



Linear Equations in One Variable Ex 9.4 Q16

Answer :

Let the total number of guests be x .

Therefore, the number of guests, who drank colas, would be $\frac{1}{4}x$.

The number of guests, who drank squash, would be $\frac{1}{3}x$.

The number of guests, who drank fruit juice, would be $\frac{2}{5}x$.

The number of guests, who did not drink, would be 3.

According to the question,

$$x - \left(\frac{x}{4} + \frac{x}{3} + \frac{2x}{5} \right) = 3$$

$$\text{or } \frac{60x - 15x - 20x - 24x}{60} = 3$$

$$\text{or } x = 180$$

Thus, total number of guests = 180.

Linear Equations in One Variable Ex 9.4 Q17

Answer :

Let the number of correctly answered questions be x .

Therefore, the number of unattempted or wrongly answered questions will be $(180 - x)$.

According to the question,

$$4x - 1(180 - x) = 450$$

$$\text{or } 5x = 450 + 180$$

$$\text{or } x = \frac{630}{5} = 126$$

Thus, number of correctly answered questions = 126.

Number of unattempted or wrongly answered questions = $180 - 126 = 54$.

Linear Equations in One Variable Ex 9.4 Q18

Answer :

Let the number of days for which the labourer is absent be x .

Therefore, the number of days for which he is present will be $(20 - x)$.

$$\therefore \text{Earnings} = \text{Rs. } 60(20 - x)$$

$$\text{Fine} = \text{Rs. } 5x$$

According to the question,

$$60(20 - x) - 5x = 745$$

$$\text{or } 1200 - 60x - 5x = 745$$

$$\text{or } 65x = 1200 - 745$$

$$\text{or } x = \frac{455}{65} = 7$$

Thus, the labourer was absent for 7 days.

Linear Equations in One Variable Ex 9.4 Q19

Answer :

Let the weight of box A be x kg.

Therefore, the weights of box B and box C will be $\left(x + 3\frac{1}{2}\right)$ kg and $\left(x + 3\frac{1}{2} + 5\frac{1}{3}\right)$ kg, respectively.

According to the question,

$$x + \left(x + 3\frac{1}{2}\right) + \left(x + 3\frac{1}{2} + 5\frac{1}{3}\right) = 60\frac{1}{2}$$

$$\text{or } 3x = \frac{121}{2} - \frac{7}{2} - \frac{7}{2} - \frac{16}{3}$$

$$\text{or } 3x = \frac{363 - 21 - 21 - 32}{6}$$

$$\text{or } 3x = \frac{289}{6}$$

$$\text{or } x = \frac{289}{18}$$

$$\text{Thus, weight of box A} = \frac{289}{18} \text{ kg}$$

Linear Equations in One Variable Ex 9.4 Q20

Answer :

Let, the denominator of the rational number be x .

\therefore The numerator of the rational number will be $x - 3$.

$$\therefore \text{The rational number} = \frac{x-3}{x}$$

According to the question,

$$\frac{x-3+2}{x+5} = \frac{1}{2}$$

$$\text{or } \frac{x-1}{x+5} = \frac{1}{2}$$

$$\text{or } 2x - 2 = x + 5$$

$$\text{or } 2x - x = 5 + 2$$

$$\text{or } x = 7$$

$$\therefore \text{The rational number} = \frac{7-3}{7} = \frac{4}{7}$$

***** END *****