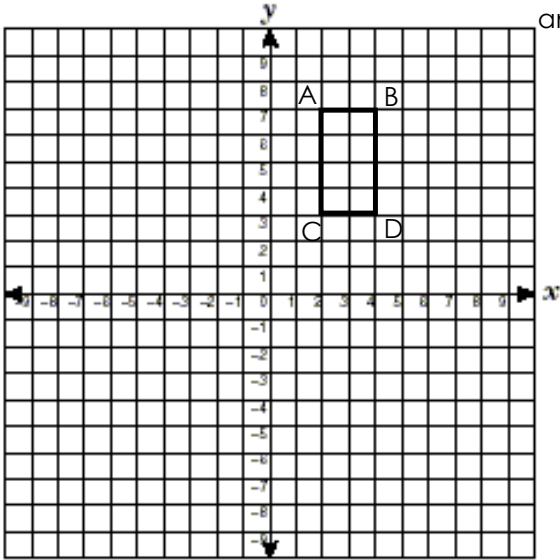


Independent Practice

Draw a reflection of rectangle ABCD over the y-axis. State the coordinates of the pre-image and image of ABCD.



State the rule for reflecting over the y-axis

$$(-x, y)$$

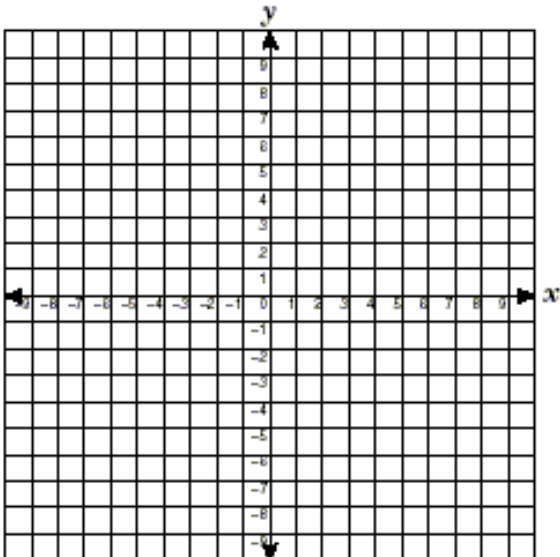
$$A(\underline{2}, \underline{7}) \longrightarrow A'(\underline{-2}, \underline{7})$$

$$B(\underline{4}, \underline{7}) \longrightarrow B'(\underline{-4}, \underline{7})$$

$$C(\underline{2}, \underline{3}) \longrightarrow C'(\underline{-2}, \underline{3})$$

$$D(\underline{4}, \underline{3}) \longrightarrow D'(\underline{-4}, \underline{3})$$

\triangle ABC has coordinates A(3,2), B(5,6) and C(4,-2). Draw a reflection of ABC over the x-axis. State the coordinates of the pre-image and the image of ABC.



State the rule for reflecting over the x-axis

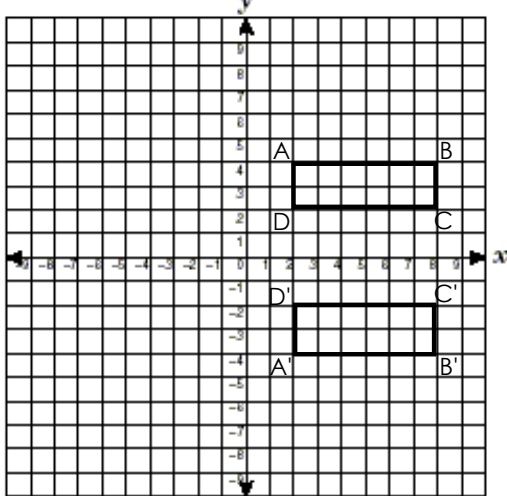
$$(x, -y)$$

$$A(3,2) \longrightarrow A'(3,-2)$$

$$B(5,6) \longrightarrow B'(5,-6)$$

$$C(4,-2) \longrightarrow C'(4,2)$$

What transformation would map rectangle ABCD onto rectangle A'B'C'D'?

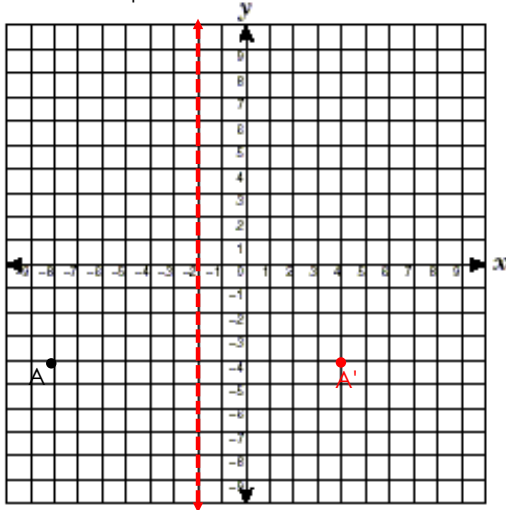


A reflection over the x-axis would map rectangle ABCD onto rectangle A'B'C'D'.

