

High School Department

180TH EXAMINATION

ARITHMETIC

Thursday, January 28, 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 Write the following in one connected expression, using figures and signs of operation: the sum of three hundred seventy-five thousandths and six hundred twenty-five ten-thousandths multiplied by the remainder of twelve and five tenths minus twelve and forty-six hundredths; this product is divided by thirty-five. Perform the operations indicated.

2 Reduce $\frac{8649}{9124}$ to its lowest terms.

3 Find the amount of \$828 at $4\frac{1}{2}\%$ simple interest from August 31, 1901 to the present date.

4 A vat 1.5 meters long, 9 decimeters wide and 8 decimeters deep is full of water; find in kilograms the weight of the water.

5 An agent sold 1600 bushels of grain @ 90¢ a bushel and sent his employer \$1418.40 as the proceeds of the sale; find the rate of the agent's commission.

6 Find the number of cubic feet of ice on a rectangular pond 17 rods long and 6 rods wide, the ice being $1\frac{1}{2}$ feet thick.

7 How many sacks will hold 35 bushels 2 pecks 7 quarts of grain, if one sack holds 1 bushel 3 pecks 7 quarts 1 pint?

8 Discounts of $12\frac{1}{2}\%$ and 4% are given on a bill of \$545; find the net amount of the bill. What single rate of discount is equivalent to the two successive discounts?

9 A man holding a 60 day note for \$376, without interest, due March 21, 1904, has it discounted today at 6%; find the proceeds of the note.

10 Find the loss on 175 shares of stock bought and sold at par, brokerage in each case being $\frac{1}{8}\%$.

11 A train traveling 24 miles an hour leaves a station at 1 p. m.; another train traveling 36 miles an hour leaves the same station at 2.45 p. m. At what time will the latter train overtake the former?

12 Find the number of acres in a circular park whose diameter is 280 rods.

13 How high is a flagstaff whose shadow is 81 feet long when a flagstaff 30 feet high casts a shadow 36 feet long? Write the proportion.

14 The face of a policy of insurance on a house was \$5692; the premium paid was \$42.69. Find the rate of insurance.

15 Define multiple, board foot, specific duty, ratio, root.