Linear equations in one variable Ex 8.4 Q13

Answer :

Let the number of 50 paise coins = 'x'.
So, the money value contribution of 50 paise coins = 0.5x.
The number of 25 paise coins = '4x'.
The money value contribution of 25 paise coins = 0.25(4x) = x.
According to the question,
$\Rightarrow 0.5x + x = 30$
$\Rightarrow 1.5x = 30$
Dividing both sides by 1.5, we get
$\Rightarrow \frac{1.5x}{1.5} = \frac{30}{1.5}$
$\Rightarrow x = 20$
Thus, the number of 50 paise coins = 'x' = 20, and the number of 25 paise coins = '4x' = 4 (20) = 80.

Linear equations in one variable Ex 8.4 Q14

Answer :

Let the breadth of the rectangle = 'x' metres.
According to the question,
Length of the rectangle = '2x' metres
Perimeter of a rectangle = 2 (length + breadth)
So, $2(2x + x) = 228$
$\Rightarrow 2(3x) = 228$
$\Rightarrow 6x = 228$
Dividing both sides by 6, we get
$\Rightarrow \frac{6x}{6} = \frac{228}{6}$
$\Rightarrow x = 38$
So, the breadth of the rectangle = x = 38 metres, and the length of the rectangle = 2x = 2(38) = 76 metres.

Linear equations in one variable Ex 8.4 Q15

Answer :

Let the number of 25-paise coins in the purse be 'x'.
So, the value of money in the purse = 0.25x.
But 0.25x = 17.5.
Dividing both sides by 0.25, we get
$\Rightarrow \frac{0.25x}{0.25} = \frac{17.5}{0.25}$
$\Rightarrow x = 70$
Thus, the number of 25-paise coins in the purse = 70.

Linear equations in one variable Ex 8.4 Q16

Answer :

Let the number of students in the hostel be 'x'.
Quantity of rice consumed by each student = 400 gm.
So, daily rice consumption in the hostel mess = 400(x).
But, daily rice consumption = 50 kg = 50 × 1000 = 50000 gm [since 1 kg = 1000 gm].
According to the question,
$400x = 50000$
Dividing both sides by 400, we get
$\Rightarrow \frac{400x}{400} = \frac{50000}{400}$
$\Rightarrow x = 125$
Thus, 125 students have their meals in the hostel mess.

********** END **********