University of the State of New York.

71st Preliminary Examination.

ARITHMETIC.

Tuesday, Jan. 21, 1890—Time, 9:30 A. M. to 12:30 P. M., only.

---

100 *credits, necessary to pass,* 75.

1. Explain the difference between the simple value of a figure and its local value... 4

2. How may the correctness of multiplication be proved and why is this a proof?.. 4

3. Copy the following numbers and find their sum:

25684 3579 26 8002 704 92076 18430 257 79460 10 12895 8205 70382 99669 47169 7280 455 22895 75000 8 276 8836 32940 66666 75834   10

4. Bought three tubs of butter weighing $25\frac{7}{16}$, $29\frac{3}{4}$ and $27\frac{1}{8}$ pounds. The empty tubs weighed $5\frac{3}{16}$, $5\frac{3}{4}$ and $5\frac{7}{8}$ pounds. How much did the butter cost at $24\frac{3}{4}$ cents a pound? 6

5. Find the cost of each of the following :

    5 gals. 3 qts. 1 pt. of vinegar at 20 cents a gallon........ 6

    10 acres, 50 sq. rods of land at $48 an acre 4

6. Find in tons the weight of the water in a full tank the capacity of which is 100 barrels ($62\frac{1}{2}$ lbs. in a cubic foot)....... 6

7. Write the table of linear measure......................... 2

8. James Jones buys of John Wilson for cash Jan. 1, 1890, 5 gals. vinegar at $.20; 27 lbs. sugar at 10 cents; 5 lbs. oat meal at 5 cents. Make out a bill of the above and receipt it for Wilson 10

9. Find the amount of $2,560 for 2 yrs. 7 mos. 22 days at 5 %   8

10. A house worth $1,600 rents for $9 per month and the owner pays $36 a year taxes; what rate per cent. does it pay the owner? 6

11. A certain $4\frac{1}{2}$ % stock sells at 77. How much annual income will be produced by $385 invested in it ? 6

12. Explain the difference between true discount and bank discount... 4

13. Find the proceeds, bank discount and date of maturity of a note for $2,000 at 90 days at 5 %, dated and discounted July 1, 1889... 6

14. If $75 premium be paid for insuring $\frac{3}{5}$ of a store at $1\frac{1}{4}$ %, find the value of the store 4

15. It is necessary to raise a tax of $3,200 on an assessed valuation of $180,000. The poll tax is $140. Find the rate and A's tax on $5,000.. 6

16. Find the square root of 4057.69 6

17. If slates average 4 mm in thickness, find the number of slates in a pile 3 d m high 2