

Question no. 1:- Express $\frac{4}{9}$ to $\frac{1}{3}$ in its Lowest form term.

Solution:-

$$\frac{4}{9} : \frac{1}{3}$$

$$\frac{4}{3} : 1$$

Question no. 2:- What is ratio between 3.5 and 7.5?

Solution:-

$$3.5 : 7.5 \Rightarrow \frac{7}{10} : \frac{15}{10}$$

$$\boxed{7:15}$$

Question no. 3:- The Cash price of Rs. 1000 has to be distributed b/w the two students in the ratio 2:3. How many does each student receive?

Solution:-

Price to be distributed = Rs. 1000

$$\text{Ratio} = 2:3 \Rightarrow 2+3 = 5$$

$$\begin{aligned} \text{I}^{\text{st}} \text{ student Share} &= \frac{2}{5} \times \frac{2000}{1000} \\ &= 400 \end{aligned}$$

$$\begin{aligned} \text{2}^{\text{nd}} \text{ Student Share} &= \frac{3}{5} \times \frac{2000}{1000} \\ &= 600 \end{aligned}$$

Question no. 4:- Bata Shoe Company has 50,000 pairs of shoes and

management likes to supply these pairs of shoes to four whole sale dealers in the ratio of 4:7:9:5. How much pairs of shoes should each dealer receive?

Solution:-

$$\text{Pairs of Shoes} = 50,000$$

$$\text{Ratio} = 4 : 7 : 9 : 5 \Rightarrow 4+7+9+5$$

$$= 25 \text{ parts}$$

$$\begin{aligned} \text{1st dealer pairs} &= \frac{4}{25} \times 50,000 \\ &= 8000 \end{aligned}$$

$$\begin{aligned} \text{2nd dealer pairs} &= \frac{7}{25} \times 50,000 \\ &= 14000 \end{aligned}$$

$$\begin{aligned} \text{3rd dealer pairs} &= \frac{9}{25} \times 50,000 \\ &= 18000 \end{aligned}$$

$$\begin{aligned} \text{4th dealer pairs} &= \frac{5}{25} \times 50,000 \\ &= 10,000 \end{aligned}$$

Question no. 5:- Reduce to its lowest form, 24:64.

Solution:- $24:64$

$$\frac{24}{3} : \frac{64}{4}$$

$$\boxed{3:4}$$

Question no. 6:- What is the value of the ratio $8 \times 7 : 9 \times 13$?

Solution:- $8 \times 7 : 9 \times 13$

$$\boxed{56 : 117}$$

Question no. 7:- Three partners invested Rs. 18000, Rs. 16500 and Rs. 12500 respectively. If third partner got Rs. 4625, as a profit, what was the total profit? And profit of 1st and 2nd partner?

Solution.

Ratio of Investment = 18000 : 16500 : 12500

$$\begin{aligned} \text{Total Investment} &= 18000 + 16500 + 12500 \\ &= \text{Rs. } 47000 \end{aligned}$$

Third Partner's profit = Rs. 4625

Total profit = ?

Profit of 1st and second partner = ?

To find total profit let's use

third's partner profit :-

$$\therefore \text{profit} = \frac{\text{Investment}}{\text{Total Investment}} \times \text{Total Profit}$$

So,

$$4625 = \frac{12500}{47000} \times \text{Total profit}$$

$$\text{Total profit} = \frac{47000 \times 4625}{12500} = \text{Rs. } 17390$$

$$\text{Profit of 1st partner} = \frac{18000 \times 17390}{47000}$$

$$\text{Profit of 1st Partner} = \text{Rs. } 6660$$

$$\text{Profit of 2nd Partner} = \frac{16500 \times 17390}{47000}$$

$$= \text{Rs. } 6105$$

$$\text{Hence, Total profit} = \text{Rs. } 17390$$

$$\text{Profit of 1st Partner} = \text{Rs. } 6660$$

$$\text{Profit of 2nd Partner} = \text{Rs. } 6105$$

Question no. 8:- Find the missing term from the proportion $2:7::?:49$.

Solution:-

Suppose unknown term = x

$$\text{So, } 2:7::x:49$$

$$\frac{2}{7} = \frac{x}{49} \Rightarrow x = \frac{2 \times 49}{7}$$

$$x = 14$$

Question no. 9:- If 20 men can prepare 10 office tables in a day. How many men are required to prepare 25 such office tables in a day?

Solution:-

By definition of Ratio;

$$204 : x :: 10 : 25$$

$$\frac{20}{x} = \frac{10}{25} \Rightarrow x = \frac{25 \times 20}{10}$$

write the final answer in the form of statement.

$$x = 50$$

Question no. 10:- If 20 men can construct a housing unit in 60 days. How many men are required to prepare construct such housing unit in 48 days?

Solution:-

$$20 : x :: 60 : 48$$

$$\frac{20}{x} = \frac{60}{48} \Rightarrow x = \frac{20 \times 48}{60}$$

$$x = 16$$

Question no. 11:- Fifteen men complete the work in 20 days. How long it will take to complete the work by 10 workers?

Solution:-

$$15 : 10 :: 20 : x$$

Ans

Men	Day
15 ↓	20 ↑
10 ↓	x ↑

$$\frac{15}{10} = \frac{x}{20} \Rightarrow x = \frac{20^2 \times 15}{16}$$

$$x = 30$$

Question no. 12 :- A production manager plans to produce 100 units with the help of 25 workers who work 4 hours a day. How many units can be made by 40 workers if they work 3 hours / day?

Solution :-

Workers	Hours	Units
25 ↑	4 ↑	100 ↑
40 ↑	3 ↑	x ↑

$$\frac{x}{100} = \frac{3}{4} \times \frac{40^2}{25^2}$$

$$\frac{x}{100} = \frac{6}{5} \Rightarrow x = \frac{100 \times 6}{5}$$

$$x = 120$$

Question no. 13 :- If the stay of 12 men for 28 days in a hotel cost Rs. 6720, find the cost for stay of 8 men for 14 days in the hotel?

Solution :-

Men	Days	Cost
12	28	6720
8	14	x

$$x = \frac{8^4}{12} \times \frac{14}{28} \times 6720$$

$$x = \frac{1}{12} \times \frac{3360}{63} \times 6720$$

$$x = \text{Rs. } 2240$$

Question no. 14 :- Ali gets one-fourth of his pay as house rent allowance. If he gets Rs. 48,000 as pay, what is his allowance?

Solution :-

Ali's pay = Rs. 48,000

1/4th of his pay is allowance

$$\text{So, Allowance} = \frac{1}{4} \times 48000$$

$$\text{Allowance} = 12000$$