

Area

A. Choose the correct answer:

1. Area is defined as

- a) the length of the boundary b) the total space outside a shape
c) the surface enclosed by a closed figure d) the measure of angles in a figure

2. The unit of area is usually expressed in

- a) cm b) cm^2
c) cm^3 d) km

3. The area of a square of side 5 cm is

- a) 10 cm^2 b) 20 cm^2
c) 25 cm^2 d) 30 cm^2

4. If length = 8 m and breadth = 4 m, the area of the rectangle is

- a) 32 m b) 24 m
c) 32 m^2 d) 12 m^2

5. The area of a triangle with base 10 cm and height 6 cm is

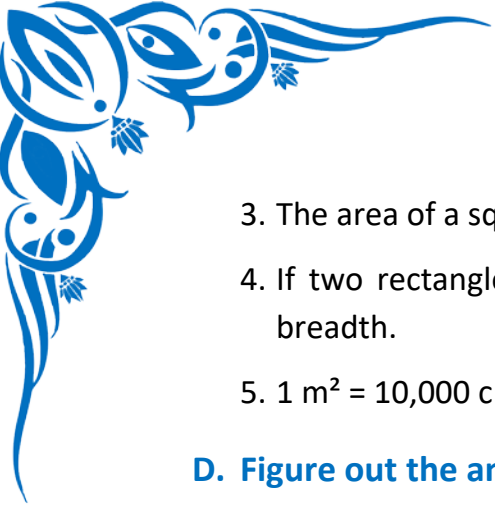
- a) 30 cm b) 60 cm^2
c) 30 cm^2 d) 40 cm^2

B. Write the Missing Terms to Complete the Sentences:

1. Area is the amount of _____ enclosed by a shape.
2. The area of a rectangle is given by _____ \times _____.
3. The formula for the area of a triangle is $\frac{1}{2} \times$ _____ \times _____.
4. A square of side 9 cm has an area of _____.
5. The area of a parallelogram is base \times _____.

C. Mark each sentence with a True (✓) or False (X):

1. Area is measured in cubic units. _____
2. A triangle has no area if its height is 0. _____



3. The area of a square is always more than its perimeter. _____
4. If two rectangles have the same area, they must have the same length and breadth. _____
5. $1 \text{ m}^2 = 10,000 \text{ cm}^2$. _____

D. Figure out the answers to these questions:

1. Find the area of a rectangle with length 12 cm and breadth 5 cm.
2. A triangle has base 10 cm and height 8 cm. Find its area.
3. A square has area 49 cm^2 . Find its side length.
4. Find the area of a parallelogram with base 15 cm and height 6 cm.
5. Compare the area of two squares: one with side 4 cm and the other with side 6 cm.

E. Challenge yourself with these questions:

1. A field is 25 m long and 18 m wide. Find the cost of covering it at Rs. 15 per m^2 .
2. The area of a square playground is 144 m^2 . Find its side and perimeter.
3. How many tiles of size $\frac{1}{2} \text{ m} \times \frac{1}{2} \text{ m}$ are required to cover an area of 20 m^2 ?
4. A triangular park has base 24 m and height 10 m. Find its area.
5. The area of a rectangle is 96 cm^2 and its length is 12 cm. Find the breadth.