

LESSON 4-2

Auxiliary Line: A line or line segment added to a given figure to help in proving a result.

Theorem 4-1 (Angle Sum Theorem): The sum of the measures of the angles of a triangle is 180° .

Theorem 4-2 (Third Angle Theorem): If two angles of one triangle are congruent to two angles of a second triangle, the third angles of the triangle are congruent.

Theorem 4-3 (Exterior Angle Theorem): The measure of an exterior angle of a triangle is equal to the sum of the measures of the two remote interior angles.

Flowchart Proof (Flow Proof): A proof which organizes a series of statements in logical order, starting with the given statements. Each statement along with its reasons is written in a box. Arrows are used to show how each statement leads to another.

Corollary: A statement that can be easily proven using a theorem.

Corollary 4-1: The acute angles of a right triangle are complementary.

Corollary 4-2: There can be at most one right angle or one obtuse angle in a triangle.