

The University of the State of New York

245TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Tuesday, June 18, 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
 468
 25
 347
 7608
 299
 3951

2 Add 4.16; 749; 216.3; 81.64; 18.46

3 Add $27\frac{1}{3}$; $8\frac{1}{4}$; $15\frac{1}{2}$; $22\frac{3}{8}$; 74

4 $39\frac{1}{8} - 14\frac{3}{4}$

5 Subtract 69673 from 85208

6 $67.14 - 43.7$

7 Multiply 63.72 by 3.06

8 Divide 347.27 by 57.4

9 Divide 2272 by $5\frac{1}{2}$

10 Write the fractional equivalent of each of the following:

(a) $33\frac{1}{3}\%$, (b) 40%, (c) 25%, (d) $12\frac{1}{2}\%$

11 Express decimally

(a) 28%, (b) $37\frac{1}{2}\%$, (c) 3%, (d) 75%

12 Find the area of a circle whose diameter is 24 feet.

13 The respective weights of the boys on a basketball team are 127, 138, 119, 134 and 129 pounds; what is the average weight?

14 Find the square of 13.22.

15 Find the volume of a cylindrical gas tank the area of whose base is 154 square feet and whose height is 15 feet.

16 At 40 cents a pound how many pounds of cheese can be bought for \$1.50?

17 How many square feet of roofing will be required to cover a surface 40 feet long and 27 feet wide?

18 Find the selling price of a blanket listed at \$15 and sold at a discount of 20%.

19 Find the interest on \$1600 for 3 months at the legal rate in New York State.

20 Write in figures: Five thousand forty-two and twenty-seven hundredths.

21 Complete the following proportion:

$$5:35 = ? : 63$$

22 If 168 gallons of gasoline were used on a trip, what was the cost of the gasoline at 23 cents a gallon?

23 A man put 2 gallons of cream in half-pint bottles and sold it for 20 cents a bottle; how much did he receive for the cream?

24 Find the area of a triangle whose base is 20 inches and whose altitude is 16 inches.

25 A dealer sells 3 crates of berries (each crate containing 1 bushel) at 25 cents a quart; how much money does he receive?

1.....Ans.

2.....Ans.

3.....Ans.

4.....Ans.

5.....Ans.

6.....Ans.

7.....Ans.

8.....Ans.

9.....Ans.

10 a..... b.....

c..... d.....Ans.

11 a..... b.....

c..... d.....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 Ten \$100 $5\frac{1}{2}\%$ first-mortgage bonds were bought at $97\frac{7}{8}$ with brokerage at $\frac{1}{8}\%$.

- a What did the broker receive for his services? [2]
- b What was the total cost of the bonds? [4]
- c What would be the yearly income from the bonds? [4]

27 The total receipts from 9 basketball games this season were \$650.80. Of this amount 15% was spent for transportation, \$81.35 for entertainment, \$195.24 for officials and \$113.89 for equipment. The remainder was used for other athletic purposes.

- a What were the average receipts per game? [2]
- b What amount was paid for transportation? [2]
- c What per cent of the receipts was paid for equipment? [3]
- d What amount was used for other athletic purposes? [3]

28 A real-estate agent sold a house for Mr Stone for \$6500. The agent charged 5% on the first \$1000 and $2\frac{1}{2}\%$ on the remainder.

- a How much did the agent receive for selling the property? [7]
- b How much did Mr Stone receive from the sale of the property? [3]

29 In a certain district the amount to be raised by taxes for school purposes is \$101,311.80. The assessed valuation is \$13,508,240 and the tax rate is \$7.50 per thousand.

- a What would be the taxes on property assessed at \$6500? [7]
- b If the district received an additional amount of \$18,688.20 from the state, what would be the total amount available for school purposes? [3]

30 A man with an annual income of \$2500 planned a budget for the year. He allowed 20% of his income for shelter, 25% for food, 15% for clothing, 10% for education and recreation and 15% for other expenses. He saved the rest.

Using the facts given above, copy and complete the following budget table by filling the blanks:

	Per cent	Amount allowed	
For shelter	[2]
For food	[2]
For clothing	[2]
For education and recreation	[1]
For other expenses	[1]
For savings [1]	[2]
Total income	

31 Mr H. R. Anthony buys a motor boat from G. W. Baker for \$950; he pays \$350 cash and gives a note for the remainder for six months at 6% interest.

a Write the note. [5]

b Find the total amount, including interest, that Mr Anthony pays for the boat. [5]

32 A dealer purchased fountain pens at \$1.50 each and sold them at \$2.25 each. If he allows 20% of the cost for expenses, how much profit does he make on each pen? [10]

33 Four men with a steam shovel excavated for a basement 40 feet long, 24 feet wide and 9 feet deep, at 40 cents per cubic yard.

a How many cubic feet of earth were taken out in the excavating? [5]

b What was the total cost of excavation? [5]