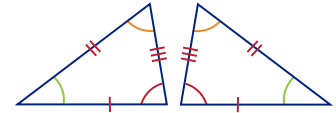# Congruent Triangles

Definition

Congruent Triangles   Triangles whose corresponding sides have the same length and whose corresponding angles have the same measure.

Postulate

Triangle Sum Postulate   The sum of the angles in a triangle is 180°.

Theorems

Exterior Angle Theorem   The measure of an exterior angle is equal to the sum of the measures of the two remote angles.

Two triangles are congruent…

…if they have the following sets of congruent corresponding parts:

Side-Side-Side (SSS)   All three sides

Side-Angle-Side (SAS)   Two sides and their included angle

Angle-Side-Angle (ASA)   Two angles and their included side

Angle-Angle-Side (AAS)   Two angles and an adjacent side

Hypotenuse-Leg (HL)   The hypotenuse and one leg of a right triangle

If you know two triangles are congruent…

Corresponding Parts of Congruent Triangles are Congruent (CPCTC)

        If two triangles are congruent, their corresponding parts are also congruent.