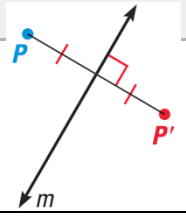
Geometry

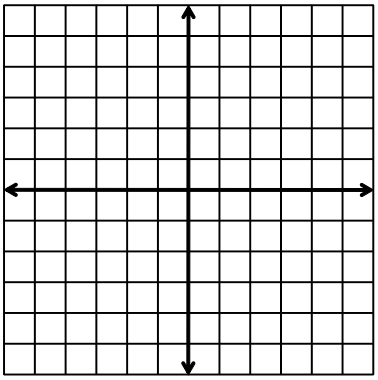
4.2 Reflections

Reflection



- Transformation that uses a line like a _____ to _____ an _____.
- That line is called _____
- P and P' are the same _____ from the ____ of _____
- The line connecting P and P' is _____ to the line of _____

Graph a reflection of ΔABC where $A(1, 3)$, $B(5, 2)$, and $C(2, 1)$ in the line $x = 2$.



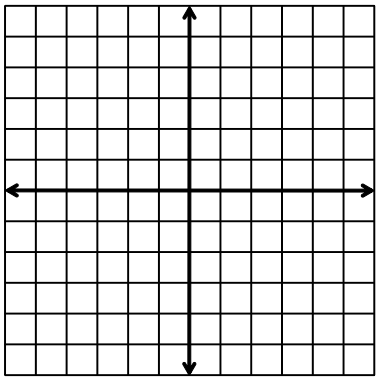
Coordinate Rules for Reflections

- Reflected in x-axis: (a, b) → _____
- Reflected in y-axis: (a, b) → _____
- Reflected in $y = x$: (a, b) → _____
- Reflected in $y = -x$: (a, b) → _____

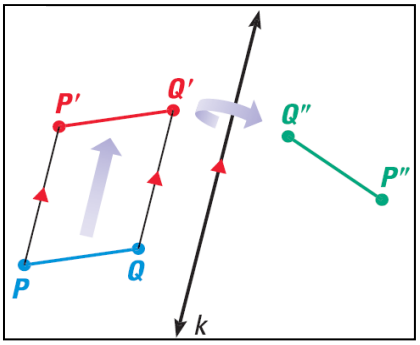
Reflection Theorem

A reflection is a _____.

Graph ΔABC with vertices $A(1, 3)$, $B(4, 4)$, and $C(3, 1)$. Reflect ΔABC in the lines $y = -x$ and $y = x$.



The vertices of ΔLMN are L(-3, 3), M(1, 2), and N(-2, 1). Find the reflection of ΔLMN in the y-axis.



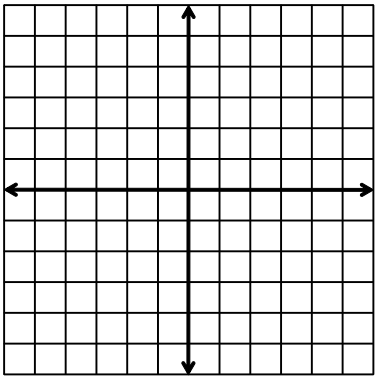
Glide Reflection

- _____ followed by _____ over a line _____ to the translation

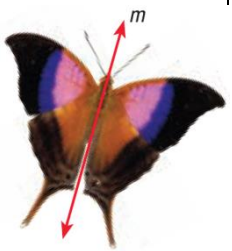
The vertices of ΔABC are $A(3, 2)$, $B(-1, 3)$, and $C(1, 1)$. Find the image of ΔABC after the glide reflection.

Translation: $(x, y) \rightarrow (x, y - 4)$

Reflection: Over y-axis



Line symmetry



- The figure can be _____ to _____ by a _____
- The line of reflection is called _____
- _____ tend to _____ that symmetry is _____

How many lines of symmetry does the object appear to have?

Assignment: 180 #2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 45, 49, 51, 54, 55 = 20