

CHAPTER-7 | Triangles

QUIZ PART-II

1. If three sides of one triangle are equal to the three sides of another triangle, what congruence rule can be applied?

- A. SAS rule
C. RHS rule
- B. SSS rule
D. None of these (B)

Explanation: The SSS (Side Side Side) congruence rule applies when all three sides of one triangle are equal to the corresponding sides of another triangle.

2. In two right triangles, if the hypotenuse and one side of one triangle are equal to the hypotenuse and one side of the other triangle, what congruence rule can be applied?

- A. SAS rule
C. RHS rule
- B. SSS rule
D. None of these (C)

Explanation: The RHS (Right Angle Hypotenuse Side) congruence rule applies when the hypotenuse and one side of two right triangles are equal.

3. In $\triangle ABC$, if points P and Q are equidistant from A and B, what can be concluded about the line PQ?

- A. PQ is parallel to AB
B. PQ is the perpendicular bisector of AB
C. PQ is equal to AB
D. None of these (B)

Explanation: Since P and Q are equidistant from points A and B, the line PQ must be the perpendicular bisector of AB.

4. In $\triangle ABC$, if point P is equidistant from two lines l and m intersecting at point A, what can be concluded about the line AP?

- A. AP bisects the angle between l and m
B. AP is perpendicular to l
C. AP is parallel to l
D. AP is parallel to m (A)

Explanation: Since P is equidistant from the two intersecting lines l and m, the line AP bisects the angle between them.

5. If in two triangles, the three sides of one triangle are equal to the corresponding three sides of the other triangle, what congruence rule applies?

- A. SAS rule
C. RHS rule
- B. SSS rule
D. AAS rule (B)

Explanation: The SSS (Side Side Side) congruence rule applies when all three sides of one triangle are equal to the corresponding sides of another triangle.

6. In $\triangle ABC$ and $\triangle PQR$, if $AB = QR$, $BC = PR$, and $2CA = PQ$, what can be concluded about these triangles?

- A. $\triangle PQR \cong \triangle BCA$
C. $\triangle ABC \cong \triangle RPQ$
- B. $\triangle ABC \cong \triangle PQR$
D. $\triangle CBA \cong \triangle PRQ$ (B)

Explanation: Since all corresponding sides are equal, $\triangle ABC$ is congruent to $\triangle PQR$, as per the SSS congruence rule.

7. In an equilateral triangle, what is the measure of each angle?

- A. 45°
C. 90°
- B. 60°
D. 120° (B)

Explanation: In an equilateral triangle, each angle measures 60° because the sum of angles in a triangle is 180° .

8. If $AB = AC$ and $\angle A = 90^\circ$ in $\triangle ABC$, what type of triangle is $\triangle ABC$?

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

Explanation: Since $AB = AC$ and $\angle A = 90^\circ$, $\triangle ABC$ is a right-angled isosceles triangle.

9. In $\triangle ABC$, if BE and CF are altitudes to sides AC and AB, and $BE = CF$, what can be concluded about $\triangle ABC$?

- A. $\triangle ABC$ is scalene
B. $\triangle ABC$ is isosceles
C. $\triangle ABC$ is equilateral
D. $\triangle ABC$ is right-angled

Answer: B

Explanation: Since $BE = CF$ and are altitudes from equal sides, $\triangle ABC$ is isosceles with $AB = AC$.

10. If two right triangles have equal hypotenuses and one equal side, which congruence rule applies?

- A. SAS rule
B. RHS rule
C. SSS rule
D. ASA rule

Answer: B

Explanation: The RHS (Right Angle Hypotenuse Side) rule applies when two right triangles have equal hypotenuses and one equal side.