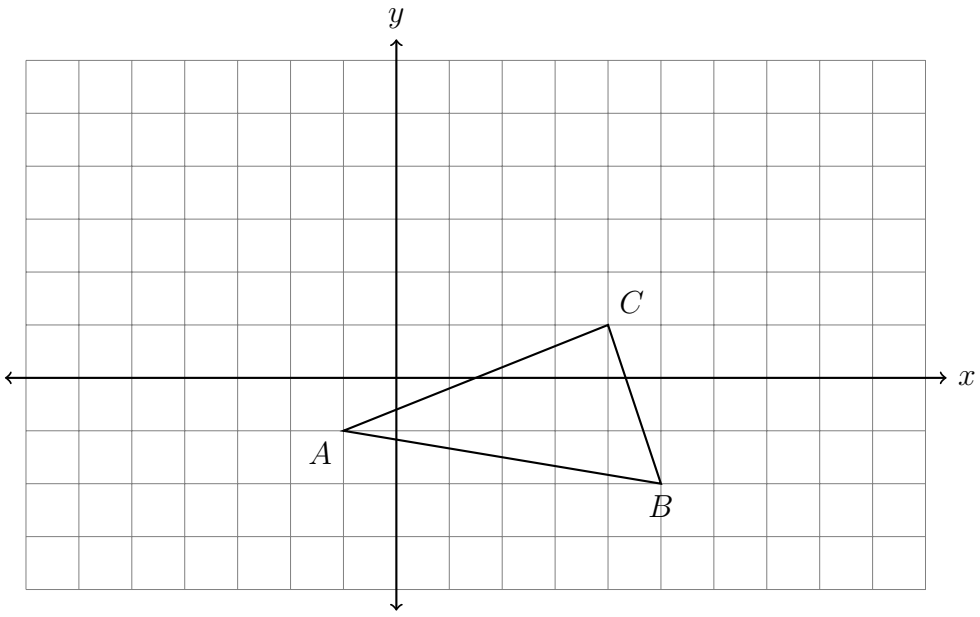
8.7 Homework: Mixed congruence transformations **CCSS.HSG.CO.A.5**

1. Do Now: Slide $\triangle ABC$ to the left three and up four. Label the image $\triangle A'B'C'$.

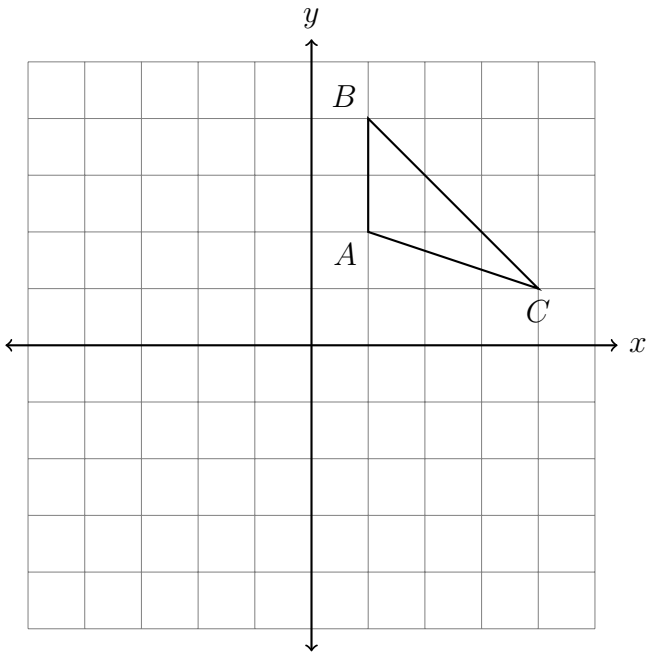


2. Reflect the triangle over the y-axis, $\triangle ABC \to \triangle A'B'C'$. Complete the table of the coordinates and plot and label the image on the grid.

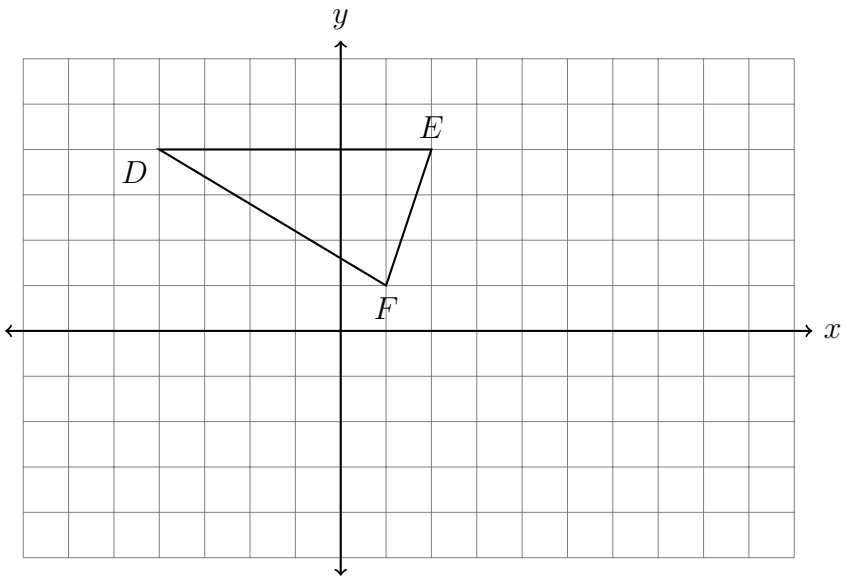
$A(1,2) \to$

$B(1,4) \to$

$C(4,1) \to$



3. Translate $\triangle DEF$ by $(x, y) \to (x + 5, y - 1)$, then reflect the result over the x-axis. Label the images $\triangle D'E'F'$ and $\triangle D''E''F''$ respectively.



4. A transformation maps $\triangle ABC \to \triangle DEC$, shown below.

   (a) Fully specify the transformation.

   (b) Identify each corresponding object.

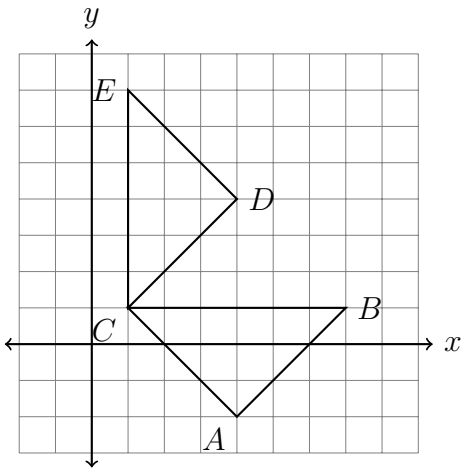
   i. $A \to$ _____

   ii. $B \to$ _____

   iii. $C \to$ _____

   iv. $\angle ACB \cong$ _____

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



5. Check those transformations that are rigid motions.

   ☐ Dilation
   ☐ Rotation
   ☐ Translation
   ☐ An isometry
   ☐ Reflection
   ☐ Horizontal stretch