

CHAPTER-7 | Area

QUIZ
PART-21

1. The area of a rhombus is calculated using:

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

Explanation: The area of a rhombus is $\frac{1}{2} \times d_1 \times d_2$, where d_1 and d_2 are its diagonals.

2. If the diagonals of a rhombus are 8 cm and 6 cm, its area is:

- A. 24 cm²
- B. 48 cm²
- C. 28 cm²
- D. 14 cm² (A)

Explanation: Area = $\frac{1}{2} \times 8 \times 6 = 24$ cm².

3. The diagonals of a rhombus are:

- A. Equal in length
- B. Parallel to each other
- C. Perpendicular bisectors of each other
- D. Equal to its sides (C)

Explanation: The diagonals of a rhombus intersect at right angles and bisect each other.

4. A rhombus can be converted into a rectangle of equal area because its:

- A. Opposite sides are unequal
- B. Diagonals divide it into equal triangles
- C. All angles are right angles
- D. Sides are parallel only (B)

Explanation: The diagonals divide the rhombus into equal triangles, making dissection into a rectangle possible.

5. Each diagonal of a rhombus divides it into:

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

Explanation: Each diagonal divides the rhombus into two congruent triangles.

6. If one diagonal of a rhombus is doubled while the other remains unchanged, the area becomes:

- A. Half
- B. Double
- C. Four times
- D. Unchanged (B)

Explanation: Since Area = $\frac{1}{2} \times d_1 \times d_2$, doubling one diagonal doubles the area.

7. Which measurement is not required in the diagonal formula for the area of a rhombus?

- A. First diagonal
- B. Second diagonal
- C. Side length
- D. Both diagonals (C)

Explanation: The diagonal formula requires only the lengths of the two diagonals.

8. A rhombus differs from a square because:

- A. All its sides are equal.
- B. Its angles need not all be 90°.
- C. It has four sides.
- D. Its diagonals bisect each other. (B)

Explanation: A square is a special rhombus with four right angles, whereas a rhombus need not have right angles.

9. The diagonals of a rhombus divide it into:

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

Explanation: The diagonals bisect each other and form four triangles of equal area.

10. Which statement about a rhombus is correct?

- A. Its area depends only on the perimeter.
- B. Its area can be found using half the product of its diagonals.
- C. Its diagonals are always equal.
- D. Its opposite sides are perpendicular. (B)

Explanation: The standard formula for the area of a rhombus is $\frac{1}{2} \times d_1 \times d_2$.