

#### Exercise 1G

Q1

#### Answer:

Length of the rope when two pieces of lengths  $2\frac{3}{5}$  m and  $3\frac{3}{10}$  m are cut off = Total length of the rope - Length of the two cut off pieces

$$11 - \left(2\frac{3}{5} + 3\frac{3}{10}\right)$$

$$\begin{split} 2\,\frac{3}{5} + 3\,\frac{3}{10} &\Rightarrow \left(2 + \frac{3}{5}\right) + \left(3 + \frac{3}{10}\right) \\ &= \frac{13}{5} + \frac{33}{10} \\ \text{LCM of 5 and 10 is 10, i.e., } \left(5 \times 1 \times 2\right). \end{split}$$

## We have:

$$\therefore 2\frac{3}{5} + 3\frac{3}{10} = \frac{59}{10}$$

 $\therefore 2\,\frac{3}{5} + 3\,\frac{3}{10} = \frac{59}{10}$  Length of the remaining rope =  $11-\frac{59}{10}$ 

$$= \frac{110 - 59}{10}$$
$$= \frac{51}{10}$$

$$= \frac{51}{10} \\ = 5\frac{1}{10} m$$

Therefore, the length of the remaining rope is  $5\frac{1}{10}$  m.

# Q2

#### Answer:

Weight of rice in the drum = Weight of the drum full of rice - Weight of the empty drum

$$= 40 \frac{1}{6} - 13 \frac{3}{4}$$

$$= \left(40 + \frac{1}{6}\right) - \left(13 + \frac{3}{4}\right)$$

$$= \frac{241}{6} - \frac{55}{4}$$

$$= \frac{241}{6} + \left(\text{Additive inverse of } \frac{55}{4}\right)$$

$$= \frac{482 - 165}{12}$$

$$= \frac{317}{12}$$

$$= 26 \frac{5}{12} \text{ kg}$$

 $=26\,\tfrac{5}{12}\,\,kg$  Therefore, the weight of rice in the drum is  $26\,\tfrac{5}{12}\,\,kg$ 

#### Answer:

Weight of pears in the basket = Weight of the basket containing three types of fruits - (Weight of apples + Weight of oranges)

$$=19\frac{1}{3}-\left(8\frac{1}{9}+3\frac{1}{6}\right)$$

Now

$$\begin{pmatrix} 8\frac{1}{9} + 3\frac{1}{6} \end{pmatrix} \Rightarrow \begin{pmatrix} 8 + \frac{1}{9} \end{pmatrix} + \begin{pmatrix} 3 + \frac{1}{6} \end{pmatrix}$$

$$= \frac{73}{9} + \frac{19}{6}$$

LCM of 9 and 6 is 18, that is,  $(3 \times 3 \times 2)$ .

## We have:

$$\frac{(73\times2)+(19\times3)}{18}$$

$$=\frac{146+57}{18}$$

$$=\frac{203}{18}$$

$$\therefore 8\frac{1}{9} + 3\frac{1}{6} = \frac{203}{18}$$

Weight of pears in the basket = 
$$19\frac{1}{3} - \frac{203}{18}$$
  
=  $\left(19 + \frac{1}{3}\right) - \frac{203}{18}$   
=  $\frac{58}{3} - \frac{203}{18}$   
=  $\frac{58}{3} + \left(\text{Additive inverse of } \frac{203}{18}\right)$   
=  $\frac{348 - 203}{18}$   
=  $\frac{145}{18}$   
=  $8\frac{1}{18}$  kg

Therefore, the weight of the pears in the basket is  $8\frac{1}{18}$  kg.

#### Q4 Answer:

Money saved by the rickshaw puller = Total money earned - (Earnings spent on tea and snacks + Earnings spent on food + Earnings spent on repairs)

$$= 80 - \left(13\frac{3}{5} + 25\frac{1}{2} + 4\frac{2}{5}\right)$$

$$= 80 - \left(\left(13 + \frac{3}{5}\right) + \left(25 + \frac{1}{2}\right) + \left(4 + \frac{2}{5}\right)\right)$$

$$= 80 - \left(\frac{68}{5} + \frac{51}{2} + \frac{22}{5}\right)$$

#### Now,

$$\frac{68}{5} + \frac{51}{2} + \frac{22}{5} = \frac{(68 \times 2) + (51 \times 5) + (22 \times 2)}{10}$$

$$= \frac{136 + 255 + 44}{10}$$

$$= \frac{435}{10}$$

$$= \frac{87}{2}$$

$$\therefore \frac{68}{5} + \frac{51}{2} + \frac{22}{5} = \frac{87}{2}$$

Money saved by the rickshaw puller 
$$=80-\frac{87}{2}$$
  $=80+\left(\text{Additive inverse of }\frac{87}{2}\right)$   $=\frac{160-87}{2}$   $=\frac{73}{2}$   $=\text{Rs }36\,\frac{1}{2}$ 

Therefore, the amount of money saved by the rickshaw puller is Rs  $36\frac{1}{2}$ 

\*\*\*\*\*\* END \*\*\*\*\*\*