

The University of the State of New York

275TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Wednesday, June 21, 1939—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 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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Wednesday, June 21, 1939

Part I

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

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| 1 What will be the cost of a dozen lemons at the rate of 3 for 10 cents? | 1.....Ans. |
| 2 Mary had a half yard of ribbon to cut into 6-inch pieces. How many pieces will she have? | 2.....Ans. |
| 3 During the past 5 months eggs have sold for the following prices per dozen: \$.35, \$.37, \$.41, \$.39, \$.43. What was the average price of a dozen eggs during these months? | 3.....Ans. |
| 4 Find the interest on \$1050 for 3 years at 4%. | 4.....Ans. |
| 5 Mr Pierce's automobile was driven 134.8 miles on 9 gallons of gasoline. Find to the nearest mile how many miles per gallon the car averaged. | 5.....Ans. |
| 6 What will it cost to send a 15-word telegram if the first 10 words cost 30 cents and each additional word costs 2 cents? | 6.....Ans. |
| 7 Find the number of square yards of linoleum required to cover a kitchen floor which is 9 feet wide and 12 feet long. | 7.....Ans. |
| 8 Charles spends each week 135 minutes in shopwork; how much time in hours does he spend in this work? | 8.....Ans. |
| 9 How many degrees are there in each angle of a square? | 9.....Ans. |
| 10 At a tax rate of \$15 per \$1000, what is the amount of the tax on property assessed at \$3600? | 10.....Ans. |
| 11 Find the area of a triangle whose base is 10 inches and whose altitude is 8 inches. | 11.....Ans. |
| 12 Write 12% as a decimal. | 12.....Ans. |
| 13 If the present age of a boy, expressed in years, is a , what will be his age 5 years from now? | 13.....Ans. |
| 14 What will be the cost of license plates for an automobile weighing 3300 pounds at the rate of 50 cents for each 100 pounds? | 14.....Ans. |
| 15 How many cubic yards of earth must be removed to dig a cellar 27 feet long, 24 feet wide and 6 feet deep? | 15.....Ans. |
| 16 Clayton in one week sold 60 magazines at 10 cents a copy. How much did he earn if he made a profit of 3 cents on each copy? | 16.....Ans. |
| 17 Which is the greater distance, 5325 feet or one mile? | 17.....Ans. |
| 18 In making a cake for 10 people, the recipe calls for 2 cups of sugar. How many cups of sugar will be needed to make a cake for 25 people? | 18.....Ans. |
| 19 If the temperature at 6 a. m. is 8 degrees below zero and at noon it is 10 degrees above zero, how many degrees has the temperature risen? | 19.....Ans. |
| 20 What is 25% of \$9.80? | 20.....Ans. |
| 21 Which one of the following is a measure of area: feet, square feet, cubic feet? | 21.....Ans. |
| 22 A room is 21 feet long and 10 feet wide; find its perimeter. | 22.....Ans. |
| 23 When a map is drawn to a scale of 12 miles per inch, what distance is represented by $5\frac{1}{2}$ inches? | 23.....Ans. |
| 24 In the formula $C = \pi d$, find the value of C if d is 14 inches and π is $\frac{22}{7}$. | 24.....Ans. |
| 25 If one side of an equilateral triangle is s , complete the formula for its perimeter: $p = \dots$ | 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 Over a period of years the total tax on gasoline in one state amounted to \$565,000,000 on 14,125,000,000 gallons of gasoline.

a What was the tax per gallon? [7]

b If Mr Carter used 31 gallons of gasoline in one month, how much gasoline tax did he pay that month? [3]

27 Mrs Hall did her Saturday shopping and paid her bill, which amounted to \$3.52, according to the clerk's figuring. She gave him a \$5 bill and received \$1.48 in change. Below is an itemized statement of her bill, in which Mrs Hall found that the clerk had made some mistakes.

a Find the items where there are mistakes and indicate the correct values on your answer paper. [6]

b Find the correct total and calculate the amount of change which Mrs Hall should have received. [4]

1 lb.	Tea	@ 46¢ per lb.	46
3 lbs.	Fish fillets	@ 9¢ " "	27
1 lb. 12 oz.	Cheese	@ 20¢ " "	37
6 cans	Soup	@ 3 for 25¢	47
4 cans	Tuna	@ 2 for 29¢	58
$\frac{1}{2}$ lb.	Dried beef	@ $\frac{1}{4}$ lb. for 15¢	30
$4\frac{1}{4}$ lbs.	Veal roast	@ 28¢ per lb.	1 07
			3 52

28 Mr Smith made a contract with John to wash and polish his car once a week during the vacation months for \$10. John also got a job washing and polishing Mr Franklin's car for 75 cents each time. During the vacation he washed and polished Mr Franklin's car 15 times.

a From which of the two men did John receive the more money? [2]

b How much more? [8]

29 Mary found the recipe given below in her cookbook. She wished to make only one half of the recipe. Rewrite it, showing the correct amount of each item that she should use. [10]

FUDGE

$4\frac{1}{2}$ cups sugar

$\frac{1}{2}$ teaspoon salt

$1\frac{1}{2}$ cups light corn syrup

1 cup water

4 egg whites, beaten

2 teaspoons vanilla

30 Mr Wilson in one year drove his automobile 15,000 miles. At the end of the year his accounts showed the following car expenses:

Gas and oil	\$218.75
License plates	15.00
Insurance	60.00
Depreciation	150.00
Garage rent	48.00
Tires	52.00
Repairs, etc.	56.25

a Find Mr Wilson's total car expense for the year. [4]

b Find the cost per mile for the year. [6]

31 A farmer shipped 3180 bushels of potatoes to a commission merchant, who sold them at 80 cents a bushel. The commission merchant charged 4%. The freight bill amounted to \$345.60, cartage to \$42.40 and other expenses to \$18.

- a What was the amount of commission due to the commission merchant? [3]
 b What was the total amount of expense to the farmer? [2]
 c How much should the farmer receive from the commission merchant? [5]

32 By using the telephone for 6 minutes at a rate of \$1.50 for the first three minutes and 40¢ for each additional minute a man saved himself a trip which would have cost \$25. How much did he save by using the telephone? [10]

33 Janet kept a record of her activities during a certain day. She found that in a 24-hour day she spent 8 hours in sleep, 6 hours in attendance at school, 2 hours in study and the remainder in meals and recreation. Draw a bar graph showing how much time she spent in each activity. [10]

34 a Select the correct equation for *each* of the following problems:

- (1) A man had d dollars. After paying a bill of \$15, he had \$6 left. How many dollars did he have at first?

$$d + 15 = 6; d - 15 = 6; \frac{d}{15} = 6 \quad [2]$$

- (2) In an archery meet Richard scored 11 points for his team, which represented one fourth of his team's final score. What was the final score, (s)?

$$4s = 11; s - 4 = 11; \frac{s}{4} = 11 \quad [2]$$

b Solve *each* of the following equations: [6]

(1) $5n + 7n = 84$

(2) $\frac{3w}{4} = 18$

(3) $3x + 5 = 14$

35 The diagram at the right shows a prism and its dimensions.

- a What is the name of the figure that forms the base of the prism? [1]
 b Find the area of the base, using the dimensions given on the drawing. [3]
 c Find the perimeter of the top of the prism. [3]
 d Find the area of the front face of the prism. [3]

