Composition of Transformations Practice

1. Make a giant axis on your graph paper with the origin in the middle. Then, graph and label the points: $A(3,2)$, $B(4,4)$, and $C(1,2)$ and connect them to form a triangle.

2. Translate the triangle 7 units to the left and 4 units up.
   But first:
   $(x, y) \rightarrow$ (_____, _____)

   $A(3, 2) \rightarrow A'(\quad,\quad)$
   $B(4, 4) \rightarrow B'(\quad,\quad)$
   $C(1, 2) \rightarrow C'(\quad,\quad)$

   Then graph it with a different color and label the points.

3. Dilate this new figure by a scale factor of 2.
   $(x, y) \rightarrow$ (_____, _____)

   $A'(\quad,\quad) \rightarrow A''(\quad,\quad)$
   $B'(\quad,\quad) \rightarrow B''(\quad,\quad)$
   $C'(\quad,\quad) \rightarrow C''(\quad,\quad)$

   Then graph it with a different color and label the points.

4. Reflect this new image over the y −axis.
   $(x, y) \rightarrow$ (_____, _____)

   $A''(\quad,\quad) \rightarrow A'''(\quad,\quad)$
   $B''(\quad,\quad) \rightarrow B'''(\quad,\quad)$
   $C''(\quad,\quad) \rightarrow C'''(\quad,\quad)$

   Then graph it with a different color and label the points.

5. Rotate this new image by $90°$.
   $(x, y) \rightarrow$ (_____, _____)

   $A'''(\quad,\quad) \rightarrow A''''(\quad,\quad)$
   $B'''(\quad,\quad) \rightarrow B''''(\quad,\quad)$
   $C'''(\quad,\quad) \rightarrow C''''(\quad,\quad)$

   Then graph it with a different color and label the points.