

High School Department

173D EXAMINATION

ARITHMETIC

Tuesday, March 25, 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 Multiply two hundred twenty-five and five hundredths by two hundred four ten-thousandths, and divide the product by five hundred twenty-five thousandths. Express the result in words.

2 The weight of the water in a tank 5 decimeters 8 centimeters long and 3 decimeters 8 centimeters wide is 92.568 kilograms; how deep is the tank?

3 Find the amount of \$216 at $2\frac{1}{2}\%$ simple interest from July 28, 1899 till today.

4 A merchant gained $12\frac{1}{2}\%$ by selling 48 yards of silk for \$4.50 more than cost; find the cost a yard of the silk.

5 A man raised \$962.85 by having his note for 90 days discounted at a bank at 7% ; for what sum was the note drawn?

6 Simplify $3 - [\frac{3}{8} - \frac{1}{8} + (\frac{1}{4} + \frac{2}{10} \div \frac{3}{8})]$

7 On a bill for \$280.50 a man is offered successive discounts of 10% and 5% for cash; to what single rate of discount is this equivalent and what is the net amount of the bill?

8 Find the cost, @ $37\frac{1}{2}\phi$ a square yard, of plastering the walls and ceiling of a room 20 feet 6 inches long, 15 feet 6 inches wide and 9 feet 6 inches high, allowing for 3 doors each 3 feet by 7 feet and for 4 windows each 3 feet by 6 feet.

9 A bin 8.4 feet long, 4.12 feet wide and 3 feet deep is $\frac{3}{4}$ full of grain; how many bushels of grain are there in the bin? [2150.4 cubic inches=1 bushel.]

10 Make a receipted bill of the following: John Mack buys this day of Adams & Co., 4 bushels potatoes @ 60ϕ , 3 dozen eggs @ 22ϕ , 10 pounds sugar @ $6\frac{3}{4}\phi$, 5 pounds cheese @ 14ϕ , 15 pounds meal @ 2ϕ .

11 A commission merchant sold 744 bushels of wheat and sent his employer \$527.31, retaining a commission of \$30.69; find the rate of commission and the selling price a bushel of the wheat.

12 How many rods of fencing are required to inclose a square field containing $12\frac{3}{4}$ acres?

13 What income will be derived from investing \$14,060 in $3\frac{1}{2}\%$ bonds purchased at $87\frac{3}{4}$, brokerage $\frac{1}{8}\%$?

14 A man pays taxes amounting to \$68.31, after receiving a rebate of 1% for prompt payment. If the rate of taxation is $1\frac{1}{2}\%$, what is the assessed valuation of his property?

15 Define *five* of the following: minuend, mixed number, multiple, compound fraction, proportion, interest, discount.