

## ARITHMETIC

Tuesday, January 18, 1916—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 the first five questions and seven of the others. Reduce each result to its simplest form and mark each answer Ans.

Questions 1, 2, 3, 4 and 5 are given as tests for accuracy; no credit, therefore, will be allowed unless the answer is correct.

- 1 Mental test on separate sheet. [10]
- 2 Subtract 6793 from the product of 4853 and 796. [5]
- 3 Add

49658

76439

27862

51374

96941

30286

64125

98507

83786

49013

[5]

- 4 Multiply the sum of  $\frac{2}{3}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ ,  $\frac{5}{6}$ ,  $\frac{7}{8}$  by  $\frac{3}{10}$  [5]

- 5 Divide 1322.4 by 4.56 [5]

6 A family uses in one month  $1\frac{1}{2}$  tons of coal at \$6.80 per ton and 3500 cubic feet of gas at \$1 per thousand cubic feet; the father's monthly salary is \$120. What fractional part of his monthly salary does he pay for fuel and light? [10]

7 How much will it cost to excavate a cellar  $42 \times 26$  feet and  $7\frac{1}{2}$  feet deep, at 55 cents a cubic yard? [10]

8 An errand boy earns \$4 a week; he can have a 25% increase or he can secure an office position at \$25 a month. Which position would pay the more annually and how much? [10]

9 What is the interest on \$2000 at 6% from Jan. 1, 1914 to Jan. 18, 1916? [10]

ARITHMETIC—concluded

10 How long a ladder will be required to reach a window 24 feet from the ground, if the foot of the ladder is 10 feet from the building and on level ground? [10]

11 A stationer bought pencils for \$3.60 per gross and sold them for 4 cents each; what per cent did he gain? [10]

12 Make a receipted bill for the following: L. F. Brown bought of Otis, Strong & Co., Albany, N. Y., 37 bu. oats @ \$.40; 50 bu. corn @ \$.67½; 76 bu. wheat @ \$1.04¼; 16 bu. potatoes @ \$.75. [Date the bill today.] [10]

13 Each boy in a shop class of 20 pupils made a magazine rack, using the following pieces of wood:

2 pieces 1 in. × 2 in. × 22 in.

3 pieces 1 in. × 2 in. × 18 in.

1 piece 1 in. × 3 in. × 21 in.

2 pieces 1 in. × 4 in. × 12 in.

Find the cost of the wood for the entire class at 10 cents a board foot. [10]

14 Find the cost of 15 dozen hammers listed at \$9 a dozen, with discounts of 40, 20 and 10. [10]

15 The assessed valuation of a school district is \$564,000; the amount to be raised by tax is \$5000. What would be the amount of school tax on property valued at \$1200? [10]



# ARITHMETIC MENTAL TEST

[Eight minutes allowed for this test]

Tuesday, January 18, 1916—9.15 a. m. to 12.15 p. m.

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

a A crate holds 32 quarts; how much will a merchant receive for a crate of strawberries if he sells them at the rate of 2 quarts for 25 cents? [2]

*Ans.* \_\_\_\_\_

b How many acres are there in a field 20 rods long and 16 rods wide? [2]

*Ans.* \_\_\_\_\_

c A dealer bought 60 hats at  $\$1.33\frac{1}{3}$  each; how much did he pay? [2]

*Ans.* \_\_\_\_\_

d How many pieces, each  $\frac{1}{4}$  of an inch long, can be made from a bar of iron 1 foot long? [2]

*Ans.* \_\_\_\_\_

e If a man takes advantage of a  $16\frac{2}{3}\%$  discount, what will he pay in settlement of a bill of \$24? [2]

*Ans.* \_\_\_\_\_