

# 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, 
$$2(2x + x) = 228$$
  
=>  $2(3x) = 228$ 

=>6x=228

Dividing both sides by 6, we get

$$\Rightarrow \frac{6x}{6} = \frac{228}{6}$$
  
=> x = 38

So, the breadth of the rectangle = x = 38 metres, and the length of the rectangle = 2x = 2(38) = 76

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 =  $50 \text{ kg} = 50 \times 1000 = 50000 \text{ gm}$  [since 1 kg = 1000 gm]. According to the question,

$$400x = 50000$$

Dividing both sides by 400, we get

$$= > \frac{400x}{400} = \frac{50000}{400}$$
$$= > x = 125$$

Thus, 125 students have their meals in the hostel mess.

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