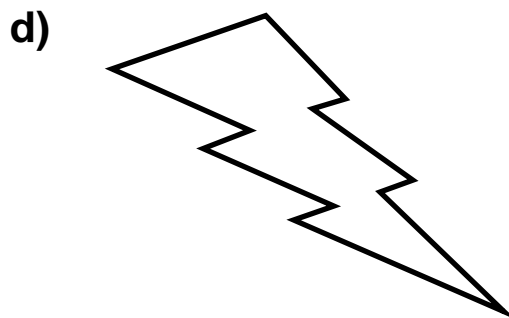
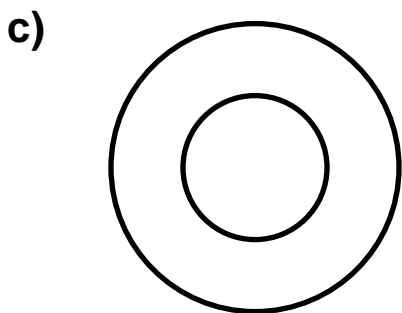
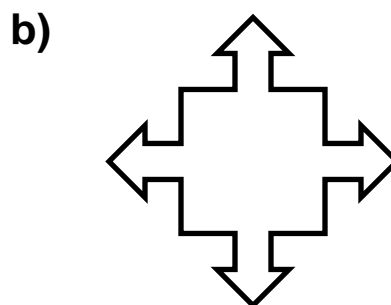
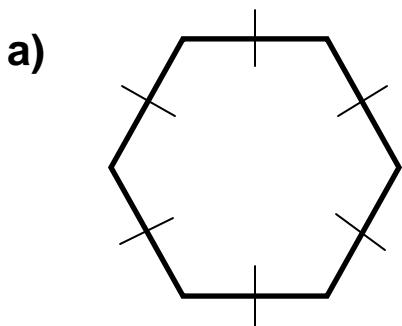


# Symmetry and Reflections

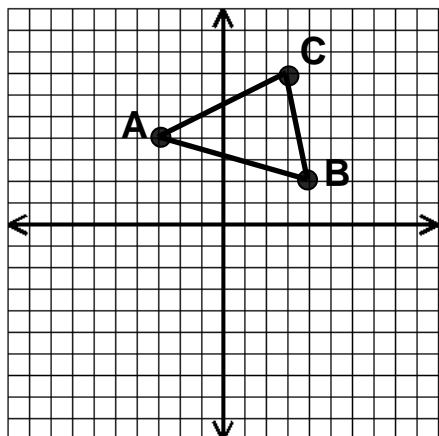
## LINES OF SYMMETRY

**EXAMPLE 1:** Draw the line(s) of symmetry, if any, for the following figures and list how many.



## REFLECTIONS

**EXAMPLE 2:** Reflect  $\triangle ABC$  across the x-axis and name the coordinates.



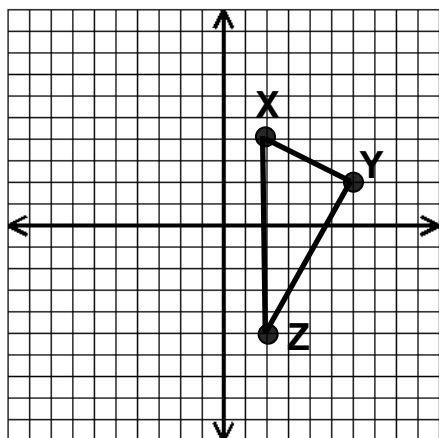
$$A(\underline{\quad}, \underline{\quad}) \rightarrow A'(\underline{\quad}, \underline{\quad})$$

$$B(\underline{\quad}, \underline{\quad}) \rightarrow B'(\underline{\quad}, \underline{\quad})$$

$$C(\underline{\quad}, \underline{\quad}) \rightarrow C'(\underline{\quad}, \underline{\quad})$$

What are the coordinates of point ( x, y )  
after a reflection in the x-axis? \_\_\_\_\_

