

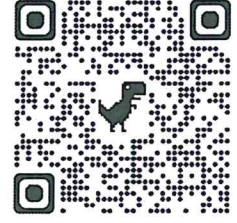
Check for orientation!!

Name Schlansky
Mr. Schlansky

same can't be a single line reflection
different must be a single line reflection

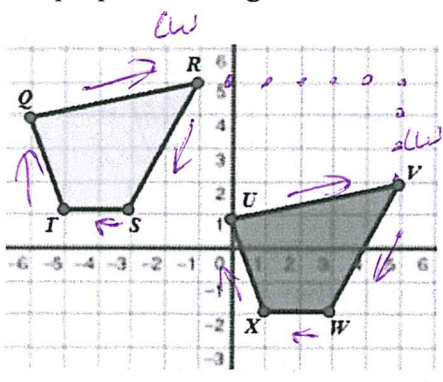
A rigid motion preserves size and angle measure producing a congruent figure.

Date _____
Geometry



Identifying and Proving Rigid Motions

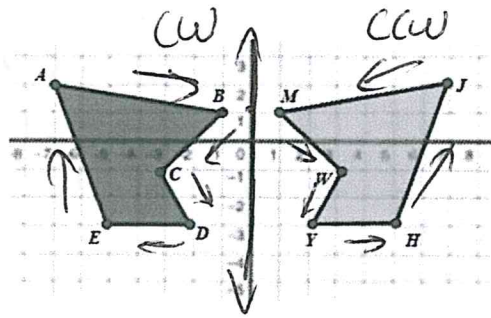
1. Identify the rigid motion that maps QRST onto UVWX. Is QRST congruent to UVWX? Use the properties of rigid motions to explain your answer.



same orientation
reflection

Translation right 6 and down 3.
Yes, a translation is a rigid motion.
A rigid motion preserves size and angle measure producing a congruent figure.

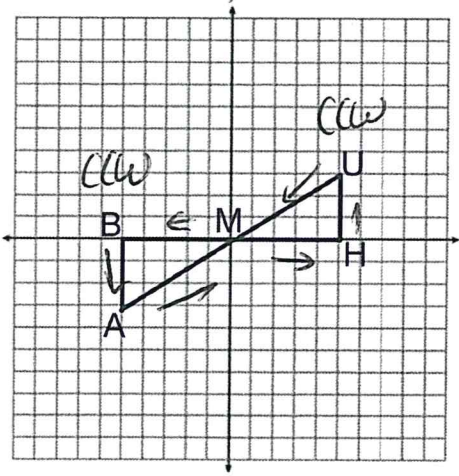
2. Identify the rigid motion that maps ABCDE onto JMWH. Is ABCDE congruent to JMWH? Use the properties of rigid motions to explain your answer.



different orientation
reflection

Reflection over the y-axis.
Yes, a reflection is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

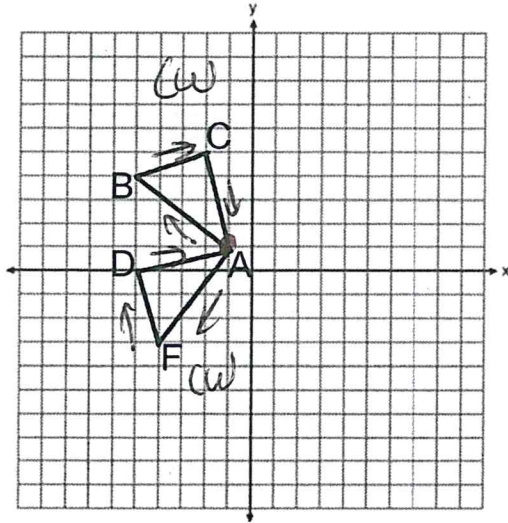
3. Identify the rigid motion that maps BAM onto HUM. Is BAM congruent to HUM? Use the properties of rigid motions to explain your answer.



same orientation
reflection

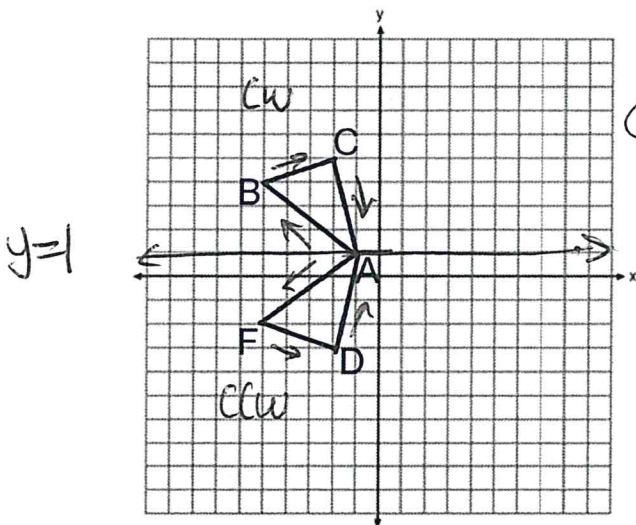
Rotation of 180° clockwise centered at M. Yes, a rotation is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

4. Identify the rigid motion that maps $\triangle ABC$ onto $\triangle AFD$. Is $\triangle ABC$ congruent to $\triangle AFD$? Use the properties of rigid motions to explain your answer.



