

# Geometry

## Proofs:

**Angle-Angle-Side (AAS) Theorem:** in trigonometry, the law of sines can be used to solve a triangle when two angles and a side not between the angles are known.

**Angle-Angle (AA) Similarity Postulate:** If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.

**Angle-Side-Angle (ASA) Postulate:** If two angles of a triangle and the side between them are congruent to those of another triangle, then the triangles are congruent.

**Congruent:** equal in size and shape.

**Conjecture:** a conclusion that may be thought to be true but that is not proven.

**Construction:** the use of tools, such as a compass and a straightedge to accomplish a geometric task.

**Coordinate Proof:** a proof that uses the coordinate system.

**Corollary:** a theorem easily proven from another theorem.

**Counterexample:** an example that will prove a conjecture false.

**Flow Proof:** a way to format a proof using arrows to indicate that a statement follows from one or more other statements.

**Given:** information that you are told is true, from either a diagram or a statement that is used in a proof.

**Indirect Reasoning:** reaching a conclusion by proving that a hypothesized statement is false.

**Inductive Reasoning:** reaching conclusions based on a pattern of facts and data. A conclusion reached by inductive reasoning is not guaranteed to be true.

**Paragraph Proof:** a proof written and justified in paragraph format instead of in two columns.

**Perpendicular Bisector:** a perpendicular line that divided a line segment in half.

**Perspective:** an artistic representation of three-dimensions on a surface, involving the use of one or more vanishing points.

**Postulate:** a statement that is accepted to be true without proof.

**Proof:** a series of statements arranged logically, each supported by reason, such as a mathematical property or a postulate that demonstrates the truth of an assertion.

**Reason:** supports or negates a statement.

**Side-Angle-Side (SAS) Postulate:** in trigonometry, the law of cosines can be used to calculate the third side of an oblique triangle, given the other two sides and the angle between them.

**Side-Angle-Side (SAS) Similarity Theorem:** if the lengths of two corresponding sides of two triangles are proportional and the angles the sides form are congruent, then the triangles are similar.

**Side-Side-Side (SSS) Postulate:** In trigonometry, the law of cosines can be used to find the measure of the angles of a triangle when the three sides are known.

**Side-Side-Side (SSS) Similarity Theorem:** If the corresponding sides of two triangles are proportional, then the triangles are similar.

**Theorem:** a conditional statement that can be proven true using postulates and other theorems.