Name _____ Date _____

LESSON 9.3

Practice A

For use with pages 588–596

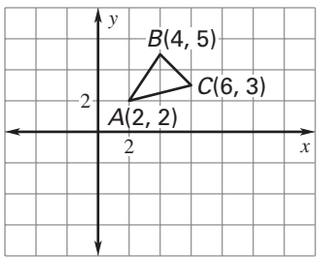
If you turn this in on time: do the odds.
If you turn this in late or
you are doing it over: do the evens.

Student score:
How well do you feel you understand this learning target:
A
B
C
D
F

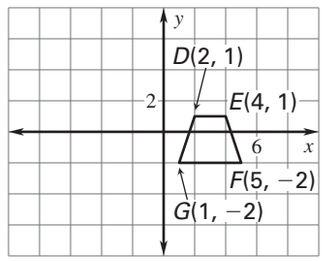
Teacher Score:

Graph the reflection of the polygon in the given line.

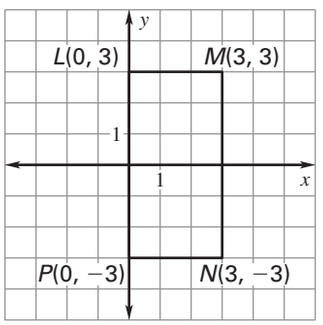
1. x-axis



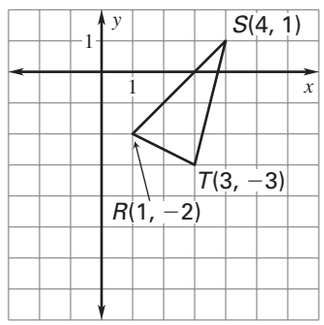
2. y-axis



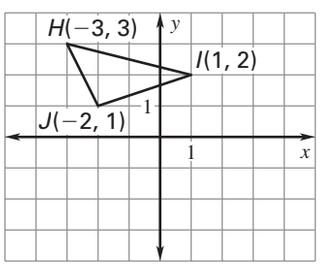
3. $x = 2$



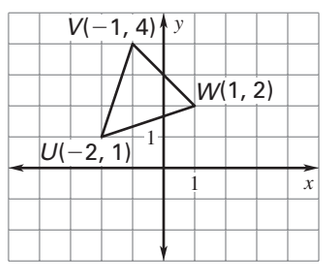
4. $y = -3$



5. $y = x$

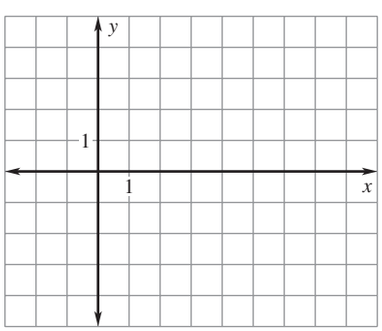


6. $y = -x$

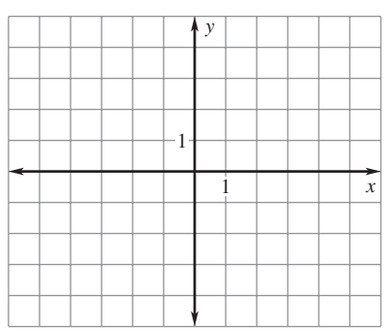


Use matrix multiplication to find the image. Graph the polygon and its image.

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



8. Reflect $\begin{matrix} D & E & F \\ \end{matrix}$ $\begin{bmatrix} -5 & -2 & 1 \\ 2 & 2 & -3 \end{bmatrix}$ in the y-axis.



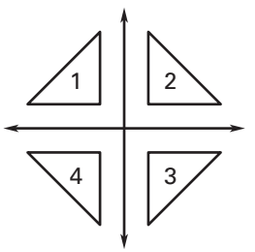
Name _____ Date _____

LESSON 9.3

Practice A *continued*

For use with pages 588–596

Use the diagram to name the image of △1 after the reflection.



9. Reflection in the x-axis

10. Reflection in the y-axis

11. Reflection in the line $y = x$

12. Reflection in the $y = -x$

13. Reflection in the y-axis, followed by a reflection in the x-axis

Decide whether the conclusion is *true* or *false*.

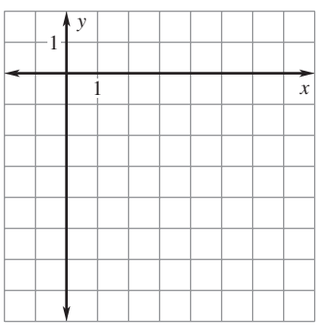
14. If $M(2, 3)$ is reflected in the line $y = 4$, then M' is $(6, 3)$.

15. If $N(-3, 1)$ is reflected in the line $y = -2$, then N' is $(-1, 1)$.

16. If $P(0, -2)$ is reflected in the line $x = 2$, then P' is $(0, 6)$.

17. If $Q(4, -3)$ is reflected in the line $x = 2$, then Q' is $(0, -3)$.

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



19. **Shuttle** You and a friend reside on the same block. You give your friend a ride to school each day. Where along the road (line n) should you park your car so that there is a minimum distance from the car to each home?