

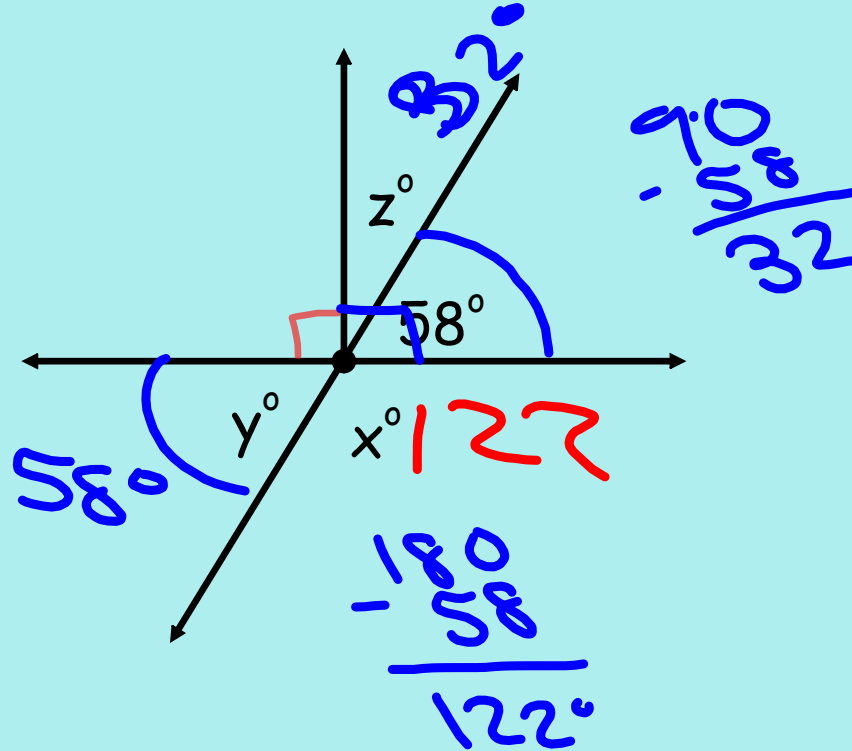
## 10/29/19 - Warm Up Problem

Find the measure of each missing angle.

$$x = \underline{122}$$

$$y = \underline{58}$$

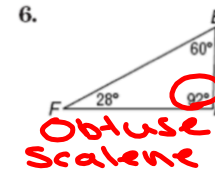
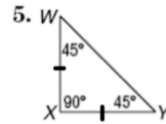
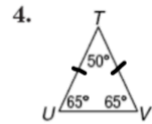
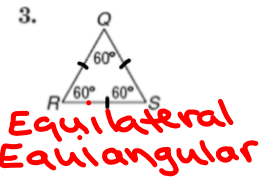
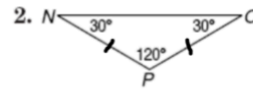
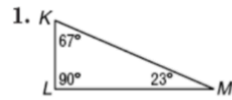
$$z = \underline{32}$$



**Assignment:**

Concept 9 Worksheet - due Friday 11/1  
(front side)

Classify each triangle by its sides (scalene, isosceles, or equilateral) and by its angles (acute, equiangular, obtuse, or right).

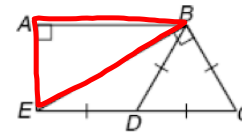


Identify one of each indicated triangle in the diagram to the right.

7. right



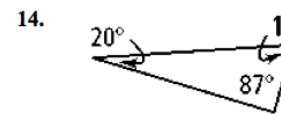
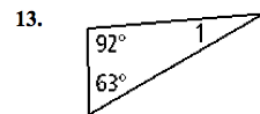
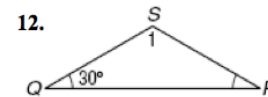
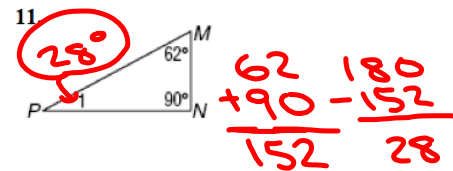
8. obtuse



