

CHAPTER-7 | Triangles

QUIZ-01

1. If $\triangle ABC \cong \triangle PQR$, then which of the following is true?

- A. $AB = PQ, BC = QR, CA = RP$
 B. $AB = QR, BC = PR, CA = PQ$
 C. $AB = RP, BC = PQ, CA = QR$
 D. $AB = AC, BC = AB, CA = BC$ (A)

Explanation: In congruent triangles, corresponding sides are equal: $AB = PQ, BC = QR, CA = RP$.

2. A triangle has angles 70° and 40° . What is the measure of the third angle?

- A. 70° B. 60°
 C. 50° D. 30° (C)

Explanation: Sum of angles in a triangle = 180° , so third angle = $180^\circ - (70^\circ + 40^\circ) = 70^\circ$.

3. In $\triangle ABC$, $AB = AC$ and $\angle B = 55^\circ$. What is $\angle C$?

- A. 55° B. 60°
 C. 70° D. 65° (A)

Explanation: In isosceles triangle, angles opposite equal sides are equal, so $\angle C = \angle B = 55^\circ$.

4. Two triangles have sides 3 cm, 4 cm, 5 cm and 3 cm, 4 cm, 6 cm. Are they congruent?

- A. Yes, by SSS B. Yes, by ASA
 C. No D. Cannot say (C)

Explanation: Sides differ ($5 \text{ cm} \neq 6 \text{ cm}$), hence not congruent.

5. In triangle PQR, $\angle P = 90^\circ$ and $PQ = PR$. What type of triangle is it?

- A. Scalene
 B. Isosceles right triangle
 C. Equilateral D. Acute (B)

Explanation: A right triangle with two equal sides is an isosceles right triangle.

6. Which rule is applied when two right-angled triangles have equal hypotenuse and one side equal?

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

Explanation: RHS rule applies when right-angled triangles have equal hypotenuse and one side equal.

7. In triangle ABC, $AB = AC$ and the angle bisector of $\angle A$ is perpendicular to BC. Then triangle ABC is:

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

Explanation: Since $AB = AC$, the triangle is isosceles.

8. CPCT stands for:

- A. Corresponding Pairs of Congruent Triangles
 B. Common Parts of Congruent Triangles
 C. Corresponding Parts of Congruent Triangles
 D. Congruent Parts of Congruent Triangles (C)

Explanation: CPCT is the abbreviation for Corresponding Parts of Congruent Triangles.

9. Which of the following statements is true?

- A. All equilateral triangles are isosceles
 B. All isosceles triangles are equilateral
 C. A triangle with all angles equal is a scalene triangle
 D. Triangle congruence does not apply to right triangles (A)

Explanation: Equilateral triangles have all three sides equal, so they satisfy the condition of an isosceles triangle.

10. In $\triangle ABC$ and $\triangle DEF$, $\angle B = \angle E$, $\angle C = \angle F$ and $BC = EF$. Which rule proves $\triangle ABC \cong \triangle DEF$?

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

Explanation: Two angles and the included side are equal, so ASA rule is used.