

Karie Shaw
Math 8

Standards:

8.G.1 Identify pairs of vertical angles as congruent

8.G.4 Determine angle pair relationships when given two parallel lines cut by a transversal.

8.G.5 Calculate the missing angle measurements when given two parallel lines cut by a transversal.

8.G.6 Calculate the missing angle measurements when given two intersecting lines and an angle

Materials: Laptop

Overhead screen

LCD projector

Bell Work: Students will revisit right, straight, obtuse, acute, vertical, complimentary, and supplementary angles.

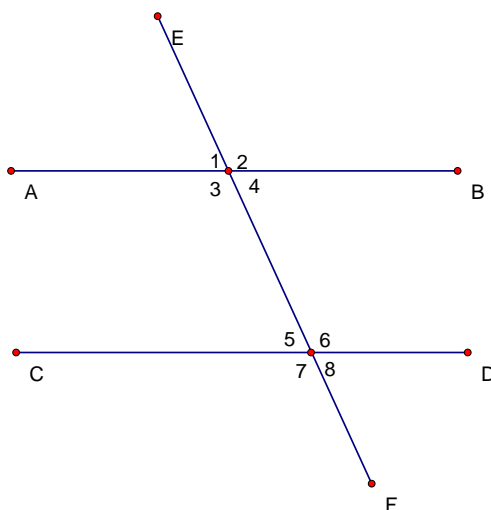
Essential Question: How do we identify the different angle relationship when you have two parallel lines cut by a transversal?

Objective: Students will be able to identify the following angle relationship.

- Alternate interior angles
- Alternate exterior angles
- Adjacent angles
- Same-side interior
- Same –side exterior
- Corresponding angles
- Adjacent angles

Teacher Directive Lessons: Given several two parallel lines cut by transversal students will practice drawing the zigzag to determine the two pairs of four congruent angles. (Example below)

- When illustrating the zigzag draw a line connecting $\angle 1$ and $\angle 4$. Draw a second line connecting $\angle 4$ and $\angle 5$. Draw the third line connecting $\angle 5$ and $\angle 8$. The three connected lines should look like a zigzag or a crooked Z. Follow the same procedure for the remaining four angles.



The students will then be asked to complete the guided worksheet “practicing the zigzag” in preparation of working with project accelerate. After attempting to complete the worksheet independently, the teacher will go over the worksheet and answer any misconceptions the students may have or redefine any vocabulary terms before taking them to the computer lab.

Work Time: Students will be instructed to log on to the computer, click on internet explore where they will input the following address.

Address: <http://www.shodor.org/interactivate/activities/angles/index.html>

This is a model of two parallel lines cut by a transversal. They will use the model to identify right, obtuse, acute, vertical, corresponding, supplementary, alternate-interior, alternate exterior, same-side interior, same-side exterior, and adjacent angles.

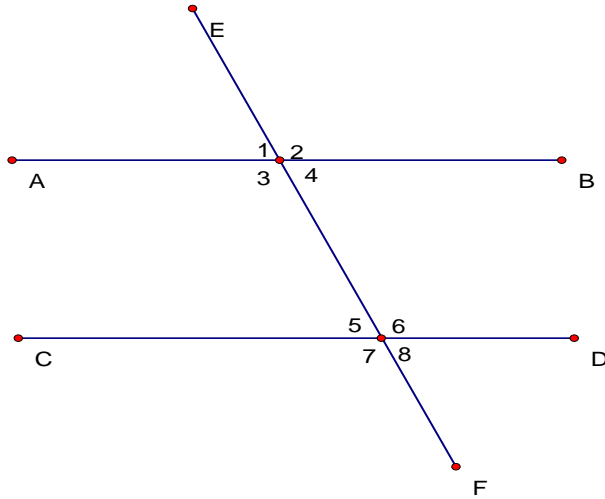
Closure: After the computer lab, students will return back to the classroom where they will be expected to complete the following worksheet to be handed in for an assign grade (see attachment).

Extension: For homework students are expected to complete the following worksheet with 95% accuracy (see attachment). The teacher will be able to assess her lesson based on the individual grades. Teacher will adjust the lesson based on the class average.

