University of the State of New York

Examinations Department

104th examination

ARITHMETIC

Tuesday, September 27, 1892-9:15 a.m. to 12:15 p. m., only

48 credits, necessary to pass, 36

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

- Define and illustrate (a) quotient, (b) common fraction, (c) compound number, (d) composite number, (e) proportion, (f) square root.
- 2 Name (a) six consecutive orders of units of which thousandths is the lowest; (b) four consecutive periods of which thousands is the lowest.
- 3 Find the prime factors of 1001 and 1309, and from these factors form the greatest common divisor and the least common multiple of the two numbers.
- 4 If five bushels of wheat cost \$4.75, how much will 8 bushels cost?

 (Solve by analysis, giving each step in full.)
- 5 Divide the sum of four thousandths and four millionths by their difference, extending the result to four places of decimals.
- 6 Find the cost at 35 c. per cubic yard of excavating a trench 6 rods long, 1½ yards wide, 1 foot 6 inches deep.

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- 7 I buy oranges at 8 cents a dozen and retail them at the rate of 2 for 3 cents; find the per cent profit.
- 8 Find the amount of \$87.63 from April 29, 1891, to September 27, 1892, at 5% simple interest.
- 9 The proceeds of a four-months' bank note dated May 1, 1892, and discounted at a bank on the same date at 6 per cent, were \$3600; find the face of the note.
- 10 At what price must 6% bonds be bought to yield 4% on the investment?
- 11 If 8 men reap 36 acres of grain in 9 days, working 9 hours a day, how many men will reap 48 acres in 12 days, working 12 hours a day? 4
- 12 If a 5 cent coin weighs 5 grams, how many kilograms will \$100 in that coin weigh?