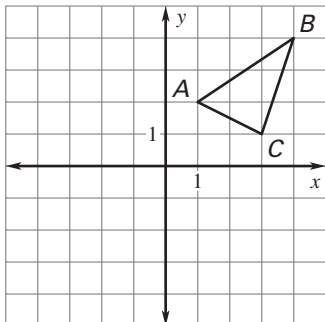


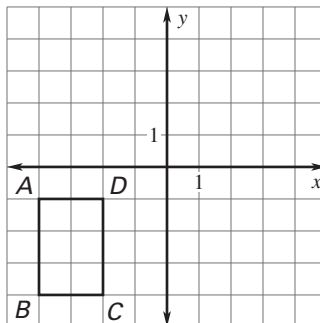
**LESSON 9.3** **Practice B**  
For use with pages 588–596

**Graph the reflection of the polygon in the given line.**

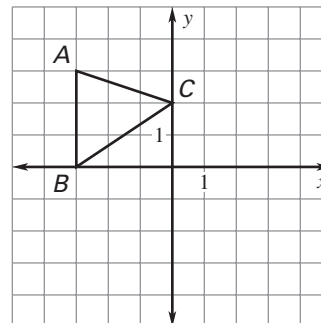
1.  $x$ -axis



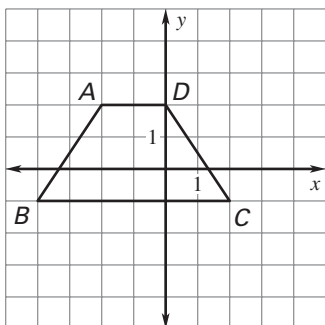
2.  $y$ -axis



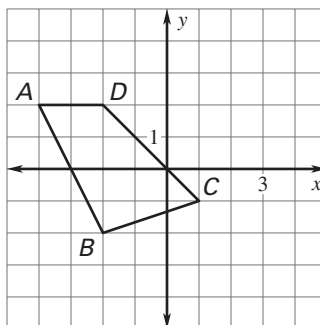
3.  $x = -1$



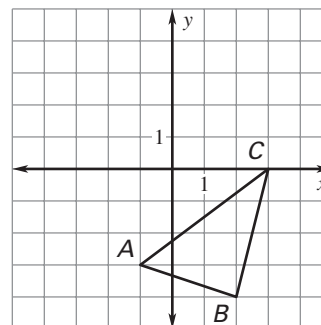
4.  $y = 1$



5.  $y = -x$

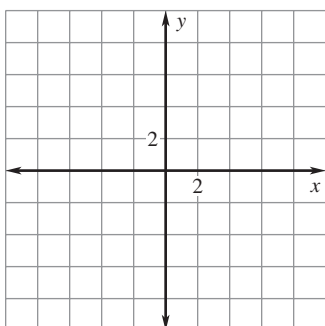


6.  $y = x$

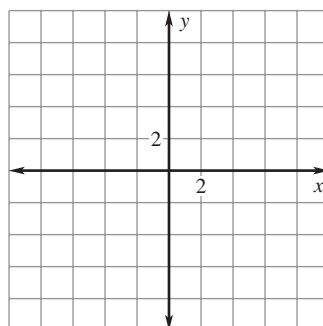


**Use matrix multiplication to find the image. Graph the polygon and its image.**

7. Reflect  $\begin{bmatrix} A & B & C \\ -3 & 1 & 6 \\ 4 & 7 & 2 \end{bmatrix}$  in the  $x$ -axis.

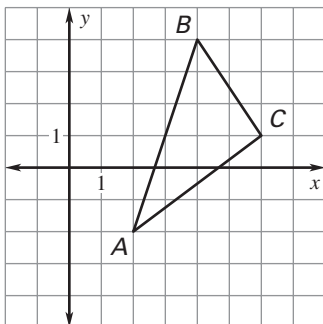
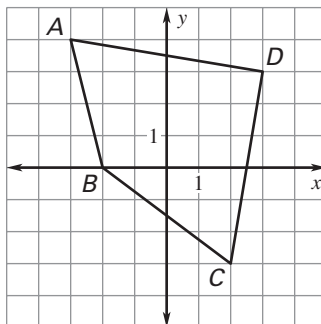
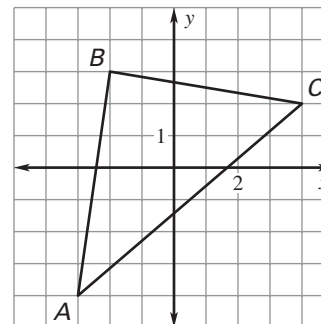


8. Reflect  $\begin{bmatrix} A & B & C & D \\ 2 & 5 & 7 & 1 \\ 6 & 4 & -5 & -3 \end{bmatrix}$  in the  $y$ -axis.



**LESSON**  
**9.3**
**Practice B** *continued*  
 For use with pages 588–596

Write a matrix for the polygon. Then find the image matrix that represents the polygon after a reflection in the given line.

9.  $x$ -axis10.  $y$ -axis11.  $x$ -axis

Find point  $C$  on the  $x$ -axis so  $AC + BC$  is a minimum.

12.  $A(2, -2), B(11, -4)$

13.  $A(-1, 4), B(6, 3)$

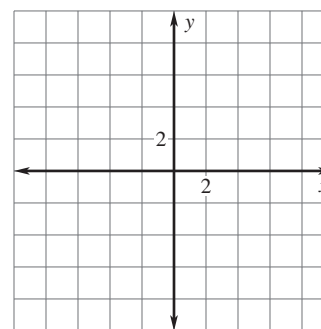
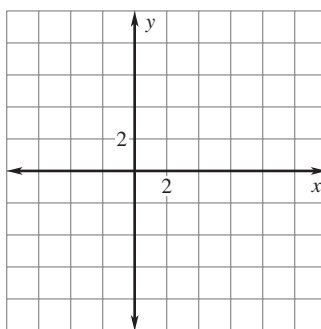
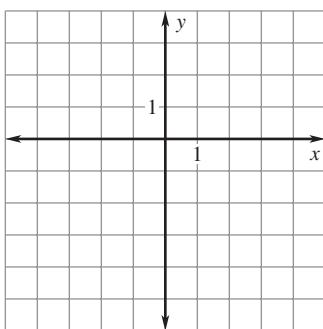
14.  $A(-3, 2), B(-6, -4)$

The vertices of  $\triangle ABC$  are  $A(-2, 1)$ ,  $B(3, 4)$ , and  $C(3, 1)$ . Reflect  $\triangle ABC$  in the first line. Then reflect  $\triangle A'B'C'$  in the second line. Graph  $\triangle A'B'C'$  and  $\triangle A''B''C''$ .

15. In  $y = 1$ , then in  $y = -2$

16. In  $x = 4$ , then in  $y = -1$

17. In  $y = x$ , then in  $x = -2$



18. **Laying Cable** Underground electrical cable is being laid for two new homes. Where along the road (line  $m$ ) should the transformer box be placed so that there is a minimum distance from the box to each of the homes?