Name: _____
Math 8

Date: _____
Practicing drawing the zigzag

1a) Using the zigzag method name the two pairs of four congruent angles.



Name the four congruent angles:

Name the four congruent angles:

b) Using the diagram above if the angle measurement of $\angle 1$ is 65° . Name the three other angles that have the same measurement.

c) Since $\angle 1$ and $\angle 2$ are supplementary angles. What is the supplement of 65° ? _____

d) What are the measurements of \angle 's 2,3,6,& 7. _____

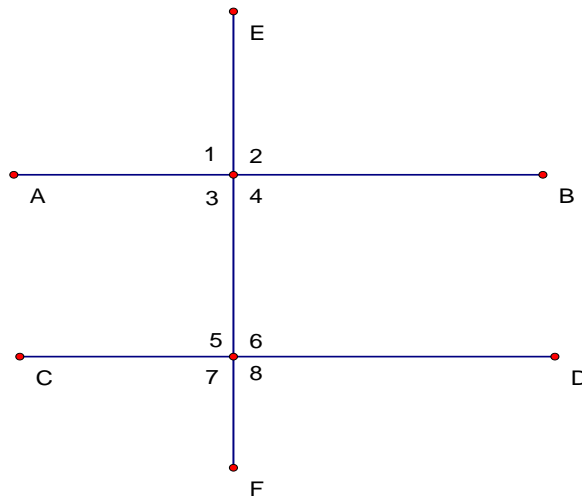
e) The measurement of $\angle 5$ represents what type of angle? _____

f) The measurement of $\angle 6$ represents what type of angle? _____

g) What do you notice about the angle measurement of the same-side exterior?

h) What do you notice about the angle measurement of the same-side interior?

2a) Using the zigzag, answer the following questions.



What is the angle relationship between $\angle 2$ and $\angle 3$. _____

What is the angle relationship between $\angle 3$ and $\angle 6$. _____

What is the angle relationship between $\angle 6$ and $\angle 7$. _____

What is the angle relationship between $\angle 2$ and $\angle 7$. _____

What is the angle relationship between $\angle 2$ and $\angle 6$. _____

b) Looking at the diagram above, what type of angle is the measurement of $\angle 4$.
_____.

c) What do you notice about angles that are adjacent? _____

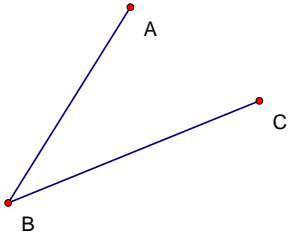
Explain: _____

Name: _____
Math

Date: _____
Bell work

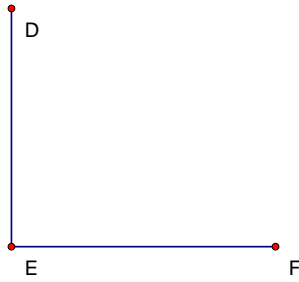
Name the types of angles that are drawn below in the space provided.

1)



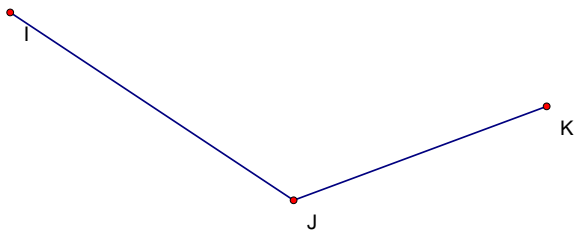
ANS: _____

2)



ANS: _____

3)



ANS: _____

4)



ANS: _____

In the space provided give a degree measurement that represents the following types of angles.

5) Acute: _____

6) Straight: _____

7) Right: _____

9) Obtuse: _____

Name the complement of each angle degree below.

10) 23° , _____

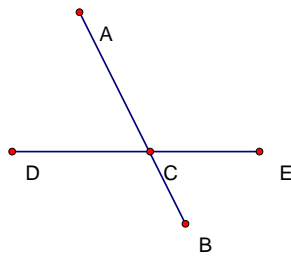
11) 85° , _____

Name the supplement of each angle degree below.

