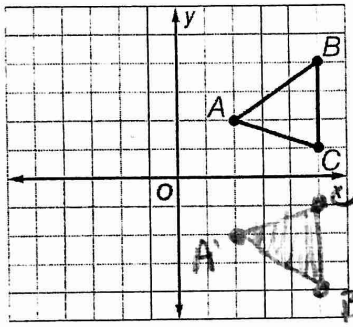


Lesson 2 Homework Practice

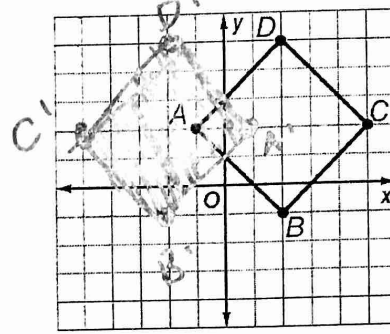
Reflections

1. Graph $\triangle ABC$ with vertices $A(2, 2)$, $B(5, 4)$, and $C(5, 1)$ and its reflection over the x -axis. Then find the coordinates of the reflected image.



$A'(2, -2)$
 $B'(5, -4)$
 $C'(5, -1)$

2. Graph square $ABCD$ with vertices $A(-1, 2)$, $B(2, -1)$, $C(5, 2)$, and $D(2, 5)$ and its reflection over the y -axis. Then find the coordinates of the reflected image.



$A'(1, 2)$
 $B'(-2, -1)$
 $C'(-5, 2)$
 $D'(-2, 5)$

The coordinates of a point and its image after a reflection are given. Describe the reflection as over the x -axis or y -axis.

** Change in y → reflect x-axis, * Change in x → reflect y-axis*

$B(1, -2) \rightarrow B'(1, 2)$
x-axis

$J(-3, 5) \rightarrow J'(-3, -5)$
x-axis

$W(-7, -4) \rightarrow W'(7, -4)$
y-axis

For Exercises 6–9, use the following information.

Triangle XYZ has vertices $X(4, 2)$, $Y(4, 4)$, and $Z(0, 2)$.

6. What are the coordinates of the image of point X after a reflection over the y -axis?

$X'(-4, 2)$

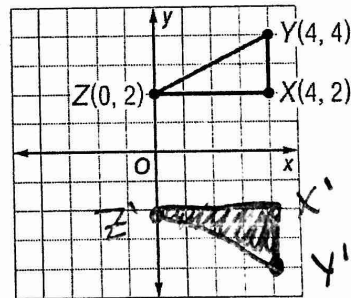
7. What are the coordinates of the image of point Y after a reflection over the y -axis?

$Y'(-4, 4)$

8. What are the coordinates of the image of point Z after a reflection over the y -axis?

$Z'(0, 2)$

9. Graph triangle XYZ and its image after a reflection over the x -axis.



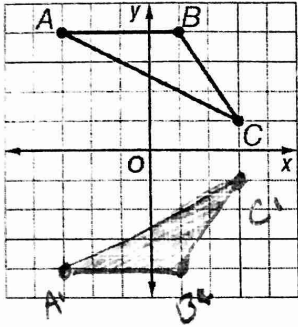
Don't graph

Lesson 2 Skills Practice

Reflections

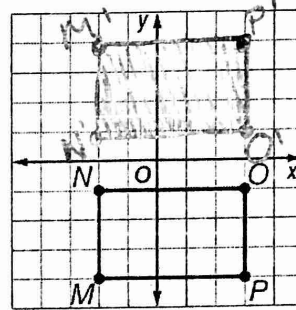
Graph the figure and its reflection over the x -axis. Then find the coordinates of the reflected image.

1. triangle ABC with vertices $A(-3, 4)$, $B(1, 4)$, and $C(3, 1)$



$$\begin{aligned} A' &(-3, -4) \\ B' &(1, -4) \\ C' &(3, -1) \end{aligned}$$

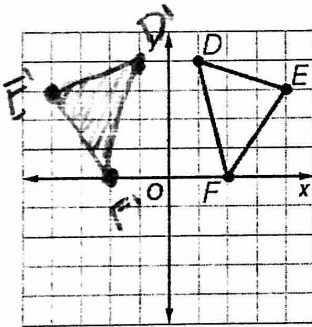
2. rectangle $MNOP$ with vertices $M(-2, -4)$, $N(-2, -1)$, $O(3, -1)$, and $P(3, -4)$



$$\begin{aligned} M' &(-2, 4) \\ N' &(-2, 1) \\ O' &(3, 1) \\ P' &(3, 4) \end{aligned}$$

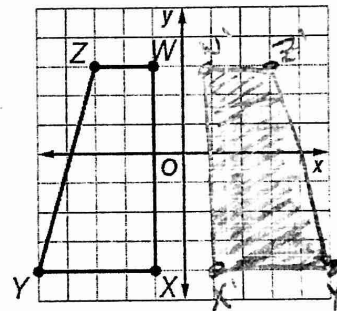
Graph the figure and its reflection over the y -axis. Then find the coordinates of the reflected image.

3. triangle DEF with vertices $D(1, 4)$, $E(4, 3)$, and $F(2, 0)$



$$\begin{aligned} D' &(-1, 4) \\ E' &(-4, 3) \\ F' &(-2, 0) \end{aligned}$$

4. trapezoid $WXYZ$ with vertices $W(-1, 3)$, $X(-1, -4)$, $Y(-5, -4)$, and $Z(-3, 3)$



$$\begin{aligned} W' &(1, 3) \\ X' &(1, -4) \\ Y' &(5, -4) \\ Z' &(3, 3) \end{aligned}$$

For Exercises 5–8, use the following information.

Triangle JKL has vertices $J(-3, 1)$, $K(-1, 3)$, and $L(-4, 2)$.

- What are the coordinates of the image of point J after a reflection over the y -axis?
 $J'(3, 1)$
- What are the coordinates of the image of point K after a reflection over the y -axis?
 $K'(1, 3)$
- What are the coordinates of the image of point L after a reflection over the y -axis?
 $L'(4, 2)$
- Graph triangle JKL and its image after a reflection over the y -axis.

