Warm-up

Get two highlighters from the pink bin.

1. $\frac{3(x-4)}{5} + 8 = 20$

$\frac{3(x-4)}{5} = 12.5$

$3(x-4) = 60$

$3x - 12 = 60$

$3x = 72$

$x = 24$

x = 24

2. Label each figure with the correct geometric vocabulary.

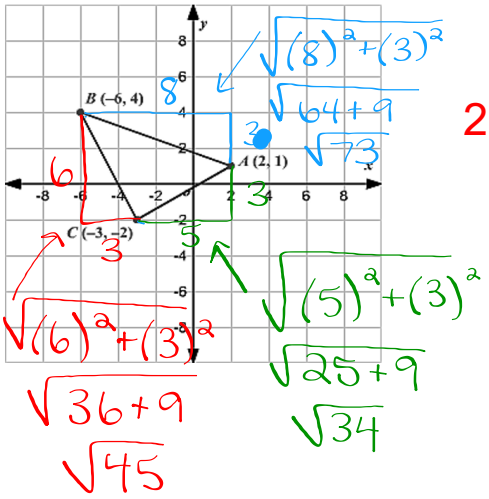
line segment

line

ray

point

3. Calculate the perimeter of the triangle.



$\sqrt{(8)^2+(3)^2}$

$\sqrt{64+9}$

$\sqrt{73}$

$\sqrt{(5)^2+(3)^2}$

$\sqrt{25+9}$

$\sqrt{34}$

$\sqrt{(6)^2+(3)^2}$

$\sqrt{36+9}$

$\sqrt{45}$

21.08 units

$\sqrt{73}+\sqrt{45}+\sqrt{34}$

$\sqrt{(73)}+\sqrt{(45)}+\sqrt{(34)}$

≈ 21.08

What am I learning today?

Learning Objective 1.3

How can I describe and use different types of angles?

What am I going to do today?

- Complete and grade warm-up
- Discuss HW Answers
- Take notes on types of angles
- Practice identifying and using types of angles

What will I do to show that I have learned it?

I can...

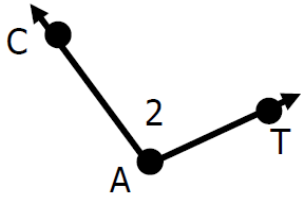
Classify angles using their angle meaurements between 0º - 180º

Angle – Two rays connected by a common endpoint called the vertex

2 ways to name an angle

1. Use 3 letters with the vertex letter being in the middle

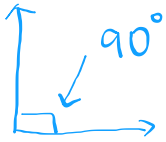
2. Use the letter or number of the vertex as long as it ***cannot be confused with another angle*** (1 angle)



Name this angle 4 different ways.

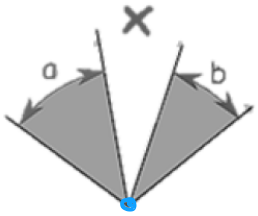
∠CAT, ∠TAC, ∠A, ∠2

angle symbol

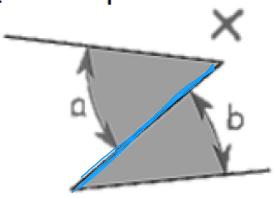
Acute	Right	Obtuse	Straight
Angle that measures less than 90°	Angle that measures exactly 90°	Angle that measures more than 90°	Angle that measures 180°
			

NEVER ASSUME THE MEASURE OF AN ANGLE!!!

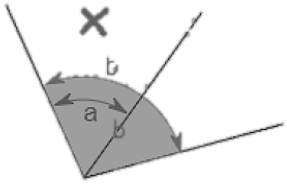
Adjacent Angles – Two angles that have a Common side and vertex and DON'T overlap.



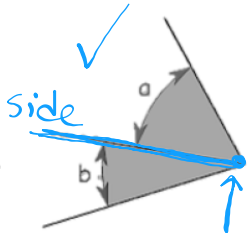
Don't have a common side



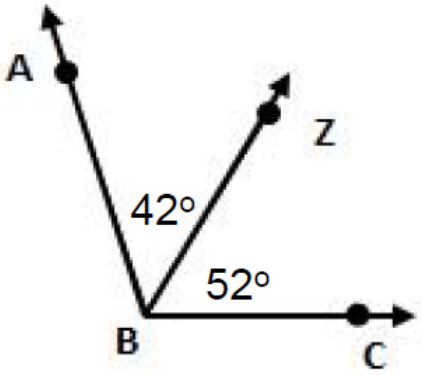
Don't have a common vertex



Overlap!

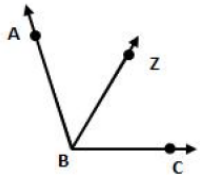


vertex



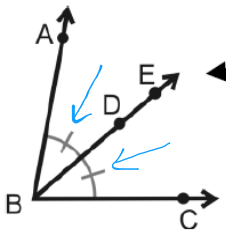
1. Which angles are adjacent?
   ∠ABZ and ∠ZBC
2. Which angles are acute?
   ∠ABZ and ∠ZBC
3. Which angle is obtuse?
   ∠ABC

Angle Addition Postulate – Adding two adjacent angle measures to create a larger angle measure.



