



Linear Equations in One Variable Ex 9.4 Q6

Answer :

Let the units digit be x .

\therefore Sum of two digits = 9

\therefore Tens digit = $(9 - x)$

\therefore Original number = $10 \times (9 - x) + x$

Reversed number = $10x + (9 - x)$

According to the question,

$$10 \times (9 - x) + x - 27 = 10x + (9 - x)$$

$$\text{or } 90 - 10x + x - 27 = 10x + 9 - x$$

$$\text{or } 9x + 9x = 90 - 27 - 9$$

$$\text{or } 18x = 54$$

$$\text{or } x = \frac{54}{18} = 3$$

\therefore The number = $10 \times (9 - 3) + 3 = 63$

Linear Equations in One Variable Ex 9.4 Q7

Answer :

Let the first part of 184 be x .

Therefore, the other part will be $(184 - x)$.

According to the question,

$$\frac{1}{3}x - \frac{1}{7}(184 - x) = 8$$

$$\text{or } \frac{7x - 552 + 3x}{21} = 8$$

$$\text{or } 10x - 552 = 168 \quad [\text{After cross multiplication}]$$

$$\text{or } 10x = 168 + 552$$

$$\text{or } x = \frac{720}{10} = 72$$

Thus, the parts of 184 are 72 and 112 ($184 - 72 = 112$).

Linear Equations in One Variable Ex 9.4 Q8

Answer :

Let the denominator of the fraction be x .

Therefore, the numerator will be $(x - 6)$.

$$\therefore \text{Fraction} = \frac{x-6}{x}$$

According to the question,

$$\frac{x-6+3}{x} = \frac{2}{3}$$

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

$$\text{or } 3x - 9 = 2x \quad [\text{After cross multiplication}]$$

$$\text{or } 3x - 2x = 9$$

$$\text{or } x = 9$$

$$\text{Thus, the original fraction} = \frac{9-6}{9} = \frac{1}{3}$$

Linear Equations in One Variable Ex 9.4 Q9

Answer :

Let the number of Rs. 10 notes be x .

Therefore, the number of Rs. 20 notes will be $(50 - x)$.

$$\text{Value of Rs. 10 notes} = 10x$$

$$\text{Value of Rs. 20 notes} = 20(50 - x)$$

According to the question,

$$10x + 20(50 - x) = 800$$

$$\text{or } 10x + 1000 - 20x = 800$$

$$\text{or } 10x = 1000 - 800$$

$$\text{or } x = \frac{200}{10} = 20$$

$$\therefore \text{Number of Rs. 10 notes} = 20$$

$$\text{Number of Rs. 20 notes} = (50 - 20) = 30.$$

Linear Equations in One Variable Ex 9.4 Q10

Answer :

Let the number of 50 paise coins be x .

Therefore, the number of 25 paise coins will be $2x$.

$$\text{Value of 50 paise coins} = \text{Rs. } 0.5x$$

$$\text{Value of 25 paise coins} = \text{Rs. } 0.25 \times 2x$$

According to the question,

$$0.5x + 0.25 \times 2x = 9$$

$$\text{or } x = 9$$

$$\therefore \text{Number of fifty paise coins} = 9$$

$$\text{Number of twenty five paise coins} = 2 \times 9 = 18$$

$$\text{Total number of coins} = 9 + 18 = 27.$$

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