

Perimeter & Area Of Plane Figures

Class VI

Assignment ii

Instructions to the students : The notes provided must be copied to the math's copy & then do the Home Work in the same copy.

For a rectangle we have ;

- Area = (length × breadth) sq. units.
- Length = $\left(\frac{Area}{Breadth}\right)$ units.
- Breadth = $\left(\frac{Area}{Length}\right)$ units.
- For a square, we have: area = (side)²sq.units.
 - I) 1cm² = 100mm². iii) 1 m² = 10000cm²
 - ii) 1 dm² = 100cm². iv) 1km² = 1000000m²

Examples

- A room is 15m long & 8m wide. Its floor is to be covered with rectangular tiles , each measuring 20cm by 8cm.

Find i) How many tiles will be required

ii) The cost of these tiles at Rs 16 per tiles

Solution: Length of the room = 15m = 1500cm.

Breadth of the room = 8m = 800cm.

Area of the room = (1500 × 800)cm²

Length of each tiles = 20cm

Breadth of each tiles = 8cm

Area of each tiles = (20 × 8)cm²

$$\begin{aligned} \text{i) Number of tiles required} &= \frac{\text{Area of the room}}{\text{Area of each tile}} \\ &= \left\{ \frac{1500 \times 800}{20 \times 8} \right\} = 7500 \end{aligned}$$

$$\text{ii) Cost of these tiles} = \text{Rs. } (7500 \times 16) = \text{Rs. } 120000$$

- The total cost of flooring a room at Rs. 50 per square metre is Rs. 4000. If the length of the room is 10m , find its breadth.

Solution: Total cost of flooring = Rs. 4000

Rate of flooring = Rs. 50per m²

$$\begin{aligned}\text{Area of the floor} &= \left\{ \frac{\text{total cost}}{\text{rate}} \right\} \text{m}^2 \\ &= \left\{ \frac{4000}{50} \right\} \text{m}^2 = 80\text{m}^2\end{aligned}$$

Now , area of the room = 80m²

Length of the room = 10m

$$\begin{aligned}\text{Breadth of the room} &= \left\{ \frac{\text{Area}}{\text{Length}} \right\} \text{m} \\ &= \frac{80}{10} \text{m} = 8\text{m}\end{aligned}$$

- Find the area of a rectangle whose length & breadth are 3.5m & 80cm respectively.

Solution: Length of the rectangle = 3.5m = $\frac{35}{10}\text{m} = \frac{7}{2}\text{m}$

$$\text{Breadth of the rectangle} = 80\text{cm} = \frac{80}{100}\text{m} = \frac{4}{5}\text{m}$$

Area of the rectangle = (l × b) sq. units

$$= \left\{ \frac{7}{2} \times \frac{4}{5} \right\} \text{m}^2 = \frac{14}{5} \text{m}^2 = 2.8\text{m}^2$$

Home work

Ex. 14.2

Q No. {3, 5, 6, 7, 9, 12 & 13}