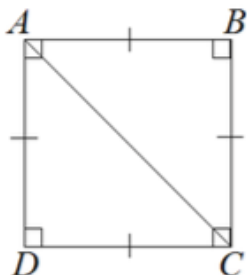


AIM: HOW DO WE IDENTIFY SEQUENCES OF RIGID MOTIONS OFF THE COORDINATE PLANE?

Do Now: $ABCD$ is a square, and \overline{AC} is one diagonal of the square. $\triangle ABC$ is a reflection of $\triangle ADC$ across line segment AC . Complete the table below identifying the missing corresponding angles and sides.



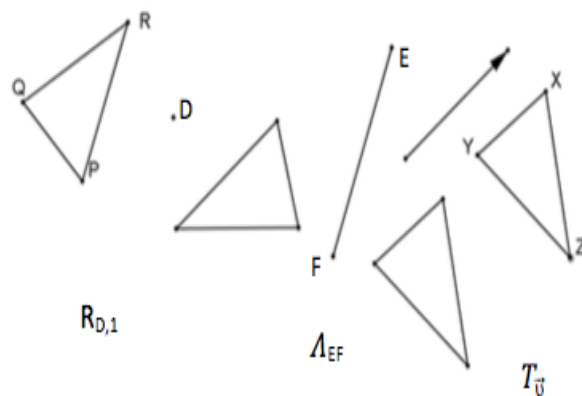
Corresponding angles	Corresponding sides
$\angle BAC \rightarrow$	$AB \rightarrow$
$\angle ABC \rightarrow$	$BC \rightarrow$
$\angle BCA \rightarrow$	$AC \rightarrow$

Is $\triangle ABC \cong \triangle ADC$? Use the properties of rigid motions to justify your response.

Consider the diagram below that shows the transformation of $\triangle PRQ$ to $\triangle XYZ$.

What are the steps that it took to map $\triangle PRQ$ onto $\triangle XYZ$?

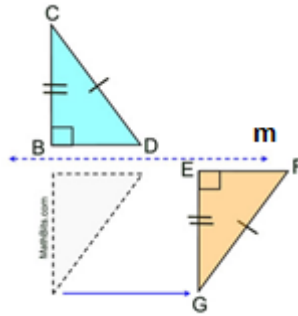
STEP 1	
STEP 2	
STEP 3	



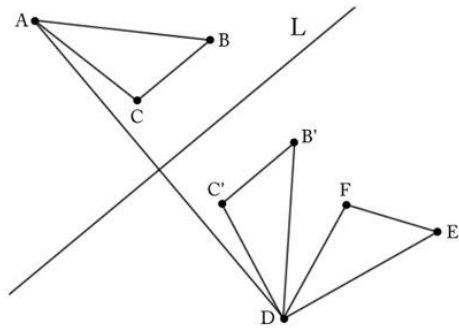
Use the properties of rigid motion to explain why $\triangle PRQ \cong \triangle XYZ$:

PRACTICE:

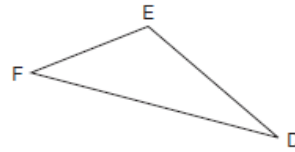
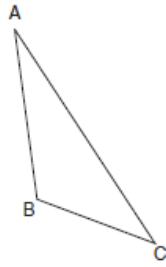
1. Triangle BCD and triangle EFG are drawn below. Write a sequence of transformations that maps triangle BCD onto triangle EGF .



2. Triangle ABC and triangle DEF are drawn below. Write a sequence of transformations that maps triangle ABC onto triangle DEF .

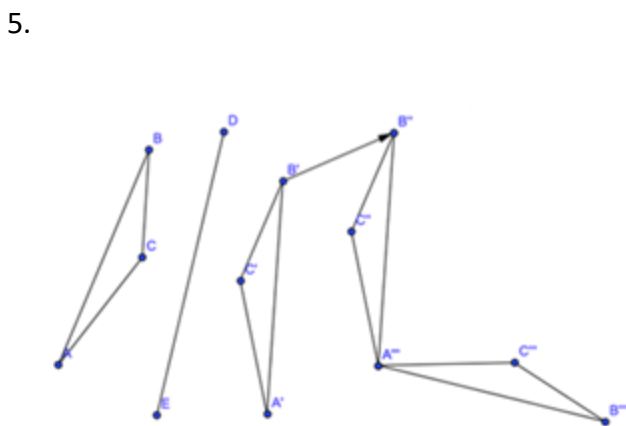
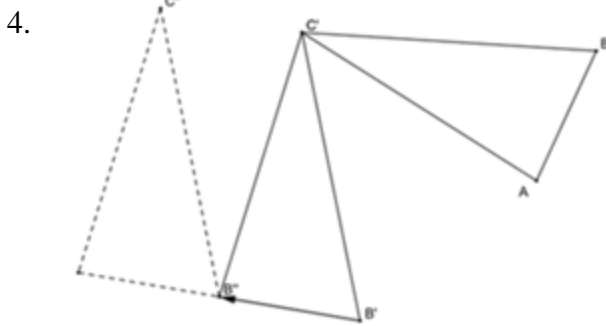


3. Triangle ABC and triangle DEF are drawn below. Write a sequence of transformations that maps triangle ABC onto triangle DEF .



For exercises 4-5, each shows a sequence of rigid motions that map a pre-image onto a final image.

- a) Identify each rigid motion in the sequence
 b) Write a statement about the congruence of the pre-image to the final image.



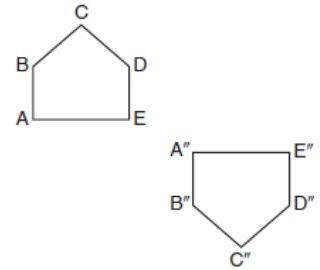
Name: _____

Date: _____

UNIT 2

LESSON 10 HOMEWORK

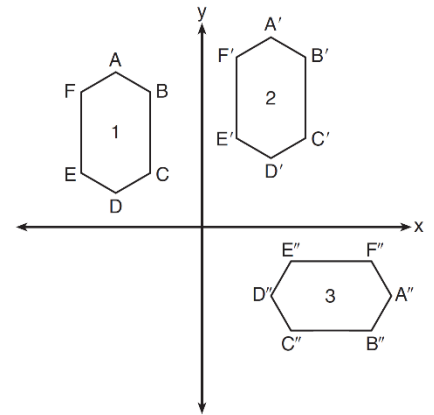
1. Identify which sequence of transformations could map pentagon $ABCDE$ onto pentagon $A''B''C''D''E''$, as shown below.



- 1) dilation followed by a rotation
- 2) translation followed by a rotation
- 3) line reflection followed by a translation
- 4) line reflection followed by a line reflection

2. In the diagram below, congruent figures 1, 2, and 3 are drawn. Which sequence of transformations maps figure 1 onto figure 2 and then figure 2 onto figure 3?

- 1) a reflection followed by a translation
- 2) a rotation followed by a translation
- 3) a translation followed by a reflection
- 4) a translation followed by a rotation



3. In the diagram below of $\triangle ABC$ and $\triangle XYZ$, write a sequence of rigid motions maps triangle ABC onto triangle XYZ .

