

196TH HIGH SCHOOL EXAMINATION

ARITHMETIC

Wednesday, September 16, 1908—9.15 a. m. to 12.15 p. m., only

Answer 10 questions. 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 fraction, factor, prime number, interest, minuend.
- 2 A liter of air weighs 1.273 grams. What is the weight in kilograms of the air in a room 7 meters long, 5 meters wide and 4 meters high?
- 3 Find the simple interest of \$685.70 at $5\frac{1}{2}\%$ for 1 yr. 7 mo. 20 da.
- 4 Find the value of $a \frac{1\frac{1}{2} \times 3\frac{1}{2} + 8\frac{1}{2}}{\frac{1}{2} + \frac{1}{12} - \frac{1}{4}}$
 $b (3.005 \times .006) \div .0009$
- 5 The longitude of St Paul is $93^{\circ} 5'$ west and that of St Petersburg $30^{\circ} 18'$ east; what is their difference in longitude? in time?
- 6 Factor 924, 168 and 396; from these factors determine (a) the greatest common divisor, (b) the least common multiple.
- 7 Find the square root of 119,716.
- 8 A pipe fills a tank at the rate of 1 gal. 1 pt 2 gills a second; if the capacity of the tank is 4899 gal. 2 qt 1 pt, how much time will be required to fill it?
- 9 A merchant buys 10 casks of wine, each containing 32 gallons, at \$3 a gallon, and sells it for $87\frac{1}{2}$ cents a quart; find his whole gain and his gain per cent.
- 10 What was the list price of an article whose net cost was \$6.15 after discounts of 20% and 25% were deducted?
- 11 A man lost $\frac{1}{4}$ of his entire crop of apples and sold the remainder for \$300; how many bushels did he have at first if apples were worth 20 cents a peck?
- 12 Find the cost of fencing a rectangular field 22×36 rods with a four wire fence, if the fence posts are 11 feet apart and cost 9 cents each and the wire costs $\frac{1}{2}$ a cent a foot.