



Practice Worksheet on Congruence of Triangles

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Subject: Mathematics

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Long Answer Questions

1. Explain the concept of congruence in triangles.
2. List the five congruence postulates for triangles.
3. State and explain the SAS (Side-Angle-Side) postulate.
4. State and explain the ASA (Angle-Side-Angle) postulate.
5. Explain the HL (Hypotenuse-Leg) postulate for right-angled triangles.
6. State and explain the SSS (Side-Side-Side) postulate.
7. State and explain the AAS (Angle-Angle-Side) postulate.

8. Describe the significance of congruent triangles in geometry.

Multiple Choice Questions

1. Which congruence postulate states that if three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent?

- a) SSS
- b) SSA
- c) AAA
- d) SAS

2. Which congruence postulate involves two angles and the included side?

- a) AAA
- b) ASA
- c) SSA
- d) SSA

3. Which congruence postulate involves two angles and a non-included side?

- a) ASA
- b) AAS
- c) SSA
- d) AAA

4. Which congruence postulate involves two sides and the included angle?

- a) AAA
- b) SSA
- c) SAS
- d) ASA

5. Which congruence postulate is specific to right-angled triangles?

- a) ASA
- b) AAS
- c) HL
- d) SSA

6. What condition must be met for two triangles to be congruent?

- a) Two sides are equal
- b) Two angles are equal
- c) All corresponding sides and angles are equal
- d) One side and one angle are equal

7. If three sides of one triangle are congruent to three sides of another triangle, the triangles are congruent by which postulate?

- a) AAA
- b) SSA
- c) SSS
- d) SAA

8. What does it mean when two triangles are congruent?

- a) Only their angles are equal
- b) Only their sides are equal
- c) Both their corresponding sides and angles are equal
- d) None of the above

Answer Key

Long Answer Questions - Expected Responses

1. Explain the concept of congruence in triangles.

Expected Answer: Two triangles are congruent if their corresponding sides and angles are equal.

2. List the five congruence postulates for triangles.

Expected Answer: SSS, SAS, ASA, AAS, and HL (Hypotenuse-Leg for right triangles) are the five congruence postulates.

3. State and explain the SAS (Side-Angle-Side) postulate.

Expected Answer: If two triangles have two pairs of congruent sides and the angle between them is also congruent, then the triangles are congruent.

4. State and explain the ASA (Angle-Side-Angle) postulate.

Expected Answer: If two triangles have two pairs of congruent angles and the side between them is also congruent, then the triangles are congruent.

5. Explain the HL (Hypotenuse-Leg) postulate for right-angled triangles.

Expected Answer: In right-angled triangles, if the hypotenuse and one leg are congruent in both triangles, then the triangles are congruent.

6. State and explain the SSS (Side-Side-Side) postulate.

Expected Answer: If two triangles have three pairs of corresponding sides that are congruent, then the triangles are congruent.

7. State and explain the AAS (Angle-Angle-Side) postulate.

Expected Answer: If two triangles have two pairs of corresponding angles that are congruent, and a pair of non-included sides are congruent, then the triangles are congruent.

8. Describe the significance of congruent triangles in geometry.

Expected Answer: Congruent triangles have the same size and shape; their corresponding parts are equal.

Multiple Choice Questions - Correct Answers

1. Which congruence postulate states that if three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent?

Correct Answer: SSS

2. Which congruence postulate involves two angles and the included side?

Correct Answer: ASA

3. Which congruence postulate involves two angles and a non-included side?

Correct Answer: AAS

4. Which congruence postulate involves two sides and the included angle?

Correct Answer: SAS

5. Which congruence postulate is specific to right-angled triangles?

Correct Answer: HL

6. What condition must be met for two triangles to be congruent?

Correct Answer: All corresponding sides and angles are equal

7. If three sides of one triangle are congruent to three sides of another triangle, the triangles are congruent by which postulate?

Correct Answer: SSS

8. What does it mean when two triangles are congruent?

Correct Answer: Both their corresponding sides and angles are equal