Exercise 1G

Q11

Answer :

Cost of one metre of cloth = $57\frac{3}{4} \div 3\frac{1}{2}$

$$= \left(57 + \frac{3}{4}\right) \div \left(3 + \frac{1}{2}\right)$$
$$= \frac{231}{4} \div \frac{7}{2}$$
$$= \frac{231}{4} \times \frac{2}{7}$$
$$= \frac{231 \times 2}{4 \times 7}$$
$$= \frac{462}{28}$$
$$= 16\frac{14}{28}$$
$$= \textbf{Rs } 16\frac{1}{2}$$

Therefore, the cost of one metre of cloth is Rs $16\frac{1}{2}$.

Q12

Answer :

Length of each piece of the cord = $71\frac{1}{2} \div 26$

$$= \left(71 + \frac{1}{2}\right) \div 26$$
$$= \frac{143}{2} \div 26$$
$$= \frac{143}{2} \div \frac{26}{1}$$
$$= \frac{143}{2} \times \frac{1}{26}$$
$$= \frac{143 \times 1}{2 \times 26}$$
$$= \frac{143}{52}$$
$$= \frac{9}{4}$$
$$= 2\frac{3}{4} \textbf{ m}$$

Hence, the length of each piece of the cord is $2\frac{3}{4}$ **metres**.

Q13

Answer :

Area of a room = Length × Breadth

Thus, we have:

$$65\frac{1}{4} = \text{Length} \times 5\frac{7}{16}$$

$$\begin{aligned}\text{Length} &= 65\frac{1}{4} \div 5\frac{7}{16} \\ &= \left(65 + \frac{1}{4}\right) \div \left(5 + \frac{7}{16}\right) \\ &= \frac{261}{4} \div \frac{87}{16} \\ &= \frac{261}{4} \times \frac{16}{87} \\ &= \frac{261 \times 16}{4 \times 87} \\ &= \frac{4176}{348} \\ &= 12 \text{ m}\end{aligned}$$

Hence, the length of the room is 12 metres.

Q14

Answer :

Let the other fraction be x.

Now, we have:

$$9\frac{3}{7} \times x = 9\frac{3}{5}$$

$$\Rightarrow x = 9\frac{3}{5} \div 9\frac{3}{7}$$

$$= \left(9 + \frac{3}{5}\right) \div \left(9 + \frac{3}{7}\right)$$

$$= \frac{48}{5} \div \frac{66}{7}$$

$$= \frac{48}{5} \times \frac{7}{66}$$

$$= \frac{48 \times 7}{5 \times 66}$$

$$= \frac{336}{330}$$

$$= \frac{56}{55}$$

$$= 1\frac{1}{55}$$

Hence, the other fraction is $1\frac{1}{55}$.

Q15

Answer :

If $\frac{5}{8}$ of the students are boys, then the ratio of girls is $1-\frac{5}{8}$, that is, $\frac{3}{8}$.

Now, let *x* be the total number of students.

Thus, we have:

$$\frac{3}{8}x = 240$$
$$\Rightarrow x = 240 \div \frac{3}{8}$$
$$= 240 \times \frac{8}{3}$$
$$= \frac{240}{1} \times \frac{8}{3}$$
$$= \frac{240 \times 8}{1 \times 3}$$
$$= \frac{1920}{3}$$
$$= 640$$

Hence, the total number of students is 640.

Now,

Number of boys = Total number of students - Number of girls

$$= 640 - 240$$
$$= 400$$

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