Name:_____

WRITE YOUR NAME ON ALL OF THE FOLLOWING HOMEWORK PAGES!

Homework Assignments - Unit 8 Geometry

Standard	Description
7.G.A.2	Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
7.G.B	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

Lesson	I can... After completing each lesson, you are on the right track if you can confidently state "I can..."
❑ 8.1	solve for unknown **angles** in word problems and in diagrams involving complementary, supplementary, vertical, and adjacent angles.
❑ 8.2	solve for unknown **angles** in word problems and in diagrams involving complementary, supplementary, vertical, and adjacent angles.
❑ 8.3	solve for unknown angles in word problems and in diagrams involving ALL learned angle facts.
❑ 8.4	explore the properties of triangles.
❑ 8.5	explore how changes in arrangement and measurement affect a triangle, creating a list of conditions that determine a **unique triangle.**
❑ 8.6	explore how changes in arrangement and measurement affect a triangle, creating a list of conditions that determine a **unique triangle.**
❑ 8.7	apply what I've learned about about **angles** AND **unique triangles** to novel scenarios.

The skills and concepts that you learn in this packet will appear as your grade for the standards listed above.	
A = 4 EXCEEDS	All questions have been attempted and have justification that proves and explains their solution.
B = 3 MEETS	Most questions have been attempted and have justification that proves and explains their solution.
C = 2 DEVELOPING	Some or all questions are attempted, but does not contain a justification or explanation for the solution.
D = 1 WELL BELOW	Few or none of the questions are attempted, and does not contain a justification or explanation for the solution.

Dear Students,

I know that math homework can be a **DAUNTING** task and sometimes it's hard to find the time to complete it. Please know that these assignments have been designed to help support your mathematical *thinking* - my goal is not to give you busy work. We will use homework to have conversations and practice in class the following day so it is really **important** that you try to complete it each night. If you need help, email me!

Use our class website too! www.7mathscience.weebly.com

Name: _____ Date: _____ Score: __/4

Lesson 8.1 Practice

Draw a 90 degree angle.	Draw a 180 degree angle.

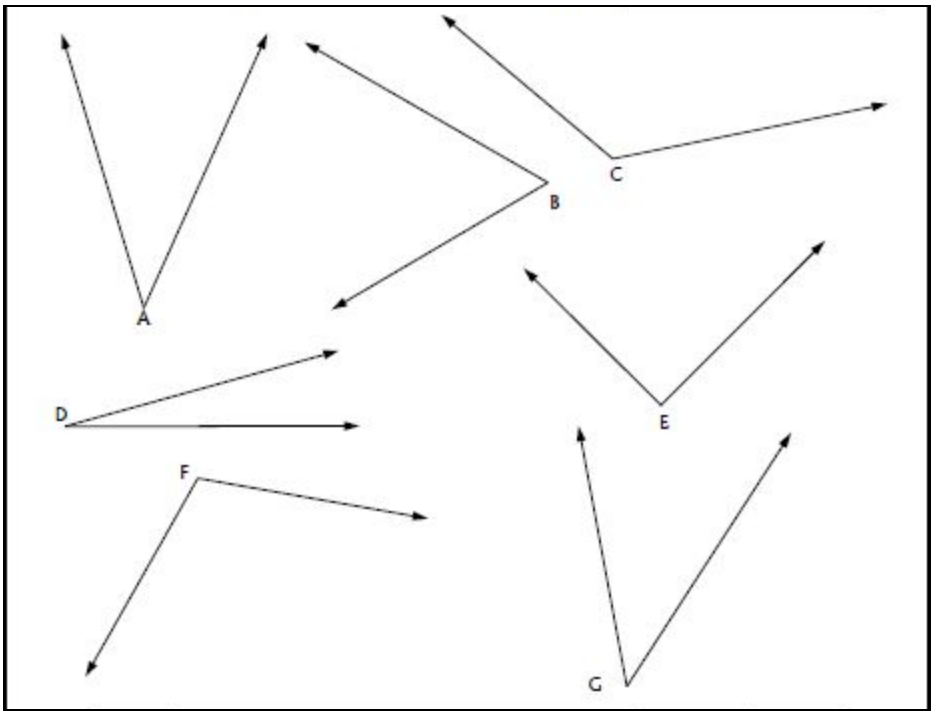
DIRECTIONS:

For angles A through G, use your mathematical reasoning to…

1) name the type of angle - right, acute, obtuse

2) estimate the measure of the angle

In class tomorrow, we will measure the angles and fill in the "actual" measure column.

