Name _____

Lesson 18: Correspondence And Transformations

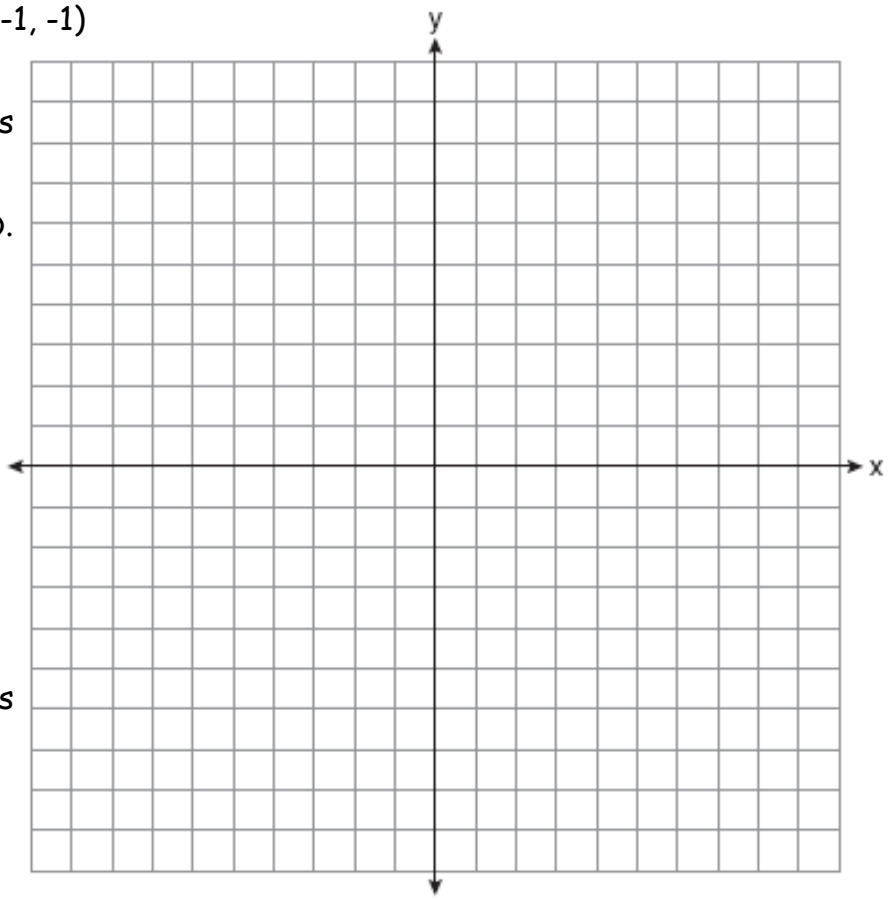
LEARNING TARGETS

I CAN name corresponding parts of figures.
I can apply a sequence of rigid motions from one figure to another figure to demonstrate that the figures are

Warm Up

a. Graph quadrilateral ABCD:
A(-6, -1), B(-9, -4), C(-7, -7), D(-1, -1)

b. Graph and state the coordinates of quadrilateral A'B'C'D' after R_{180} of quadrilateral ABCD.



c. Graph and state the coordinates of quadrilateral A''B''C''D after r_{x-axis} of quadrilateral A'B'C'D'.

Mini Lesson

Example 1:

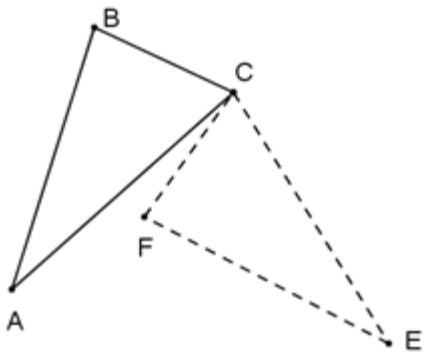
The figure at the right represents a rotation of $\triangle ABC$ 80° around vertex C.

a. Which triangle is the pre-image? _____

b. Which triangle is the image? _____

c. Write the rotation in function notation. _____

d. Name all the corresponding angles.



e. Name all the corresponding sides.

