

Directions: Using the rule provided, describe the transformation that has occurred.

1) $(x, y) \rightarrow (y, x)$

2) $(x, y) \rightarrow (-y, x)$

3) $(x, y) \rightarrow (x-3, y)$

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

Reflection over $y=x$

90° CCW Rotation

Left 3 units

Reflection over x -axis ($y=0$)

Directions: Write the rule to represent the transformation.

5) Rotate 90° CW about the origin

$(x, y) \rightarrow (y, -x)$

6) Translate 5 units left and 3 units up

$(x, y) \rightarrow (x-5, y+3)$

7) Reflect over $y = -x$

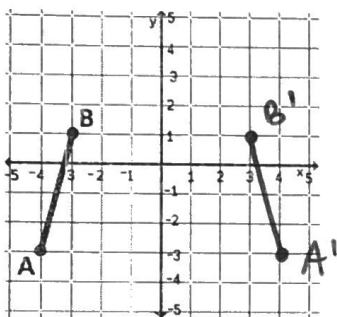
$(x, y) \rightarrow (-y, -x)$

8) Rotate 180° CCW about the origin

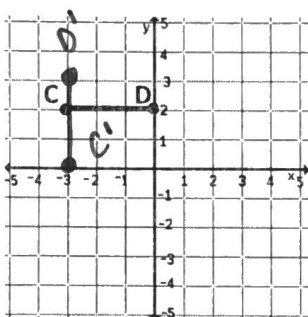
$(x, y) \rightarrow (-x, -y)$

Directions: Graph the transformation using the given information.

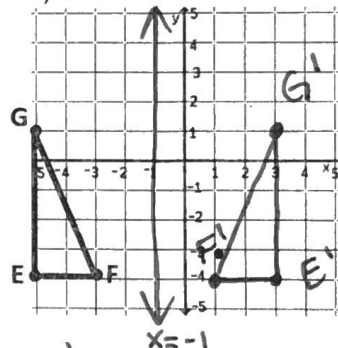
9) $(x, y) \rightarrow (-x, y)$



10) Rotate 90° CCW about $(-2, 1)$



11) Reflect over $x = -1$



should be a double prime

$C(-3, 2) \rightarrow (-1, 1) \rightarrow (-1, -1) \rightarrow C'(-3, 0)$
 $D(0, 2) \rightarrow (2, 1) \rightarrow (-1, 2) \rightarrow D'(-3, 3)$

Directions: Solve each problem.

12) If $Z(3, -4)$, what is Z'' after it has been reflected over the x -axis and then moved 5 units to the right.

$Z(3, -4) \rightarrow Z'(3, 4) \rightarrow Z''(8, 4)$

13) If $R'(0, 5)$, what is R if the following rule was used to produce the image: $(x, y) \rightarrow (y, -x)$?

$R(-5, 0)$

14) If $J(3, 1)$ is reflected over $y = x$, which other transformation would have the same coordinate as J' ?

A) $M(1, 3)$ is transformed using the rule $(x, y) \rightarrow (-x, -y)$. $M'(-1, -3)$

B) $H(1, -3)$ is reflected over the y -axis. $H'(-1, -3)$

C) $W(-1, 3)$ is rotated 270° CCW about the origin. $W'(3, 1)$

D) $E(4, -5)$ is translated 3 units left and 8 units up. $E'(1, 3)$

Directions:

1) Log into usatestprep.com

2) Complete the following benchmark: JOJOWEZUTA