

Name KEY

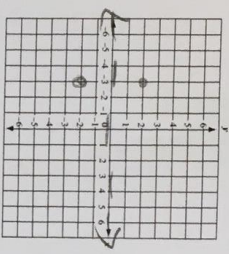
Date _____

Station 1: Reflecting Points

Identify the image after the given reflection. The graph is optional for each problem.

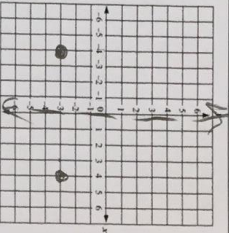
1. $A(-3, 2)$ in the x -axis

$A'(-3, -2)$



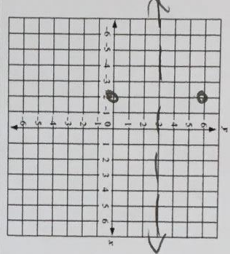
2. $B(-4, -3)$ in the y -axis

$B'(4, -3)$



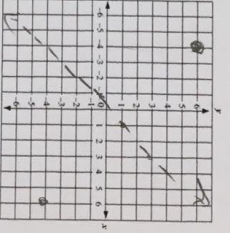
3. $C(-2, 0)$ in the line $y = 3$

$C'(-2, 6)$



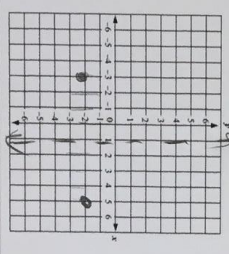
4. $D(-4, 6)$ in the line $y = x$

$D'(6, -4)$



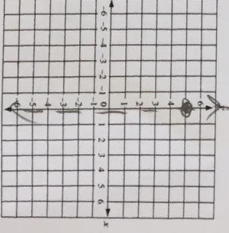
5. $E(5, -2)$ in the line $x = 1$

$E'(-3, -2)$



6. $F(0, 5)$ in the y -axis

$F'(0, -5)$



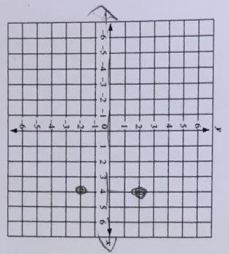
Name KEY

Date _____

Station 2: Identifying Lines of Reflection

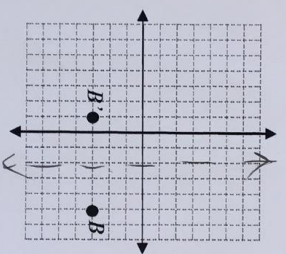
For each reflection, identify the line of reflection.

1. $A(4, 2) \rightarrow A'(4, -2)$



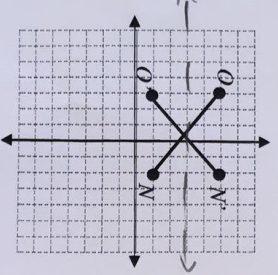
X -axis (or $Y=0$)

2.



$X = 2$

3.



$Y = 3$

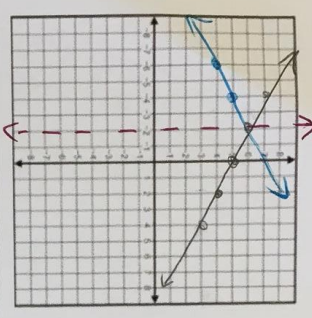
Slope Intercept Form: $y = mx + b$

Point-Slope Form: $y - y_1 = m(x - x_1)$

1. Find the image of the line $y = -\frac{1}{2}x + 5$ under a reflection in the line $x = -2$. Write the equation of the image in slope-intercept form.

Pre-Image $(0, 5) \rightarrow$ Image $(-4, 5)$
 $(2, 4) \rightarrow (-6, 4)$

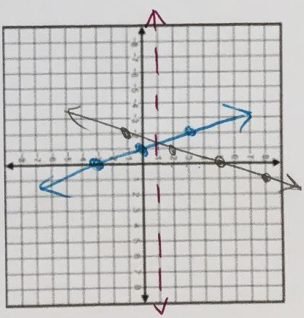
$m = \frac{1}{2}, b = 7$
 $Y = \frac{1}{2}X + 7$



2. Find the image of the line $y = 3x + 5$ under a reflection in the line $y = 1$. Write the equation of the image in slope-intercept form.

Pre-Image $(0, 5) \rightarrow$ Image $(0, -3)$
 $(-1, 2) \rightarrow (-1, 0)$

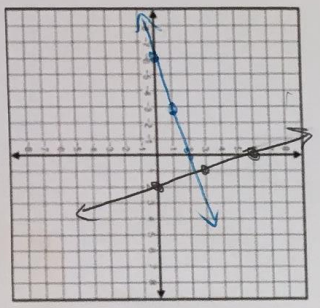
$m = -3, b = -3$
 $Y = -3X - 3$



3. Graph the image of the line $y = -3x + 6$ rotated 270° CW about the origin. Write the equation of the image in slope intercept form.

Pre-Image $(0, 6) \rightarrow$ Image $(-6, 0)$
 $(1, 3) \rightarrow (-3, 1)$

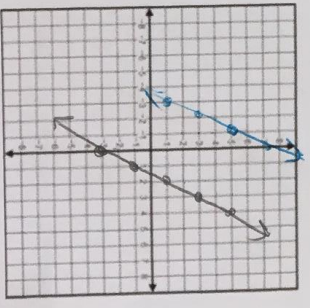
$m = \frac{1}{3}, b = 2$
 $Y = \frac{1}{3}X + 2$



4. Graph the image of the line $y = 2x - 3$ translated along the vector $\langle -3, 4 \rangle$. Write the equation of the image in slope intercept form.

