High School Department

174TH EXAMINATION

ARITHMETIC

Thursday, June 19, 1902 — 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: abstract number, greatest common divisor, board foot, present worth, root, duty, gram.

2 Simplify $\frac{1.75\times.5+.325-.33\frac{1}{3}\times2.1}{.25+.049+.014}$ and express the result as a common fraction.

3 A man borrowed $837 September 12, 1899 and paid it today, with interest at 5%; what amount did he pay?

4 A man sold a carriage for $207 thereby gaining 12½%; how much did he gain?

5 Find the cost, @ 35¢ a square meter, of plastering the walls and ceiling of a room 6 meters 6 decimeters long, 5 meters 5 decimeters wide and 2 meters 8 decimeters high.

6 Divide the least common multiple of 812 and 336 by their greatest common divisor.

7 Find the cost of the following bill of lumber: 20 scantlings 14′ long, 4″ wide and 3″ thick @ $30 per M; 16 planks 10′ long, 14″ wide and 2″ thick @ $20 per M.

8 A commission merchant was sent $704.52 which he invested in 950 bushels of wheat, after deducting his commission of 3%; find the cost a bushel of the wheat.

9 Two successive discounts of 15% and 10% reduced a bill to $489.60; what was the original bill?

10 Find the cost, @ 45¢ a roll, of papering the walls of a room 16½ feet long, 15 feet wide and 12 feet high, making no allowances for openings. [A roll of paper is 8 yards long and 18 inches wide.]

11 What sum must be invested in 6½% stock at 185 to yield an annual income of $481?

12 A man bought 227 pounds of butter @ 19⅛¢ a pound and paid the bill with the proceeds of a bank note for 60 days at 6%; find the face of the note.

13 How long must a ladder be to reach a window 15 feet high, if the foot of the ladder is 8 feet from the house?

14 It costs $36.18 to insure a store at ¾%; find the face of the policy.

15 What will it cost, @ 8½¢ a square yard, to paint the convex surface of a cylindric boiler 6 feet high and 5 feet in diameter?