

Examination Department

139TH EXAMINATION

ARITHMETIC

August 1896—Three hours, only

100 credits, necessary to pass, 75

Answer questions 1-5 and five of the others but no more. If more than five of these other questions are answered only the first five of these 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.

1 Define prime number, cancelation, proportion, numerator, quotient.

2 Simplify $\frac{3\frac{1}{2} + 2\frac{1}{3} - 1\frac{1}{4}}{\frac{3}{8} \times \frac{10}{3}} \div 1.375$

3 Find the amount of \$1250 for 1 year, 4 months and 20 days at $5\frac{1}{3}\%$ simple interest.

4 The area of a rectangle is $45\frac{1}{4}$ square meters, the length is 3 meters, 1 decimeter and 5 centimeters. Find its width.

5 Solve the following by analysis and write out work in full: If it cost \$1.25 to pave $1\frac{1}{4}$ square feet of street what will it cost to pave $25\frac{3}{4}$ square rods?

6 Extract the square root of 4900.25 to two places of decimals.

7 I sell goods at 15% below the market price and still make a profit of 10%. What per cent above cost was the market price?

8 If 3 men can build 8 rods of fence in 10 days working 8 hours a day, how many rods can 6 men build in 15 days working 7 hours a day? (Solve by proportion.)

9 A man receives $\frac{2}{5}$ of his income from stocks, $\frac{3}{8}$ from land, $\frac{1}{6}$ from mortgages and the remainder, which is \$210, from rents; what is his entire income?

10 A certain stock pays 10%. At what rate must it be bought to yield 6% on the investment?

11 What single discount is equal to commercial discount of 10%, 15%, 5%?

12 Make a receipted bill of at least three items bought by you this day of James Johnson.

13 How many bushels of oats will be contained in a bin 30 feet long, 15 feet wide and 10 feet deep?

14 A can do a piece of work in 6 days, B in 8 days and C in 12 days. How many days will it take them all working together?

15 Extract the cube root of 112.04 to three places of decimals.