ARITHMETIC

Tuesday, June 20, 1922 — 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 Copy and add the following: [5]

3795; 184.6; 9.97; 6887; 875.475; 96.4689; 5438.7268; 44.3; .99; 80.027

3 Subtract .255 from 1000 and prove your answer. [5]

4 Divide 11.357 by 67.3, carrying the quotient to *four* decimal places. [5]

5 From the product of $\frac{3}{4}$ and $\frac{4}{5}$ subtract the quotient of $\frac{1}{3}$ divided by $\frac{1}{16}$. [5]

6 How much does a farmer receive for a meadow 128 rods long and 40 rods wide if he sells it at $75 an acre? [10]

7 A merchant bought goods listed at $1472 and was allowed successive discounts of $12\frac{1}{2}$% and 5%; how much did he pay for the goods? [10]

8 If 40 cubic feet of ensilage weigh 1 ton, find the number of tons of ensilage that a cylindric silo will hold if it is 18 feet in diameter and 35 feet high. [10]

9 A real estate dealer sold a house for $6050 and thereby gained 10% on the transaction; what did he pay for the house? [10]

10 Tell how to do *two* of the following: [10]

a Find the cost of one article when the number of articles and the cost of all of them are known.

b Change a common fraction to a per cent.

c Find the amount received when the number of articles and the price of one article are known.

11 On a certain map of Asia, Bombay and Manila are $7\frac{1}{4}$ inches apart; the scale of the map is 100 miles to every quarter of an inch. How many miles apart are the two places? [10]

12 Write a 60 day note, with John Doe as payee and Richard Roe as maker, for $180, interest at 5%. Find its value when due. [10]

13 A man owns a house valued at $6500 and insures it for 80% of its value; find the premium if the rate of insurance is $1\frac{1}{4}$%. [10]

14 A square has an area of 7921 square inches; what is the perimeter of the square? [10]

15 Copy and complete *five* of the following so as to make them correct statements: [10]

a When one number is divided by another, the number divided is called the —.

b The second and third terms of a proportion are called —.

c A fraction whose numerator is greater than its denominator is called —.

d When interest due is added to the principal the sum is called —.

e The distance from the center of a circle to its circumference is called —.

f An even number is one which can be exactly divided by —.

g Changing numbers from a higher to a lower denomination is reduction —.

ARITHMETIC MENTAL TEST

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 How much change will be received from a dollar given in payment for $2\frac{1}{2}$ pounds of beefsteak at 32 cents a pound? [1]

Ans.

b If a train runs 75 miles in 2 hours 30 minutes, what is its rate per hour? [1]

Ans.

c A board 1 inch thick is planed down $\frac{1}{8}$ of an inch; how thick is it then? [1]

Ans.

d During the World War a certain imported dye increased in value from $2 to $8 a pound; what was the per cent of *increase?* [1]

Ans.

e Find the cost of 27 inches of silk at $3.20 a yard. [1]

Ans.

f The tax in a certain village is $28 on each $1000 of assessment; find the tax to be paid by Mr A whose assessment is $2000. [1]

Ans.

g Find the interest on $900 for 4 months at 6%. [1]

Ans.

h A salesman sold goods for $500 and retained 2% commission; what did he remit to his principal? [1]

Ans.

i If oranges are 60 cents a dozen, how much will 3 oranges cost? [1]

Ans.

j What will be the cost of 500 pounds of ice at 60 cents per hundred pounds? [1]

Ans.