The University of the State of New York

230TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Tuesday, January 22, 1924—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]

2456.78; 9367.436; 679.04; 4864; 36.789; 675.28; 600.48; 369.45

3 Divide 26.992 by 5.6. Prove your answer. [5]

4 Complete *five* of the following statements: [5]

a To add fractions they must be reduced to . . .

b When one number is divided by another, the result is called . . .

c By multiplying together the length, breadth and height of a box or bin you find . . .

d When the interest is added to the principal of a note, the sum is called . . .

e To reduce a fraction to a decimal you must . . .

f To multiply a decimal by 100, move . . .

5 Multiply $\frac{4}{5}$ by $\frac{3}{8}$. To the product add $2\frac{1}{4}$ and divide the sum by $\frac{1}{2}$. [5]

6 Answer both *a* and *b*:

a Change to per cents:

$\frac{7}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{5}$, $\frac{3}{5}$ [5]

b Change to common fractions:

10%, $66\frac{2}{3}$%, 60%, $12\frac{1}{2}$%, $83\frac{1}{3}$% [5]

7 From your knowledge of measurements in denominate numbers, use *each* of the following numbers in a correct statement: [10] [Example: 12 inches = 1 foot]

160, 144, 2000, 5280, $16\frac{1}{2}$, 320, 8, 32, 36, 27

8 A man has 10 acres of land in three fields; one field is 15 rods wide and 18 rods long; the second is 20 rods square. How many acres are in the third field? [10]

9 Mrs John Smith bought of William Jones the following goods: 5 yards dress goods at $2 a yard; 1 skirt at $16; 2 pairs gloves at $2.75 a pair; 4 yards ribbon at 20 cents a yard. If Mr Jones gives a 5% discount on every cash purchase above $5, what must Mrs Smith pay? [10]

10 A huckster buys sweet corn at $2 per hundred ears and sells it at 30 cents a dozen; what per cent profit does he make? [10]

11 I borrowed $1200 at 6% on June 1, 1922; on Sept. 25, 1923, I paid the note in full with interest. What was the amount of payment made? [10]

12 A certain man has a lot fronting the street; the village orders him to put a concrete walk in front of it. State *three* things that he must find out before he can compute the cost of the walk. [10]

13 Which will yield more interest in 6 months and how much more: two $500 bonds, one bearing interest at 6% and the other bearing interest at $4\frac{1}{2}$% annually, *or* a $1000 mortgage bearing interest at 5%? [10]

14 A school district has a valuation of $125,000; the district wishes to buy $100 worth of books of which the state will pay half the cost. How much will a man having a farm valued at $4000 pay toward these books? [10]

15 It costs a school $20.40 to furnish supplementary readers for a class of 24 pupils; what will it cost to furnish a class of 19 pupils with readers of the same kind? [Solve by proportion.] [10]

ARITHMETIC MENTAL TEST

16

[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 John selects the following from the school lunch counter: meat, potatoes, gravy, bread and butter, 23 cents; milk 5 cents; pudding 8 cents. What change should he receive from a 50-cent piece? [1]

Ans.

b Tom received $3.25 from the sale of *The Saturday Evening Post* at 5 cents a copy; how many copies did he sell? [1]

Ans.

c George misses 8 words from a list of 40 words; what per cent credit does he receive? [1]

Ans.

d If a watch loses 5 seconds an hour, how many minutes will it lose in one day? [1]

Ans.

e Find 250% of 60. [1]

Ans.

f Find the interest on $600 for 9 months at 6%. [1]

Ans.

g Add $\frac{1}{3}$ and $\frac{1}{4}$. [1]

Ans.

h Find the total area of the faces of a cube the dimensions of which are 4 inches. [1]

Ans.

i How many square feet are there in a board 6 inches wide and 6 feet long? [1]

Ans.

j If candy costs 80 cents a pound, how many ounces can be bought for 20 cents? [1]

Ans.