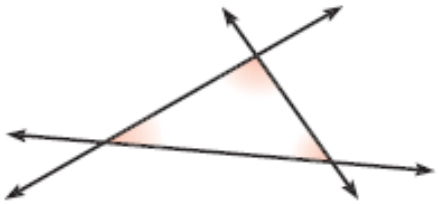
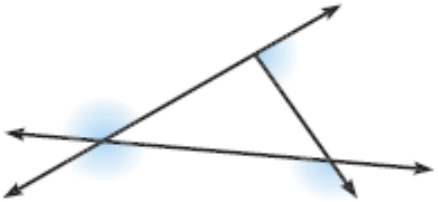
Geometry H
Section 4.1 Notes Part 2

Name : _____
Date : _____ Period : ____

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**.



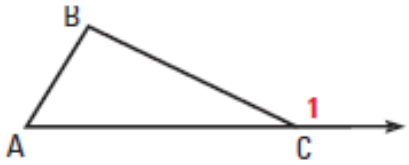
interior angles



exterior angles

THEOREM 4.2 – Exterior Angle Theorem

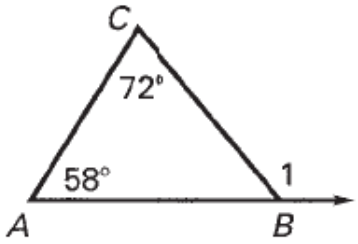
Words The measure of an exterior angle of a triangle is equal to the _____ of the measures of the two nonadjacent _____ angles.



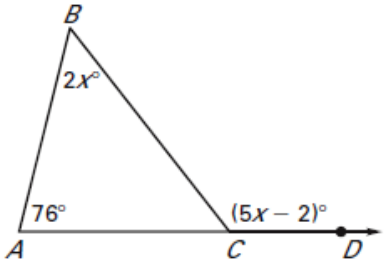
Symbols: $m\angle 1 = m\angle A + $ _____

Example 1 – Find an Angle Measure

a) Find $m\angle 1$.



b) Find $m\angle BCD$.

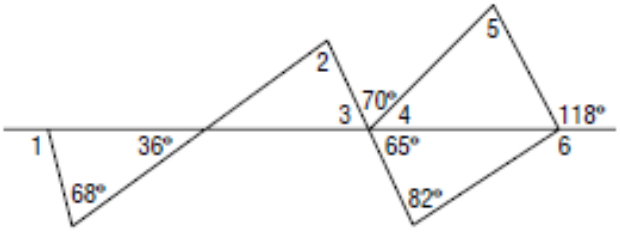


c) Find the measure of each angle.

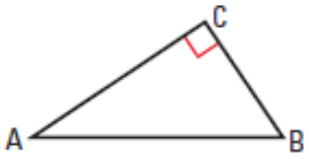
$m\angle 1 =$ _____ $m\angle 2 =$ _____

$m\angle 3 =$ _____ $m\angle 4 =$ _____

$m\angle 5 =$ _____ $m\angle 6 =$ _____



- A **corollary to a theorem** is a statement that can be proved easily using the theorem. The corollary below follows from the Triangle Sum Theorem.

Corollary to the Triangle Sum Theorem	
The acute angles of a right triangle are _____.	 _____+ _____ = 90°

Example 2 – Find angle measures from a verbal description.

a) The support for the skateboard ramp shown forms a right triangle. The measure of one acute angle in the triangle is five times the measure of the other. Find the measure of each acute angle.