

# 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
-------	------	----	------	-----	-------	-------	-----	-------	----	-------	------	-------	-------	-------	------	-----	-------	-------	---	-----	------	-------	-------	-------	----

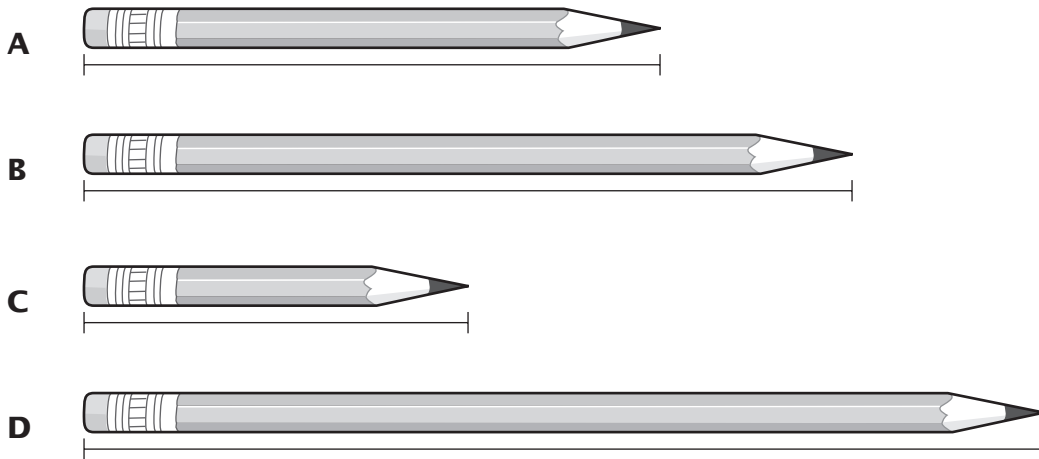
4. Bought three tubs of butter weighing  $25\frac{7}{16}$ ,  $29\frac{3}{4}$  and  $27\frac{1}{2}$  pounds. The empty tubs weighed  $5\frac{3}{16}$ ,  $5\frac{3}{4}$  and  $5\frac{1}{2}$  pounds. How much did the butter cost at  $24\frac{3}{4}$  cents a pound?..... 6
5. Find the cost of each of the following :
  - 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  $\frac{3}{8}$  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

1



Use your ruler to help you solve this problem.

Which pencil is closest to 4 inches long?



2

What is the value of 3 in the number 352?

- F 3
- G 30
- H 300
- J 350

**Go On**

3

Adrian spent the coins shown below at the school store.



How much money did Adrian spend?

- A \$0.68
- B \$0.83
- C \$0.88
- D \$0.93

4

Carmen writes the number sentence below.

$$218 > \square$$

Which number belongs in the box to make the number sentence correct?

- F 211
- G 218
- H 222
- J 230

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Dora has saved \$314.

a. Write the amount Dora has saved in three different ways by filling in the blanks.

number names \_\_\_\_\_

expanded form \_\_\_\_\_

\_\_ hundreds \_\_ tens \_\_ ones

b. Dora's goal is to save \$400. How many tens are in \$400? Explain your answer using words, pictures or numbers.

- c. Dora reaches her goal of \$400 in savings. She decides to set a new goal of \$900. How many more \$100 bills will she need to reach \$900 in savings? Explain your answer using words, pictures, or numbers.
- d. Dora made her new goal! She saved both ten dollar bills and hundred dollar bills to go from \$400 to \$900. Show how Dora could skip-count using tens **and** hundreds from 400 to 900. Explain your answer using words, pictures, or numbers.