**EXAMPLE 3: Reflect  $\triangle XYZ$  across the  $y$ -axis and name its new coordinates.**



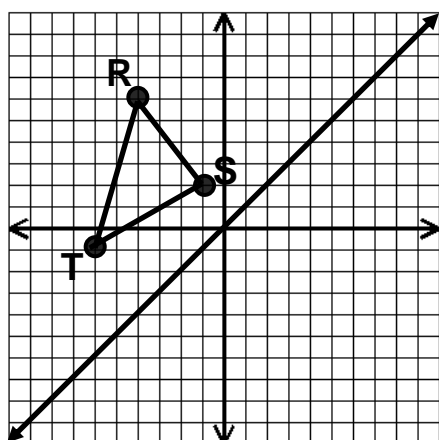
X(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  X'(\_\_\_\_\_, \_\_\_\_\_)

Y(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  Y'(\_\_\_\_\_, \_\_\_\_\_)

Z(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  Z'(\_\_\_\_\_, \_\_\_\_\_)

What are the coordinates of point ( x, y )  
after a reflection in the  $y$ -axis? \_\_\_\_\_

**EXAMPLE 4: Reflect  $\triangle RST$  across the line  $y = x$  and name the coordinates.**



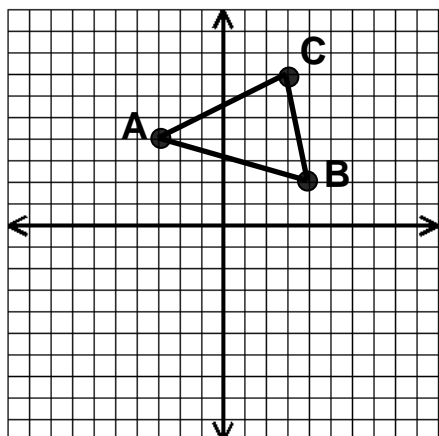
R(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  R'(\_\_\_\_\_, \_\_\_\_\_)

S(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  S'(\_\_\_\_\_, \_\_\_\_\_)

T(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  T'(\_\_\_\_\_, \_\_\_\_\_)

What are the coordinates of point ( x, y )  
after a reflection in the line  $y = x$ ? \_\_\_\_\_

**EXAMPLE 5: Reflect  $\triangle ABC$  across the origin and name the coordinates.**



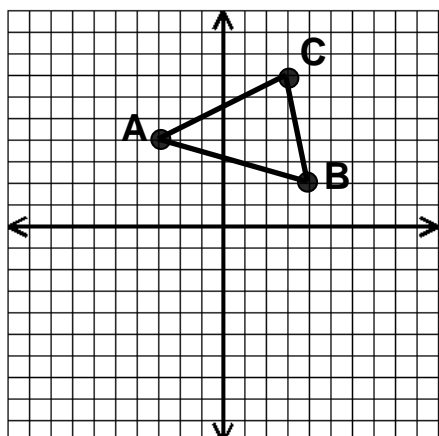
A(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  A'(\_\_\_\_\_, \_\_\_\_\_)

B(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  B'(\_\_\_\_\_, \_\_\_\_\_)

C(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  C'(\_\_\_\_\_, \_\_\_\_\_)

What are the coordinates of point ( x, y ) after a reflection in the origin? \_\_\_\_\_

**EXAMPLE 6: Reflect  $\triangle ABC$  across the line  $x = -1$  and name the coordinates.**

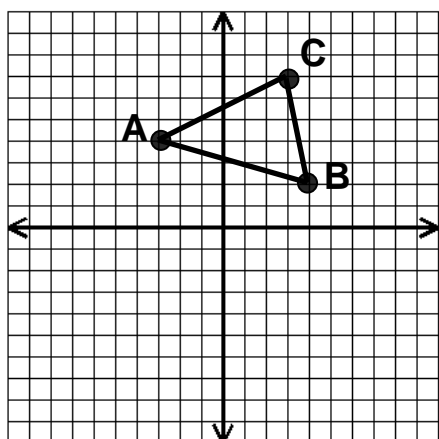


A(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  A'(\_\_\_\_\_, \_\_\_\_\_)

B(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  B'(\_\_\_\_\_, \_\_\_\_\_)

C(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  C'(\_\_\_\_\_, \_\_\_\_\_)

**EXAMPLE 7: Reflect  $\triangle ABC$  across the line  $y = -1$  and name the coordinates.**



A(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  A'(\_\_\_\_\_, \_\_\_\_\_)

B(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  B'(\_\_\_\_\_, \_\_\_\_\_)

C(\_\_\_\_\_, \_\_\_\_\_)  $\rightarrow$  C'(\_\_\_\_\_, \_\_\_\_\_)