



Ratio and Proportion Ex 9.1 Q6

Answer :

We have

Sum of the terms of the ratio = $2 + 3 + 5 = 10$.

Sum of the numbers = 800.

$$\begin{aligned}\text{Therefore, first number} &= \left(\frac{2}{10} \times 800 \right) \\ &= 160\end{aligned}$$

$$\begin{aligned}\text{or, Second number} &= \left(\frac{3}{10} \times 800 \right) \\ &= 240\end{aligned}$$

$$\begin{aligned}\text{or, Third number} &= \left(\frac{5}{10} \times 800 \right) \\ &= 400\end{aligned}$$

Ratio and Proportion Ex 9.1 Q7

Answer :

Let the present ages of the two persons be ' $5x$ ' and ' $7x$ ' years.

Ratio of their present ages = $5 : 7$.

Eighteen years ago, their ages were $(5x - 18)$ and $(7x - 18)$, respectively.

But eighteen years ago the ratio of their ages was $8 : 13$.

$$\text{So, } \frac{5x - 18}{7x - 18} = \frac{8}{13}$$

$$13(5x - 18) = 8(7x - 18)$$

$$65x - 234 = 56x - 144$$

$$65x - 56x = 234 - 144$$

$$9x = 90$$

$$x = \frac{90}{9} = 10$$

So, their ages are $5x = 5 \times 10 = 50$ years and $7x = 7 \times 10 = 70$ years.

Ratio and Proportion Ex 9.1 Q8

Answer :

Let the two numbers be 'x' and 'y'.

$$\text{Given that } x : y = 7 : 11 = \frac{x}{y} = \frac{7}{11} = x = \frac{7y}{11} \quad \text{----- (1)}$$

Now, 7 is added to each of the numbers, which means that

$$\frac{x+7}{y+7} = \frac{2}{3}$$

$$\frac{\frac{7y}{11} + 7}{y+7} = \frac{2}{3}$$

$$\frac{7y+77}{y+7} = \frac{2}{3}$$

$$3(7y+77) = 2 \times 11(y+7)$$

$$21y+231 = 22y+154$$

$$22y-21y = 231-154$$

$$\text{Therefore, } y = 77, \text{ and } x = \frac{7y}{11} = \frac{7 \times 77}{11} = 49.$$

Thus, the two numbers are 49 and 77.

Ratio and Proportion Ex 9.1 Q9

Answer :

We have

$$\text{Sum of the terms of the ratio} = 2 + 7 = 9.$$

$$\text{Sum of the numbers} = 810.$$

$$\text{Therefore, first number} = \frac{2}{9} \times 810 = 180$$

$$\text{Second number} = \frac{7}{9} \times 810 = 630$$

Ratio and Proportion Ex 9.1 Q10

Answer :

We have

$$\text{Sum of the terms of the ratio} = 2 + 3 = 5$$

$$\text{Therefore, Ravish's share} = \text{Rs} \left(\frac{2}{5} \times 1350 \right) = \text{Rs } 540$$

$$\text{Sikha's share} = \text{Rs} \left(\frac{3}{5} \times 1350 \right) = \text{Rs } 810$$

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