9. acute

10. equilateral

Find the measure of each numbered angle



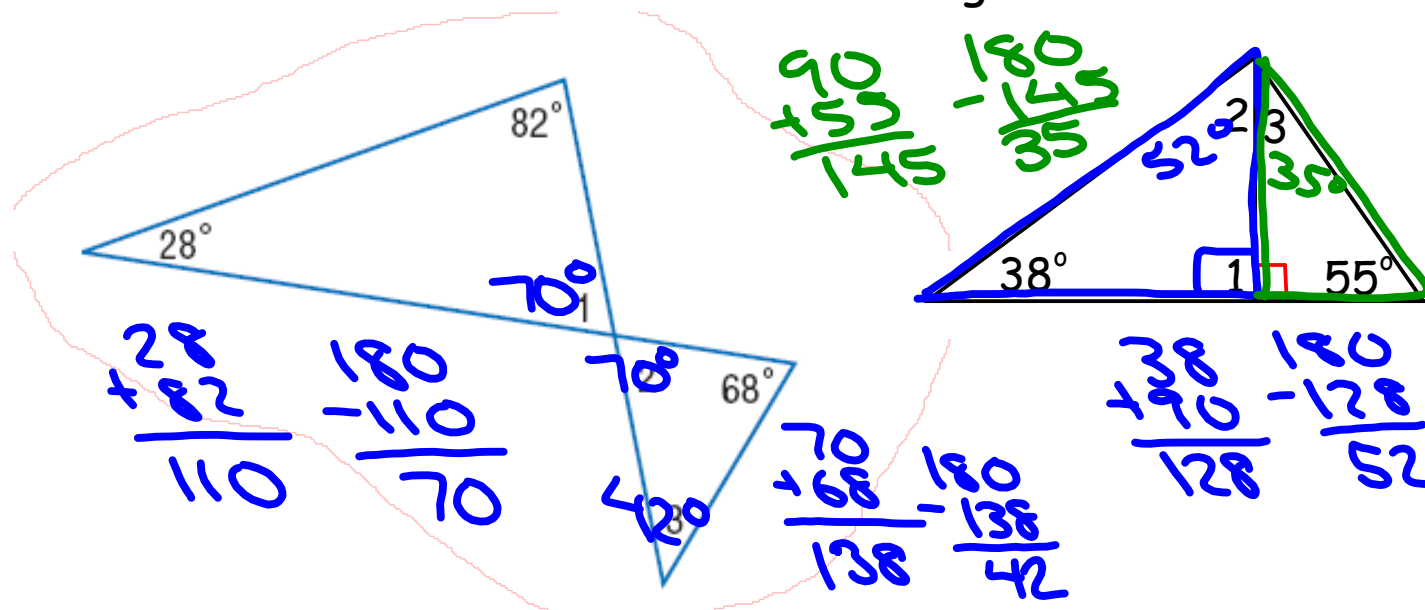
## Section 3.5 - The Triangle Angle Sum

**Goals:** Use the Triangle Sum Theorem and Exterior Angle Theorem to find measures of angles

### Triangle ~~Angle~~ Sum Theorem

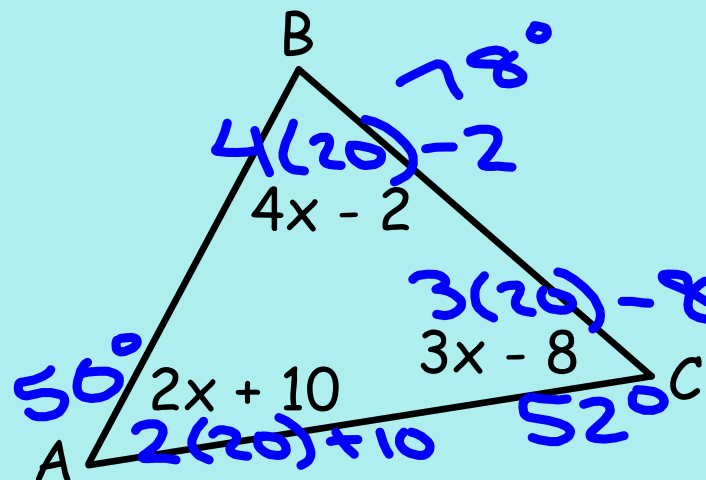
The sum of the measures of the interior angles of a triangle is **180 degrees**.

Find the measure of each numbered angle.



## Using Algebra to Find Angles

Find the measure of each angle.



