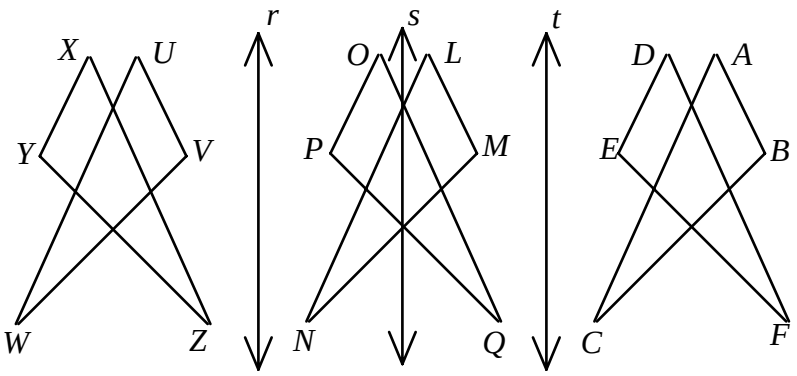
NAME:_____

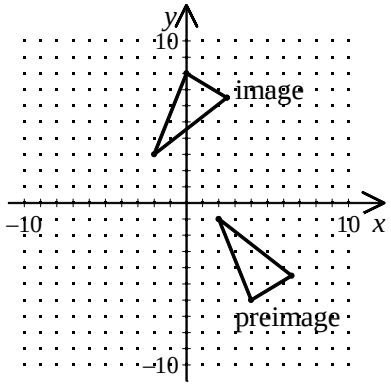
P.I. G.G.54: Define, investigate, justify, and apply isometries in the plane (rotations, reflections, translations, glide reflections)

1. Describe a two-step transformation of $\overline{AB}$ so that $A'(-2, 3)$ and $B'(1, -4)$. Give the coordinates of *A* and *B*.

2. Name the translation image of Δ *UVW* after a reflection in line *r* then a reflection in line *s*.



3. In the following glide reflection, identify the individual reflections.



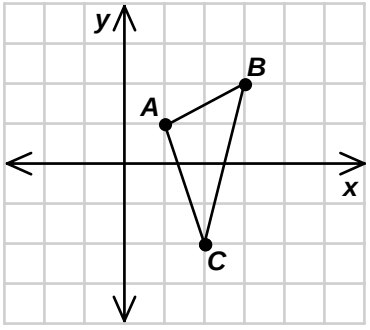
[A] a reflection in the line $y = 0$ followed by one in the line $x = y$

[B] reflections in $x = 0$, then $x = -1$, then $y = 1$

[C] a reflection in the line $x = y$ followed by one in the line $x = -y$

[D] reflections in $x = 1$, then $x = -1$, then $y = 1$

4. Find the image of ΔABC under the glide reflection $\langle 3, -1 \rangle$ and $x = 0$.



[1] Answers will vary. Sample: $A(2, 2)$ and $B(5, -5)$ are the original coordinates. The figure is translated 4 units left and 1 unit up.

[2] ΔLMN

[3] D

[4]