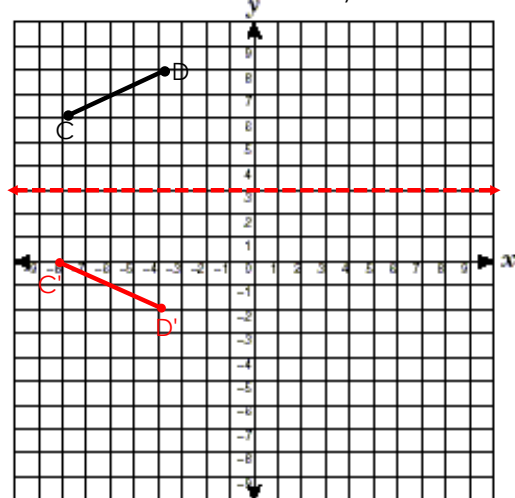
Is $\square ABCD \cong \square A'B'C'D'$? Explain using the properties of rigid motions.

Yes, because a reflection over the x-axis is a rigid transformation and rigid transformations preserve side lengths and angle measures.

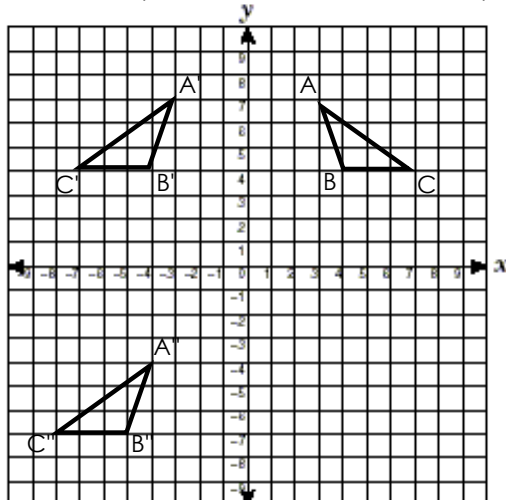
Reflect point A over the line $x = -2$.



Reflect line CD over $y = 3$.



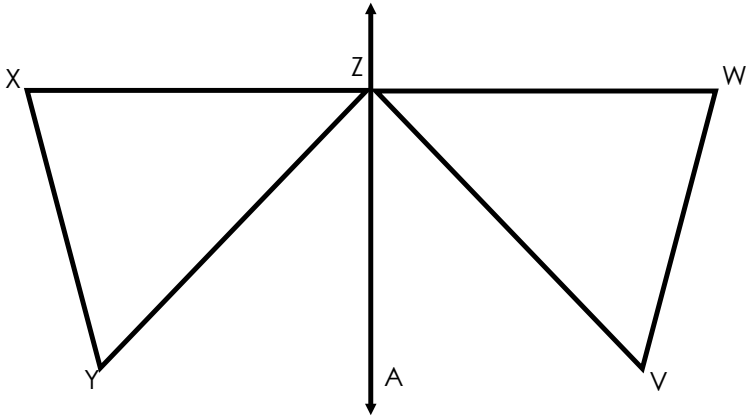
A sequence of transformations maps $\triangle ABC$ onto $\triangle A''B''C''$.



What sequence of transformations maps $\triangle ABC$ onto $\triangle A'B'C'$ and then maps $\triangle A'B'C'$ onto $\triangle A''B''C''$?

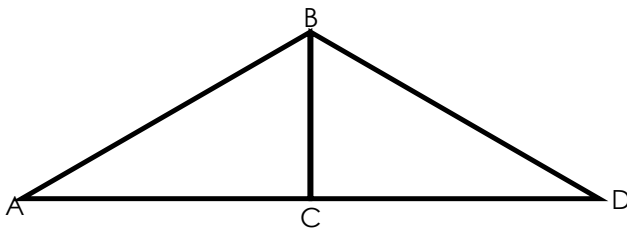
First, a reflection over the y-axis maps $\triangle ABC$ onto $\triangle A'B'C'$. Then, a translation 11 units down maps $\triangle A'B'C'$ onto triangle $\triangle A''B''C''$.

Describe a rigid motion that would map triangle XYZ onto triangle WVZ



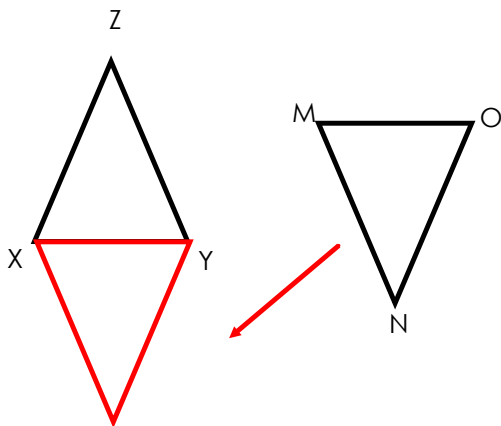
A reflection
 over the line \overline{ZA}
 maps XYZ onto WVZ.

Describe a transformation that would map $\triangle ABC$ onto $\triangle DBC$



A reflection over the line \overline{BC}
 maps $\triangle ABC$ onto $\triangle DBC$

Describe a sequence of transformation that would map $\triangle XYZ$ onto $\triangle MON$



First, a translation along
 line \overline{MX} , then a reflection
 over the line \overline{XY} maps
 $\triangle XYZ$ onto $\triangle MON$