Unit: Transformational Geometry

Assessment Review

Name _____

Period _____ Date _____

G.CO.2 Learning Target: *I can describe a transformation using coordinate notation that maps one point onto a unique image point. I can compare transformations that preserve distance and angle to those that do not.*

1. Translate the quadrilateral $W(-2,2)$, $X(-3,3)$, $Y(-6,5)$, $Z(-6,3)$ using the transformation $(x,y) \rightarrow (x-2, y+3)$.

   A. $W'(-4,5)$, $X'(-5,6)$, $Y'(-8,8)$, $Z'(-8,6)$

   B. $W'(0,5)$, $X'(-1,6)$, $Y'(-4,8)$, $Z'(-4,6)$

   C. $W'(0,-1)$, $X'(-1,0)$, $Y'(-4,2)$, $Z'(-4,0)$

   D. $W'(4,6)$, $X'(6,9)$, $Y'(12,15)$, $Z'(12,9)$

-1, -2

2. After a translation, the image $P(-3,5)$ is $P'(-4,3)$. Identify the image of the point Q $(1,-6)$ after this same translation. Then, describe the rule of the rigid transformation in coordinate notation and in words.

   Point Q': (0,-8)

   Coordinate notation:

   (x,y) → (x-1, y-2)

   Words:

   go to the left 1 & down 2

3. ΔJKL is rotated 90° **clockwise** about the origin and then translated using $(x,y) \rightarrow (x-8, x+5)$.

   What are the coordinates of the final image of point L under this composition of transformations?

(y, -x)

J(0,3) J'(3,0)

K(4,4) K'(4,-4)

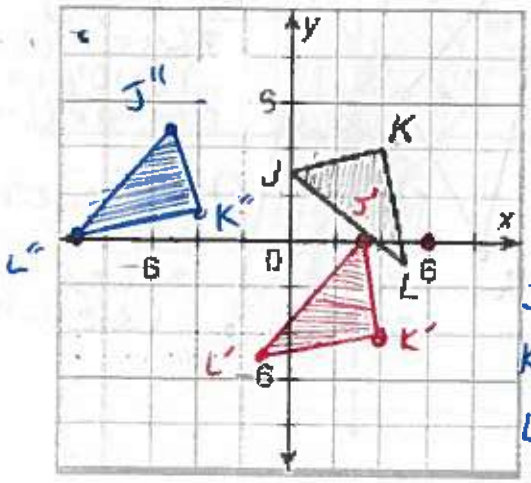
L(5,-1) L'(-1,-5)

(x-8, y+5)

J"(-5,+5)

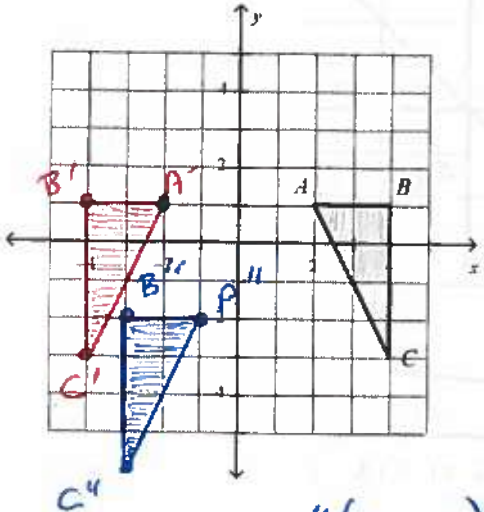
K"(-4,1)

L"(-9,0)



Answer: L"(-9,0)

4. ΔABC is translated using $(x,y) \rightarrow (x+1, y-3)$ after it is reflected across the y-axis. What are the coordinates of the final image of point C under this composition of transformations?



Answer: C"(-3,-6)