Quick Review:

Which transformations are rigid motions?

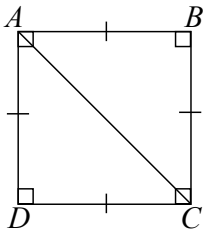
Why?

Two figures are **congruent** if a sequence of rigid motion maps every side and angle of one image onto the other.

Example 2:

$ABCD$ is a square, and $\overline{AC}$ is one diagonal of the square. $\triangle ABC$ is a reflection of $\triangle ADC$ across segment $\overline{AC}$.

Complete the table below identifying the missing corresponding angles and sides.

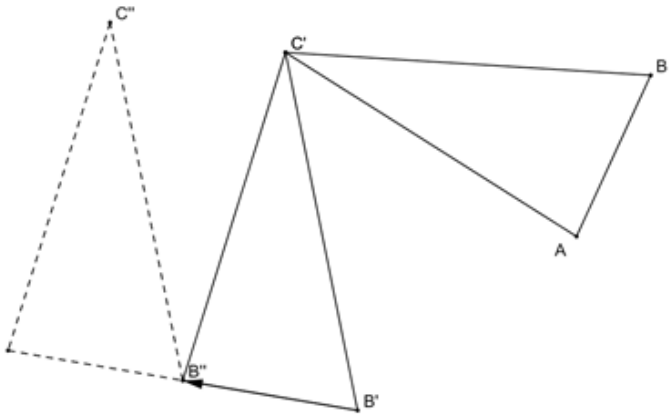


Corresponding angles	Corresponding sides
$\angle BAC \rightarrow$	$\overline{AB} \rightarrow$
$\angle ABC \rightarrow$	$\overline{BC} \rightarrow$
$\angle BCA \rightarrow$	$\overline{AC} \rightarrow$

Are the corresponding sides and angles congruent? Justify your response.

Is $\triangle ABC \cong \triangle ADC$? Justify your response.

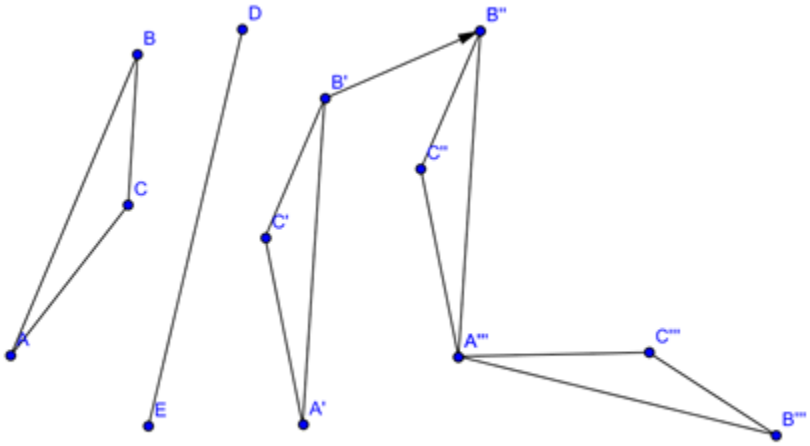
Example 3: Fill in the chart.



Sequence of rigid motions (2)	
Composition in function notation	
Sequence of corresponding sides	
Sequence of corresponding angles	
Triangle congruence statement	

Work Time:

Exercise 1:



Sequence of rigid motions (3)	
Composition in function notation	
Sequence of corresponding sides	
Sequence of corresponding angles	
Triangle congruence statement	

Name _____ Classwork/Homework

Lesson 18: Correspondence and Transformations

1. The vertices of ΔRST are $R(-6,5)$, $S(-7,-2)$, and $T(1,4)$. The image of ΔRST after the composition $T_{-2,3} \circ r_{y=x}$ is $\Delta R''S''T''$. State the coordinates of $\Delta R''S''T''$. [The use of the set of axes below is optional.]