$m\angle ABC = m\angle ABZ + m\angle ZBC$
(large ∠) (adjacent ∠s)
measure

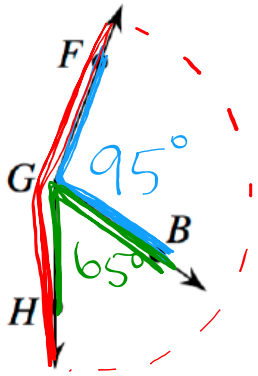
Angle Bisector – A line or ray that cuts an angle into 2 congruent angles



$\overrightarrow{BE}$ bisects ∠ABC

$\angle ABE \cong \angle DBC$

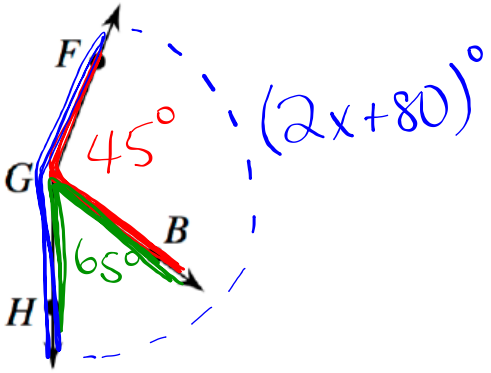
1. If the $m\angle FGB = 95°$ and the $m\angle BGH = 65°$, what is the $m\angle FGH$?



$95° + 65°$

$160°$

2. If the $m\angle FGB = 45°$, the $m\angle BGH = 65°$, and the $m\angle FGH = (2x + 80)°$, what is x?



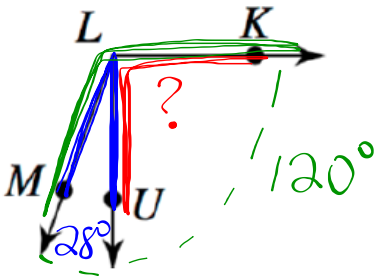
$45 + 65 = 2x + 80$

$110 = 2x + 80$

$30 = 2x$

$15 = x$

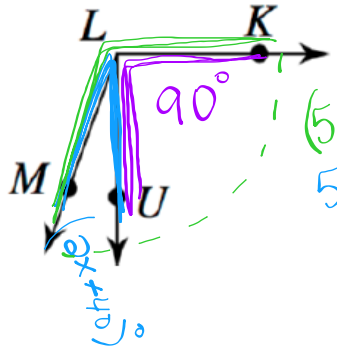
3. If the $m\angle MLU = 28°$ and the $m\angle MLK = 120°$, what is the $m\angle KLU$?



$120° = ? + 28°$

$92° = ?$

4. If the $m\angle MLU = (2x + 40)°$, $m\angle MLK = (5x + 145)°$, and the $m\angle KLU = 90°$, what is the $m\angle MLK$?



$(5x+145)° \quad 5(-5)+145° \quad = 120°$

$(2x+40)° + 90° = (5x+145)°$

$2x + 130 = 5x + 145$

$-5x \quad -5x$

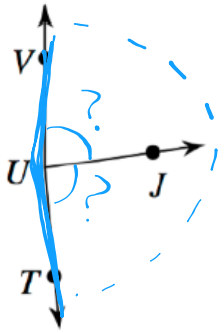
$-3x + 130 = 145$

$-130 \quad -130$

$-3x = 15$

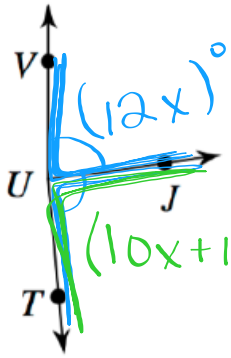
$x = -5$

5. If the $m\angle VUT = 174°$ and $\overrightarrow{UJ}$ bisects $\angle VUT$, find the measures of $\angle VUJ$ and $\angle JUT$.



$174° = x + x$
$174° = 2x$
$87° = x$

6. If $\overrightarrow{UJ}$ bisects $\angle VUT$, the $m\angle VUJ = (12x)°$, and $m\angle JUT = (10x + 12)°$, what is the $m\angle VUT$?



congruent

$12x = 10x + 12$
$-10x \quad -10x$
$2x = 12$
$x = 6$

$\angle VUT = 72° + 72°$
$\angle VUT = 144°$

Summary

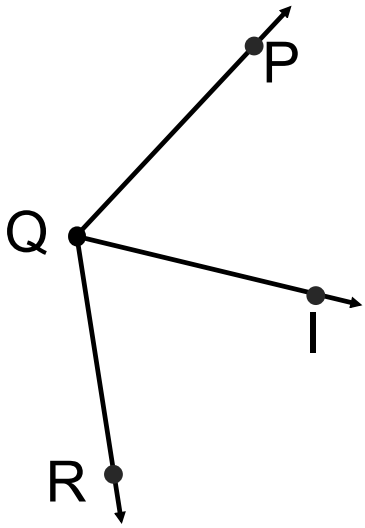
Take a few minutes to summarize today's lesson. Remember to give yourself key words to help you study later on for the test.

Classwork: 

Complete the classwork identifying angles and using them to solve for the measures of angles.

HW: On top of the bin

#11 from CW



#18 from CW