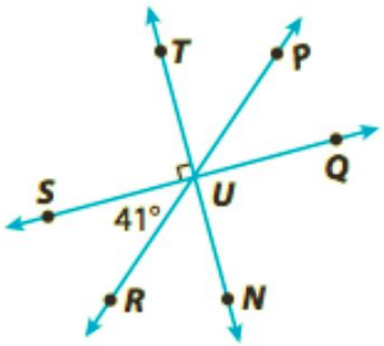


Angle	Type of Angle (Right, Acute, Obtuse)	Measure Estimate	Actual (in class)
<A			
<B			
<C			
<D			
<E			
<F			
<G			

Name: _____ Date: _____ Score: __/4

Lesson 8.2 Practice

1. Answer questions a-e for the figure to the right.



a. Two adjacent angles are: _____ and _____

b. Two supplementary angles are: _____ and _____

c. Two complementary angles are: _____ and _____

d. The measure of ∠QUR = _____

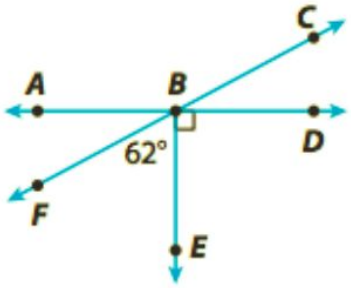
e. Which angle measure is greater: ∠TUR or ∠RUQ?

Explain: _____

_____

_____

2. Solve for the measure of each indicated angle.

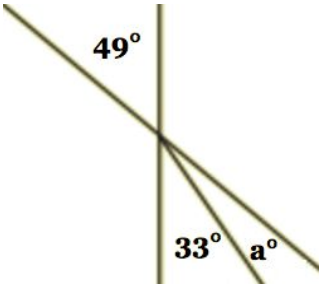


∠CBE = _____

∠ABF = _____

∠CBA = _____

3. The measure of ∠a = _____



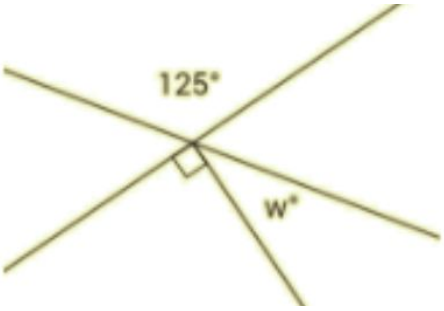
What property of angles lets us calculate this?

_____

_____

_____

4. In the figure to the right, find the value of the measure of ∠w.

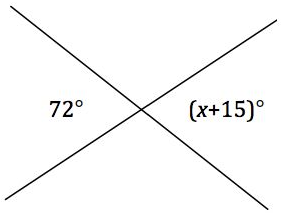


∠w = _____

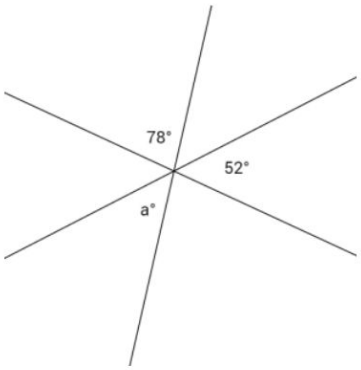
Name: _____ Date: _____ Score: __/4

Lesson 8.3 Practice

1. Two lines meet at a point. Set up an equation and solve for x.

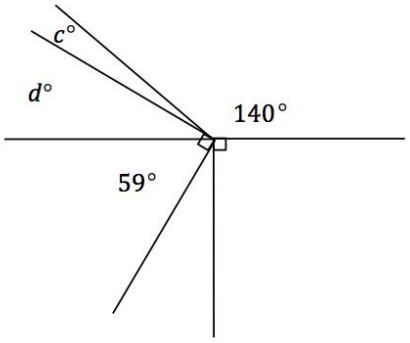


2. Three lines meet at a point. Set up an equation and solve for a.



3. Two lines meet at a point that is also the endpoint of two rays. Set up and solve an equation to find the values of a and b.

4. Four rays have a common endpoint on a line. Set up and solve an equation to find the value of c.



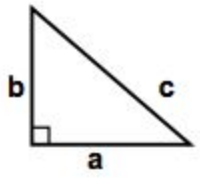
Name: _____ Date: _____ Score: __/4

Lesson 8.4 Practice

DIRECTIONS: Classify each triangle by angle and side. Write the type or triangle in the blank provided.

Good Luck :)

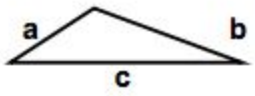
1.



Angle: _____

Side: _____

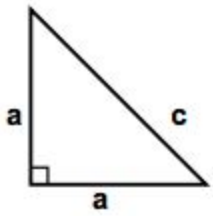
2.



Angle: _____

Side: _____

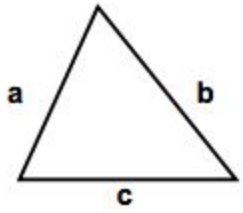
3.



Angle: _____

Side: _____

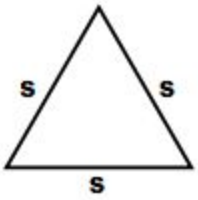
4.



Angle: _____

Side: _____

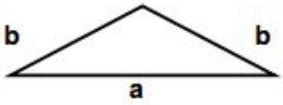
5.



Angle: _____

Side: _____

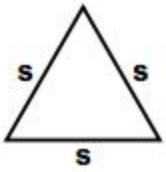
6.



Angle: _____

Side: _____

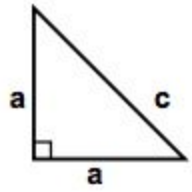
7.



