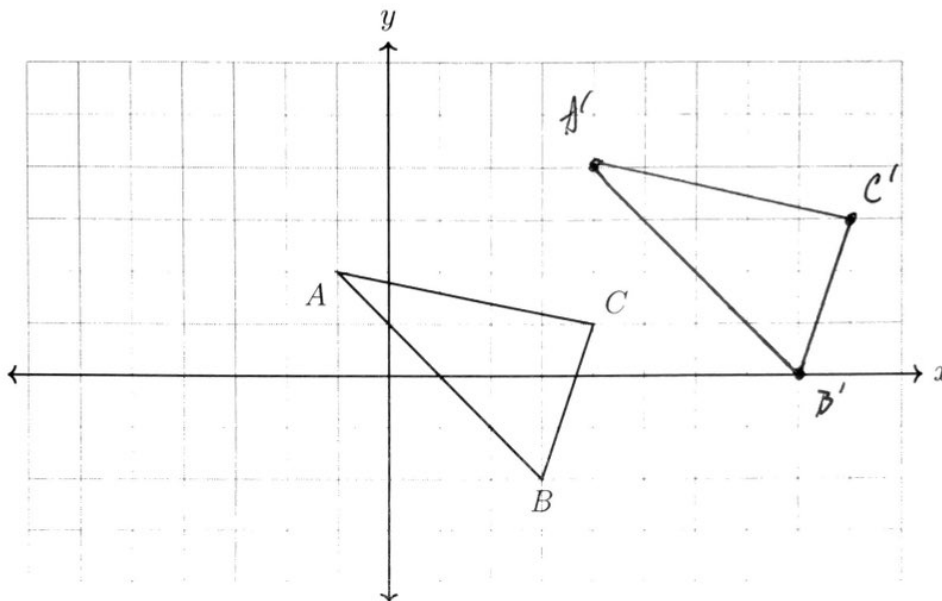


7.9 Pretest: Mixed congruence transformations

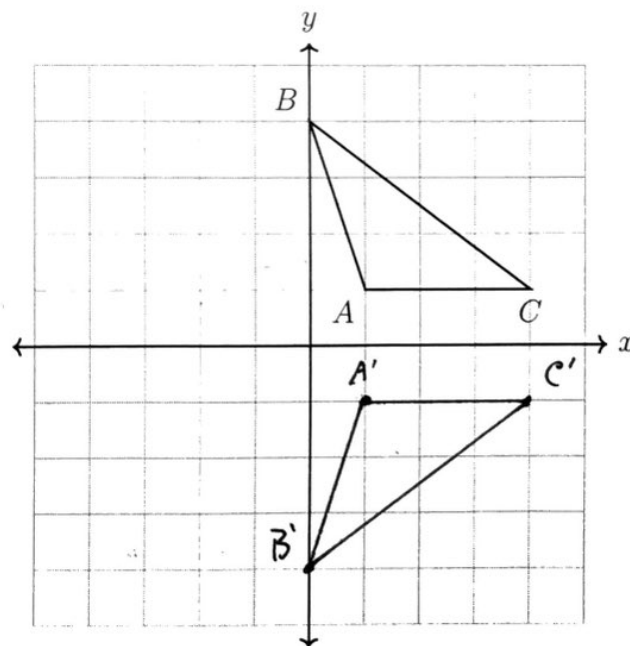
CCSS.HSG.CO.A.5

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.

$$\begin{aligned} A(1, 1) &\rightarrow A'(1, -1) \\ B(0, 4) &\rightarrow B'(0, -4) \\ C(4, 1) &\rightarrow C'(4, -1) \end{aligned}$$



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

(a) Fully specify the transformation.

Rotate  $90^\circ$  ~~counter~~ clockwise around P

(b) Identify each corresponding object.

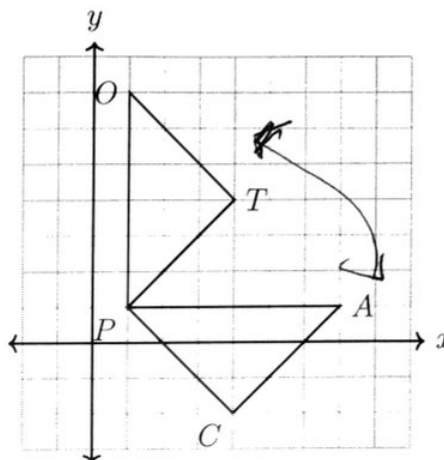
i.  $T \rightarrow$  C

ii.  $O \rightarrow$  A

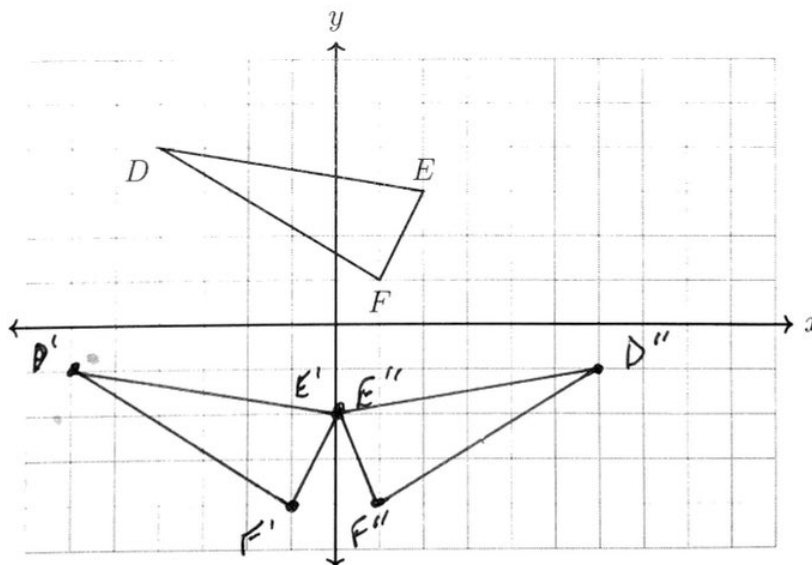
iii.  $P \rightarrow$  P

iv.  $\angle PTO \cong$   $\angle PCA$

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



4. Translate  $\triangle DEF$  by  $(x, y) \rightarrow (x - 2, y - 5)$ , 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

☐ Dilation

☒ Translation

☒ Rotation

☒ An isometry

☐ Horizontal stretch