Geometry Info Sheet #5

Angle Relationships; Types of Triangles; Axioms vs. Theorems vs. Corollaries

Definitions

Adjacent Angles: Two angles in a plane that share a vertex and a side, but do not overlap

Vertical Angles: Opposite angles formed by two intersecting lines; every pair of intersecting lines forms two sets of vertical angles

Triangle: A closed figure in a plane consisting of three straight sides

Acute Triangle: A triangle whose interior angles are all acute

Obtuse Triangle: A triangle that contains an obtuse interior angle

Right Triangle: A triangle that contains a right interior angle

A **postulate** or **axiom** is a basic statement that we accept as true without proof.

A **theorem** is a statement that must be proven to be true using postulates/axioms and/or previously-proven theorems.

A **corollary** is a statement derived or inferred from another corollary or an already-proven theorem.

A **conjecture** is a statement that you think is true. It is an educated guess, based on observations.

Theorems

Vertical Angles Theorem: If two angles form a pair of vertical angles, then they are congruent.

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