

The University of the State of New York

251ST HIGH SCHOOL EXAMINATION

ARITHMETIC

Monday, June 15, 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.

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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 Multiply 6.42 by 4.2 | 1.....Ans. |
| 2 Divide 555 by .37 | 2.....Ans. |
| 3 $32\frac{1}{2} - 18\frac{3}{4}$ | 3.....Ans. |
| 4 $6\frac{3}{4} \div \frac{1}{2}$ | 4.....Ans. |
| 5 Find the total of the following sales slips: \$75.20; \$50.87; \$49.29; \$63.75; \$96.56; \$95.55. | 5.....Ans. |
| 6 Find the value of x in the proportion $2:3 = x:24$ | 6.....Ans. |
| 7 What per cent of \$320 is \$80? | 7.....Ans. |
| 8 Square 10.7 | 8.....Ans. |
| 9 John spends 60% of his salary for board and room, 20% for other expenses, and saves the rest. What per cent does he save? | 9.....Ans. |
| 10 The perimeter of a square field is 192 rods; how long is each side? | 10.....Ans. |
| 11 At 90¢ per 1000 cubic feet, what will 3500 cubic feet of gas cost? | 11.....Ans. |
| 12 Maple syrup can be bought at \$.75 a quart or in gallon cans at \$2.80 a can. How much is saved by buying it by the gallon? | 12.....Ans. |
| 13 If 6 tons of coal cost \$78, how much will 25 tons of coal cost at the same price a ton? | 13.....Ans. |
| 14 A girl found a purse that contained \$80. She returned it to the owner, who gave her 15% of the money for a reward. How much did she receive? | 14.....Ans. |
| 15 A bicycle whose cost was \$64 was sold at a loss of $12\frac{1}{2}\%$ of the cost; what was the selling price? | 15.....Ans. |
| 16 At 25¢ a square foot, how much will it cost to refinish a table top $2\frac{1}{2}$ feet by 6 feet? | 16.....Ans. |
| 17 A tank contained $40\frac{3}{8}$ gallons of oil. If $16\frac{3}{4}$ gallons were drawn out, how many gallons were left? | 17.....Ans. |
| 18 Dr Miller stated that during the first five years of his practice he earned \$1400, \$1600, \$2200, \$2400 and \$2440; what was his average annual income? | 18.....Ans. |
| 19 If $5\frac{1}{2}$ pounds of meat cost \$1.21, how much does it cost a pound? | 19.....Ans. |
| 20 In a school of 800 pupils 3% have been absent during the month; how many pupils have not been absent? | 20.....Ans. |
| 21 Find the interest on \$500 for 3 months at 6%. | 21.....Ans. |
| 22 A merchant sells umbrellas costing him \$1.50 at \$2 each; what is the rate per cent of profit on the cost? | 22.....Ans. |
| In each of the following exercises select the one correct answer from those in parenthesis: | |
| 23 $40\% = (\frac{1}{10}; .04; \frac{2}{5})$ | 23.....Ans. |
| 24 $\frac{3}{8} = (67\frac{1}{2}\%; 62\frac{1}{2}\%; .0625)$ | 24.....Ans. |
| 25 Six and seventy-one thousandths = (.671; 6.071; 6.0071) | 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 Mr Driver kept a careful record of the expense of operating his automobile. The cost per mile was as follows: gasoline \$.0125, oil \$.002, tires \$.005, repairs \$.006, depreciation \$.034, interest and insurance \$.025.

a What was Mr Driver's operating cost per mile? [6]

b What did it cost to drive the car 2500 miles? [4]

27 Each of the 12 members of a girls' club is making an apron. The girls buy the following material together: 18 yards of lawn at 24¢ a yard and 24 yards of lace edging at 6¢ a yard.

a Find the total cost of the material. [6]

b How much does each girl pay for her share? [4]

28 Mary was earning \$9 a week. After taking a six-months course in an evening school, she earned \$15.50 a week. Her tuition was \$78. In how many weeks would her increase in salary pay the cost of the tuition [4]? What per cent was her salary increased [6]?

29 In building a driveway 90 feet long and 10 feet wide, a layer of crushed rock was spread over the road to an average depth of 4 inches. At \$1.50 per cubic yard, what was the cost of the crushed rock? [10]

30 A man owes \$100 and is given the choice of paying it in 90 days with interest at 6%, or of paying \$1.12 a day for 90 days. Which is the cheaper plan for him to take? How much will he save? [10]

31 A house cost \$7,500 and an amount equal to 20% of this cost was spent in improvements. The house was then sold for \$12,000. Find the net profit. [10]

32 A commission agent sold a load of peaches for \$459.63. He charged 5% commission. He paid \$29.72 for freight, \$18.80 for storage and \$13.60 for hauling. How much should he remit to the fruit grower? [10]

33 A family having an income of \$2000 a year spent in one year \$400 for rent, \$600 for food, \$400 for clothing and \$600 for miscellaneous expenses. The next year they used a budget plan and spent the same amount for rent but 15% less for food, 20% less for clothing and 20% less for miscellaneous expenses. How much did they save by using the budget plan? [10]

34 In a certain school there is an enrolment of 900 pupils. The per cent of attendance for a certain month was 95%. Each day that a pupil is absent represents a loss of 30¢ in figuring the state public school money for the district.

a What per cent of the pupils were absent? [2]

b How many absences were there in the month? [4]

c What is the total loss in money because of these absences? [4]