University of the State of New York

Examination Department

127th examination

ARITHMETIC

Tuesday, January 22, 1895—9 : 15 a. m. to 12 : 15 p. m., only

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100 *credits, necessary to pass,* 75

Answer questions 1-5 and five of the others but no more. *If more than five of these other questions are answered only the first five of these answers will be considered. Give all operations (except mental ones) necessary to find results. Reduce each result to its simplest form and mark it Ans. Each complete answer will receive 10 credits.*

1 Define *divisor, multiple, factor, prime number, fraction.*

2 Find the sum of the following quantities : $1\frac{3}{5}$, $2\frac{1}{8}$, $\frac{3}{4} \times \frac{2}{5}$, $\dfrac{1\frac{2}{3} - \frac{5}{7}}{2\frac{1}{2}}$, 3.04, .08.

3 Find the amount of $1287 for 1 year, 5 months and 15 days at 5 per cent simple interest.

4 How many ares in the area of a rectangular field which is 2 hectometers long and 8 dekameters wide?

5 I buy 10 shares of railway stock at 80 and sell them at 90 ; how many dollars do I gain and what is the rate per cent of profit?

6 Find the smallest number that will exactly contain 15, 18, 21, 24 and 30.

7 Divide 4782613 by 47124, extending the quotient to *three* places of decimals.

8 Two men hire a pasture for $30. A puts in 8 horses for 10 weeks and B 6 horses for 12 weeks ; how much should each pay?

9 A sidewalk 5 feet wide and 100 feet long is made of 2 inch plank laid crosswise on two stringers which are 3 inches by 4 inches ; find the amount of lumber required and its cost at $16 per thousand feet, board measure.

10 A house valued at $6000 is insured for $\frac{3}{4}$ of its value at the rate of $\frac{1}{2}$ of 1 per cent a year ; how much is the annual premium?

11 I sell goods at a discount of 10% from the marked price and still make a profit of 8% ; how many per cent above cost was the marked price?

12 A ditch is 3 feet wide at the top, 2 feet at the bottom, 3 feet deep and 12 rods long ; find the cost of digging it at 30 cents a cubic yard.

13 How many apple-trees will be required to set an orchard of 6 acres in the form of a rectangle 32 rods long, the trees to be set 33 feet apart each way and the outside rows to be 1 rod from the boundaries of the field?

14 What single discount is equal to a commercial discount of 10%, 10% and 5% ?

15 Find the square root of 1080234 to *two* places of decimals.