

Name: Geom. Answer Key Date: Thursday

Reflections and Rotations Practice

CW

Find the coordinates of the vertices of each figure after the given transformation.

1. Reflection across the x-axis.

$R(-2, 2) \rightarrow -2, -2$

$J(-1, 4) \rightarrow -1, -4$

$G(3, 4) \rightarrow 3, -4$

2. Reflect across the y-axis.

$H(1, -3) \rightarrow -1, -3$

$Z(1, 2) \rightarrow -1, 2$

$W(4, 1) \rightarrow -4, 1$

3. Reflect across the line
- $y = x$
- .

$E(-4, -2) \rightarrow -2, -4$

$N(-1, 0) \rightarrow 0, -1$

$A(1, -3) \rightarrow -3, 1$

4. Reflect across the line
- $y = -x$
- .

$N(-4, 2) \rightarrow -2, 4$

$L(-1, 3) \rightarrow -3, 1$

$R(-1, 2) \rightarrow -2, 1$

5. Reflect across the y-axis.

$R(1, -5) \rightarrow -1, -5$

$Y(0, -3) \rightarrow 0, -3$

$U(2, 0) \rightarrow -2, 0$

$V(4, -2) \rightarrow -4, -2$

6. Reflect across the line
- $y = -x$
- .

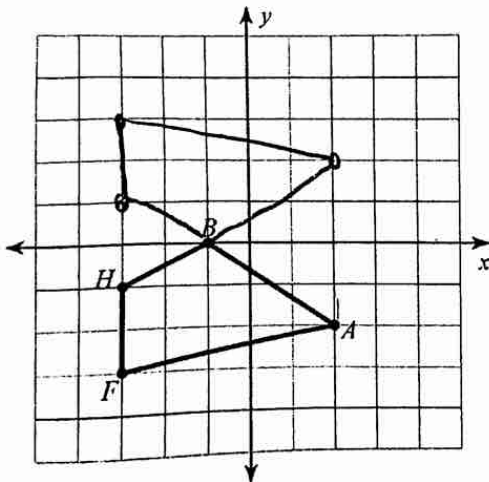
$Z(-5, -2) \rightarrow 2, 5$

$P(-5, 2) \rightarrow -2, 5$

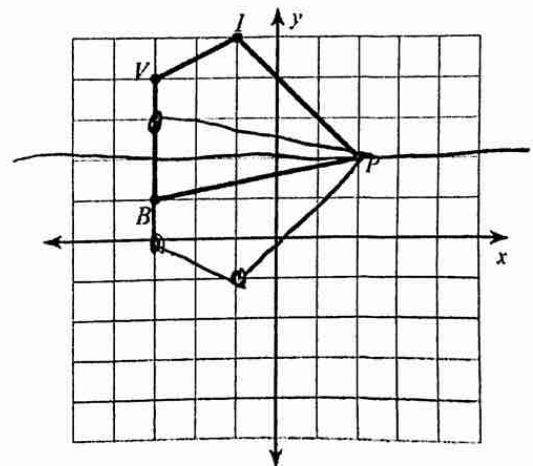
$N(-3, 3) \rightarrow -3, 3$

$A(-2, 0) \rightarrow 0, 2$

7. Reflect the image.
-
- reflection across the y-axis



8. Reflect the image.
-
- reflection across the
- ~~axis~~
- $y = 2$



Write a rule to describe each transformation.

$Z(0, -4) \rightarrow Z'(0, 4)$

9. $W(1, 0) \rightarrow W'(1, 0)$ reflect over X axis
 $S(3, 0) \rightarrow S'(3, 0)$

$Q(-4, -3) \rightarrow Q'(4, -3)$

10. $S(-5, 1) \rightarrow S'(5, 1)$ reflect over y
 $L(-2, -1) \rightarrow L'(2, -1)$

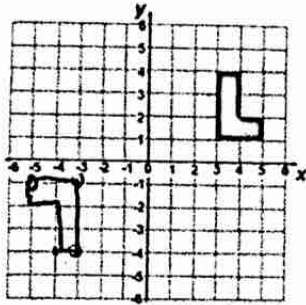
$N(1, 2) \rightarrow N'(1, -2)$ reflect over

11. $E(1, 5) \rightarrow E'(1, -5)$ over X axis
 $C(5, 2) \rightarrow C'(5, -2)$

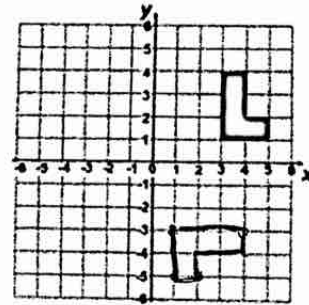
12. $J(1, 2) \rightarrow J'(-1, 2)$ reflect over y
 $S(1, 5) \rightarrow S'(-1, 5)$
 $X(5, 2) \rightarrow X'(-5, 2)$

Where will the L-Shape be if it is...

a. rotated 180° around the origin?

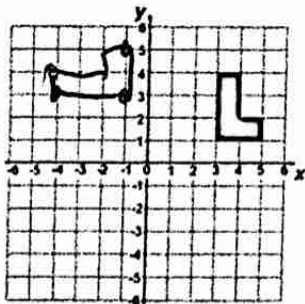


b. rotated 90° clockwise around the origin?



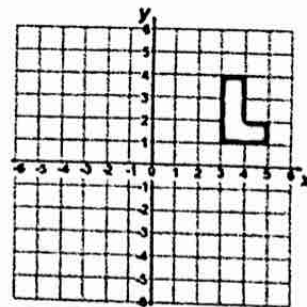
~~x, y~~
 y, -x
 1, -3
 1, -4
 2, -3
 2, -4
 4, -3
 4, -4

c. rotated 90° counterclockwise around the origin?



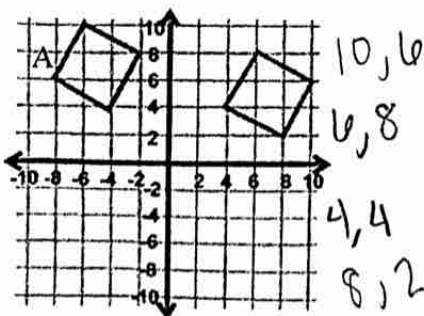
-y, x
 -1, 3
 -1, 4
 -4, 3
 -4, 4
 same

d. rotated 270° clockwise around the origin?



Find the angle of rotation for the graphs below. The center of rotation is the origin, and the Image labeled A is the preimage. Your answer will be 90°, 180°, or 270°.

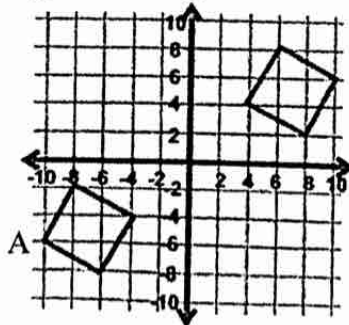
a.



-8, 6
 -4, 10
 2, 8
 -4, 4

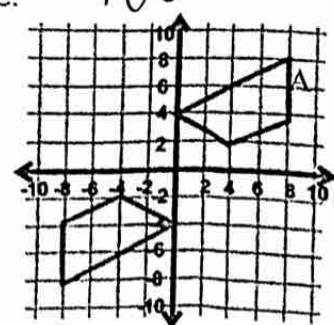
90° CW

b.



180°

c.



180°