

The University of the State of New York

283D HIGH SCHOOL EXAMINATION

ARITHMETIC

Wednesday, January 21, 1942 — 9.15 a. m. to 12.15 p. m., only

Fill in the following lines:

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

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 on the line 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

Part I

Answer all questions in this part. Write the answer to each question on the dotted line at the right. Each question has 2 credits assigned to it; no partial credit will be allowed. Each answer must be reduced to its simplest form.

- | | |
|---|---------|
| 1 Add 8654; 6401; 83; 921; 6442 | 1..... |
| 2 $84713 - 28649 = ?$ | 2..... |
| 3 $4\frac{1}{2} \times 3\frac{1}{2} = ?$ | 3..... |
| 4 $406.3 \times .375 = ?$ | 4..... |
| 5 $39.3 + 2.06 + .385 + 49 = ?$ | 5..... |
| 6 $4\frac{1}{2} \div 8\frac{1}{2} = ?$ | 6..... |
| 7 $86.45 \div .035 = ?$ | 7..... |
| 8 A live chicken weighed $5\frac{1}{4}$ pounds; after dressing and cooking it weighed $3\frac{1}{2}$ pounds. How much weight was lost in the process? | 8..... |
| 9 Choice apples are being sold at the grocery store at 7 for 25¢. How many can you buy for 75¢? | 9..... |
| 10 Frank was born on May 21, 1936; what is his age today (January 21, 1942) in years and months? | 10..... |
| 11 How much will 2856 gallons of fuel oil cost at $7\frac{1}{2}$ cents a gallon? | 11..... |
| 12 At 32 cents a pound, how much will 2 pounds 6 ounces of meat cost? | 12..... |
| 13 How many maple syrup cans 6 inches square can be placed on a shelf 4 feet long and 12 inches wide? | 13..... |
| 14 Suppose you receive the following marks in five of your Regents examinations: 96, 82, 90, 98, 94. What will your average be? | 14..... |
| 15 Mary weighed x pounds and lost 4 pounds. How much did she then weigh? | 15..... |
| 16 What must be the length of a box that is 4 feet wide and 3 feet deep, if it has a volume of 96 cubic feet? | 16..... |
| 17 If the temperature rose from 8 degrees below zero to 15 degrees above zero, how many degrees did it rise? | 17..... |
| 18 If a farmer has 108 bushels of potatoes, how many 100-pound bags will he be able to fill completely? [1 bu. = 60 lb.] | 18..... |
| 19 How long will it take a person to walk 3 miles at the rate of 4 miles an hour? | 19..... |
| 20 On the front of a large public building John saw the Roman numeral MCMXXIV. What year does it represent? | 20..... |
| 21 If oranges cost c cents a dozen, how much does one orange cost? | 21..... |
| 22 A girl paid \$5 for a camera and sold it for \$4; what is her per cent of loss on the cost? | 22..... |
| 23 Is a "big" 12-ounce bottle of soda water more or less than a pint? [32 oz. = 1 qt] | 23..... |
| 24 What part of a yard is 27 inches? | 24..... |
| 25 If two straight lines intersect and are perpendicular to each other, how many degrees are there in each of the four resulting angles? | 25..... |

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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 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 boy's club with a membership of 22 decides to go camping for one week. The estimated expenses are as follows: transportation \$20, rent for the camp \$24, food \$88, incidentals \$11. The boys have \$82.50 in the treasury and vote to raise the balance necessary by taxing each member an equal amount.

- a What will their total expenses be? [3]
- b How much must be raised by taxing the members? [3]
- c How much must each member be taxed? [4]

27 Mr White bought 10 defense bonds at \$18.75 each. At the end of 10 years each bond will be worth \$25.

- a How much did Mr White spend for defense bonds? [2]
- b How much will he receive at the end of 10 years for these bonds? [2]
- c What is the per cent of gain on his investment for the 10-year period? [6]

28 Mr Greene's house in the city is insured for \$8000 at 25 cents per hundred. His house in the country is insured for \$4000 at 52 cents per hundred.

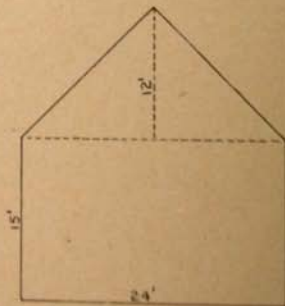
- a How much more does the insurance on the country house cost than the insurance on the city house? [6]
- b Give *one* reason why the \$4000 house should have a higher premium than the \$8000 house. [2]
- c Name *two* kinds of insurance other than fire insurance. [2]

29 A saleslady received \$4 a day, plus a commission of 2% on all sales over \$300 a week. Her total daily sales for one week were as follows: Monday \$32, Tuesday \$78, Wednesday \$56, Thursday \$72, Friday \$95 and Saturday \$145.

- a How much commission did she receive? [6]
- b What was the total amount of her week's pay? [4]

30 The accompanying sketch represents the end of a barn.

- a What *two* different geometric figures are represented in the sketch? [2]
- b What is the area of the end of the barn? [6]
- c How much paint will be required to paint the end one coat if one gallon of paint will cover 336 square feet of surface? [2]



- 31 a Combine similar terms: $4x + 2y - 2x + y$ [2]
 b Given the formula $d = rt$; solve for r . [2]
 c Write the algebraic equation for the following: One number is twice another number and their sum is 12. [2]
 d A boy earns 15 dollars a week. Write the formula for the total amount t that he earns in n weeks. [2]
 e If a girl's age now is n years, express her age 4 years from now. [2]

32 In a certain eighth grade there are 36 pupils of whom 4 are 12 years old, 14 are 13 years old, 12 are 14 years old, 4 are 15 years old and 2 are 16 years old. Represent these facts by a bar graph. [10]

33 Jane's father, Thomas Brown, made her a loan of \$32 to purchase a bicycle. Jane wanted to be very businesslike, so she agreed to pay 5% interest on the loan and gave her father a promissory note for three months.

- a How much did Jane have to pay back to her father, when the note was due? [6]
 b Make out a simple promissory note such as Jane made. [Copy and fill out the form below.] [4]

..... N. Y.	19..
.....after date promise to pay to
the order of.....
.....Dollars
with interest at the rate of.....
.....

18

