Discovering Patterns in Transformations
Reflections over the Y-axis

Place the Geoboard Template under your Communicator.

Set up your geoboard with four quadrants.

Draw a scalene triangle that is completely in Quadrant IV. Name the vertices A, B, and C.

Record the coordinates of each vertex in the chart below.

Coordinates of A	***Coordinates of B***	***Coordinates of C***

Draw a new triangle that is the reflection of your original triangle over the y-axis. (You can flip the communicator over to see this reflection.)

Label the corresponding vertices of the new triangle A', B' and C'. Record their coordinates in the chart below.

Coordinates of A'	***Coordinates of B'***	***Coordinates of C'***

Study the change made in the coordinates to find a pattern.

Let's try it again.

Draw a scalene triangle that is completely in Quadrant III. Name the vertices A, B, and C.

Record the coordinates of each vertex in the chart below.

Coordinates of A	***Coordinates of B***	***Coordinates of C***

Redraw your triangle so it is reflected over the y-axis. Label the corresponding vertices of the new triangle A', B' and C'. Record their coordinates in the chart below.

Coordinates of A'	*Coordinates of B'*	*Coordinates of C'*

Study the change made in the coordinates to find a pattern.

If you started with a polygon that had a vertex (3,5) and you reflected it over the y-axis, what would the new coordinate be? _____

If you started with a polygon that had a vertex (x,y) and you reflected it over the y-axis, what would the coordinates of the new vertex be? _____
This means the _____ coordinate changes, but the _____ coordinate doesn't change.

Draw a line segment between two corresponding vertices, what does the y-axis do to that line?

_____

The line of reflection is the _____ of the line segment connecting two corresponding points (the original and its reflected point).