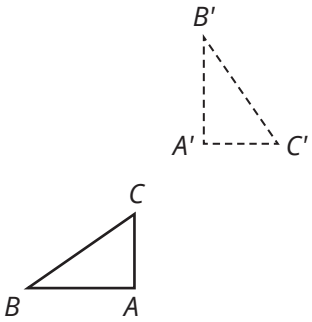
Enhanced End of Topic Assessment

Name _____ Date _____

Part A: Multiple-Choice Questions

1. Which sequence of transformations will **NOT** carry the given pre-image onto the image shown with dashed lines?



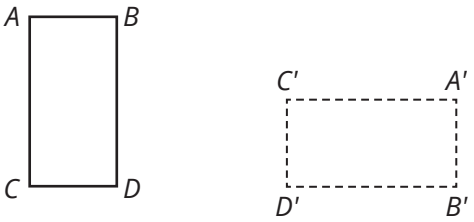
a. Rotate 90° clockwise about point C, and then translate the distance CC'

b. Reflect across $\overline{AC}$, and then translate up

c. Translate the distance CC', and then rotate 90° clockwise about C

d. Translate the distance AA', and then rotate 90° clockwise about A

2. Which sequence of transformations will carry the given pre-image onto the image shown with dashed lines?



a. Reflect across $\overline{BD}$, and then rotate 270° clockwise

b. Rotate 90° clockwise about D, and then translate to the right

c. Translate to the right, and then rotate 90° counterclockwise about A

d. Rotate 90° about D, and then reflect across $\overline{AB}$

3. Which algebraic representation indicates reflecting a shape over the *x*-axis and then translating the shape up 2 units and right 5 units on the coordinate plane?

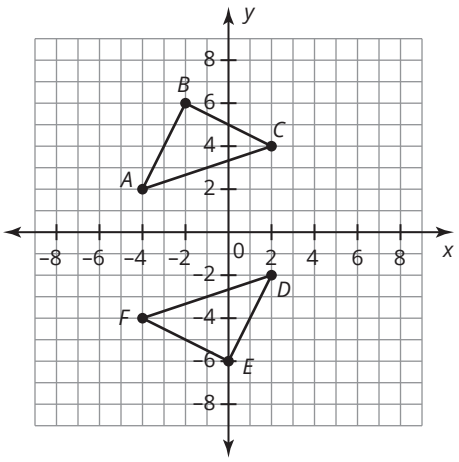
a. $(x + 5, -y + 2)$

b. $(x - 5, -y + 2)$

c. $(-x + 5, y + 2)$

d. $(-x - 5, y + 2)$

4. $\triangle ABC$ is transformed to create $\triangle DEF$. What sequence of transformations maps one to the other?



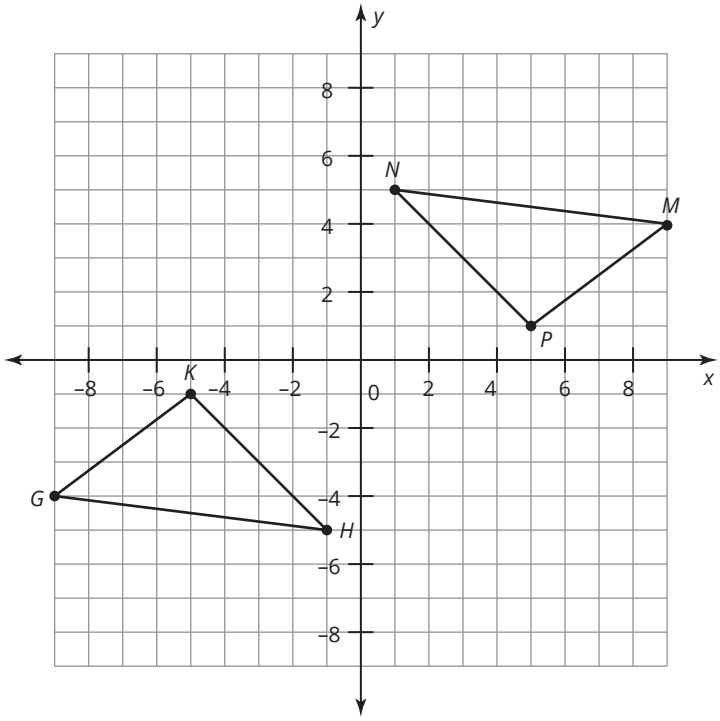
a. Rotate 180° about the origin, then translate left 2 units

b. Reflect over the *x*-axis, then translate down 2 units

c. Translate 4 units to the right, then rotate 180° about the origin

d. Translate 2 units to the right, then reflect over the *x*-axis

5. The image in this figure was formed by reflecting ΔGHK over the y-axis and then over the x-axis. Which congruence statement is **NOT** true?



a. $\overline{GH} \cong \overline{MN}$

b. $\overline{KH} \cong \overline{PN}$

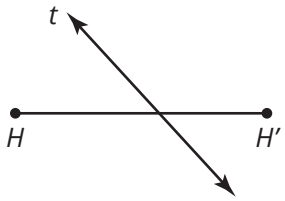
c. $\angle K \cong \angle N$

d. $\angle G \cong \angle M$

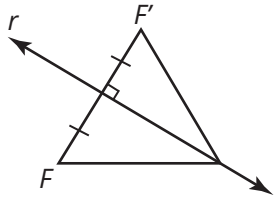
Part B: Open-Response Questions

6. Use the Perpendicular Bisector Theorem to decide whether each diagram shows a reflection of the pre-image(s) to form the image(s). Explain your answers.

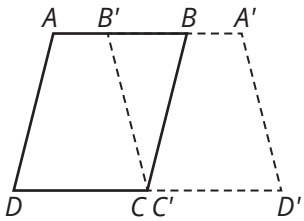
a.



