

## EXERCISE – 16 A

**REMEMBER :**

**Perimeter of Rectangle = 2 x (Length + Breadth)**

**Perimeter of Square = 4 x side**

**Perimeter of Triangle = Sum of all sides**

**Q-2. Find the perimeter of the following rectangles –**

a.

i Length = 20 m , Breadth = 15m

$$\begin{aligned}\text{Perimeter} &= 2 \times (\text{Length} + \text{breadth}) \\ &= 2 \times (20 + 15) = 2 \times 35 = 70 \text{ m.}\end{aligned}$$

ii Length = 240 m , Breadth = 120m

$$\begin{aligned}\text{Perimeter} &= 2 \times (\text{Length} + \text{breadth}) \\ &= 2 \times (240 + 120) = 2 \times 360 = 720 \text{ m.}\end{aligned}$$

v. Length = 30 m , Breadth = 15m

$$\begin{aligned}\text{Perimeter} &= 2 \times (\text{Length} + \text{breadth}) \\ &= 2 \times (30 + 15) = 2 \times 45 = 90 \text{ m.}\end{aligned}$$

c.. Find the perimeter of the following squares –

i. side = 3 m

$$\text{Perimeter of square} = 4 \times \text{side} = 4 \times 3 = 12 \text{ m}$$

ii . side = 20 m

$$\text{Perimeter of square} = 4 \times \text{side} = 4 \times 20 = 80\text{m}$$

**Q-3. The side of a square field is 60m long . What will be the length of a fence going all around it ?**

Sol : Side of a square field = 60m

$$\text{Perimeter} = 4 \times \text{side} = 4 \times 60 = 240\text{m.}$$

**Q-5. The dimensions of a picture are 30cm x 20cm . What length of wooden frame is needed to frame the picture ?**

Sol : Length of picture = 30cm

Breadth of picture = 20cm

Perimeter = 2 x ( Length + Breadth )

$$= 2 \times ( 30+20) = 2 \times 50 = 100\text{cm}$$

Hence , length of wooden frame is 100cm.

**Q-6. The length of a rectangular field is 100m . If its perimeter is 300m , what is its breadth ?**

Sol : Let the breadth be x m .

Perimeter of rectangle = 300

$$2 \times ( \text{Length} + \text{Breadth} ) = 300$$

$$2 \times ( 100 + x ) = 300$$

$$200 + 2x = 300$$

$$2x = 300 - 200 = 100$$

$$x = 100/2 = 50\text{m}$$

Hence breadth = 50m

**Q-8. Find the cost of fencing a rectangular park of length 175m and breadth 150m at the rate of Rs 12 per metre .**

Sol : Length of the park = 175m

Breadth = 150m

$$\text{Perimeter} = 2 \times ( L + B ) = 2 \times ( 175 + 150 ) = 2 \times 325 = 650\text{m}$$

Cost of fencing the park for 1 metre = 12

$$\text{Cost of fencing the park for 650 metres} = 650 \times 12 = \text{Rs } 7800$$

**Q-9. The two sides of a triangular flag are 30cm and 40cm . Find the length of the third side if the perimeter of the flag is 130cm.**

Sol : Let the 3<sup>rd</sup> side be x m

Perimeter of triangle = sum of all sides = 130

$$= 30 + 40 + x = 130$$

$$70 + x = 130$$

$$x = 130 - 70 = 60$$

Hence the 3<sup>rd</sup> side is = 60m

### **EXERCISE – 16B**

#### **REMEMBER –**

**Area of a Rectangle = Length x Breadth**

**Area of a square = Side x Side**

**Number of tiles =  $\frac{\text{Area of floor}}{\text{Area of a tile}}$**

**Q-2. The length and breadth of a room are 6m and 4m respectively . How many square m of carpet are required to completely cover the floor of the room ? If the carpet cost Rs 240 per square m, how much it cost to cover the entire room?**

Sol :Length of the room = 6m

Breadth = 4m

Area = Length x Breadth = 6 x 4 = 24m<sup>2</sup>

Cost of carpet to cover 24 metre square = Rs 240 x 24 = Rs 5760.

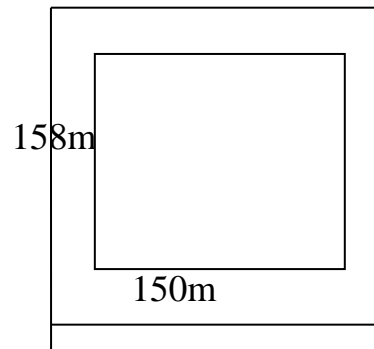
**Q-3. Inside a square garden of side 158m , a road 4m wide is built all around . What is the area of the remaining part of the garden?**

Sol : Side of a outer square = 158m

$$\text{Area} = \text{side} \times \text{side} = 158 \times 158 = 24964\text{m}^2$$

Side of inner square = 150m

$$\text{Area} = \text{side} \times \text{side} = 150 \times 150 = 22500 \text{ m}^2$$



**Q- 5. The area of a rectangular frame is 1125sq m . If its width is 25cm , what is its length ?**

Sol :Let the length be Lm

Width of the frame = 25cm

$$\text{Area} = L \times B = 1125$$

$$L \times 25 = 1125$$

$$L = 1125 / 25 = 45\text{m}$$

**Q-6. Find the length of the side of the squares-**

a. Let the side of the square be x m.

$$\text{Area} = 225 \text{ sq m}$$

$$\text{Side} \times \text{side} = 225$$

$$x \times x = 225$$

$$x^2 = 15^2$$

$$x = 15\text{m}$$

b. Let the side of the square be x m.

$$\text{Area} = 81 \text{ sq mm}$$

$$\text{Side} \times \text{side} = 81$$

$$x \times x = 81$$

$$x^2 = 9^2$$

$$x = 9 \text{ mm}$$

**Q-7. Find the length of the other side of the rectangle –**

a. Area = 6750 sq m , side = 75m

$$\text{Area} = L \times B = 6750$$

$$L \times 75 = 6750$$

$$L = 6750 / 75 = 90\text{m}$$

**Q-8. The area of a rectangular field is 120 sq m . If the length is 15m , find the breadth and the perimeter of the rectangle .**

Sol ; Length of the rectangular field = 15m

$$\text{Area} = 120 \text{ sq m}$$

$$L \times B = 120$$

$$15 \times B = 120$$

$$B = 120 / 15 = 8\text{m}$$

$$\text{Perimeter} = 2 \times ( L + B )$$

$$= 2 \times ( 15 + 8 ) = 2 \times 23 = 46 \text{ m .}$$

**Q-9. A marble tile measures 25 cm by 20cm . How many tiles will be required to cover a wall of size 4m by 3 m ?**

Sol : Length of the wall = 4 m = 4 x 100 = 400 cm

$$\text{Breadth} = 3 \text{ m} = 3 \times 100 = 300 \text{ cm}$$

$$\text{Area} = L \times B = 400 \times 300 = 120000 \text{ cm}^2$$

$$\text{Length of the tile} = 25 \text{ cm}$$

$$\text{Breadth} = 20 \text{ cm}$$

$$\text{Area} = L \times B = 25 \times 20 = 500 \text{ cm}^2$$

$$\text{Number of tiles required} = \frac{\text{Area of the wall}}{\text{Area of a tile}} = \frac{120000}{500} = 240 \text{ tiles .}$$

