University of the State of New York.
67th Preliminary Academic Examination.

ARITHMETIC.

TUESDAY, November 20, 1888—Time, 9:30 A.M. to 12:30 P.M., only.

60 credits, necessary to pass, 45.

1. Mention two kinds of notation used in Arithmetic. ............... 2

2. What is meant by the local value of a figure? What is the effect of moving a figure one place to the left; of moving it two places to the left? ........................................... 3

3. In three books there are 930 pages. In the first are 248 pages; and the second has 50 pages less than the third. How many pages has each book? ....................................................... 3

4. If three men can build a wall in 16 days, in what time can 8 men build it? ................................................................. 2

5. Write two numbers, one odd and one even, that are divisible by 13. ............................................................................. 2

6. Find the prime factors of 6699. .......................................... 3

7. The product of three numbers is 120. Two of the numbers are 6$\frac{1}{4}$ and 3$\frac{1}{3}$. What is the other number? ................................. 2

8. Mention the chief differences between a common fraction and a decimal fraction. .................................................... 2

9. Multiply $57\frac{1}{2}$ by 6.875. Give the fractional part of the answer in the decimal form, and write the whole answer in words. ................................................................. 4

10. For what is Troy weight used; Apothecaries weight? ..... 2

11. By what weight is hay estimated; by what weight a silver dollar? ........................................................................... 2

12. Write the table for long measure ........................................ 1

13. What decimal part of a day is 13$\frac{1}{2}$ hours and 30 minutes? 2

14. How much will it cost to carpet a room which is 15 feet wide and 24 feet long with carpet $\frac{1}{2}$ yd. wide, at $1.25$ a linear yard? ............................................................... 3

15. A bin that holds 50 bushels is 4 feet long and 3 feet wide; how deep is it? ................................................................. 3

16. James Dalton buys of Julius Johnson, May 1, 1888, 275 lbs. sugar at 7$\frac{1}{2}$ cents; 3 lbs. raisins at 12$\frac{1}{2}$ cents; 1 barrel flour at $5.50; and in payment of the bill gives his note payable at the Commercial Bank in 30 days. Make a bill of the above and receipt it. . 4

17. Find the bank discount and proceeds of the note mentioned in question 16, discounted May 1, 1888 .................. 3

18. If 15 barrels of flour be sold for what 18 barrels cost how much is the gain per cent? ................................................. 2

19. What sum invested in stock at 6 per cent. premium will produce an annual income of $1,000, the stock paying 8 per cent. annual dividend? ............................... 3

20. Three men gain $980, of which A is to have $2 as often as B has $5 and C has $7. How much is the share of each? ........ 3

21. If a field 30 rods long and 20 rods wide cost $48, how much will a field 50 rods long and 15 rods wide cost? (Solve by proportion.) ................................................................. 3

22. The foot of a ladder is 28 feet from the wall of a house and the top of the ladder touches the wall 45 feet from the ground; how long is the ladder? ...................... 3

23. Find the side of a cubical bin holding 91125 cubic inches. 2

24. Give the length of a metre in inches ................................. 1