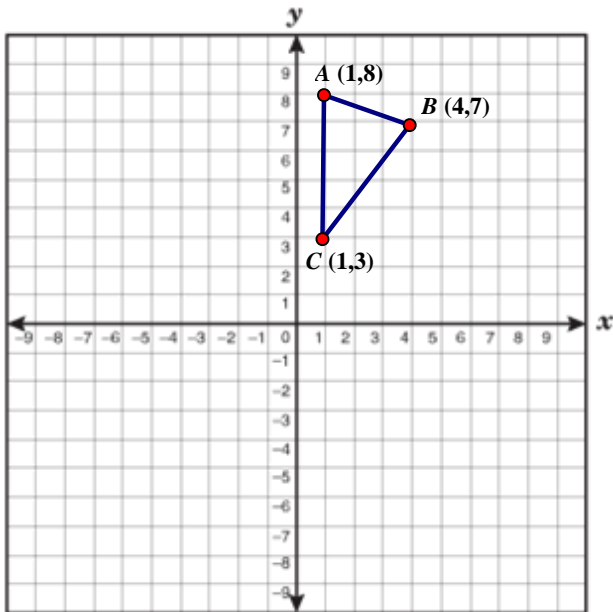
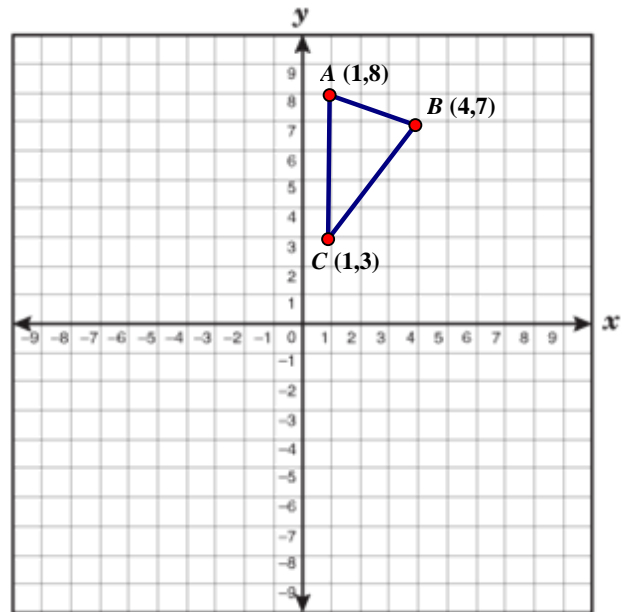


Use the composite transformation to plot  $\Delta A'B'C'$  and  $\Delta A''B''C''$ .

1a)  $R_{x\text{-axis}} \circ R_{O, 90^\circ\text{CCW}} (\Delta ABC)$



b)  $R_{O, 90^\circ\text{CCW}} \circ R_{x\text{-axis}} (\Delta ABC)$



c) Did doing the transformations in a different order matter? Explain why?

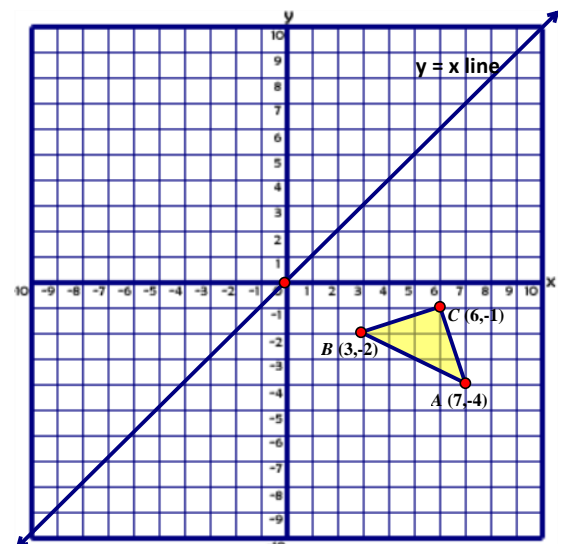
2. Write the following compositions of transformations in function notation.

a) A rotation of  $270^\circ$  clockwise about the origin followed by a translation of  $\langle 9, -3 \rangle$ .

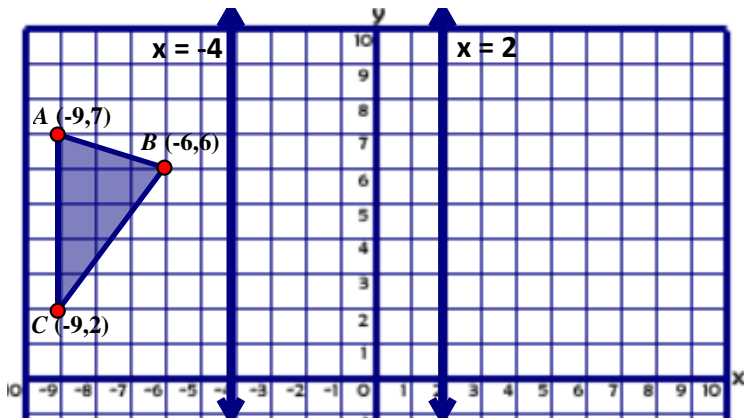
b) A reflection over the x-axis followed by a rotation of  $180^\circ$  about the origin.

3. Complete the following composition of transformations:

$$R_{y=x} \circ R_{x\text{-axis}} (\Delta ABC)$$



4.  $R_{x=2} \circ R_{x=-4}(\Delta ABC)$



Circle the **resultant transformation** from  $\Delta ABC$  to  $\Delta A''B''C''$ ?

Rotation      Reflection      Translation

What is the distance  $CC''$ ? \_\_\_\_\_

What is the distance between the parallel lines? \_\_\_\_\_

How do these two distances relate to each other?

5. Complete each transformation to create an animal friend.

