 pounds 2 ounces. [2½]
- d Find the number of cubic feet in a bin 7' x 12' x 5'. [2½]

## Group III

Answer two questions from this group.

- 6 Complete each of the following statements:
  - a In a common fraction the number above the line is called the . . . [2]
  - b A straight line drawn from the center of a circle to its circumference is called a . . . [2]
  - c The fee paid annually for insurance is called the . . . [2]
  - d The number on which percentage is computed is called the . . . [2]
  - e One of the two equal factors of a number is called its . . . [2]
- 7 a Write a negotiable note for \$625, dated August 5, 1925, with yourself as maker. [5]
- b Charles receives a monthly allowance of \$2. Make a budget (or statement showing how he might divide his money) for the month of February, consisting of at least five items and covering the three following divisions: spending, giving, saving. [5]
- 8 a State which of the facts given in the following problem you need to use in order to find Mr Brown's school tax: [6]
 

In district no. 12 the taxable property consists of 18 farms with a valuation of \$76,000, and of \$2000 personal property. Mr Brown has a farm of 150 acres for which he paid \$3500. The assessed valuation of his property is \$3000. The district has voted to raise \$1200 for school purposes.
- b Find Mr Brown's tax. [4]

## Group IV

Answer four questions from this group.

- 9 A housekeeper can buy maple syrup at 75¢ a quart or in gallon cans at \$2.70 a can. How much does she save in purchasing by the gallon if she uses 20 quarts a year [5]? What per cent does she save [5]?
- 10 An automobile uses one gallon of gasoline every 12 miles. What does it cost to take a trip of 612 miles if the cost of gasoline is 20 cents a gallon and other expenses are 10 cents a mile? [10]

11 Carson Brothers buy a plot of ground containing 400 acres. They give  $\frac{1}{2}$  of the property to the city for streets and parks, which are to be laid out in such a way that the remainder of the plot can be cut up into building lots, each 60 feet by 200 feet. How many lots will there be? [10]

12 A building and loan association loans a man \$4200. This amount is  $\frac{3}{4}$  of the value of the house he is building. On completing the house, the man sells it at a profit of \$800. Find the selling price.

*a* Analyze the problem (that is, give the steps in the solution and state reasons). [6]

*b* Solve the problem. [4]

13 Make out a bill for the following transaction: [10]

Alex Taylor & Co., 22 E. 42d st., New York, N. Y., sells to the Peerless Athletic Club, Reading, Pa., the following goods:

8 worsted sleeveless shirts at \$2.35

8 pairs white twill gym pants at \$.85

12 Annapolis swimming trunks at \$1.45

6 pairs Instructor boxing gloves at \$9.25

5 pairs Star track shoes size 8 at \$3.75

2 Leader megaphones at \$.53

3 Perfection volley balls at \$4.90

1 volley ball net no. B. M. at \$3

## ARITHMETIC MENTAL TEST

17

[Fifteen minutes allowed for this test]

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Answer all parts of this test. Write each answer in the space marked  
*Ans.* No credit will be allowed unless the answer is correct.

a With a scale of 400 miles to one inch, how many inches represent  
2000 miles on a map? [1]

*Ans.*

b If  $\frac{1}{4}$  of a yard of cloth costs 8 cents, what will 3 yards cost? [1]

*Ans.*

c On a day's trip a man traveled 240 miles by train and 120 miles  
by auto; what per cent of his day's journey did he travel by  
auto? [1]

*Ans.*

d From  $1\frac{1}{2}$  subtract  $\frac{3}{4}$ . [1]

*Ans.*

e Mary took care of a neighbor's baby one afternoon from 1.30  
until 4.30; if she received 20 cents an hour, how much did she  
earn that afternoon? [1]

*Ans.*

f The total expenses for 8 boys at camp for 2 weeks were \$72;  
what was the cost a week for each boy? [1]

*Ans.*

g Multiply  $22\frac{1}{2}$  by 10. [1]

*Ans.*

h State which of the following fractions is the largest:

 $\frac{1}{2}$ ,  $\frac{3}{8}$ ,  $\frac{1}{3}\frac{1}{3}$  [1]*Ans.*

i Divide 36 by .2. [1]

*Ans.*

j A child entered school Sept. 8, 1925, and presented a birth cer-  
tificate dated June 8, 1920; how old was he? [1]

*Ans.* years months