9.4A Notes- Composition of Isometries

A glide reflection is a composition of a translation (a glide) and a reflection across a line parallel to the direction of the translation.

EXAMPLES of graphing a composition of isometries.

Graph ΔABC and its glide reflection image.

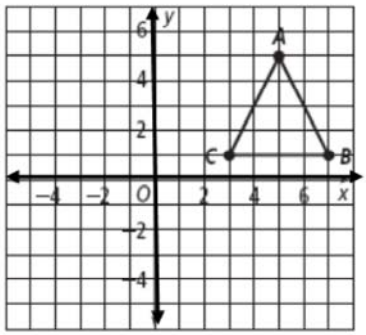
1. $(R_{x\text{-axis}} \circ T_{\langle -2, 0\rangle})(\Delta ABC)$

To start, translate the vertices of ΔABC to:

$A'(\square, \square)$, $B'(\square, \square)$, $C'(\square, \square)$.

Then, reflect $\Delta A'B'C'$ across $\square$.

x-axis

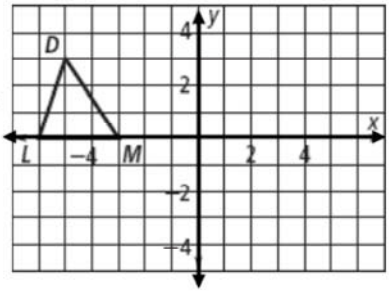


Graph ΔDML and its glide reflection image.

2. $(R_{y\text{-axis}} \circ T_{\langle 3, 0\rangle})(\Delta DML)$

First, use the translation rule $T_{\langle 3, 0\rangle}(\Delta DML)$ to move ΔDML right *(up, down, left, right) 3 units.*

Then, reflect the translation image of each of each vertex across the line of reflection, y-axis.



3. $(R_{x=2} \circ T_{\langle 0, 1\rangle})(\Delta DML)$