Angle: _____

Side: _____

8.



Angle: _____

Side: _____

Do you have any questions about triangle properties so far?

Name: _____ Date: _____ Score: __/4

Lesson 8.5 Practice

Directions: Read the prompt with the triangle criteria. Answer the question that follows. Be sure to fully explain your answer.

1. A triangle has sides of 15 and 27. The measurement of the longest side is missing. Ted says that one possibility for the unknown side length is 50. Do you agree with Ted? Why or why not?

2. A triangle has sides of 15 and 27. The measurement of the longest side is missing. Ted says that one possibility for the unknown side length is 40. Do you agree with Ted? Why or why not?

Reflect *(in drawing and/or writing)* on today's question posed at the end of class:

Can you make** more than one **triangle when given the three side lengths?

Name: _____ Date: _____ Score: __/4

Lesson 8.6 Practice

DIRECTIONS: Respond to each prompt below.

1. **A triangle has a 60° angle, a 60° angle and a side 2 centimeters in length.** *Select True or False for each statement about this type of triangle.*

Statement	*True*	*False*
The triangle must be an equilateral triangle.		
More than one triangle can be made with these measures.		
The triangle must contain an angle measuring 75°.		

2. **A triangle has a 40° angle, a 120° angle and a side 2.5 centimeters in length.** *Select True or False for each statement about this type of triangle.*

Statement	*True*	*False*
The triangle must be an isosceles triangle.		
More than one triangle can be made with these measures.		
The triangle must contain an angle measuring 20°.		

3. Create (draw) your own **UNIQUE** triangle using a ruler and protractor (if able). Be sure to label angles and sides!

4.

   A. Create (draw) your own **NOT UNIQUE** triangle using a ruler and protractor (if able). Be sure to label angles and sides!

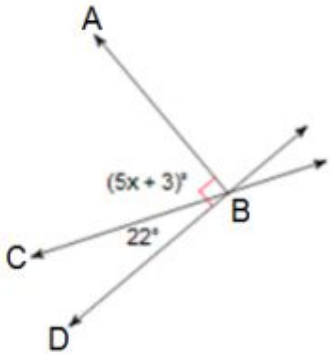
   B. Since this triangle is not unique, draw a different triangle, with the same criteria included in part A.

Name: _____ Date: _____ Score: __/4

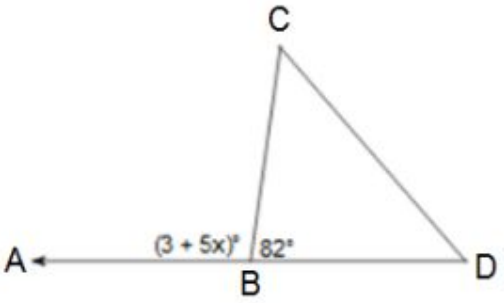
Lesson 8.7 Practice

DIRECTIONS: For each problem, **write and solve an equation to find the value of x.** Then, use that value to find the measure of <ABC. The diagrams are not to scale. ***You may show your work on scratch paper.***

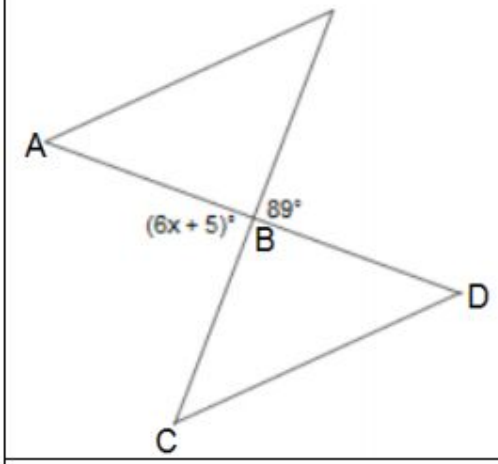
1. $\angle ABC =$ _____



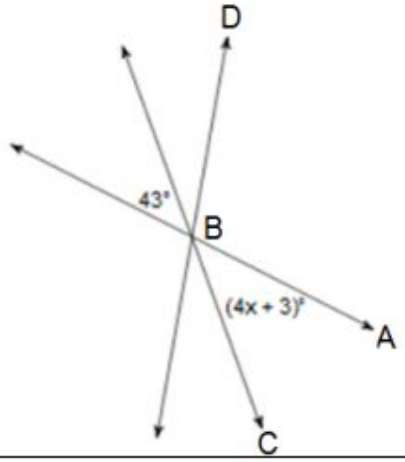
2. $\angle ABC =$ _____



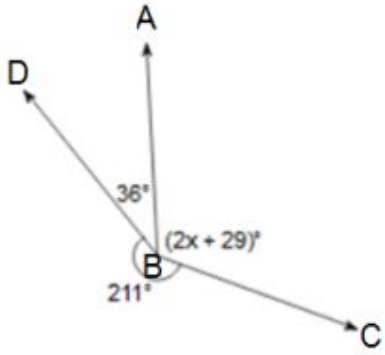
3. $\angle ABC =$ _____



4. $\angle ABC =$ _____



5. $\angle ABC =$ _____



6. $\angle ABC =$ _____