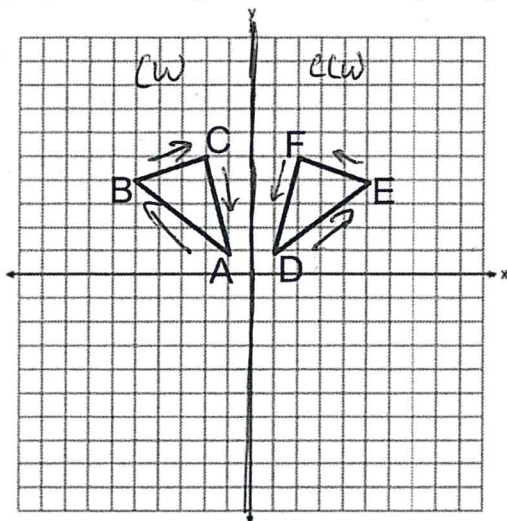
Same orientation
~~reflection~~ Rotation of ~~90~~ 90 degrees counter-clockwise centered at A.
 Yes, a rotation is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

5. Identify the rigid motion that maps $\triangle ABC$ onto $\triangle AFD$. Is $\triangle ABC$ congruent to $\triangle AFD$? Use the properties of rigid motions to explain your answer.



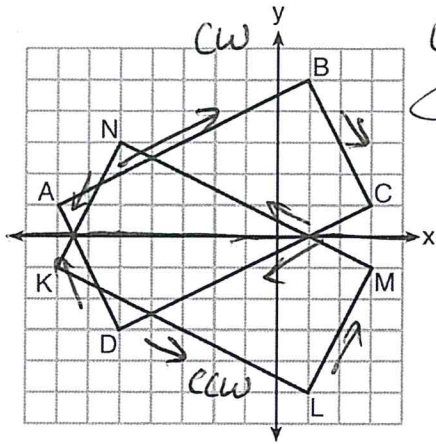
different orientation
 reflection over $y=1$. Yes, a reflection is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

6. Identify the rigid motion that maps $\triangle ABC$ onto $\triangle DEF$. Is $\triangle ABC$ congruent to $\triangle DEF$? Use the properties of rigid motions to explain your answer.



different orientation
 reflection over the y-axis. Yes, a reflection is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

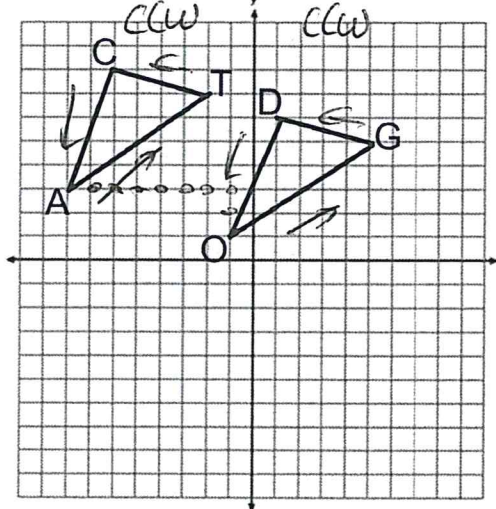
7. On the set of axes below, rectangle $ABCD$ and rectangle $KLMN$ are graphed. Identify the rigid motion that maps $ABCD$ onto $KLMN$. Is $ABCD$ congruent to $KLMN$? Use the properties of rigid motions to explain your answer.



Opposite orientation
~~reflection~~ Yes!

Reflection over the x-axis.
 A reflection is a rigid motion.
 A rigid motion preserves size and angle measure producing a congruent figure.

