

The University of the State of New York

239TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Tuesday, June 14, 1927 — 9.15 a. m. to 12.15 p. m., only

Instructions

Do not open this sheet until the signal is given.

Answer all questions in part I and five questions from part II.

Part I is to be done first and the maximum time to be allowed for this part is one and one half hours.

If you finish part I before the signal to stop is given you may begin part II on another paper. However, it is advisable to look your work over carefully before proceeding to part II, since no credit will be given any answer in part I which is not correct and reduced to its simplest form.

When the signal to stop is given at the close of the one and one half hour period, work on part I must cease. The answer papers to part I will then be collected and you should continue with the remainder of the examination.

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Write at top of first page of answer paper to part I (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 first half of the eighth grade in arithmetic.

Part I

Answer all questions in this part. Each question has 2 credits assigned to it. All work must be shown. Each answer must be reduced to its simplest form.

$$\begin{array}{r}
 1 \text{ Add} \quad 861 \\
 \quad \quad 78 \\
 \quad \quad 3962 \\
 \quad \quad \quad 4 \\
 \quad 58535 \\
 \quad \quad 483 \\
 \hline
 \end{array}$$

2 Add 72.6; 81.5; 902.41; 67; 612.04

3 Add $8\frac{3}{4}$; $22\frac{1}{8}$; $6\frac{1}{2}$; $7\frac{3}{16}$; $5\frac{1}{4}$

$$\begin{array}{r}
 4 \text{ Subtract} \quad 76204 \\
 \quad \quad \quad 70829 \\
 \hline
 \end{array}$$

5 $26\frac{1}{8} - 7\frac{1}{3}$

6 $128.401 - 33.7$

7 $684 - .473$

$$\begin{array}{r}
 8 \text{ Multiply} \quad 76384 \\
 \quad \quad \quad 407 \\
 \hline
 \end{array}$$

9 Multiply $9\frac{3}{8}$ by 7

10 Multiply $\frac{3}{4}$ by $\frac{5}{6}$

11 Multiply 64.21 by 8.7

12 Multiply 823 by $6\frac{1}{8}$

13 a Divide 7568 by 308

b Check the answer.

14 a Divide 664.84 by 32.6

b Check the answer.

15 Divide $9\frac{1}{3}$ by 4

16 Find the average of the following numbers: 12, 41, 34, 46, 32

17 Find the second term of the following proportion: $22 : ? = 6 : 9$

18 Express in words: 409072.019

19 Find the square root of 647, carrying the work out to one decimal place.

20 Write the percentage equivalent of each of the following: $\frac{3}{8}$, $\frac{5}{8}$, $\frac{2}{3}$, $\frac{1}{16}$

21 Find the number of cubic feet of space in a room 10 feet wide, 20 feet long and 9 feet high.

22 Find the circumference of a circle whose radius is 3 feet.

23 Find the cost of a dozen cans of tomatoes if 3 cans cost 29 cents.

24 A man worked from 8 a. m. to 5 p. m. with one hour out for lunch. At 60 cents an hour how much did he earn in 6 days?

25 A huckster sold 6 bushels of potatoes at 70 cents per peck; what did he receive for the 6 bushels?

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Part II

Answer five questions from this part. Reduce each result to its simplest form and mark each answer Ans.

26 A man sells a piece of property through a real estate dealer for \$14,825. Find the dealer's commission at 3% [5]. If the man selling the property pays the commission, what amount does he actually receive for the property [5]?

27 A merchant carries a stock of goods insured for \$40,000. The insurance rate is \$12 per \$1000 per year. The merchant learns that the premium will be reduced \$4 per \$1000 per year if he installs a sprinkler system. Find (a) the total premium per year before installing the sprinkler, (b) the total premium per year after installing the sprinkler, (c) the saving in premiums in 5 years if the sprinkler is installed. [10]

28 If a factory produces 5875 pairs of shoes in 5 days, how many pairs will it produce in 21 days working at the same rate? [Solve by proportion.] [10]

29 What is the amount due on a note for \$875 that has run for 1 year 3 months at 5% interest? [10]

30 Find the cost of building a road 20 feet wide and $8\frac{1}{2}$ miles long at \$2.75 a square yard. [10]

31 In a village with property assessed at \$3,000,000, the school tax was \$9000.

a What was the tax rate? [5]

b What tax did a man pay whose property was assessed at \$15,000? [5]

32 A house was sold for \$7820 at a loss of 8%; for what price should it have been sold in order to gain 15%? [10]

33 If a man owns 17 bonds worth \$500 each that bear interest at $4\frac{1}{4}\%$, how much does he receive at each semiannual interest period? [10]