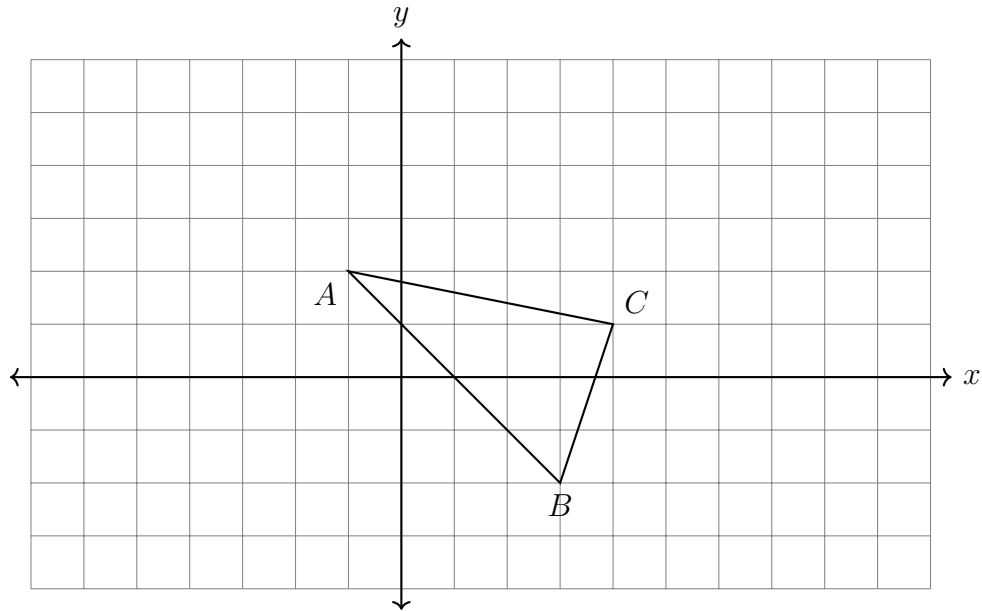**7.9 Pretest: Mixed congruence transformations**   **CCSS.HSG.CO.A.5**

1. Slide $\triangle ABC$ to the right five and up two. Label the image $\triangle A'B'C'$.
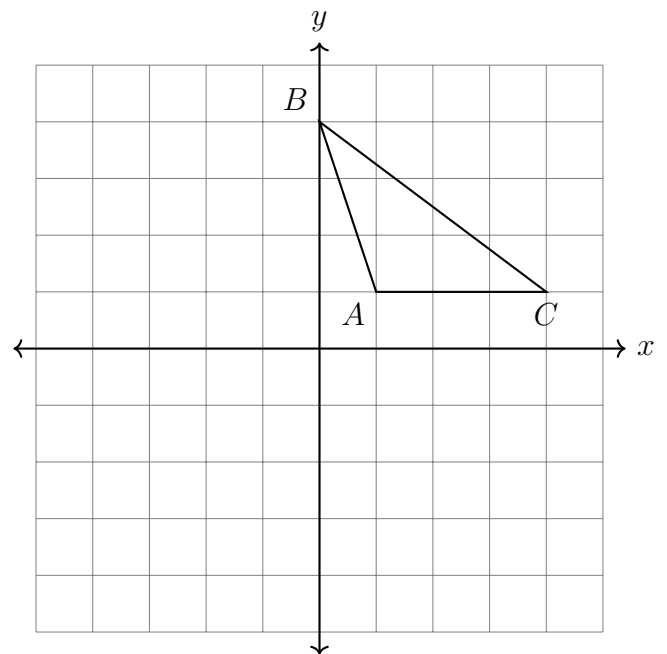

2. Reflect the triangle over the x-axis, $\triangle ABC \rightarrow \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

$A(1,1) \rightarrow$

$B(0,4) \rightarrow$

$C(4,1) \rightarrow$

3. A transformation maps $\triangle TOP \to \triangle CAP$, shown below.

   (a) Fully specify the transformation.
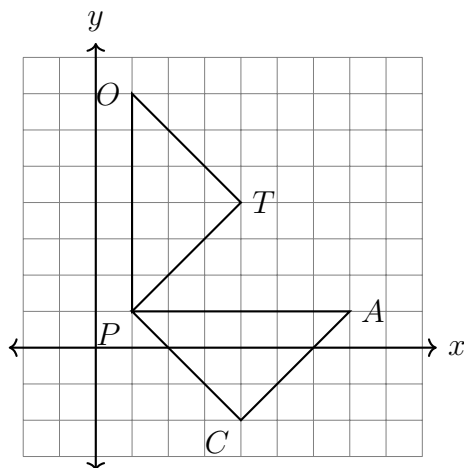
   (b) Identify each corresponding object.

      i. $T \to$ _____

      ii. $O \to$ _____
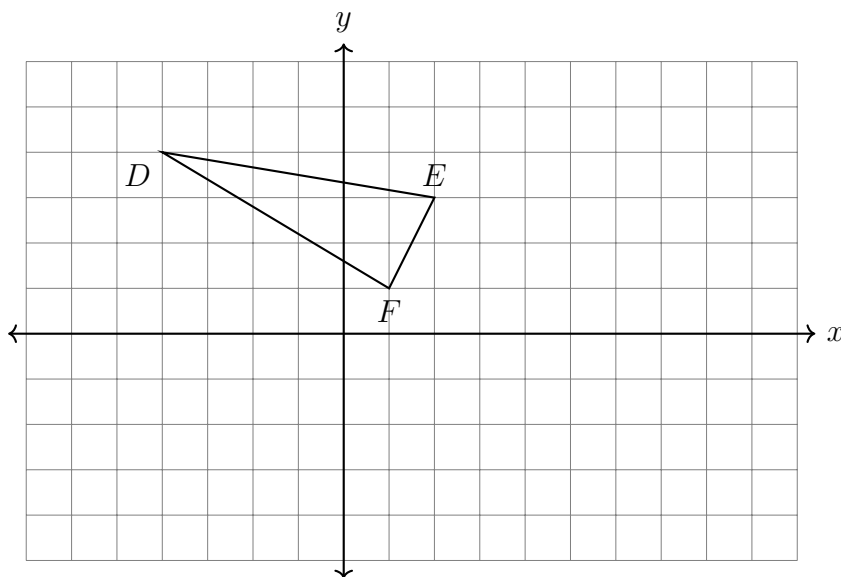
      iii. $P \to$ _____

      iv. $\angle PTO \cong$ _____

      v. _____ $\cong \overline{CA}$

4. Translate $\triangle DEF$ by $(x, y) \to (x - 2, y - 5)$, then reflect the result over the y-axis. Label the images $\triangle D'E'F'$ and $\triangle D''E''F''$ respectively.

5. Check those transformations that are rigid motions.

   ☐ Reflection   ☐ Rotation

   ☐ Dilation   ☐ An isometry

   ☐ Translation   ☐ Horizontal stretch