

**CBSE Class –VII Mathematics**  
**NCERT Solutions**  
**Chapter 11 Perimeter and Area (Ex. 11.1)**

**Question 1.** The length and breadth of a rectangular piece of land are 500 m and 300 m respectively. Find:

(i) Its area.

(ii) The cost of the land, if 1  $m^2$  of the land costs Rs. 10,000.

**Answer:** Given: Length of a rectangular piece of land = 500 m and

Breadth of a rectangular piece of land = 300 m

(i) Area of a rectangular piece of land = Length x Breadth

$$= 500 \times 300 = 1,50,000 \text{ m}^2$$

(ii) Since, the cost of 1  $m^2$  land = Rs. 10,000

Therefore, the cost of 1,50,000  $m^2$  land = 10,000 x 1,50,000

$$= \text{Rs. } 1,50,00,00,000$$

**Question 2.** Find the area of a square park whose perimeter is 320 m.

**Answer:** Given: Perimeter of square park = 320 m

$$\Rightarrow 4 \times \text{side} = 320$$

$$\Rightarrow \text{side} = \frac{320}{4} = 80 \text{ m}$$

Now, Area of square park = side x side

$$= 80 \times 80 = 6400 \text{ m}^2$$

Thus, the area of square park is 6400  $m^2$ .

**Question 3.** Find the breadth of a rectangular plot of land, if its area is 440  $m^2$  and the

length is 22 m. Also find its perimeter.

**Answer:** Area of rectangular park =  $440 \text{ m}^2$

$$\Rightarrow \text{length} \times \text{breadth} = 440 \text{ m}^2$$

$$\Rightarrow 22 \times \text{breadth} = 440 \Rightarrow \text{breadth} = \frac{440}{22} = 20 \text{ m}$$

Now, Perimeter of rectangular park =  $2 (\text{length} + \text{breadth})$

$$= 2 (22 + 20)$$

$$= 2 \times 42 = 84 \text{ m}$$

Thus, the perimeter of rectangular park is 84 m.

**Question 4.** The perimeter of a rectangular sheet is 100 cm. If the length is 35 cm, find its breadth. Also find the area.

**Answer:** Perimeter of the rectangular sheet = 100 cm

$$\Rightarrow 2 (\text{length} + \text{breadth}) = 100 \text{ cm}$$

$$\Rightarrow 2 (35 + \text{breadth}) = 100 \Rightarrow 35 + \text{breadth} = \frac{100}{2}$$

$$\Rightarrow 35 + \text{breadth} = 50 \Rightarrow \text{breadth} = 50 - 35$$

$$\Rightarrow \text{breadth} = 15 \text{ cm}$$

Now, Area of rectangular sheet = length x breadth

$$= 35 \times 15 = 525 \text{ cm}^2$$

Thus, breadth and area of rectangular sheet are 15 cm and  $525 \text{ cm}^2$  respectively.

**Question 5.** The area of a square park is the same as of a rectangular park. If the side of the square park is 60 m and the length of the rectangular park is 90 cm, find the breadth of the rectangular park.

**Answer:** Given: The side of the square park = 60 m

The length of the rectangular park = 90 m

According to the question,

Area of square park = Area of rectangular park

$\Rightarrow$  side x side = length x breadth

$\Rightarrow 60 \times 60 = 90 \times \text{breadth}$

$\Rightarrow \text{breadth} = \frac{60 \times 60}{90} = 40 \text{ m}$

Thus, the breadth of the rectangular park is 40 m.

**Question 6.** A wire is in the shape of a rectangle. Its length is 40 cm and breadth is 22 cm. If the same wire is rebent in the shape of a square, what will be the measure of each side. Also find which shape encloses more area?

**Answer:** According to the question,

Perimeter of square = Perimeter of rectangle

$\Rightarrow 4 \times \text{side} = 2 (\text{length} + \text{breadth})$

$\Rightarrow 4 \times \text{side} = 2 (40 + 22) \Rightarrow 4 \times \text{side} = 2 \times 62$

$\Rightarrow \text{side} = \frac{2 \times 62}{4} = 31 \text{ cm}$

Thus, the side of the square is 31 cm.

Now, Area of rectangle = length x breadth =  $40 \times 22 = 880 \text{ cm}^2$

And Area of square = side x side =  $31 \times 31 = 961 \text{ cm}^2$

Therefore, on comparing, the area of square is greater than that of rectangle.

**Question 7.** The perimeter of a rectangle is 130 cm. If the breadth of the rectangle is 30 cm, find its length. Also, find the area of the rectangle.

**Answer:** Perimeter of rectangle = 130 cm

$$\Rightarrow 2 (\text{length} + \text{breadth}) = 130 \text{ cm}$$

$$\Rightarrow 2 (\text{length} + 30) = 130 \Rightarrow \text{length} + 30 = \frac{130}{2}$$

$$\Rightarrow \text{length} + 30 = 65 \Rightarrow \text{length} = 65 - 30 = 35 \text{ cm}$$

$$\text{Now area of rectangle} = \text{length} \times \text{breadth} = 35 \times 30 = 1050 \text{ cm}^2$$

Thus, the area of rectangle is  $1050 \text{ cm}^2$ .

**Question 8.** A door of length 2 m and breadth 1 m is fitted in a wall. The length of the wall is 4.5 m and the breadth is 3.6 m. Find the cost of white washing the wall, if the rate of white washing the wall is Rs. 20 per  $m^2$ .

**Answer:** Area of rectangular door = length  $\times$  breadth = 2 m  $\times$  1 m =  $2 \text{ m}^2$

$$\text{Area of wall including door} = \text{length} \times \text{breadth} = 4.5 \text{ m} \times 3.6 \text{ m} = 16.2 \text{ m}^2$$

Now, Area of wall excluding door

$$= \text{Area of wall including door} - \text{Area of door}$$

$$= 16.2 - 2 = 14.2 \text{ m}^2$$

Since, The rate of white washing of  $1 \text{ m}^2$  the wall = Rs. 20

Therefore, the rate of white washing of  $14.2 \text{ m}^2$  the wall =  $20 \times 14.2$

$$= \text{Rs. } 284$$

Thus, the cost of white washing the wall excluding the door is Rs. 284.