

Chapter – 7 | Area

QUIZ-01

1. Which formula is used to find the area of a rectangle?

- A. Length $\times$ Breadth
- B. Length + Breadth
- C. 2(Length + Breadth)
- D. Length $\times$ Length (A)

Explanation : The area of a rectangle is obtained by multiplying its length by its breadth.

2. A diagonal divides a rectangle into:

- A. Four equal triangles
- B. Two equal triangles
- C. Two unequal triangles
- D. Four rectangles (B)

Explanation : A diagonal of a rectangle forms two congruent triangles, so each triangle has half the area of the rectangle.

3. The area of a triangle depends on:

- A. Base and Height
- B. Three Sides
- C. Perimeter
- D. Two Diagonals (A)

Explanation : The area of a triangle is calculated using $\frac{1}{2} \times \text{Base} \times \text{Height}$.

4. Two triangles having the same base and the same height always have:

- A. Different Areas
- B. Equal Areas
- C. Equal Perimeters
- D. Equal Angles (B)

Explanation : The area of a triangle depends only on its base and corresponding height.

5. The area of any polygon can be found by:

- A. Counting Vertices
- B. Dividing it into Triangles
- C. Measuring its Perimeter
- D. Drawing a Circle (B)

Explanation : Any polygon can be divided into triangles, and the total area is the sum of the areas of those triangles.

6. The area of a parallelogram is:

- A. Base $\times$ Height
- B. Side $\times$ Side
- C. Length $\times$ Breadth
- D. $\frac{1}{2} \times \text{Base} \times \text{Height}$ (A)

Explanation : A parallelogram has the same area as a rectangle with the same base and height.

7. The area of a rhombus is:

- A. Side $\times$ Side
- B. Base $\times$ Height
- C. $\frac{1}{2} \times \text{Product of Diagonals}$
- D. Perimeter $\times$ Side (C)

Explanation : The area of a rhombus equals half the product of its diagonals.

8. Which formula gives the area of a trapezium?

- A. Height $\times$ Parallel Side
- B. $\frac{1}{2} \times \text{Height} \times \text{Sum of Parallel Sides}$
- C. Base $\times$ Height
- D. Side $\times$ Side (B)

Explanation : The area of a trapezium is half the product of its height and the sum of its parallel sides.

9. During dissection of a figure, the:

- A. Area Changes
- B. Shape Only Changes
- C. Perimeter Always Remains Same
- D. Number of Sides Always Increases (B)

Explanation : Dissection rearranges pieces without changing the total area, although the shape may change.

10. Why is perimeter not a measure of area?

- A. Same Perimeter Always Means Same Area
- B. Different Shapes with the Same Perimeter Can Have Different Areas
- C. Area Is Always Greater Than Perimeter
- D. Perimeter Measures Volume (B)

Explanation : Different regions can have the same perimeter but different areas. Therefore, perimeter cannot measure area.