



SpeedLabs

MATHS

CBSE 7th

TEEVRA EDUTECH PVT. LTD.

Perimeter and Area

Exercise-11.1

Q.1 The length and the 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 m² of the land costs Rs 10,000.

Sol: (i) Area = Length × Breadth

$$\text{Area} = 500 \times 300$$

$$\text{Area} = 150000 \text{ m}^2$$

(ii) Cost of 1 m² land = Rs 10000

$$\text{Cost of } 150000 \text{ m}^2 \text{ land} = 10000 \times 150000 = \text{Rs } 1500000000$$

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

Sol: Perimeter = 320 m

$$4 \times \text{Length of the side of park} = 320$$

$$\text{Length of the side of park} = \frac{320}{4} = 80 \text{ m}$$

$$\text{Area} = (\text{Length of the side of park})^2 = (80)^2 = 6400 \text{ m}^2$$

Q.3 Find the breadth of a rectangular plot of land, if its area is 440 m² and the length is 22 m. Also find its perimeter.

Sol: Area = Length × Breadth = 440 m²

$$22 \times \text{Breadth} = 440$$

$$\text{Breadth} = \frac{440}{22} = 20 \text{ m}$$

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

$$= 2 (22 + 20) = 2 (42) = 84 \text{ m}^2$$

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

Sol: Perimeter = 2 (Length + Breadth) = 100 cm

$$2 (35 + \text{Breadth}) = 100$$

$$35 + B = 50$$

$$B = 50 - 35 = 15 \text{ cm}$$

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

Q.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 m, find the breadth of the rectangular park.

Sol: Area of square park = (One of its sides)² = (60)² = 3600 m²

Area of rectangular park = Length × Breadth = 3600

90 × Breadth = 3600

Breadth = 40 m

Q.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?

Sol: Perimeter of rectangle = Perimeter of square

2 (Length + Breadth) = 4 × Side

2 (40 + 22) = 4 × Side

2 × 62 = 4 × Side

Side == 31 cm

Area of rectangle = 40 × 22 = 880 cm²

Area of square = (Side)² = 31 × 31 = 961 cm²

Therefore, the square-shaped wire encloses more area.

Q.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.

Sol: Perimeter = 2 (Length + Breadth) = 130

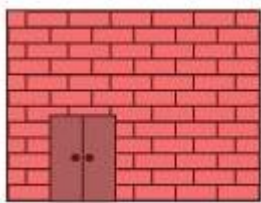
2 (Length + 30) = 130

Length + 30 = 65

Length = 65 – 30 = 35 cm

Area = Length × Breadth = 35 × 30 = 1050 cm²

Q.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 (see the given figure). Find the cost of white washing the wall, if the rate of white washing the wall is Rs 20 per m².



Sol: Area of wall = 4.5 × 3.6 = 16.2 m²

Area of door = 2 × 1 = 2 m²

Area to be white-washed = 16.2 – 2 = 14.2 m²

Cost of white-washing 1 m² area = Rs 20

∴ Cost of white-washing 14.2 m² area = $14.2 \times 20 = \text{Rs } 284$

