1 Define and illustrate improper fractions, complex fractions, prime factor, divisor, multiple.

2 A certain room is 6 meters, 4 decimeters long, 4 meters, 8 decimeters wide and 3 1/2 meters high; find the cost of plastering its four walls and ceiling at 30 cents a square meter. Make no allowance for openings.

3 Simplify the following: \[\frac{3\frac{1}{2} + 2\frac{2}{3}}{\frac{1}{2} \times \frac{4}{3} - \frac{1}{5}}\]

4 Find the sum of the following and express the result in words: 2370.12, 59.63, 482.71, 10042.63, 6259.001, 1.0003, 52746, 358712.

5 A note for $624 is dated August 26, 1893; July 15, 1894 there was paid on it $62.50; find the amount now due.

6 I buy goods at a discount of 25% from the list price and sell at the list price; find the per cent gain.

7 Property valued at $12000 is insured for 3/4 its value at the rate of 1 1/4% a year; find the premium.

8 I buy 15 shares of stock at 95 and sell the same at 98, paying 1 1/4% brokerage in each case; find my net gain.

9 How many brick \(8'' \times 4'' \times 2''\) will be required for a wall \(37\frac{1}{2}\) ft long, \(18\) ft high and \(1\) ft thick, allowing 20% of the wall for mortar?

10 If 3 men can do a certain piece of work in \(4\frac{2}{3}\) days, how long will it take 5 men to do the same work? (Solve by proportion.)

11 A piece of land in the form of a square contains four acres; find the length of one of its sides.

12 A note for $500 at 90 days with interest at 6% is discounted at a bank 30 days after it is dated; find the proceeds.

13 A man has \(\frac{1}{2}\) his property invested in land, \(\frac{1}{16}\) in stock, \(\frac{3}{10}\) in utensils and the remainder, which is $3500, in the bank; how much property has he in all?

14 A collecting agent whose commission is 2% remits to his employer $2808.19; what amount did he collect?

15 State and illustrate two methods of proving simple multiplication.