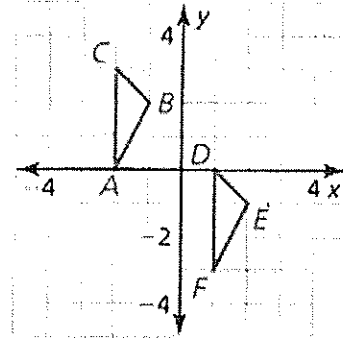
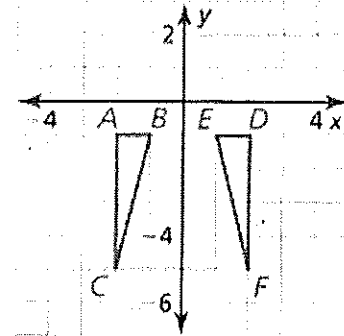


## 4.2 Reflections

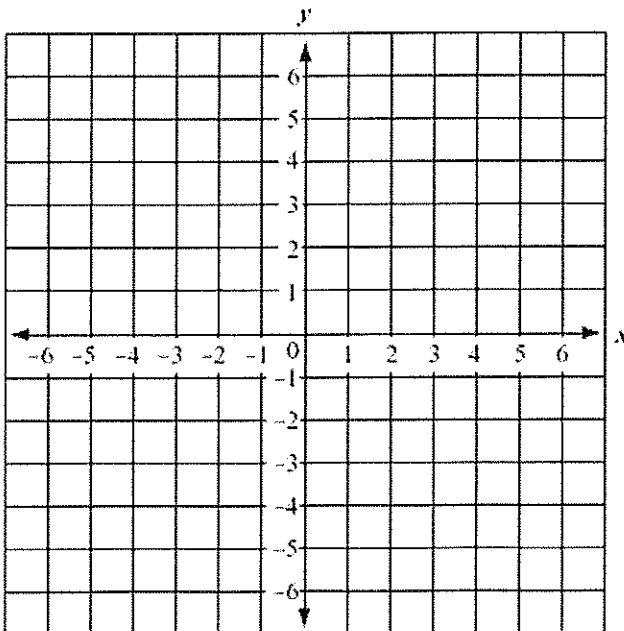
- 1) Determine if the coordinates give the lines of reflection
  - a) ABC over the y axis
  - b) ABC over the x axis
  - c) DEF over  $y = x$ .
  - d) DEF over  $y = -x$ .



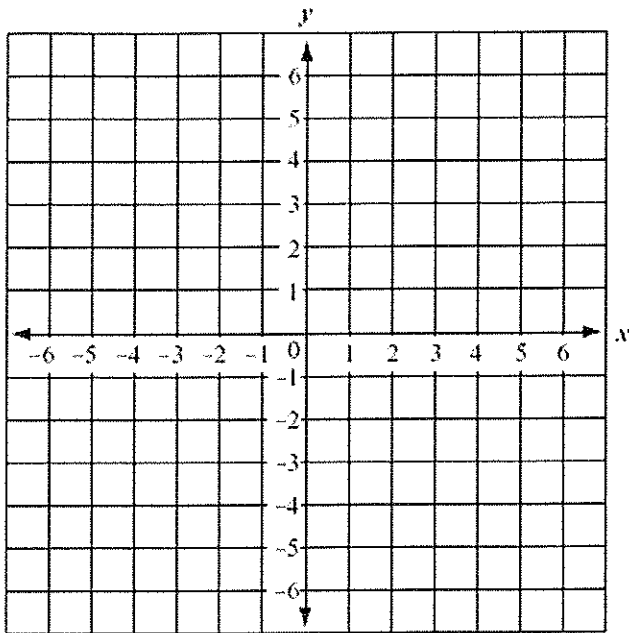
- 2) Determine if the coordinate plane shows a reflection over the lines  $x = 0$ ,  $y = 0$ , or neither.



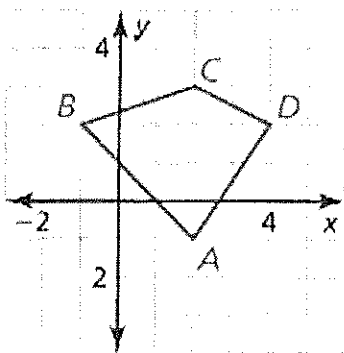
- 3) Graph  $\triangle MAN$  and its image over the line of reflection.  
 $M(2, -1)$ ,  $A(4, -5)$ ,  $N(3, 1)$  reflect over  $x = -1$



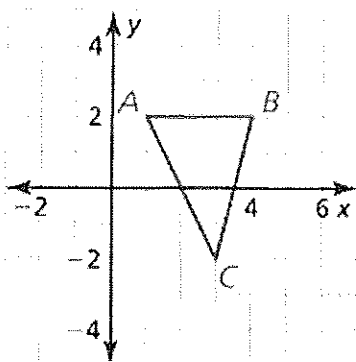
- 4) Graph  $\triangle SON$  and its image over the line of reflection.  
 $S(2, 4)$ ,  $O(-4, -2)$ ,  $N(-1, 0)$  reflect over  $y = 1$



- 5) Graph the line of reflection and the image over  $y = x$ .



