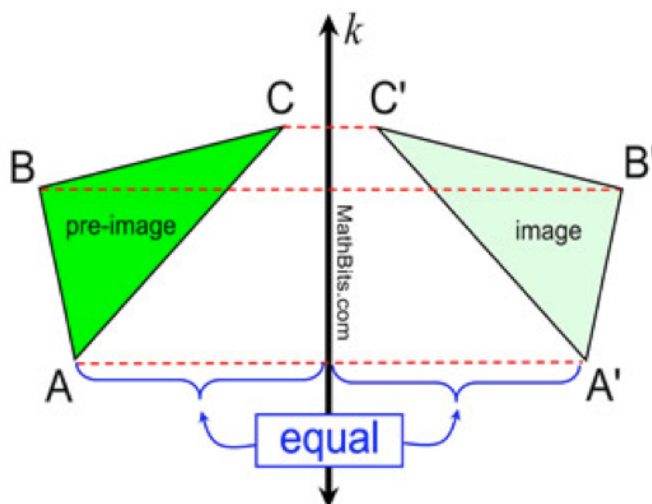


Name _____ Block _____ Date _____

Reflections - Notes

A **reflection** is a transformation which _____ the figure over a _____.

This line is called the _____.



Rules for Reflections:

- Every point of the Image is moved to the other _____ of the _____ of _____.
- Each point in the Image is the _____ distance from the line of reflection as the corresponding point in the _____.
- The image is reflected at a _____ angle to the Line of Reflection.
- The image and the preimage are _____.

Example 1:

$\triangle ABC$ is being reflected over the x -axis.

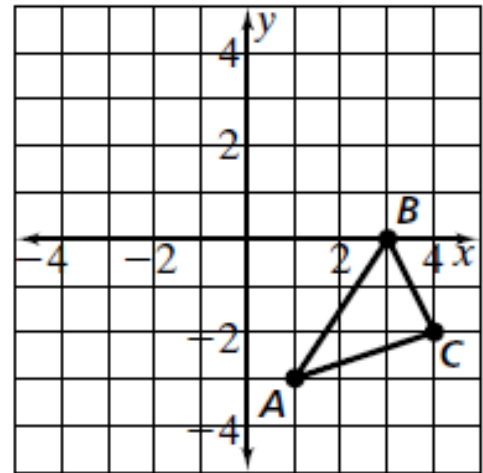
Draw and label the image $\triangle A'B'C'$.

What are the coordinates of:

A _____ \rightarrow A' _____

B _____ \rightarrow B' _____

C _____ \rightarrow C' _____



Can you write a general rule for a reflection across the x -axis?

$$(x, y) \rightarrow (\text{_____} , \text{_____}).$$

Example 2:

$\triangle ABC$ is reflected over the y -axis.

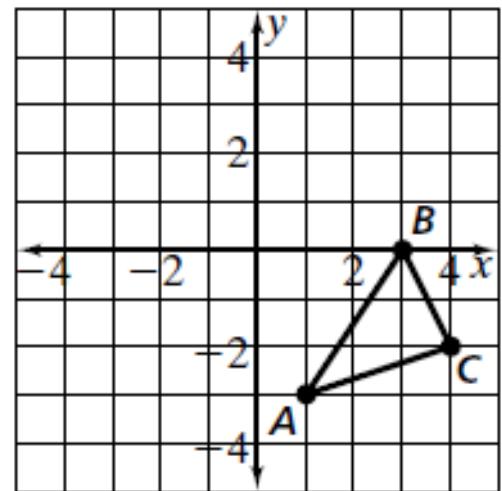
Draw the image $\triangle A'B'C'$.

What are the coordinates of:

A _____ \rightarrow A' _____

B _____ \rightarrow B' _____

C _____ \rightarrow C' _____



Write a general rule for a reflection over the y -axis:

$$(x, y) \rightarrow (\text{_____} , \text{_____}).$$

Reflections can also be made over lines that are not the axes!

