

CHAPTER-6 | Triangles

QUIZ-01

1. All circles are :

- A. Congruent B. Similar
C. Both congruent and similar
D. Neither congruent nor similar (B)

Explanation: All circles have the same shape, though their sizes may vary. Hence, they are similar but not necessarily congruent.

2. Two polygons are similar if:

- A. Corresponding angles are equal
B. Corresponding sides are equal
C. Corresponding sides are in same ratio and corresponding angles are equal
D. They have same area (C)

Explanation: Two polygons of the same number of sides are similar if their corresponding angles are equal and their sides are in the same ratio.

3. Which of the following is a criterion for similarity of triangles?

- A. SSS B. ASA
C. RHS D. AAS (A)

Explanation: SSS (Side-Side-Side) is a valid criterion for similarity, where the sides of one triangle are in proportion to the corresponding sides of another.

4. If a line is drawn parallel to one side of a triangle intersecting the other two sides, it:

- A. Bisects the triangle
B. Divides the triangle into two equal triangles
C. Divides the other two sides in the same ratio
D. Forms a rhombus (C)

Explanation: As per the Basic Proportionality Theorem, a line parallel to one side of a triangle divides the other two sides in the same ratio.

5. If $DE \parallel BC$ in triangle ABC, then which of the following is true?

- A. $AD/DB = AE/EC$ B. $AB/AC = DE/BC$
C. $AD = DB$ D. $AE = AC$ (A)

Explanation: When a line is drawn parallel to one side of a triangle, it divides the other two sides in the same ratio.

6. In triangle similarity, the symbol " \sim " represents :

- A. Congruency B. Approximation
C. Parallelism D. Similarity (D)

Explanation: The symbol " \sim " is used to denote similarity between two geometric figures or triangles.

7. If in two triangles, two angles are equal, then the triangles are :

- A. Congruent B. Similar
C. Right-angled D. Isosceles (B)

Explanation: If two angles of one triangle are equal to two angles of another, the triangles are similar by the AA criterion.

8. In SSS similarity, if $AB/DE = BC/EF = CA/FD$, then triangle ABC is :

- A. Right-angled
B. Similar to triangle DEF
C. Congruent to triangle DEF
D. Equal in area to triangle DEF (B)

Explanation: If all corresponding sides are in the same ratio, triangles are similar by SSS similarity criterion.

9. If DE divides two sides of a triangle in the same ratio, then DE is :

- A. Perpendicular to third side
B. Equal to third side
C. Parallel to third side
D. Median of triangle (C)

Explanation: Converse of the Basic Proportionality Theorem states that if a line divides two sides in the same ratio, it is parallel to the third side.

10. If in two right triangles, hypotenuse and one side are in proportion, the triangles are:

- A. Congruent B. Similar
C. Isosceles D. Equal in area (B)

Explanation: This is the RHS similarity criterion—if hypotenuse and one side are in proportion, right triangles are similar.