9. What is the cost of paper for the walls of a room 30 ft. long, 15 ft. broad, and 15 ft. high, the paper be 1½ yds. wide, and its price 4¼ cents per yard? What would the cost for a room twice as long, twice as broad, and twice as high, the paper twice as wide, and costing twice as much per yard as before?

10. If when 25 per cent. is lost in grinding wheat, a country has to import ten million quarters, but can maintain itself on its own produce if only 5 per cent. be lost, find the quantity of wheat grown in the country.

11. How many flag-stones, each 5·76 ft. long and 4·15 ft. wide are required for paving a cloister which es a rectangular court 45·77 yds. long and 41·93 yds. ; the cloister being 12·45 ft. wide?

12. A man wishing to invest $100 in Government bonds bearing interest at 6 per cent, inquires the price of the stock, and finds it to be 86 per cent.; he delays the investment however, until bonds l e risen to 87. What effect has the delay on his income?

VI.

1. Explain our decimal system of arithmetic, and how it is that we are enabled with digits to express any number, however great.

2. If 12 men or 18 boys can do $\frac{3}{4}$ of a piece of work in $6\frac{1}{2}$ hours, in what time will 11 men and 9 boys do the rest?

3. Express ·0025 by a simple fraction, and $1\frac{3}{25}+6\frac{3}{40}-\frac{17}{25}$ by a decimal.

4. Explain what is meant by Compound Interest. What is the difference between the Simple and Compound Interest of $345·50 for 2 years at 3·5 per cent.?

5. Define discount. If the discount on $226·33, due at the end of a year and a half be $12·80 what is the rate of interest?

6. Show how to divide 4 things of the same size and material among 3 children, A, B, and C, by merely breaking *one* of the four, and so that A's share shall be $\frac{2}{5}+\frac{5}{6}+\frac{1}{2}$ of a whole one; B's share $\frac{3}{8}+\frac{7}{10}+\frac{3}{20}$ of a whole one; and C's share the remainder.

7. A grain of pure gold can be drawn out into a wire 550 feet long; find the cost of a wire of the same thickness which would extend round the earth, assuming the circumference of the earth to be 25,000 miles, and the value of gold to be $21·25 per oz. troy.

8. (*a*) If $A = 1\frac{1}{6}$ of B, and $C = 2\frac{1}{6}$ of B, find the ratio of A to C.