High School Department

176TH EXAMINATION

ARITHMETIC

Thursday, January 29, 1903—9.15 a. m. to 12.15 p. m., only

Answer the first five questions and five of the others but no more. *If more than five of the others are answered only the first five answers will be considered. Give all operations (except mental ones) necessary to find results. Reduce each result to its simplest form and mark it Ans. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.*

1 Define *five* of the following: numeration, prime factor, multiple, board foot, square root, trade discount, stock.

2 Simplify $\frac{2\times(\frac{3}{5}-\frac{9}{2\,5}\div\frac{24}{7}-\frac{5}{1\,2}\times 1\frac{1}{2\,0})}{1\div(9-2\times 2)}$

3 A bin 2 meters 6 decimeters long and 1 meter 5 decimeters wide, contains 2535 liters of wheat; find the depth of the bin.

4 A horse and wagon were sold for $120 each; the horse was sold at a loss of 25%, the wagon at a gain of 25%. Find how much was gained or lost on the whole transaction.

5 A man borrowed $2700 November 11, 1901, with interest at 5%; find the amount of his debt today.

6 My broker bought for me 26 shares of stock at 107 and sold them at $118\frac{7}{8}$, brokerage in each case $\frac{1}{8}$%; find my gain.

7 Find the cost @ $23 per M of a stick of timber 30′ long 10″ wide and 8″ thick.

8 A man fails and pays 67 cents on a dollar; after paying his lawyer a fee of 4%, how much would a creditor receive on a claim of $625?

9 A 90 day note without interest, dated December 10, 1902, yields $458.92 proceeds when discounted today at 6%; find the face of the note.

10 Find the difference in a bill of $925 between a discount of 25% and a discount of 10%, 10% and 5%.

11 A garden 145 feet long and 120 feet wide is inclosed by a tight board fence 6 feet high; find the cost, @ 8¢ a square yard, of painting both sides of the fence.

12 A house worth $3500 was insured for 75% of its value at the rate of $\frac{3}{4}$%; find the premium paid.

13 The distance around a rectangular field whose width is $\frac{3}{4}$ its length, is 98 rods; find the area of the field.

14 What will it cost, @ 16¢ a square foot, to cover with gold-leaf a circle 28 inches in diameter?

15 On a note for $500, with interest at 6%, dated March 5, 1902, a payment of $18 was made September 11, 1902; find the amount due today.