

High School Department

182D EXAMINATION

ARITHMETIC

Thursday, June 16, 1904—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 In the Roman notation show the effect of (a) repeating a letter, (b) placing a letter before another of greater value, (c) placing a letter after another of greater value, (d) placing a bar over a letter. Write 11,949 in the Roman notation.

2 Find the cost, @ \$2.80 per M, of laths for the walls and ceiling of a room 20'x18' and 9' high; 1000 laths cover 70 square yards.

3 A single track railway connects two places $266\frac{2}{3}$ kilometers apart; how many rails $9\frac{1}{4}$ meters long will it require?

4 How much interest will \$732 earn in 3 years, 7 months and 17 days at $3\frac{1}{2}\%$ simple interest?

5 Silk is sold at a gain of $33\frac{1}{3}\%$ which is a gain of 30¢ on a yard; find the cost and the selling price a yard of the silk.

6 Find the cost @ \$16.50 per M, of $1\frac{1}{2}$ " lumber for a board walk 5' wide inclosing a rectangular grass plot which is 60'x40'.

7 Subtract $\frac{3}{4}$ of an acre from $\frac{1}{2}$ of an acre, expressing the result in integers of lower denominations.

8 Make a receipted bill of the following items sold by you to S. Roberts June 13, 1904: 10 lbs sugar @ $6\frac{3}{4}\phi$; 25 lbs meal @ 2ϕ ; 5 lbs coffee @ 38ϕ ; 2 lbs tea @ 60ϕ ; 5 bars soap @ 6ϕ .

9 A merchant sends his agent \$3138.66 which includes the agent's commission of 6% and the amount to be invested; how many pounds of cotton can be bought @ 9¢ a pound?

10 A pail 12" in diameter and 15" deep is full of water; find the weight of the water. [1 cubic foot of water weighs $62\frac{1}{2}$ pounds.]

11 The proceeds of a sale of stock at $127\frac{1}{2}$, brokerage $\frac{1}{8}\%$, are \$12,228; find the number of shares sold.

12 Simplify
$$\frac{2\frac{1}{3} - \frac{5}{6} \times (12\frac{2}{3} \div 11\frac{2}{3})}{4\frac{7}{8} - 8\frac{2}{3} \times \frac{1}{2} + 1\frac{1}{2}}$$

13 If 15 yards of cloth 27 inches wide are required for a dress, how many yards of cloth 30 inches wide will be required? Solve by proportion.

14 Find the proceeds and the date of maturity of a 90 day note for \$540.50, dated May 26, 1904, and discounted today at a bank at 6%.

15 Find the least common multiple of 544, 1071 and $127\frac{1}{2}$