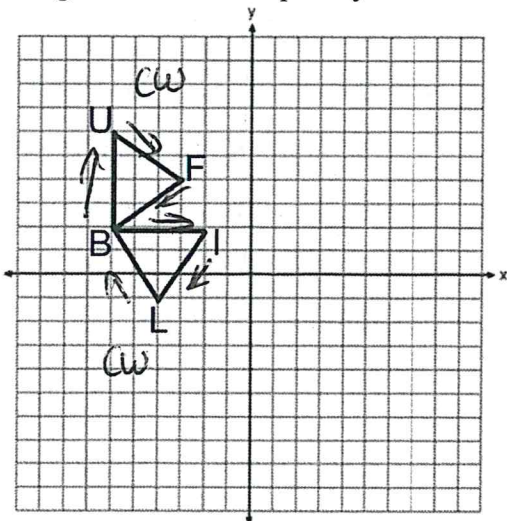
8. Identify the rigid motion that maps CAT onto DOG . Is CAT congruent to DOG ? Use the properties of rigid motions to explain your answer.



Same orientation
~~reflection~~

Translation of 7 units right and 2 units down.
 Yes! A translation is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

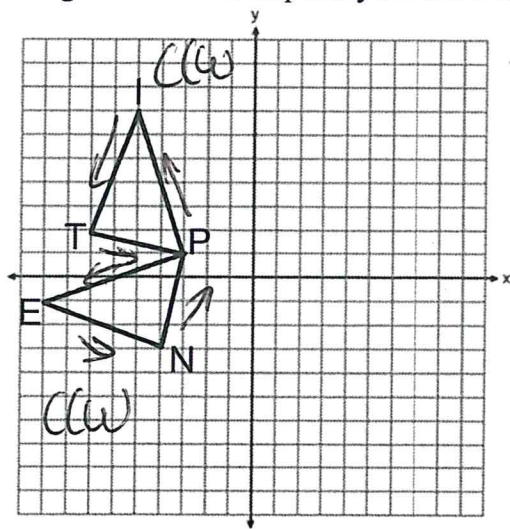
9. Identify the rigid motion that maps BUF onto BIL . Is BUF congruent to BIL ? Use the properties of rigid motions to explain your answer.



Same orientation
~~reflection~~

Rotate $\triangle BUF$ 90° clockwise centered at B .
 Yes, a rotation is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

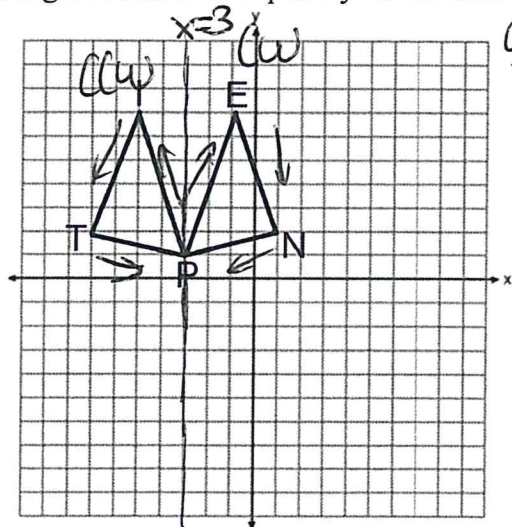
10. Identify the rigid motion that maps PIT onto PEN. Is PIT congruent to PEN? Use the properties of rigid motions to explain your answer.



Same orientation
~~reflection~~

Rotate $\triangle PIT$ 90°
Counter-clockwise centered at P.
Yes, a rotation is a rigid motion.
A rigid motion preserves size and angle measure producing a congruent figure.

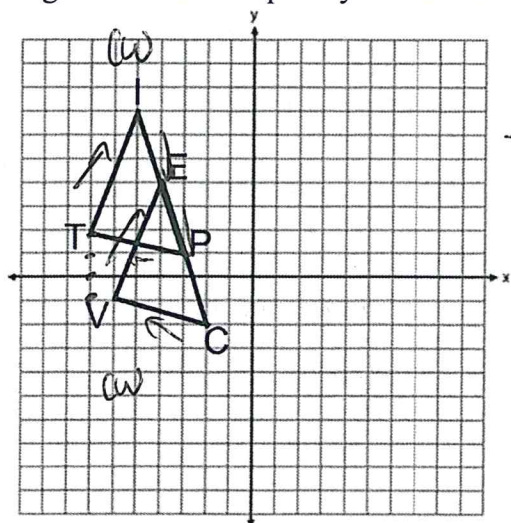
11. Identify the rigid motion that maps PIT onto PEN. Is PIT congruent to PEN? Use the properties of rigid motions to explain your answer.



opposite orientation
reflection

Reflect $\triangle PIT$ over $x=3$. Yes, a reflection is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.

12. Identify the rigid motion that maps VEC onto TIP. Is VEC congruent to TIP? Use the properties of rigid motions to explain your answer.



Same orientation
~~reflection~~

Translate $\triangle VEC$ left 1 and up 3. Yes! A translation is a rigid motion. A rigid motion preserves size and angle measure producing a congruent figure.