University of the State of New York

Examinations Department

108th examination

ARITHMETIC

Tuesday, March 14, 1893—9 : 15 a. m. to 12 : 15 p. m., only

---

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 Define *fraction, power, root, ratio, percentage.* 10

2 Reduce $\frac{2958}{4002}$ to its lowest terms. 4

3 Find the sum of $1\frac{1}{8}$, $\frac{2}{5} \times 1\frac{1}{2}$, 3, $\frac{7}{16}$. Express the result decimally. 6

4 Find the cost of 20 boards each 14 ft long, 8 in. wide, $1\frac{1}{4}$ in. thick at \$24 per M. 10

5 How many cubic yards of masonry in the walls of a cellar 30 ft long, 21 ft wide and 9 ft deep, inside measurement, if the walls are 18 in. thick? (Make no allowance for openings.) 12

6 Find the amount of \$265 at $4\frac{1}{2}\%$ simple interest from July 12, 1892 to March 14, 1893. 10

7 Bought 240 barrels of apples at \$1.75 a barrel; lost 40 barrels through frost; at what price a barrel must I sell the remainder to gain 25% on the money invested? 10

8 School bonds bearing $4\frac{1}{2}\%$ interest sell at 10% premium; what rate per cent does the buyer get on his investment? 10

9 If 2 men plow 15 acres in 5 days working ten hours a day, how many acres will 3 men plow in 4 days working 8 hours a day? 10

10 Find the square root of 243.121 correct to three decimal places. 6

11 Find the face of a 60 day note which when discounted at a New York bank will yield \$250. 6

12 Find the weight of the water that can be contained in a cubic vessel whose edge is 4 decimeters. 6