

# Transformations Quiz Review

## Geometry

Describe each algebraic rule below with the transformation it defines.

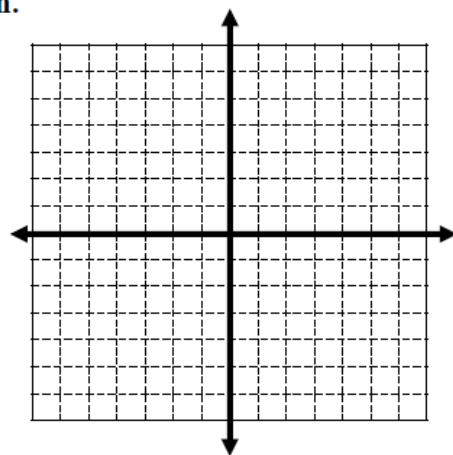
1.  $(x,y) \rightarrow (-x, y)$
2.  $(x,y) \rightarrow (-x, -y)$
3.  $(x,y) \rightarrow (-y, x)$
4.  $(x,y) \rightarrow (y+2, x-5)$

Describe each transformation using an algebraic rule:

1. Reflection across  $y=-x$ .
2.  $90^\circ$  rotation clockwise.
3. Reflection across the  $y$ -axis followed by a translation up 4, left 5.

The vertices of  $\triangle MNO$  are  $M(-2, 4)$ ,  $N(-1, 1)$  and  $O(3, 3)$ . Graph and label the image of the triangle using prime notation.

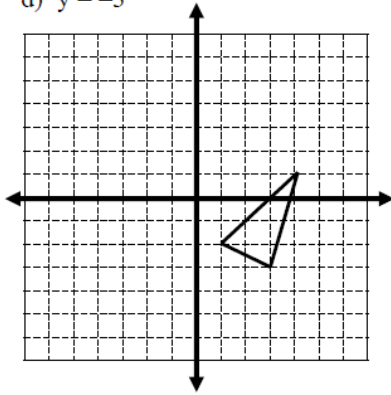
$$(x, y) \rightarrow (x + 4, y - 6)$$



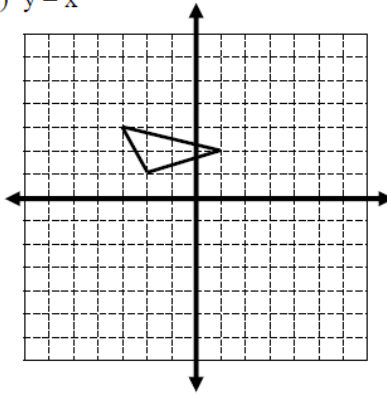
Rectangular Snip

Reflect across the given lines.

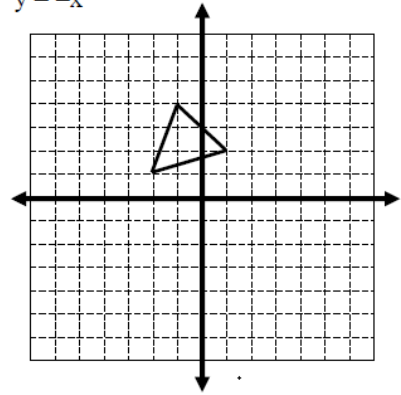
d)  $y = -3$



e)  $y = x$

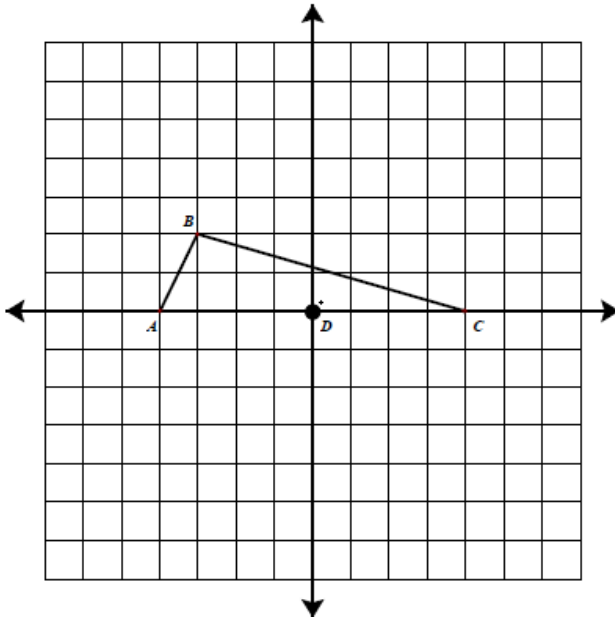


f)  $y = -x$



Complete the rotation.

Rotate  $\triangle ABC$   $180^\circ$  counter-clockwise about point  $D$ . Label the corresponding vertices. Write the coordinates in the table below in order to find the rule for a  $180^\circ$  counter-clockwise rotation.



	Pre-image	Image
$A$		
$B$		
$C$		

Rule:  $(x, y) \rightarrow$

Read this next one very carefully!

Polygon  $H'E'X'A'G'N'$  is the image resulting from a translation of polygon  $H'X'A'G'N'$  by the vector  $(x, y) \rightarrow (x + 7, y - 4)$ . Find the coordinates of the pre-image.

