

CHAPTER-7 | Triangles

QUIZ
PART-03

1. In quadrilateral ACBD, if AC AD and AB bisects $\angle A$, what can be concluded about triangles ABC and ABD?

- A. $\triangle ABC \cong \triangle ABD$
- B. $\triangle ABC \neq \triangle ABD$
- C. $\triangle ABC$ is right-angled
- D. $\triangle ABC$ is isosceles (A)

Explanation: By the criteria of congruence (SAS), we can show that $\triangle ABC \cong \triangle ABD$ since $AC = AD$, AB is common, and $\angle A$ is bisected.

Q2. In quadrilateral ABCD, if $AD = BC$ and $\angle DAB = \angle CBA$, what can be concluded?

- A. $\triangle ABD \cong \triangle BAC$
- B. $\triangle ABD \neq \triangle BAC$
- C. $BD = AC$
- D. $\triangle ABD = \triangle DAC$ (A)

Explanation: By the ASA congruence rule, if two angles and the included side are equal, the two triangles are congruent, so $\triangle ABD \cong \triangle BAC$.

3. What is the relationship between BD and AC if $\triangle ABD \cong \triangle BAC$?

- A. $BD = AC$
- B. $BD \neq AC$
- C. $BD > AC$
- D. $BD < AC$ (A)

Explanation: Since $\triangle ABD \cong \triangle BAC$, all corresponding sides are equal, so $BD = AC$.

4. In the figure, if AD and BC are equal perpendiculars to a line segment AB, what can be concluded about CD?

- A. CD bisects AB
- B. CD is parallel to AB
- C. CD is perpendicular to AB
- D. CD is equal to AB (A)

Explanation: If AD and BC are equal perpendiculars to AB, then CD bisects AB as both perpendiculars divide AB into two equal parts.

5. In $\triangle ABC$ and $\triangle ABD$, if $AB = AB$, $AC = AD$, and $\angle CAB = \angle DAB$, what congruence rule applies?

- A. SAS (Side Angle Side)
- B. ASA (Angle Side Angle)
- C. SSS (Side Side Side)
- D. RHS (Right Angle Hypotenuse Side) (B)

Explanation: By the ASA rule (Angle-Side-Angle), $\triangle ABC \cong \triangle ABD$ since two angles and the included side are equal.

6. If $\triangle ABD \cong \triangle BAC$, what can be concluded about the angles of these triangles?

- A. $\angle ABD = \angle BAC$
- B. $\angle ABD \neq \angle BAC$
- C. $\angle ABD = \angle DAB$
- D. $\angle ABD = \angle ABC$ (A)

Explanation: Since $\triangle ABD \cong \triangle BAC$, their corresponding angles are equal, hence $\angle ABD = \angle BAC$.

7. In a triangle, if one side and two angles are congruent to another triangle, which criterion can be used to prove the triangles are congruent?

- A. SSS (Side Side Side)
- B. SAS (Side Angle Side)
- C. ASA (Angle Side Angle)
- D. AAS (Angle Angle Side) (C)

Explanation: The ASA congruence rule applies when two angles and the included side of one triangle are equal to the corresponding parts of another triangle.

8. If two triangles are congruent, which of the following is true about their corresponding sides and angles?

- A. Corresponding sides are different
- B. Corresponding angles are unequal
- C. Corresponding sides and angles are equal
- D. None of the above (C)

Explanation: For congruent triangles, all corresponding sides and angles are equal.

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

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

Explanation: The SSA criterion is not a valid congruence criterion, as it does not guarantee congruence in triangles.

10. In the congruence of triangles, if two triangles have the same size and shape, what can be said about their corresponding parts?

- A. Corresponding parts are different
- B. Corresponding parts are equal
- C. Corresponding parts are proportional
- D. None of the above (B)

Explanation: For congruent triangles, all corresponding sides and angles are equal.