

Decimals & Fraction

- (1) In a hostel's mess, each student gets $\frac{1}{3}$ lit of milk every day. If the total consumption of the milk is $57\frac{2}{3}$ lit per day, how many students are there in the hostel?

Amount of milk is got by one student = $\frac{1}{3}$ lit.

Total consumption of the milk = $57\frac{2}{3}$ lit.

$$\text{No. of students} = \frac{\text{Total amount of milk}}{\text{amount consumed by one student}}$$

$$= \frac{57\frac{2}{3}}{\frac{1}{3}}$$

$$= \frac{\frac{173}{3}}{\frac{1}{3}}$$

$$= 173.$$

Ans: - NO. of students = 173.

2. Renu completed $\frac{2}{3}$ part of her homework in 2 hours. How much part of her home-work had she completed in $\frac{1}{4}$ hour

In 2 hours Renu completed $\frac{2}{3}$ part

" 1 " " $\frac{2}{3} \div 2$

$$= \frac{2}{3} \times \frac{1}{2}$$

$= \frac{1}{3}$ part

In $\frac{1}{4}$ hrs = $\frac{2}{4}$ hr she completed

$$= \frac{1}{3} \times \frac{2}{4}$$

$$= \frac{2}{12} \text{ part}$$

Ans :- Renu completed $\frac{2}{12}$ part of work

③ The length of a rectangular plot of area $68\frac{3}{4}$ sqm is $12\frac{1}{2}$ m, find its width

$$\text{Area} = 68\frac{3}{4} \text{ m}^2$$

$$= \frac{275}{4} \text{ m}^2$$

$$\text{width} = \frac{\text{Area}}{\text{length}} = \frac{275/4}{\frac{25}{2}}$$

$$= \frac{275}{4} \times \frac{2}{25} = \frac{11}{2} = 5\frac{1}{2} \text{ m}$$

$$\text{Ans width} = 5\frac{1}{2} \text{ m}$$

④ The cost of $5\frac{1}{2}$ kg of sugar is ₹ $206\frac{1}{4}$
Find the cost of $8\frac{1}{4}$ kg of sugar.

Cost of $5\frac{1}{2}$ kg of sugar is ₹ $206\frac{1}{4}$

$$\text{" " 1 kg " " = ₹ } 206\frac{1}{4} \div \frac{11}{2}$$

$$= \cancel{₹ 206} \frac{75}{4} \times \frac{2}{11}$$

$$= ₹ \frac{75}{2}$$

$$\text{Cost of } 8\frac{1}{4} \text{ kg} = ₹ \frac{75}{2} \times \frac{33}{4}$$

$$= ₹ 309\frac{3}{8}$$

Ans: cost of $8\frac{1}{4}$ kg = ₹ $309\frac{3}{8}$