Fractions Ex 2.1 Q10

Answer :

Let x be the required fraction.

According to the question:

$$x + 5\frac{4}{15} = 12\frac{3}{5}$$

$$\Rightarrow x + \frac{(15\times5)+4}{15} = \frac{(12\times5)+3}{5}$$

$$\Rightarrow x = \frac{63}{5} - \frac{79}{15}$$

$$LCM\ of\ 5\ and\ 15\ is\ 15.$$

$$\Rightarrow x = \frac{(63\times3)-(79\times1)}{15} \Leftrightarrow \frac{110}{15}$$

$$\Rightarrow x = \frac{110}{15} \Leftrightarrow \frac{22}{3}$$

Fractions Ex 2.1 Q11

Answer :

Suman studies for $5\frac{2}{3}$ **hours** daily. Therefore, we have

$5\frac{2}{3}$ **hours** $= \frac{(5\times3)+2}{3} = \frac{17}{3}$ **hours**

She studies science and mathematics for $2\frac{4}{5}$ **hours**. Therefore, we have

$2\frac{4}{5}$ **hours** $= \frac{(2\times5)+4}{5} = \frac{14}{5}$ **hours**

Time devoted to other subjects = Total study time − Time devoted to science and mathematics

$= \frac{17}{3} - \frac{14}{5} = \frac{(17\times5)-(14\times3)}{15}$

$= \frac{43}{15}$ **hours**

Fractions Ex 2.1 Q12

Answer :

Let the length of second piece be x.

Total length of wire = Length of one piece + Length of second piece

$$12\frac{3}{4} = 5\frac{1}{4} + x$$
$$\Rightarrow \frac{(12\times4)+3}{4} = \frac{(5\times4)+1}{4} + x$$
$$\Rightarrow x = \frac{(12\times4)+3}{4} - \frac{(5\times4)+1}{4}$$
$$\Rightarrow x = \frac{51}{4} - \frac{21}{4} \Leftrightarrow \frac{30}{4}$$
$$\Rightarrow x = \frac{30}{4} \Leftrightarrow \frac{15}{2}$$

Fractions Ex 2.1 Q13

Answer :

Perimeter of rectangle = 2(length + width)

$$2 \times \left[12\frac{1}{2} + 10\frac{2}{3}\right]$$
$$= 2 \times \left[\frac{(12\times2)+1}{2} + \frac{(10\times3)+2}{3}\right]$$
$$= 2 \times \left[\frac{(25\times3)+(32\times2)}{6}\right]$$
$$= 2 \times \left[\frac{139}{6}\right]$$
$$= \frac{139}{3} \text{ cm}$$

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