Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Triangle Sum, Base Angles, & Exterior Angles**

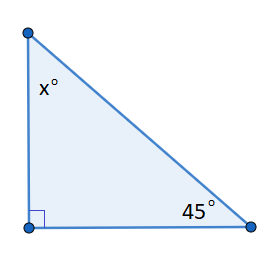
**Triangle Sum Theorem**

*The sum of the ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a triangle is \_\_\_\_\_\_\_\_\_\_\_.*

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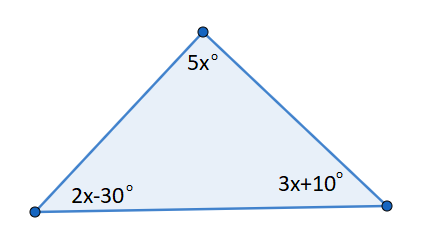
**Example one:**

Find x and all angle measures for the following:

****

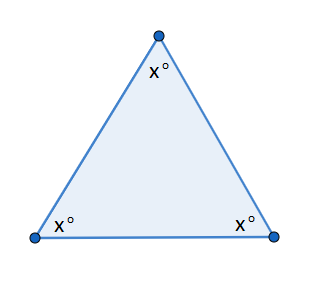
**Example two:**

Find x and all angle measures for the following:

****

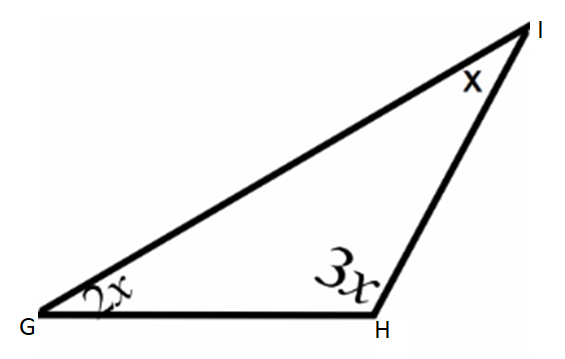
**Example three:**

Find x and all angle measures for the following:

****

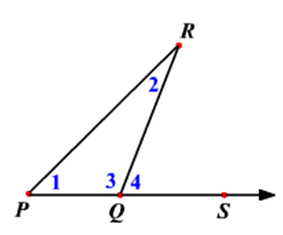
**Example four:**

Find x and all angle measures for the following:

****

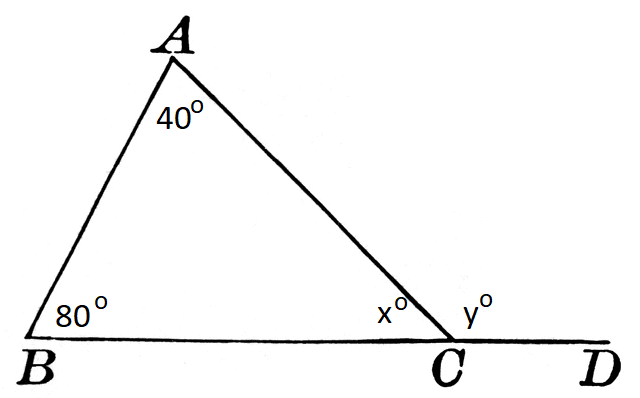
**Exterior Angle Theorem**

*The measure of an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a triangle is equal to the \_\_\_\_\_\_\_\_\_ of the measures of its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ angles.*

** **

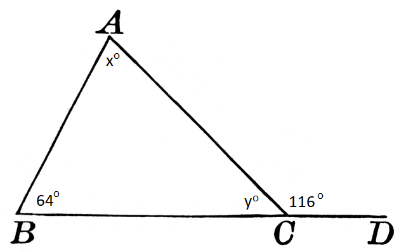
**Example one:**

Find x and y.

****

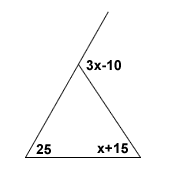
**Example two:**

Find x and y.

****

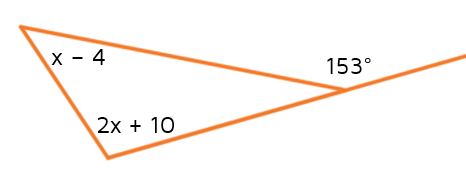
**Example three:**

Find x and all missing angle measures for the following:

****

**Example four:**

Find x and all angle measures for the following:

****

**Base Angles of a Triangle**

***Base Angle Theorem:*** *If 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a triangle are congruent, then the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ opposite them are congruent.*

***Base Angle Theorem Converse:*** *If 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a triangle are congruent, then the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ opposite them are congruent.*

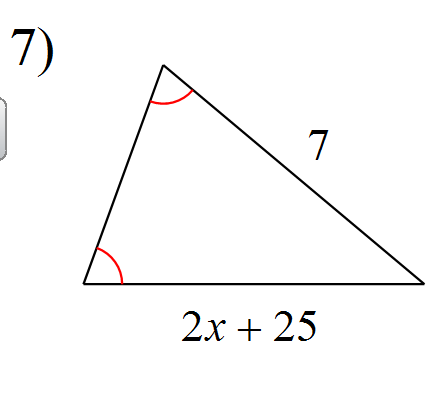
**Equilateral Triangle Corollaries**

***Corollary 1:*** *If a triangle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

***Corollary 2:*** *If a triangle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

**Example one:**

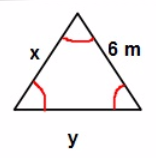
Solve for x.

****

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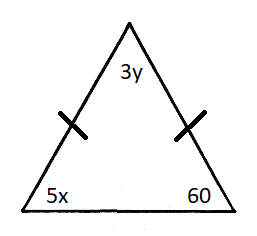
**Example two:**

Find x, y, and all missing angle measures



**Example three:**

Find x, y, and all the measure of all angles in the triangle.

****