

### Practice Questions on Area and Perimeter Pdf

1. A rectangular room can be partitioned into two equal square rooms by a partition 7 metres long. What is the area of the rectangular room in square metres?

- a. 49
- b. 147
- c. 196
- d. 98

Ans: D

Length of the room =  $(7 + 7)$  m = 14 m. Breadth of the room = 7 m.

$\therefore$  Area of the room =  $(14 \times 7)$  m<sup>2</sup> = 98 m<sup>2</sup>.

2. The length of the side of a square whose area is four times the area of a square with side 25 m is

- a. 12.5 m
- b. 50 m
- c. 100 m
- d. 125 m

Ans: B

Area of given square =  $(25 \times 25)$  m<sup>2</sup> = 625 m<sup>2</sup>.

Area of new square =  $(625 \times 4)$  m<sup>2</sup> = 2500 m<sup>2</sup>.

$\therefore$  Side of new square =  $\sqrt{2500}$  m = 50 m.

3. The cost of cultivating a square field at the rate of Rs. 685 per hectare is Rs. 6165. The cost of putting a fence around it at the rate off Rs. 48.75 per metre would be

- a. Rs. 23400
- b. Rs. 52650

c. Rs. 58500

d. Rs. 117000

Ans: C

$$\text{Area} = \frac{\text{Total cost}}{\text{Rate}} = \left( \frac{6165}{685} \right) \text{hectares} = (9 \times 10000) \text{ m}^2.$$

$$\therefore \text{Side of the square} = \sqrt{90000} \text{ m} = 300 \text{ m}.$$

$$\text{Perimeter of the field} = (300 \times 4) \text{ m} = 1200 \text{ m}.$$

$$\text{Cost of fencing} = ₹ (1200 \times 48.75) = ₹ 58500.$$

4. 50 square stone slabs of equal size were needed to cover a floor area of 72 sq.m. The length of each stone slab is

a. 102 cm

b. 120 cm

c. 201 cm

d. 210 cm

Ans: B

$$\text{Area of each slab} = \left( \frac{72}{50} \right) \text{ m}^2 = 1.44 \text{ m}^2.$$

$$\therefore \text{Length of each slab} = \sqrt{1.44} \text{ m} = 1.2 \text{ m} = 120 \text{ cm}.$$

5. A circular wire of diameter 42 cm is bent in the form of a rectangle whose sides are in the ratio 6 : 5. Find the area of the rectangle.

We have:  $r = 21$  cm.

Perimeter of the rectangle = Circumference of the circle

$$= \left( 2 \times \frac{22}{7} \times 21 \right) \text{cm} = 132 \text{ cm}.$$

Let the sides of the rectangle be  $6x$  and  $5x$ .

Then,  $2(6x + 5x) = 132 \Rightarrow 11x = 66 \Rightarrow x = 6$ .

So, the sides of the rectangle are 36 cm and 30 cm.

Area of the rectangle =  $(36 \times 30) \text{ cm}^2 = 1080 \text{ cm}^2$ .

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