

The University of the State of New York
244TH HIGH SCHOOL EXAMINATION
ARITHMETIC

Tuesday, January 22, 1929 — 9.15 a. m. to 12.15 p. m., only

Fill in the following lines:

Name of school..... Name of pupil.....

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. Merely write the answer to each question in the space at the right; no work need be shown.

If you finish part I before the signal to stop is given you may begin part II. 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 and this sheet of the question paper must be detached. The sheets will then be collected and you should continue with the remainder of the examination.

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Part I

Answer all questions in this part. Each question has 2 credits assigned to it; no partial credit should be allowed. Each answer must be reduced to its simplest form.

1 Add $\begin{array}{r} 309 \\ 5 \\ 84 \\ 5673 \\ 288 \\ \hline 6320 \end{array}$

2 Add 2.9; 372.04; 7056; 3.19; .224

3 Add 43 ; $28\frac{1}{2}$; $17\frac{3}{4}$; $706\frac{1}{4}$; $7\frac{7}{8}$

4 $35\frac{1}{4} - 9\frac{3}{8}$

5 Subtract $\begin{array}{r} 904236 \\ 695127 \\ \hline \end{array}$

6 $53.62 - 8.71$

7 Multiply 241.6 by 8.27

8 Divide 414.18 by 17.7

9 Divide 52 by $3\frac{1}{4}$

10 Write the fractional equivalent of *each* of the following:
 5% , $33\frac{1}{3}\%$, 25% , $37\frac{1}{2}\%$

11 What per cent of 72 is 48?

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

13 The prices in cents which a motorist paid for gasoline in different parts of the state were as follows: 20, 17, 21, 19, 23. What was the average price paid?

14 A rectangular pool is 10 yards long, 5 yards wide and 2 yards deep; how many cubic feet does it contain?

15 What will 1600 tulip bulbs cost at \$24 a thousand?

16 Extract the square root of 1156.

17 What is the interest on \$500 for $2\frac{1}{2}$ years at 5%?

18 A man bought a house for \$8500 and sold it for \$8330; what per cent of the cost did he lose on the transaction?

19 Find the area of a triangle whose base is 8 inches and whose altitude is 9 inches.

20 Find the cost of 3 pounds 4 ounces of butter at 52 cents a pound.

21 Write in figures: Eight thousand twenty-nine and eleven thousandths.

22 A bill for \$638 is discounted at 2% for cash; what amount is paid?

23 If a man with his team plowed 8 acres in 6 days, at this rate how many acres will he plow in 15 days?

24 Find the cost of 30 roses at \$2 a dozen.

25 How many quarts of oil will a 15-gallon can hold?

1.....Ans.

2.....Ans.

3.....Ans.

4.....Ans.

5.....Ans.

6.....Ans.

7.....Ans.

8.....Ans.

9.....Ans.

10.....Ans.

11.....Ans.

12.....Ans.

13.....Ans.

14.....Ans.

15.....Ans.

16.....Ans.

17.....Ans.

18.....Ans.

19.....Ans.

20.....Ans.

21.....Ans.

22.....Ans.

23.....Ans.

24.....Ans.

25.....Ans.

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Write at top of first page of answer paper to part II (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 II

Answer five questions from this part. No credit will be allowed unless all necessary operations are given. Reduce each result to its simplest form and mark each answer *Ans.*

26 Mr Daw has a house worth \$8000. It is assessed at 75% of its real value. The tax rate in the city is \$22 per \$1000 of assessed valuation. Repairs cost \$100 yearly and insurance 30¢ per \$100 per year. Mr Daw has an opportunity to rent a house at \$55 a month.

- a Find the assessed valuation of the house. [3]
- b What are Mr Daw's city taxes per year? [3]
- c What is his insurance per year (based on real value of property)? [4]

27 Using the facts given in question 26, find whether it is cheaper for Mr Daw to own or to rent a house. [Copy on your answer paper and complete the table below.]

- | | |
|-----------------------------------|-------|
| a Interest on \$8000 at 6% a year | [2] |
| b Taxes | |
| c Insurance | |
| d Repairs | |
| e Total | [2] |
| f Yearly rent at \$55 a month | [2] |
| g Which method is cheaper? | [2] |
| h How much cheaper? | [2] |

28 A house was bought for \$5000. If repairs and selling expenses amount to 8%, at what price must the house be sold to bring a net profit of 10% on the total cost? [10]

29 A mile and a quarter of fence is required to inclose a certain race track; find the cost of this fence at \$1.10 per foot. [10]

30 Charles Adams buys today of William Searles, Buffalo, N. Y., the following goods: 15 tubs of butter at \$7.50 a tub; 3 cases of eggs at \$9.60 a case; 6 cases of canned peas at \$1.75 a case. Make out the bill in proper form [4]. Find the gross amount of the bill [2]. If a discount of 2% is allowed for cash, what is the net amount of the bill [4]?

31 Eight gallons of ice cream were bought at \$2 a gallon. Each quart was cut into 6 portions and sold for 10 cents a portion. The profit was what per cent of the cost? [10]

32 Four \$100 5% bonds were purchased at $94\frac{3}{4}$ plus a commission of $\frac{1}{2}$ % of the face value.

- a What was the total cost of the bonds? [4]
- b What was the annual income? [3]
- c What per cent of the cost was the annual income? [3]

33 The students' association of a school had \$117.18 in the bank at the beginning of the month. The treasurer made the following deposits: \$118.25, \$168.40, \$50, \$46.75, \$98.65. He drew checks for the following amounts: \$50, \$88.25, \$175.78, \$28.10. How much was in the bank at the end of the month? [10]