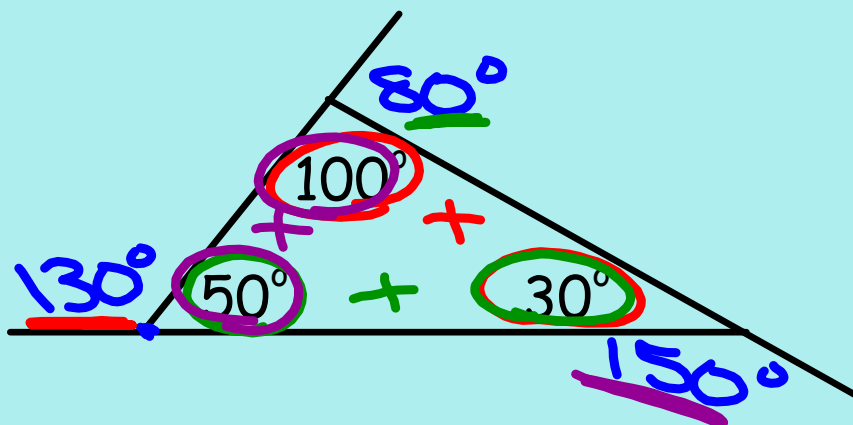
$$\underline{2x+10} + \underline{4x-2} + \underline{3x-8} = 180$$

$$\frac{9x}{9} = \frac{180}{9}$$

$$x = 20$$

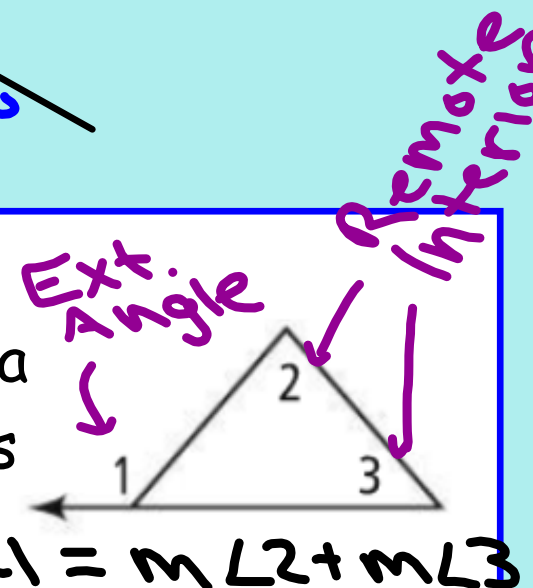
## Exterior Angles of Triangles

**Exterior Angle:** an angle formed by one side of a triangle and the extension of another side



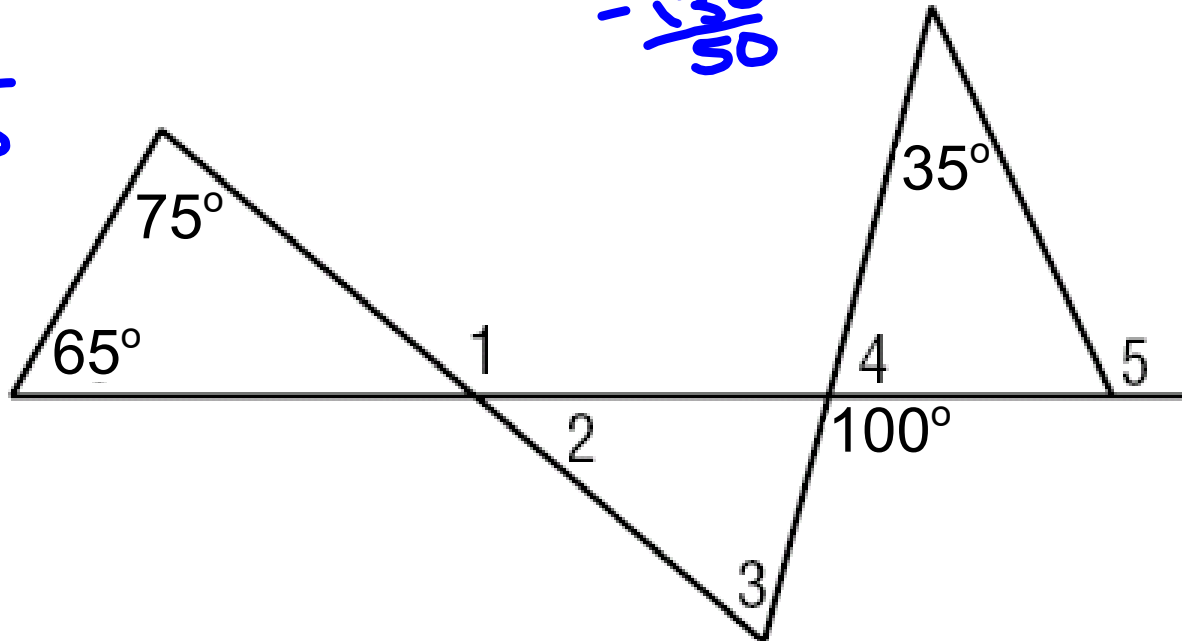
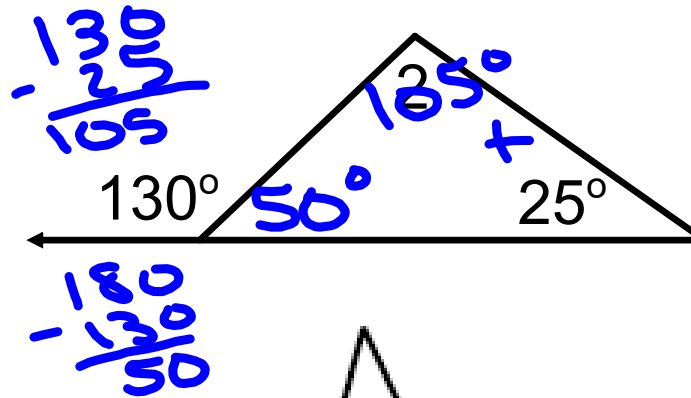
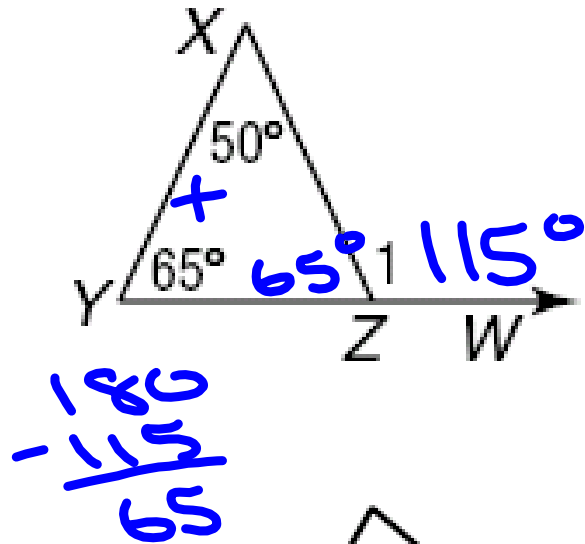
### Triangle Exterior Angle Theorem

