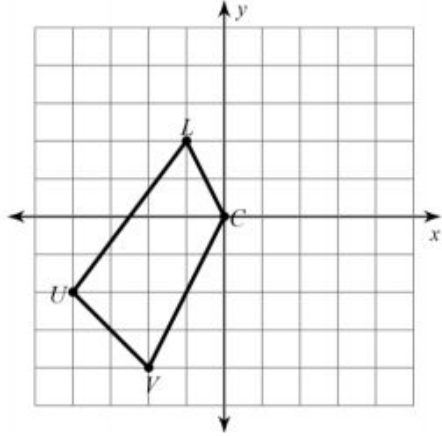


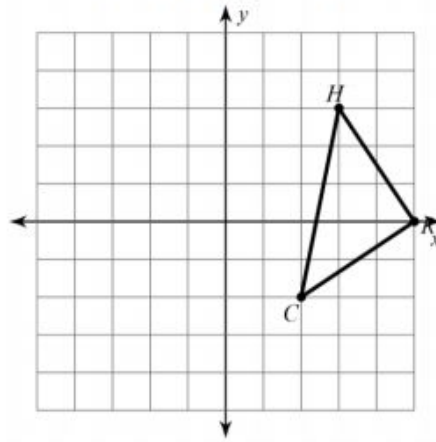
## Reflection Practice

Draw the following reflection transformations.

1. Reflect the image across the y-axis.



2. Reflect using the following rule:  $(x, y) \rightarrow (x, -y)$ .



Write mapping notation and determine the new coordinates given the following transformations.

3. Reflect over the x-axis

Mapping Notation:  $(x, y) \rightarrow$  \_\_\_\_\_

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

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

$G(3, 4) \rightarrow G'$  \_\_\_\_\_

4. Reflect over the y-axis

Mapping Notation:  $(x, y) \rightarrow$  \_\_\_\_\_

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

$Z(1, 2) \rightarrow Z'$  \_\_\_\_\_

$W(4, 1) \rightarrow W'$  \_\_\_\_\_

Write a rule to describe each transformation.

5. \_\_\_\_\_

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

$W(1, 0) \rightarrow W'(1, 0)$

$S(3, 0) \rightarrow S'(3, 0)$

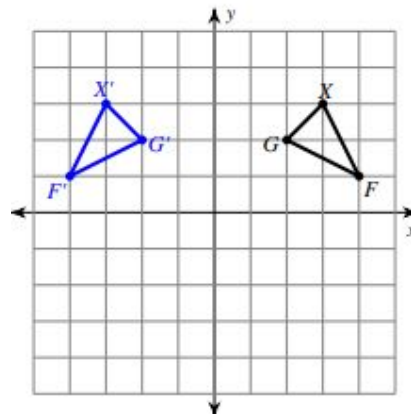
6. \_\_\_\_\_

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

$S(-5, 1) \rightarrow S'(5, 1)$

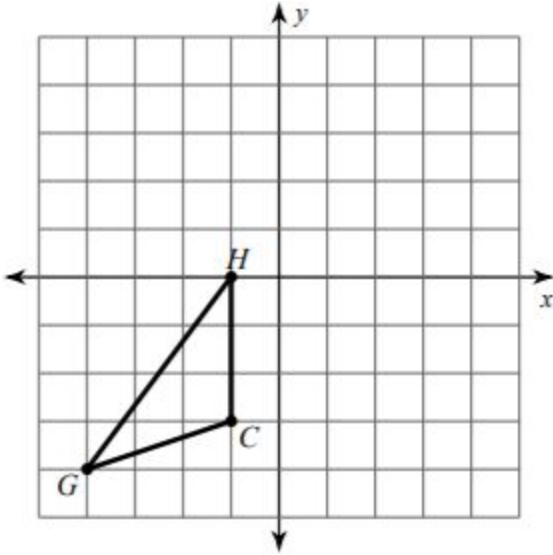
$L(-2, -1) \rightarrow L'(2, -1)$

7. \_\_\_\_\_

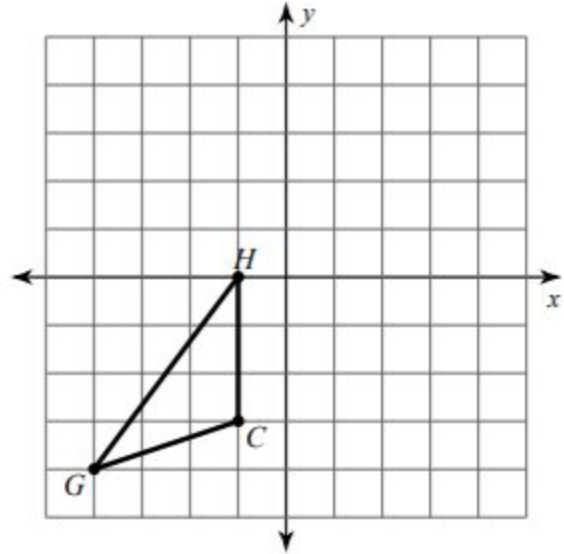


### Challenge

7. Draw the new image if triangle HCG is reflected over the y-axis **and then** translated 2 units up.

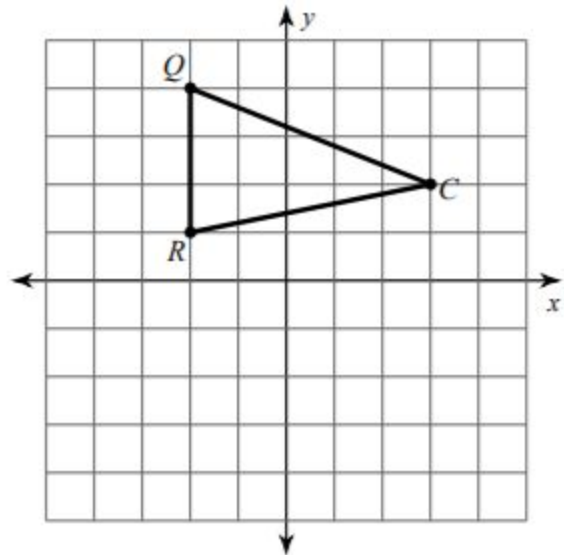


8. Draw the new image if triangle HCG is translated 2 units up and then reflected over the y-axis.



9. What are your observations about questions 7 and 8?

10. Determine the new coordinates of triangle QCR if it is reflected over the y-axis and then translated 4 units down. Use the graph if necessary.



Pre-Image	Image after Reflection	Image after Translation
Q(-2 , 4)	Q'(       )	Q''(       )
C(3 , 2)	C'(       )	C''(       )
R(-2 , 1)	R'(       )	R''(       )