University of the State of New York

Examinations Department
81st examination
ARITHMETIC

Tuesday, June 14, 1892—9 : 15 a. m. to 12 : 15 p. m., only

60 credits, necessary to pass, 45

NOTE.—Give each step of solution, indicating the operations by appropriate signs. Use cancellation when possible. Reduce fractions to lowest terms. Express final result in its simplest form and mark it *Ans*.

1. Define and give an example of (*a*) even number ; (*b*) composite number : (*c*) concrete number ; (*d*) sign ; (*e*) fraction ; (*f*) involution.
6

2. Indicate the following operations by signs forming one connected expression : 12 diminished by the sum of 4 and 3, and the remainder multiplied by the difference between 9 and 4. Perform the operations. 6

3. Divide 15 millionths by 50 and express the answer in words. 2

4. Reduce $\frac{3335}{4669}$ to its lowest terms.
3

5. Make a receipted bill for the following : Harold Kirby bought of Pliny Hall 10 lbs. sugar at 5 c., $\frac{1}{2}$ lb. tea at 60 c., 3 lbs. coffee at 40 c., 1 sack flour at $1.50.
4

6. Find the cost of excavating a cellar 36 ft. x 27 ft. and 6 ft. deep at 30 c. per cubic yard.
4

7. A railway train runs $\frac{2}{3}$ of a mile in $\frac{4}{5}$ of a minute ; find its velocity per hour. (Solve by analysis.)
4

8. I buy stocks at 80 and sell them at par. Find the per cent profit.
4

9. How many ares of land in a field 4 kilometers long and 3 kilometers wide?
4

10. Find the amount of $864 for 1 yr., 3 mos., 15 days at 5 % simple interest.
5

11. 5 men can dig a trench 10 rods long, 2 ft. wide, and 5 ft. deep in 4 days ; how many men will it take to dig a trench 40 rods long, 2 ft. wide and 4 ft. deep in 8 days? (Solve by proportion.)
6

12. Find the face of a bank note at 90 days that the proceeds may be $360.
4

13. Find the length of the longest line that can be drawn on the floor of a room 18 ft. x 22 ft. (Answer in ft. to two places of decimals.)
4

14. How much lumber will be required to ceil the four walls of a room 16 ft. x 18 ft. and 10 ft. high, and how much will the lumber cost at $16 per M?
4