

CHAPTER-7 | Triangles

QUIZ PART-01

1. Which of the following is a property of a triangle?

- A. It has four sides
- B. It has three sides, three vertices, and three angles
- C. It has only two sides
- D. It has only one vertex (B)

Explanation: A triangle is a closed figure formed by three sides, three vertices, and three angles.

2. What type of triangle has all three sides equal?

- A. Isosceles triangle
- B. Scalene triangle
- C. Equilateral triangle
- D. Right-angled triangle (C)

Explanation: An equilateral triangle has all three sides equal, and each angle measures 60° .

3. In a right-angled triangle, one of the interior angles is 90° . What are the other two angles?

- A. Acute angles less than 90°
- B. Obtuse angles
- C. One angle is 180°
- D. One angle is greater than 90° (A)

Explanation: In a right-angled triangle, the sum of the other two angles is 90° , and they must both be acute angles.

4. In an obtuse-angled triangle, one of the interior angles is greater than 90° . What are the other two angles?

- A. Acute angles
- B. Right angles
- C. Obtuse angles
- D. None of these (A)

Explanation: In an obtuse-angled triangle, one angle is greater than 90° , and the other two must be acute angles, which are less than 90° .

5. Which of the following criteria can be used to prove the congruence of two triangles?

- A. SAS (Side Angle Side)
- B. SSA (Side Side Angle)
- C. AAA (Angle Angle Angle)
- D. None of these (A)

Explanation: The SAS congruence rule states that two triangles are congruent if two sides and the included angle of one triangle are equal to the corresponding parts of the other triangle

6. What is the condition for two triangles to be congruent under the ASA rule (Angle Side Angle)?

- A. Two sides and the included angle are equal
- B. Two angles and the included side are equal
- C. All sides and angles are equal
- D. Two sides and the opposite angles are equal (B)

Explanation: The ASA rule states that if two angles and the included side of one triangle are equal to the corresponding angles and side of another triangle, the two triangles are congruent.

7. What is the criteria for congruence in the SSS (Side Side Side) rule?

- A. All three angles are equal
- B. All three sides are equal
- C. Two angles and one side are equal
- D. Two sides and the included angle are equal (B)

Explanation: The SSS rule states that if all three sides of one triangle are equal to the corresponding sides of another triangle, then the triangles are congruent.

8. Which of the following is not a valid criterion for congruence of triangles?

- A. SAS
- B. ASA
- C. SSS
- D. SSA (D)

Explanation: The SSA (Side Side Angle) criterion does not guarantee triangle congruence. The correct criteria are SAS, ASA, SSS, and AAS.

9. What does the term "congruence of triangles" mean?

- A. The triangles have the same size but different shapes
- B. The triangles have the same shape and size
- C. The triangles have different shapes but the same angles
- D. The triangles are different in both size and shape (B)

Explanation: Congruent triangles have the same shape and size, meaning their corresponding sides and angles are equal.

10. In a triangle, the sum of all three interior angles is always equal to:

- A. 90°
- B. 120°
- C. 180°
- D. 360° (C)

Explanation: According to the angle sum property of triangles, the sum of the three interior angles of any triangle is always 180° .