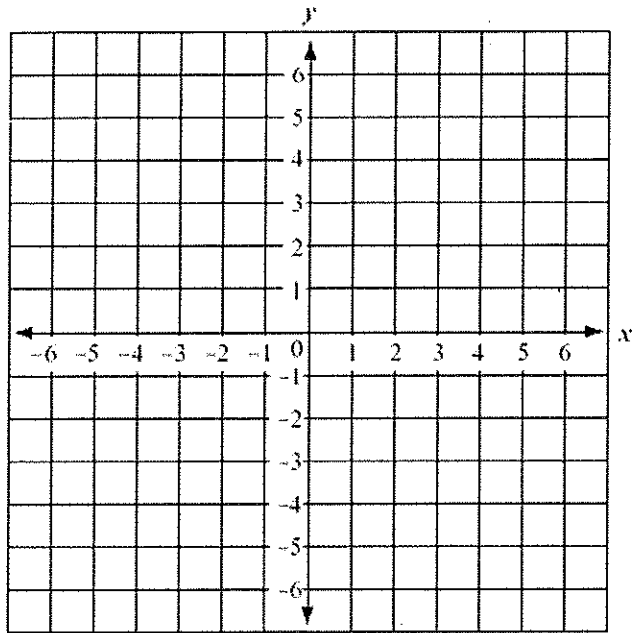
- 6) Graph the line of reflection and the image over  $y = -x$ .



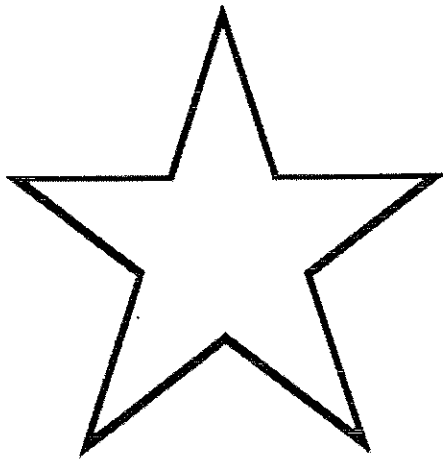
- 7) Graph  $\triangle BAT$  with vertices  $B(4, 1)$ ,  $A(7, 3)$ , and  $T(6, 4)$  and its image after the glide reflection.

Translation:  $(x, y) \rightarrow (x, y - 1)$

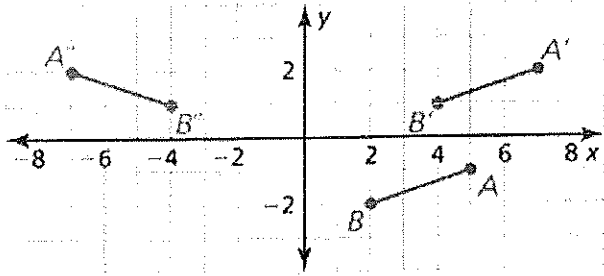
Reflection: over  $x = 0$



- 8) Draw and determine the number of lines of symmetry in the figure.

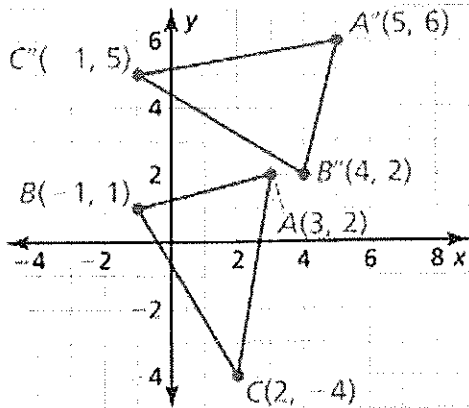


9) Describe and correct the error in describing the transformation.



$\overline{AB}$  to  $\overline{A'B'}$  is a glide reflection.

10) Use the numbers and symbols to create the glide reflection resulting in the image shown.



Translation:  $(x, y) \rightarrow ( \quad , \quad )$

Reflection: over  $y = x$ .

$x$

$y$

1

2

3

+

-