University of the State of New York

Examinations Department

106th examination

ARITHMETIC

Friday, December 30, 1892—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 Distinguish between (*a*) a compound and a denominate number; (*b*) interest and discount. Illustrate by examples. 8

2 What will be the cost of carrying 250 cords of wood 100 miles, if a railway charges 1 cent a mile for carrying one cord the first 40 miles and 3 cents a cord for every 4 miles of the remaining distance? 10

3 Find the sum of $9\frac{3}{5}$, $8\frac{1}{4}$, $5\frac{2}{3}$ and $\frac{5}{12}$. Express the result both as a fraction in lowest terms and as a decimal. 8

4 What part of an ounce (apothecaries' weight) is 5 drams and 2 scruples? 6

5 In how many days will a boy earn, at 75 cents a day, as much as a man earns in 90 days at $2.75 a day? 6

6 What must be the length of a field 88 feet wide to contain one third of an acre? 8

7 What will it cost to paint the walls and ceiling of a hall 48 feet long, 27 feet wide, 18 feet high, at 95 cents a square yard? 8

8 A merchant marks an article $2.80, but in selling it takes off 5% for cash; if the rate of his profit is 33% what was the cost of the article? 10

9 What is the amount of $255.40 from Feb. 16, 1891 to Dec. 10, 1892 at 5%? 6

10 A note of $275, dated Oct. 14, payable in 60 days, is discounted Oct. 14 at 6%; find the proceeds. 6

11 Divide $720 among A, B and C, so that the number of dollars they receive shall be as the numbers 5, 6 and 7. 6

12 The side of a square room is 40 feet; find the distance, correct to two decimal places, between the diagonal corners of the floor. 10

13 If alcohol costs 50 cents a liter what is the cost of 7.5 deciliters? 8