

# Geometry Info Sheet #24

## Equilateral and Isosceles Triangles

### Definitions

**Stable Figure:** A figure made up only of triangles; this definition is derived from the Side-Side-Side (SSS) triangle congruence postulate

**Scalene Triangle:** A triangle with no congruent sides; a scalene triangle has no congruent angles

**Isosceles Triangle:** A triangle with at least two congruent sides; the two congruent sides are called the legs of the triangle, and the remaining side is known as the base; the angles whose vertices are the endpoints of the base are known as the base angles, and the angle opposite the base is called the vertex angle

**Equilateral Triangle:** A triangle with three congruent sides; an equilateral triangle is also an isosceles triangle

### Theorems

**Isosceles Triangle Theorem:** If two sides of a triangle are congruent, then the angles opposite those sides are congruent.

**Converse of ITT:** If two angles of a triangle are congruent, then the sides opposite those angles are congruent.

Note that the *Big Ideas* textbook refers to the Isosceles Triangle Theorem as the Base Angles Theorem.

### Corollaries to Isosceles Triangle Theorem

If a triangle is equilateral, then it is equiangular.

If a triangle is equiangular, then it is equilateral.

The measure of each interior angle of an equilateral triangle is 60 degrees.