12) 142° , _____

13) 105° , _____

14) Given the $m\angle ECA$ is 117° , find the following.



a) $m\angle ECB$ _____

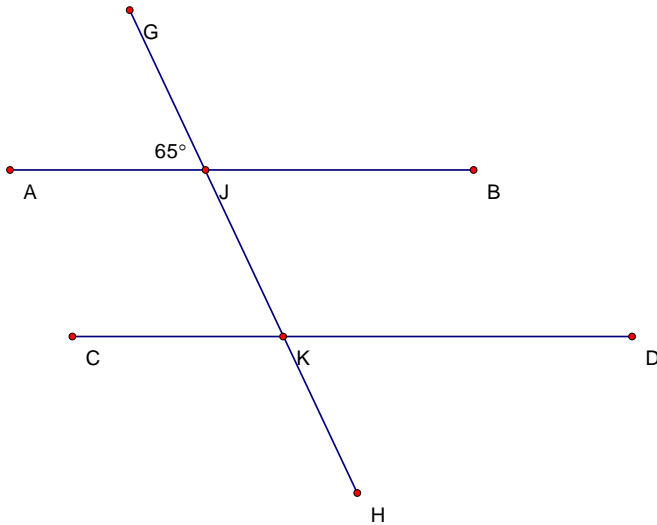
b) $m\angle ACD$ _____

c) $m\angle ACE$ _____

Name: _____
Math

Date: _____
Class work

1) If the $m\angle GJA$ is 65° , find the degree measurement of the remaining 7 angles.



$m\angle GJB$: _____

$m\angle AJK$: _____

$m\angle BJK$: _____

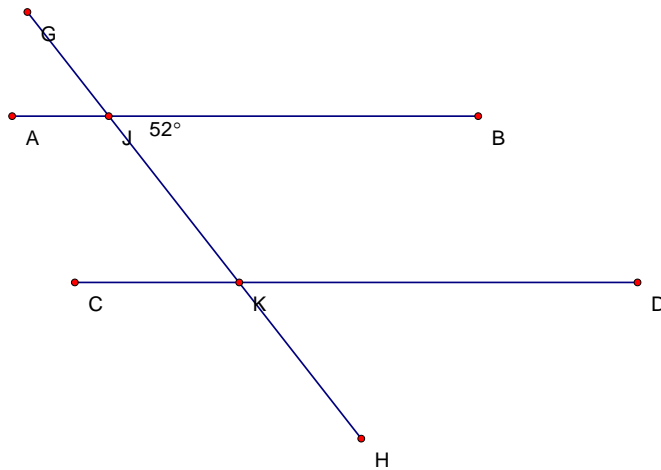
$m\angle CKJ$: _____

$m\angle DKJ$: _____

$m\angle HKC$: _____

$m\angle HKD$: _____

2) If the $m\angle BJK$ is 52° , find the degree measurement of the remaining 7 angles.



$m\angle AJG$: _____

$m\angle GJB$: _____

$m\angle AJK$: _____

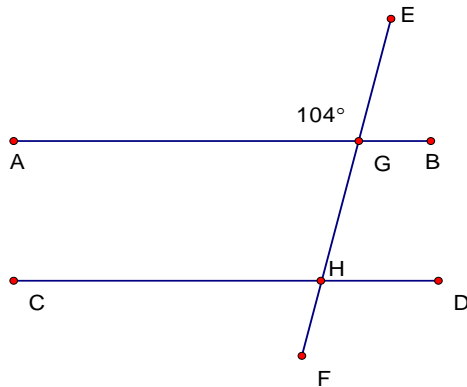
$m\angle CKJ$: _____

$m\angle JKD$: _____

$m\angle HKC$: _____

$m\angle DKH$: _____

3a) If the $m\angle EJA$ is 104° , find the degree measurement of the remaining 7 angles.