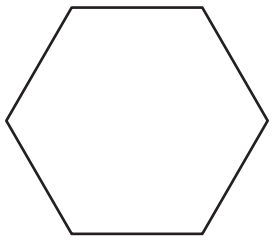
b.



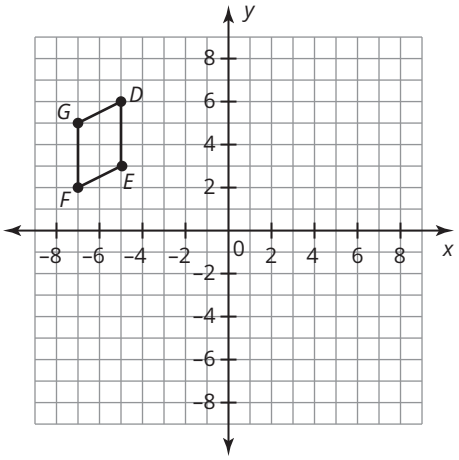
7. Describe the sequence of transformations that will carry the given pre-image onto the image shown with dashed lines.



8. Use reflectional and rotational symmetry to describe the reflection(s) and rotation(s) that will carry the regular hexagon onto itself.

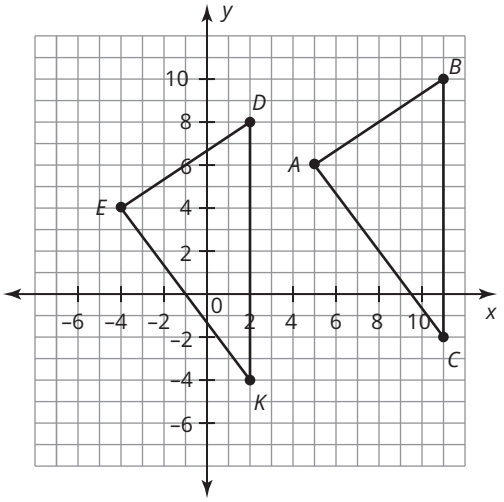


9. Analyze parallelogram *DEFG*.



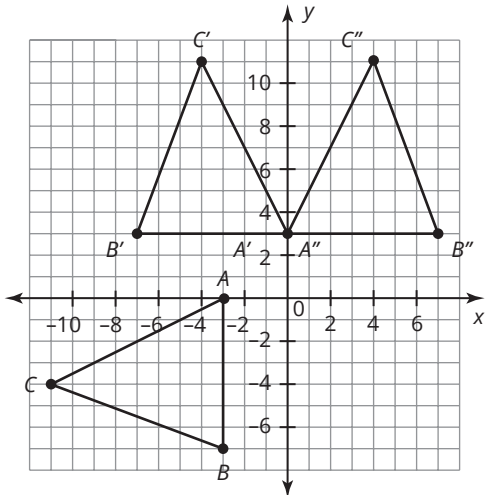
Rotate parallelogram *DEFG* about the origin 180° counterclockwise. Graph and label the figure *D'E'F'G'*. Identify the vertex coordinates of image *D'E'F'G'*. How can you represent the transformation using coordinate notation?

10. Analyze the triangles shown.



Triangle *ABC* was transformed to create triangle *EDK*. Describe the transformation used to create triangle *EDK*, and represent the transformation using coordinate notation.

11. Analyze the triangles shown.

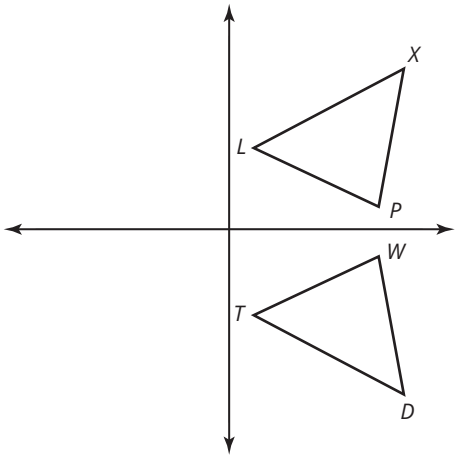


a. Triangle *ABC* was transformed to create triangle *A′B′C′*. Determine the transformation used to form triangle *A′B′C′*.

b. Triangle *A′B′C′* was transformed to create triangle *A″B″C″*. Determine the transformation used to form triangle *A″B″C″*.

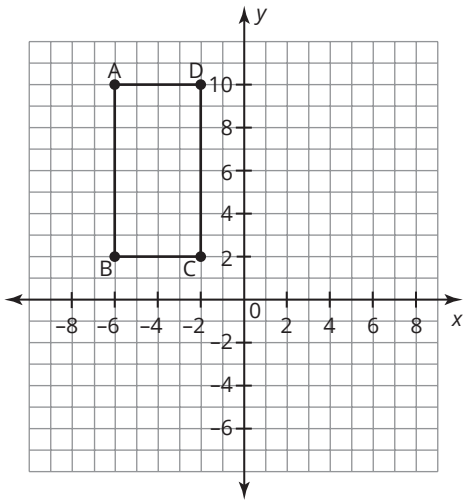
c. How can you represent the transformation from triangle *ABC* to triangle *A″B″C″* using coordinate notation?

12. $\triangle TDW$ was formed by reflecting $\triangle LXP$ across the x-axis.



Write congruency statements for the corresponding sides and angles of $\triangle LXP$ and the image, $\triangle TDW$.

13. Consider rectangle *ABCD*.



Translate rectangle *ABCD* down 4 units and then rotate 180° about the origin.

Part C: Griddable Response Questions

Record your answers and fill in the bubbles.

14. How many lines of symmetry does a regular pentagon have?