University of the State of New York

Examinations Department

111th examination

ARITHMETIC

Tuesday, June 13, 1893—9 : 15 a. m. to 12 : 15 p. m., only

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100 *credits, necessary to pass,* 75

NOTE—Give all operations (except mental ones) necessary to find results. Reduce each result to its simplest form and mark it *Ans.*

1 Divide the sum of 18 thousandths, 106 ten thousandths, 84 hundredths, and 509 ten thousandths by 15 millionths.   10

2 State two methods of proving subtraction and illustrate each by an example.   4

3 What number divided by the sum of $\frac{4}{5}$ and $2\frac{1}{3}$ will give a quotient of $2\frac{7}{20}$?   10

4 Define *greatest common divisor, least common multiple*, and illustrate by finding the greatest common divisor and least common multiple of 12, 15 and 18.   12

5 If 14 quarts of grass seed are required for an acre of ground, what will be the cost of the seed for a field 36 rods by 24 rods, the seed being worth $3½ a bushel?   12

6 Find the cost of a stone walk 4 rods long and 5 feet wide, at 60 cents a square foot.   6

7 Find the amount of $436 at 4½% simple interest, from January 1, 1893, to the present time.   10

8 I buy oranges at the rate of 15 cents a dozen and sell them at the rate of 3 for 10 cents ; find the gain per cent.   10

9 Find the distance between the diagonally opposite corners of a rectangle 60 feet long and 50 feet wide. (Result correct to two places of decimals.)   10

10 If it costs $80 to plow a field 40 rods by 80 rods, when we pay $5 a day for man and team, how much will it cost to plow a field 30 rods by 60 rods, if we pay $4 a day? (Solve by proportion.)   10

11 Assuming that 1 kilogram equals $2\frac{1}{3}$ pounds, find the weight in pounds of the water that can be contained in a tank $1\frac{1}{2}$ meters long, 8 decimeters wide and 5 decimeters deep.   6