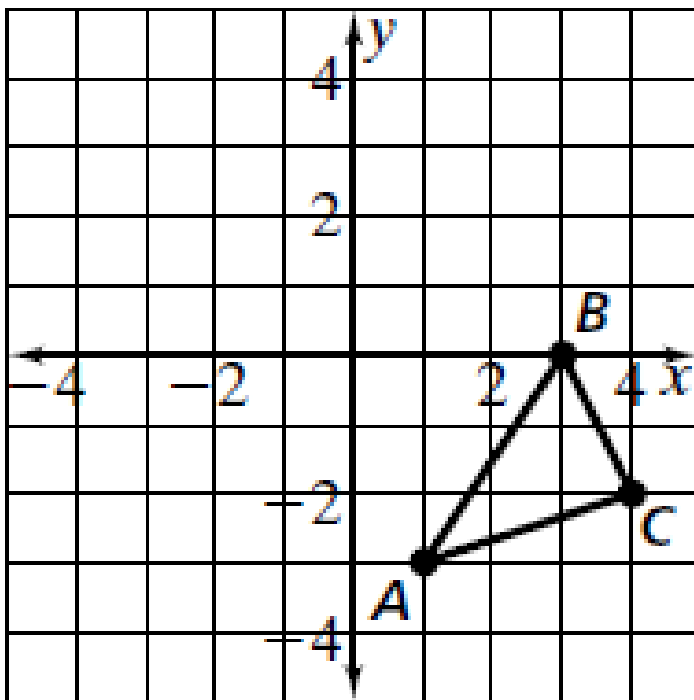
Example 3:

$\triangle ABC$ is reflected over the line $y = 1$. Draw the image $\triangle A'B'C'$.

Steps to reflecting over a line that is not one of the axes:

1. Draw your line of reflection on the graph
2. Move each point perpendicular **across** the line so that the new point is the same distance from the line of reflection as the original point.

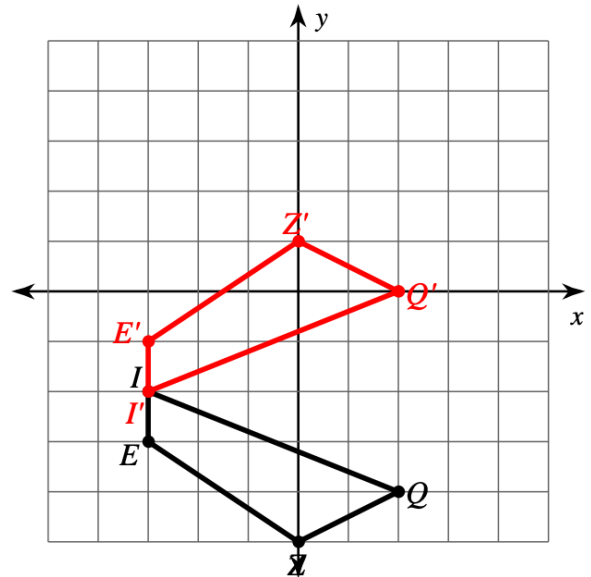
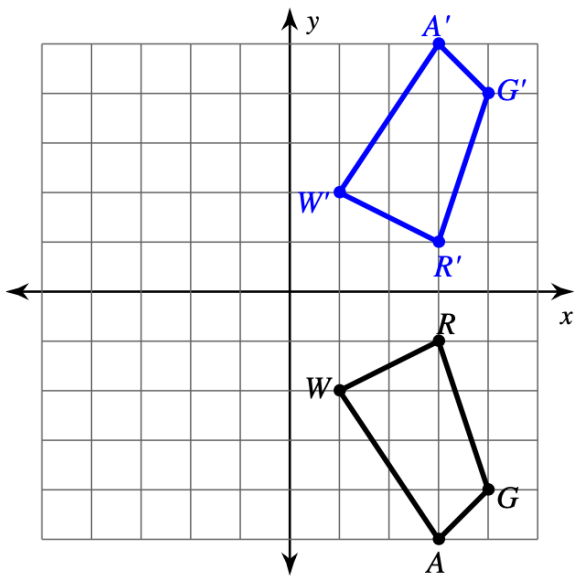
Reflect $\triangle ABC$ over the line $y = 1$



*It is not expected that you can write and use rules for reflecting over lines other than the axes. It is best to draw.

Example 4:

Write the reflections that must have occurred.



Example 5:

Write the reflection that must have occurred.

