**Chapter 5 Congruent Triangles**

**Essential Questions:**

* What properties do triangles share and how are they classified?
* How can you show that two triangles are congruent?
* How can you determine the number of lines of symmetry?
* How can you use angle bisectors and perpendicular bisectors to help you compute angle measures and segments lengths in situations involving triangles?

**5.1 Congruence and Triangles (G-CO.6 and G-CO.7)**

* I can identify if two triangles are congruent and match up their corresponding parts.
* I can name and use the correct notation to state that two parts are congruent.
* I can write a congruence statement and name the property that it illustrates.

**5.2 Proving Triangles are Congruent: SSS and SAS (G-CO.6, G-CO.7, and G-CO.8)**

* I can apply the Side-Side-Side Congruence Postulate to prove two triangles are congruent.
* I can apply the Side-Angle-Side Congruence Postulate to prove two triangles are congruent.
* I can create two triangles that are congruent using SSS or SAS.
* I can illustrate that two triangles are congruent in a diagram using SSS and SAS.
* I can write a proof to show that two triangles are congruent using SSS and SAS.

**5.3 Proving Triangles are Congruent: ASA and AAS (G-CO.6, G-CO.7, and G-CO.8)**

* I can apply the Angle-Side-Angle Congruence Postulate to prove two triangles are congruent.
* I can apply the Angle-Angle-Side Congruence Postulate to prove two triangles are congruent.
* I can create two triangles that are congruent using ASA or AAS.
* I can illustrate that two triangles are congruent in a diagram using ASA and AAS.
* I can write a proof to show that two triangles are congruent using ASA and AAS.
* I can identify which postulate to use to show that two triangles are congruent.

**5.4 Hypotenuse-Leg Congruence Theorem (G-CO.6, G-CO.7, and G-CO.8)**

* I can identify the leg and hypotenuse of a triangle.
* I can apply the Hypotenuse-Leg Congruence Theorem to prove that two triangles are congruent.
* I can write a proof to demonstrate that triangles are congruent using the HL Congruence Theorem.

**5.5 Using Congruent Triangles (G-CO.6, G-CO.7, and G-CO.8)**

* I can identify corresponding sides and corresponding angles of triangles.
* I can sketch and label diagrams to show the corresponding parts.
* I can recognize congruent figures in images with overlapping figures and write a proof to prove they are congruent.

**5.6 Angle Bisectors and Perpendicular Bisectors ( G-CO.12)**

* I can define and sketch an angle bisector.
* I can define and sketch a perpendicular bisector.
* I can determine if a line or point is equidistant from another point or line.
* I can use and understand the Perpendicular Bisector Theorem in a proof.
* I can identify and draw the Perpendicular Bisector Theorem.

**5.7 Reflections and Symmetry (G-CO.5 and G-CO.4)**

* I can identify and use reflections and lines of symmetry.
* I can determine the line of reflection on a coordinate plane.
* I can draw in lines of symmetry and determine how many there are.