$m\angle EGB$: _____ $m\angle HGA$: _____

$m\angle DHG$: _____ $m\angle BGH$: _____

$m\angle GHC$: _____ $m\angle FHC$: _____

$m\angle DHF$: _____

b) What is the relationship between $\angle EGA$ and $\angle DHF$? _____

c) Name two pairs of supplementary angles. _____

d) Identify one pair of alternate interior angles. _____

e) Explain why $\angle G$ & $\angle H$ are supplementary angles.

f) Explain how to identify corresponding angles.

g) In the diagram above, name the angle degree of the acute angle. _____

h) In the diagram above, name the angle degree of the obtuse angle. _____

i) What is the sum of the acute and obtuse angle? _____

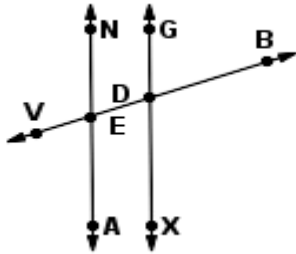
Name: _____
Math

Date: _____
Homework

Lines and Angles

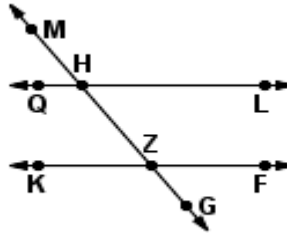
Fill in the blank with an angle.

1.



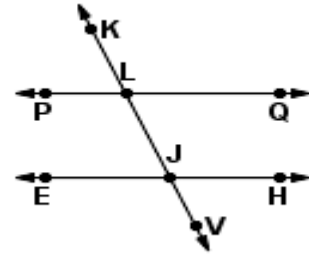
$\overleftrightarrow{NA} \parallel \overleftrightarrow{GX}$
 $\angle AED$ and _____
are alternate interior angles

2.



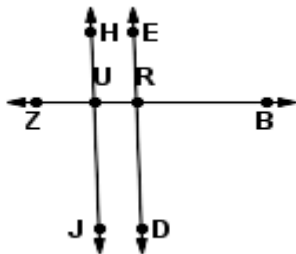
$\overleftrightarrow{QL} \parallel \overleftrightarrow{KF}$
 $\angle KZH$ and _____
are vertical angles

3.



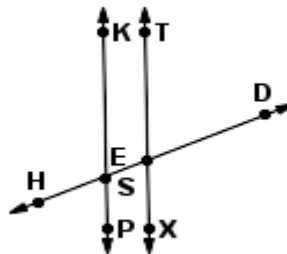
$\overleftrightarrow{PQ} \parallel \overleftrightarrow{EH}$
 $\angle QLJ$ and _____
are alternate interior angles

4.



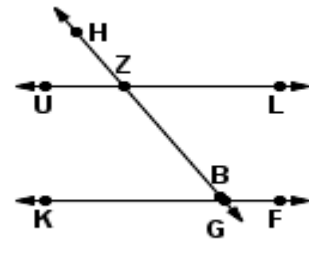
$\overleftrightarrow{HJ} \parallel \overleftrightarrow{ED}$
 $\angle ZUJ$ and _____
are vertical angles

5.



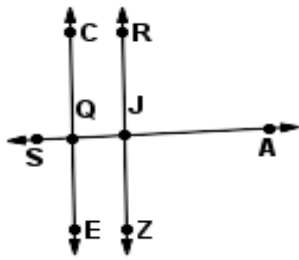
$\overleftrightarrow{KP} \parallel \overleftrightarrow{TX}$
 $\angle KSE$ and _____
are corresponding angles

6.



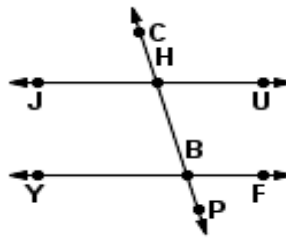
$\overleftrightarrow{UL} \parallel \overleftrightarrow{KF}$
 $\angle HZL$ and _____
are alternate exterior angles

7.



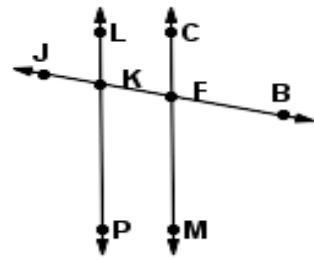
$\overleftrightarrow{CE} \parallel \overleftrightarrow{RZ}$
 $\angle SQC$ and _____
 are alternate exterior
 angles

8.



$\overleftrightarrow{JU} \parallel \overleftrightarrow{YF}$
 $\angle UHB$ and _____
 are corresponding
 angles

9.



$\overleftrightarrow{LP} \parallel \overleftrightarrow{CM}$
 $\angle KFM$ and _____
 are vertical
 angles