Board –Foundation	Class – 7th	Topic – Perimeter and Area

1. Find the area of a rectangle whose length and breadth are **10. 5 cm** and **7. 5 cm** respectively.

   Sol: Length of rectangle (I) = 10.5 cm

   Breadth of rectangle (b) = 7.5 cm

   - Area of rectangle = 1 × b

   = (10.5 × 7.5) = 78.75 cm^2

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

   Sol: We have, Length (I) = 35 cm.

   Breadth (b) = ?

   Perimeter = 100 cm

   Perimeter of rectangle = 2(l + b)

   = 100 = 2[35 + b]
   = 100 ÷ 2 = 35 + b
   = 50 = 35 + b
   = 50 − 35 = b
   = 15 = b

   Breadth (b) = 15 cm.

   Now, the area of the rectangle = 1 × b

   = 35 × 15 cm^2 = 525 cm^2.

3. The area of a square park is the same as that of a rectangular park. If the side of the square park is 60 m and the length of the rectangular park is 90 m , find the breadth of the rectangular park.

   Sol: Side of square park = 60 m

   Area of a square park

   = side × side = 60 m × 60 m = 3600 m^2

Length of the rectangular park (I) = 90 m

Breadth of the rectangular park (b) = ?

As the area of the rectangular park = Area of the square park (given)

$\Rightarrow 1 \times b = 3600$
$\Rightarrow 90 \times b = 3600$
$\Rightarrow b = 3600 \div 90$
$\Rightarrow b = 40$ m

So, the breadth of the rectangular park = 40 m.

6. 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 $\mathbf{m^2}$.

Sol: Area of door = $(2 \times 1)m^2$

Area of door = $2\ m^2$

Area of wall including door = $(4.5 \times 3.6)m^2 = 16.2\ m^2$

Area of wall excluding door = $(16.2 - 2)m^2$

Area of the wall to be white-washed = $14.2\ m^2$

Cost of white-washing the wall

= Area of wall × Cost of white-washing per m^2

= (14.2×20) = Rs. 284

4. Express 745000000sqmmin:

(a) sq cm (b) sq m

Sol: (a)

Since 100sqmm = 1sqcm

$$745000000\text{sq mm} = \frac{745000000}{100}\text{sq cm}$$

$$= 7450000\text{sq cm}$$

(b)

$$7450000\text{sq cm} = \frac{7450000}{100 \times 100}\text{sq m} = 745\text{sq m}$$

[Since, 100 × 100sqcm = 1sqm]

Therefore 745000000sqmm = 7450000sqcm = 745sqm

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

Sol: Perimeter of square = 4 × side

⇒ 320 m = 4 × side

⇒ 320 ÷ 4 = side

⇒ 80 m = side

Side of square = 80 m

Now, area of square = side × side

= 80 m × 80 m

Hence, the area of the square = 6400 m^2.

6. Express 745000000sqmmin:

(a) sq cm (b) sq m

Sol: (a)

Since 100sqmm = 1sqcm

$$745000000\text{sq mm} = \frac{745000000}{100}\text{sq cm}$$

$$= 7450000\text{sq cm}$$

(b)

$$7450000\text{sq cm} = \frac{7450000}{100 \times 100}\text{sq m} = 745\text{sq m}$$

[Since, 100 × 100sqcm = 1sqm]

Therefore 745000000sqmm = 7450000sqcm = 745sqm

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

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⇒ 80 m = side

Side of square = 80 m

Now, area of square = side × side

= 80 m × 80 m

Hence, the area of the square = 6400 m^2.