Pre-Image $(0, -3) \rightarrow$ Image $(-3, 1)$
 $(2, 1) \rightarrow (-1, 5)$

$m = 2, b = 7$
 $Y = 2X + 7$



Name KEY

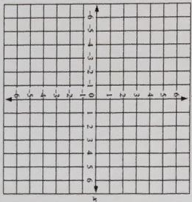
Date _____

Station 4: Rotating About Origin

Identify the image after the given rotation about the origin. The graph is optional for each problem.

1. $A(-3, -1)$ rotated 180° cw about the origin

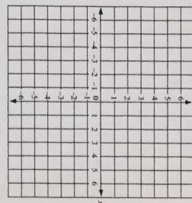
$(x, -y)$



$A' (3, 1)$

2. $A(-3, -1)$ rotated 270° ccw about the origin

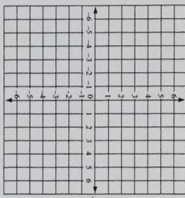
$(y, -x)$



$A' (-1, 3)$

3. $B(2, -6)$ rotated 90° ccw about the origin,

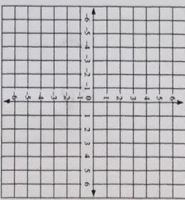
$(-y, x)$



$B' (6, 2)$

4. $B(2, -6)$ rotated -90° about the origin,

$(y, -x)$



$B' (-6, -2)$

5) Given $A(-2, 4)$, $B(6, 2)$, $C(3, -2)$ is rotated to $A'(4, 2)$, $B'(2, -6)$, $C'(-2, -3)$, select the correct options for each blank.

$\triangle ABC$ is mapped onto $\triangle A'B'C'$ by a 90° clockwise rotation about the origin.
(degrees) (direction)

or 270°

counter clockwise

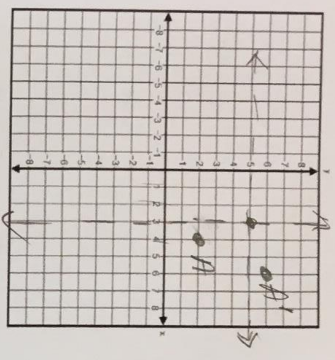
Name KEY

Date _____

Station 5: Rotating About a Point

1. Rotate $A(4, 2)$ 90° counterclockwise about $(3, 5)$

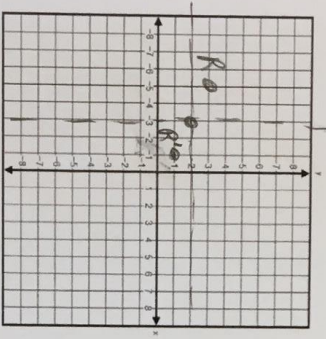
$(-y, x)$



Fake $A(1, -3) \rightarrow A'(5, 1)$

$A'(6, 6)$

2. Find the image of $R(-5, 3)$ rotated 180° clockwise about $(-3, 2)$ $(-x, -y)$

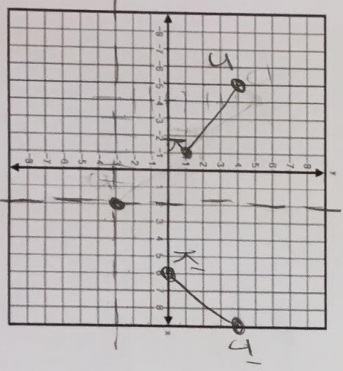


Fake $R(-2, 1) \rightarrow R'(2, -1)$

$R'(-1, 1)$

3. Rotate $J(5, 4)$ 90° clockwise about $(2, -3)$ if $(5, 4)$ and $K(-1, 1)$

90° CW



Fake $J(-7, 7) \rightarrow J'(-3, 7)$

$J'(9, 4)$

Fake $K(3, 4) \rightarrow K'(4, 3)$

$K'(6, 0)$

Name KEY

Date _____

Station 6: Put It Together

Matching: Write the letter of the correct transformation that maps each pre-image to the image.

- B $A(-9, 4) \rightarrow A'(-4, -9)$ $(x, y) \rightarrow (y, x)$
A. rotation 180° cw about the origin
B. rotation 90° ccw about the origin
C. rotation 270° ccw about the origin
D. reflection in the x-axis
E. reflection in the line $y = x$
- D $L(8, 1) \rightarrow L'(8, -1)$
- E $K(0, 5) \rightarrow K'(5, 0)$
- H $F(2, -3) \rightarrow F'(-2, 3)$ $(-x, -y)$
- C $G(7, 0) \rightarrow G'(0, -7)$ $(y, -x)$

6. Given quadrilateral $GIFT \rightarrow$ quadrilateral $BOWS$ by a reflection in the y-axis. Identify the following.

- I is mapped onto O
- $\angle F \cong$ $\angle W$
- If $T(-6, 8)$, what point can you determine on $BOWS$? $S(6, 8)$
- $\overline{FT} =$ \overline{WS}
- $\overline{TG} \rightarrow$ \overline{SB}