The measure of each exterior angle of a triangle equals the sum of the measures of its remote interior angles.



$$m\angle 1 = m\angle 2 + m\angle 3$$

Find the measure of each numbered angle.



**Assignment:**

**Concept 9 Worksheet - due Friday 11/1**

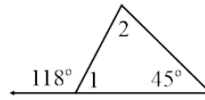
(back)

Find the measure of each numbered angle.

15.

$m\angle 1 = \underline{\hspace{2cm}}$

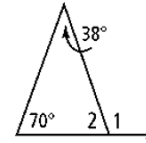
$m\angle 2 = \underline{\hspace{2cm}}$



16.

$m\angle 1 = \underline{\hspace{2cm}}$

$m\angle 2 = \underline{\hspace{2cm}}$

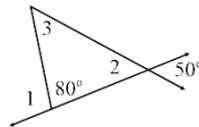


17.

$m\angle 1 = \underline{\hspace{2cm}}$

$m\angle 2 = \underline{\hspace{2cm}}$

$m\angle 3 = \underline{\hspace{2cm}}$



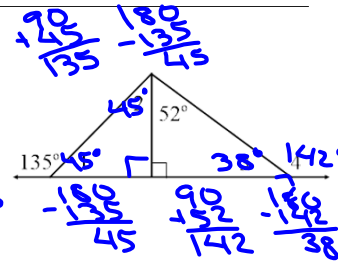
18.

$m\angle 1 = \underline{45^\circ}$

$m\angle 2 = \underline{45^\circ}$

$m\angle 3 = \underline{38^\circ}$

$m\angle 4 = \underline{142^\circ}$

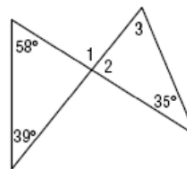


19.

$m\angle 1 = \underline{\hspace{2cm}}$

$m\angle 2 = \underline{\hspace{2cm}}$

$m\angle 3 = \underline{\hspace{2cm}}$

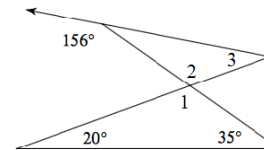


20.

$m\angle 1 = \underline{\hspace{2cm}}$

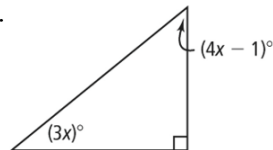
$m\angle 2 = \underline{\hspace{2cm}}$

$m\angle 3 = \underline{\hspace{2cm}}$



Write and solve an equation to find the value of x. Show your work.

21.



22.

