Vocabulary

4.1

A **triangle** is a polygon with three sides.

A **scalene** triangle has no congruent sides.

An **isosceles** **triangle** has at least two congruent sides.

An **equilateral triangle** has three congruent sides.

An **acute triangle** has three acute angles.

A **right triangle** has one right angle.

An **obtuse triangle** has one obtuse angle.

An **equiangular triangle** has three congruent angles.

When the sides of a polygon are extended, other angles are formed. The original angles are the interior angles. The angles that form linear pairs with the interior angles are the exterior angles.

**Theorem 4.1 Triangle Sum Theorem**: The sum of the measures of the interior angles of a triangle is 180 degrees.

**Theorem 4.2 Exterior Angle Theorem**: The measure of an exterior angle of a triangle is equal to the sum of the measures of the two nonadjacent interior angles.

**Corollary to the Triangle Sum Theorem**: the acute angles of a right triangle are complementary

4.2

In two **congruent figures**, all the parts of one figure are congruent to

the **corresponding parts** of the other figure. In congruent polygons,

this means that the **corresponding sides** and the **corresponding angles**

are congruent.

**Theorem 3 Third Angles Theorem**: If two angles of one triangle are

congruent to two angles of another triangle, then the third angles are congruent.





