

High School Department

164TH EXAMINATION

ARITHMETIC

Tuesday, June 12, 1900—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 Ant. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

- 1 Simplify $\left\{ \left(\frac{2}{3} + 2\frac{1}{2} - 3\frac{1}{3} \right) \div \left(\frac{2}{3} - 1\frac{1}{2} + 5\frac{2}{3} \right) \right\} \times (.625 \times \frac{1}{4})$
- 2 The bottom of a rectangular tank which holds 2400 liters of water is $2\frac{1}{2}$ meters long and 120 centimeters wide; find the depth of the tank.
- 3 Find the greatest common divisor and the least common multiple of 243, 198 and 264.
- 4 A grocer pays \$12 for 5 bushels of cranberries and sells them so as to gain $33\frac{1}{2}\%$; find the selling price per quart.
- 5 Find the amount of \$835 at $4\frac{1}{2}\%$ simple interest from October 25, 1898 to the present time.
- 6 Define five of the following: antecedent, decimal fraction, factor, interest, payee, policy, subtrahend.
- 7 John Hartwell borrows this day of Charles Smith \$280, giving his note for 3 months at 5%. Write the promissory note in proper form and find its amount at maturity.
- 8 If 1 bushel of wheat weighs 60 lbs. what is the capacity in cubic feet of a bin which holds 1 ton of wheat? [1 bushel = 2150.42 cubic inches.]
- 9 Find the cost of carpeting a floor $13\frac{1}{2}$ feet by 18 feet, the carpet being $\frac{1}{2}$ of a yard wide and costing \$1.20 a yard.
- 10 Find the exact contents in cubic yards of a solid wall 8 feet high and 18 inches thick around a rectangular court 20 yards by 32 yards.
- 11 Find the square root of 73 to three decimal places.
- 12 A person sells 200 shares of railway stock at $105\frac{1}{2}$ and invests the proceeds in mining stock at $70\frac{1}{2}$, paying $\frac{1}{2}\%$ brokerage in each case; how many shares of mining stock does he buy?
- 13 An agent sold 3000 bushels of oats, and, after deducting his commission of $2\frac{1}{2}\%$, sent his principal the proceeds, \$877.50; for how much a bushel were the oats sold?
- 14 The list price of a bill of goods is \$120; find the net cost when the successive commercial discounts are 20, 10 and 5.
- 15 Find the number of square feet in the convex surface of a cylindrical iron chimney 30 inches in diameter and 50 feet high.