The University of the State of New York

233d High School Examination

ARITHMETIC

Tuesday, June 16, 1925 — 9.15 a. m. to 12.15 p. m., only

Write at top of first page of answer paper (*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 seventh grade in arithmetic, as outlined in the 1910 syllabus for elementary schools.

Answer 10 questions, including two questions from each of the first three groups and four questions from the fourth group. Reduce each result to its simplest form and mark each answer Ans.

Questions 1 and 2 are given as tests for accuracy; no credit, therefore, will be allowed unless the answer is correct.

Group I

Answer the two questions in this group.

1 Mental test on separate sheet. [10]

2 Answer both *a* and *b:*

a In one hour a clerk in a hardware store made the following cash sales; give the total that his cash register should show: $.27; $6.52; $.95; $4.75; $10.86; $3.88; $16; $1.63; $.08; $2.25; $7.07; $39 [6]

b Subtract 8.67 from *each* of the following: 27.75; 32; 15.025; 82.5 [4]

Group II

Answer two questions from this group.

3 Write in figures: two hundred and three hundred seven ten-thousandths [2½]. Write in words: 3 : 6 :: 4 : 8 [2½]; $306.28 [2½]; $1\frac{7}{18}$ [2½]

4 Extract the square root of the following to *two* decimal places: 80436 [10]

5 Multiply $8\frac{1}{4}$ by $\frac{4}{5}$. To the product add $3\frac{1}{3}$. From this sum subtract $3\frac{1}{4}$ and divide the remainder by $1\frac{1}{2}$. [10]

Group III

Answer two questions from this group.

6 Supply what is necessary to make *each* of the following a correct statement:

a The hypotenuse of a right triangle is the side . . . [2]

b Compensation for the use of money is called . . . [2]

c To divide a fraction by a fraction . . . [2]

d To divide a decimal number by 100, move . . . [2]

e To find the area of a circle . . . [2]

7 Answer both *a* and *b:*

a By illustration show the use of the 6% method in a simple interest problem. [5]

b Explain where to place the decimal point in the product when one decimal number is multiplied by another. [5]

8 If you knew the number of bushels of potatoes produced in New York State each year for any given number of years, how would you find the average yearly production? [10]

Group IV

Answer four questions from this group.

9 A school building costing $160,000 is insured for 80% of its value for a term of three years, at a rate of $.6804 per $100; what premium must be paid? [10]

10 Make out a receipted bill for the following: John Stone, grocer, sold to Henry Moon, June 6, 1925, 7 pounds rice at 9 cents a pound; 4 dozen eggs at 41 cents a dozen; 2 brooms at 45 cents each; 18 pounds sugar at 8 cents a pound; 9 pounds tomatoes at 13 cents a pound; 6 bushels potatoes at 65 cents a bushel. [10]

11 An automobile cost $1200; it depreciated in value 45% the first year, 20% of the reduced value the second year and 20% of the second reduced value the third year. What was it worth at the end of the third year? [10]

12 A man fills a building 32 feet long, 25 feet wide and 14 feet high with ice; if a cubic foot of ice weighs $57\frac{1}{2}$ pounds, how many pounds of ice has he [7]? If he sells the ice at a profit of 10 cents per hundred pounds, how much will his profit be [3]?

13 What is the amount due today on a note for $725 given February 4, 1924, at $5\frac{1}{2}$% interest? [10]

14 An athletic field containing 8 acres is 32 rods wide; find its length in rods [5]. Find the number of feet of fencing required to inclose the field [5].

ARITHMETIC MENTAL TEST

18

[Fifteen minutes allowed for this test]

Tuesday, June 16, 1925 — 9.15 a. m. to 12.15 p. m.

Answer all parts of this test. Write each answer in the space marked Ans. No credit will be allowed unless the answer is correct.

a If an airplane travels 630 miles in 7 hours, what is its rate of speed per hour? [1]

Ans.

b A boy had 40 words to spell; he missed 8. What per cent credit did he receive? [1]

Ans.

c A man earns $1800 a year and his son earns $\frac{1}{6}$ as much; how much do both earn? [1]

Ans.

d A boy picked 1 bushel of huckleberries and sold 24 quarts; how many quarts were left? [1]

Ans.

e Find the cost of 10 gallons of milk at 12 cents a quart. [1]

Ans.

f Add $\frac{1}{3}$ and $\frac{1}{4}$. [1]

Ans.

g How much would you expect to pay for 1 can of soup if 3 cans cost 29 cents? [1]

Ans.

h Jane earned $12 a week and saved $12\frac{1}{2}\%$ of it; how much did she save in 4 weeks? [1]

Ans.

i A farmer raised 360 bushels of potatoes and sold $33\frac{1}{3}\%$ of them; how many bushels did he sell? [1]

Ans.

j A boy had $1.53 in his pocket; there were 2 fifty-cent pieces, 1 quarter and 2 dimes; the rest of the money consisted of pennies. How many pennies were there? [1]

Ans.