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University of the State of New York

Examination Department

131st examination

ARITHMETIC

Tuesday, June 11, 1895—9:15 a. m. to 12:15 p. m., only

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. Division of groups is not allowed. 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 *minuend*, *multiplication*, *prime factor*, *common divisor*, *ratio*.

2 Simplify the following: $4\frac{2}{3} + 5\frac{1}{2} \times \frac{3}{4} \times 2\frac{1}{2}$
 $9\frac{3}{4} - 4\frac{2}{3} \times \frac{3}{130}$

3 Find the prime factors of 2964.

4 Divide one millionth by eight ten-thousandths and express the result in words.

5 A room which is 6.5 meters long by 4.5 meters wide is to be covered with carpeting 7.5 decimeters wide; how many meters in length of carpet will be required? (Make no allowance for matching figures.)

6 Find the smallest number that is exactly divisible by each of the nine digits.

7 Find the amount at simple interest at 5% of \$860 from September 1, 1894 to the present time.

8 I buy goods at commercial discount of 15 and 10 from the list price and sell at the list price; find the per cent profit.

9 At what price should $4\frac{1}{2}\%$ bonds be bought to make the income from investment equivalent to that from 3% bonds at par?

10 Find the cost of building a fence at 75 cents a rod round a square 10 acre field.

11 Find the cost of the following bill of lumber:

6 pieces	16' x 8" x 2"	at \$14.50 per M
8 "	12' x 3" x 4"	at \$15.25 "
16 "	12' x 1" x 8'	at \$16.10 "

12 Make a receipted bill of at least three items bought by you this day of Smith and Jones.

13-14 If 3 men in 12 days of 10 hours each can build a wall 100 feet long, 14 feet high and 3 feet thick, how long will it take 4 men working 8 hours a day to build a wall 200 feet long, 16 feet high and 4 feet thick?

15 A man plants corn on $\frac{1}{2}$ of his land, potatoes on $2\frac{1}{2}$ times as much and sows the remainder with wheat; he sells the wheat at 60 cents a bushel and receives for it \$180. If the yield of wheat was 20 bushels an acre how much land had he?