The University of the State of New York

218TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Tuesday, January 22, 1918—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

$$\begin{array}{r} \$12.78 \\ 9.92 \\ 743.45 \\ .79 \\ 7.84 \\ .07 \\ 38.35 \\ 89.26 \\ .91 \\ 526.76 \\ 979.45 \\ 3.64 \\ \hline \end{array}$$

[5]

3 Divide 860.89 by 43.7. [5]

4 Prove that the result obtained in answer to question 3 is correct. [5]

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

6 If a standard railway rail is 30 feet long and weighs 115 pounds per linear yard, how many tons of steel will be required to manufacture 40 rails? [One ton contains 2000 lb.] [10]

7 In a school of 600 children each child is to contribute 5 cents a week for 40 weeks for the purchase of 4% Liberty Bonds; after the bonds are purchased, what will be the total annual interest received by the school? [10]

8 What will be the cost of 14,640 pounds of coal if a ton of 2000 pounds costs $8? [10]

9 The total cost of a shipment of sugar, including a commission of 2%, was $1224; how much was the commission? [10]

10 Write the following per cents in a column and after each write the equivalent common fraction in its lowest terms: $6\frac{1}{4}\%$; $37\frac{1}{2}\%$; 75%; $12\frac{1}{2}\%$; $83\frac{1}{3}\%$; $16\frac{2}{3}\%$; $66\frac{2}{3}\%$; $87\frac{1}{2}\%$; $33\frac{1}{3}\%$; $62\frac{1}{2}\%$. [10]

11 An entertainment for the benefit of the Red Cross was held in a high school auditorium containing 900 seats; $\frac{1}{3}$ of the seats were sold for $1 each, $\frac{1}{3}$ for 75 cents each and $\frac{1}{3}$ for 50 cents each. How many sweater outfits at $5 each could be purchased with the proceeds? [10]

12 A man gave the use of a piece of land to 121 boys for the purpose of raising potatoes; to each boy was assigned a plot 30 feet long and 24 feet wide. If the average yield was 92 bushels to the acre, how many bushels of potatoes were raised? [1 acre contains 43,560 square feet.] [10]

13 On January 3, 1918, John Jones, a merchant in Syracuse, N. Y., sold to Adam Smith the following groceries: 6 pounds of coffee at 21 cents a pound; $4\frac{1}{2}$ pounds of tea at 60 cents a pound; $7\frac{1}{2}$ pounds of butter at 48 cents a pound. Make out the receipted bill. [10]

14 Which is the more profitable and how much a year, to rent a house for $40 a month *or* to purchase a house for $4000 if money is borrowed at 6% and $175 is allowed for insurance, taxes, repairs and depreciation? [10]

15 A watering trough is 6 feet long, 18 inches wide and 12 inches deep; how many gallons of water will it hold? [1 gallon contains 231 cubic inches.] [10]

ARITHMETIC MENTAL TEST

[Eight minutes allowed for this test]

Tuesday, January 22, 1918—9.15 a. m. to 12.15 p. m.

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 If soap is sold at the rate of 4 bars for 25 cents, how many bars can be bought for $1.75? [2]

Ans. _____

b A newsboy paid $1.50 for 100 newspapers and sold them for 2 cents each; how much did he make? [2]

Ans. _____

c How many ¼ inch spaces are there on a ruler 1 foot in length? [2]

Ans. _____

d How many pencils, at the rate of 3 for 5 cents, can be bought for 45 cents? [2]

Ans. _____

e A second-hand book was sold for 9 cents which was 37½% of its cost; what was its cost? [2]

Ans. _____