

The University of the State of New York

250TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Monday, January 19, 1931 — 1.15 to 4.15 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.

ARITHMETIC

Monday, January 19, 1931

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.

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|---|-------------|
| 1 How much will 54 apples cost at \$.50 a dozen? | 1.....Ans. |
| 2 Find the cost of shipping 375 pounds of freight from Cleveland to Lorain at 48¢ a hundred pounds. | 2.....Ans. |
| 3 A boy borrows \$35 for 3 years at 6%; what amount of interest will he pay? | 3.....Ans. |
| 4 A sirloin steak weighed 1 pound 10 ounces; how much did it cost at 40¢ a pound? | 4.....Ans. |
| 5 If a boy answers correctly 15 questions out of 20 on an arithmetic test, what per cent does he answer correctly? | 5.....Ans. |
| 6 How many pieces of metal, each of which is $\frac{5}{8}$ of an inch long, can be cut from a strip of metal 35 inches long? | 6.....Ans. |
| 7 A man traveled 990 miles by automobile and used 50 gallons of gasoline. What was the average number of miles he traveled on a gallon of gasoline? | 7.....Ans. |
| 8 An agent sells a house for \$9000 and receives a commission of $2\frac{1}{2}\%$; find the amount of his commission. | 8.....Ans. |
| 9 What is the cost of laying a sidewalk 5 feet wide and 261 feet long at \$1.53 a square yard? | 9.....Ans. |
| 10 If it costs $2\frac{3}{8}$ cents an hour to run an electric motor, how much will it cost to run this motor 24 hours a day for three days? | 10.....Ans. |
| 11 At a tax rate of \$2.20 per \$100, what is the tax on property assessed at \$25,000? | 11.....Ans. |
| 12 What is the cost of an automobile that is marked \$1250 with a discount of $12\frac{1}{2}\%$ for cash? | 12.....Ans. |
| 13 George weighed 120 pounds at the opening of school in September. If he gained 10% in weight during the school year, how much did he weigh in June? | 13.....Ans. |
| 14 A pint is what per cent of a gallon? | 14.....Ans. |
| 15 Find the circumference of a circle when the diameter is 14 inches. | 15.....Ans. |
| 16 Find the product of 140.17 and .093 | 16.....Ans. |
| 17 Add \$25.62; \$91.07; \$1.87; \$6; \$23.50 | 17.....Ans. |
| 18 Add $36\frac{7}{8}$; $43\frac{1}{2}$; $65\frac{1}{8}$; 127 | 18.....Ans. |
| 19 $15\frac{5}{8} - 3\frac{3}{8}$ | 19.....Ans. |
| 20 Multiply $18\frac{3}{8}$ by $3\frac{3}{8}$ | 20.....Ans. |
| 21 $6\frac{3}{4} \div 3\frac{7}{8}$ | 21.....Ans. |
| 22 Square 3.6 | 22.....Ans. |
| 23 Divide 2.92851 by 1.17 | 23.....Ans. |
| 24 Find the value of x in the proportion $x : 33 = 15 : 165$ | 24.....Ans. |
| 25 Write in figures: forty and seventy-five ten-thousandths. | 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 any 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 A man purchased a house for \$5000. The first year the expense for repairs was \$45, for taxes \$75, for insurance \$10; if the house rented for \$40 a month, what was the owner's per cent of gain on his investment that year? [10]

27 A skilled mechanic who graduated from high school averages \$30 a week. An unskilled worker in the same shop who did not advance beyond the grammar grades averages \$18 a week. What is the difference in their earnings in 5 years? [10]

28 Martha Wolf, who learned to sew in the home economics class in high school, makes her dresses instead of buying them ready-made. She made two summer dresses for herself last spring. The cost of the material was as follows:

3½ yd gingham	@	\$.50
3½ yd percale	@	.30
Snaps, thread and buttons		.50

Similar dresses bought ready-made would cost an average of \$3.50 each. How much did Martha save by making these dresses? [10]

29 The cost of food for 12 hens for 6 months was \$3.48 a month. During that period 8 eggs a day were collected on an average. These eggs were sold at 36¢ a dozen. [Allow 30 days to a month.]

a Find the cost of feeding the hens during the whole period. [2]

b How much money was gained by keeping the hens? [8]

30 Find the amount of a note for \$640.50, dated April 19, 1929, and paid June 4, 1930, with interest at 6%. [10]

31 When Mr Taylor was 25 years old he took out a life policy for \$2500 on which he paid an annual premium of \$32.10 per thousand. After paying 8 annual premiums he died and the company paid his heirs \$2500. How much more did the heirs receive than Mr Taylor paid? [10]

32 Find the cost of digging a cellar 25 feet long, 18 feet wide and 6 feet deep at \$1.80 a cubic yard. [10]

33 If each of 200 homes in a certain community wastes on an average $\frac{1}{8}$ cup of milk a day, how many quarts (4 cups = 1 quart) are wasted each day [4]? How many quarts are wasted in a year (365 days) [3]? What is the cost of this wasted milk in a year when the average price of milk is 11.6¢ a quart [3]?