Name _____ Date _____

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:

LESSON 9.1

LESSON 9.1 Practice A

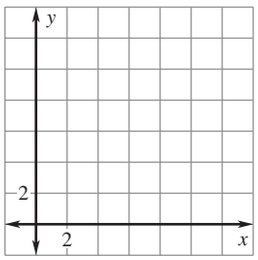
For use with pages 572–579

Use the translation $(x, y) \rightarrow (x + 2, y - 5)$.

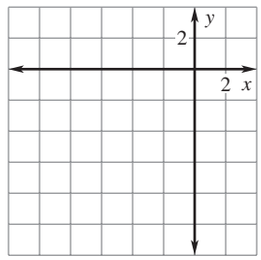
1. What is the image of $D(4, 7)$?
2. What is the image of $E(-3, 2)$?
3. What is the preimage of $M'(-5, 3)$?
4. What is the preimage of $N'(-9, -11)$?

The vertices of $\triangle MNO$ are $M(-2, 4)$, $N(-1, 1)$, and $O(3, 3)$. Graph the image of the triangle using prime notation.

5. $(x, y) \rightarrow (x + 4, y + 2)$

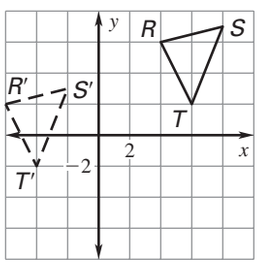


6. $(x, y) \rightarrow (x - 5, y - 6)$

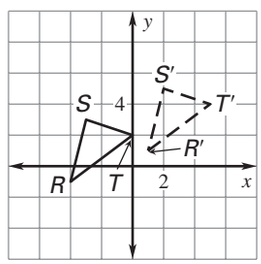


$\triangle R'S'T'$ is the image of $\triangle RST$ after a translation. Write a rule for the translation. Then *verify* that the translation is an isometry.

7.



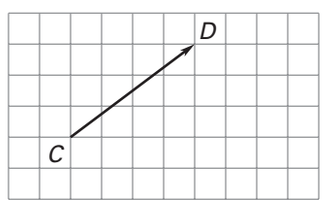
8.



Name the vector and write its component form.

9.

10.



Use the point $S(-3, 2)$. Find the component form of the vector that describes the translation to S'.

11. $S'(9, -7)$
12. $S'(-11, 13)$

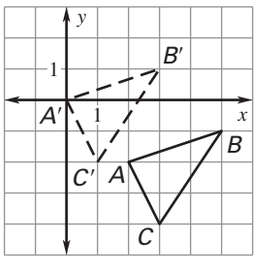
Name _____ Date _____

LESSON 9.1

Practice A *continued*

For use with pages 572–579

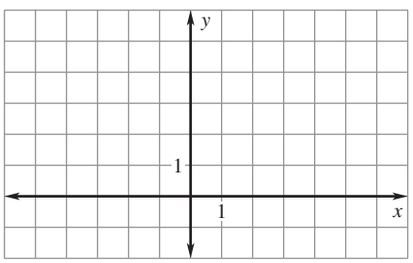
13. Error Analysis *Describe* and correct the error in graphing the translation of $\triangle ABC$.



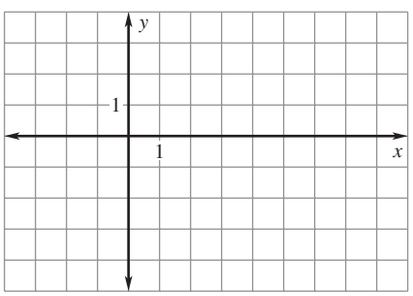
$(x, y) \rightarrow (x + 2, y - 2)$

The vertices of $\triangle ABC$ are $A(-1, 2)$, $B(2, 3)$, and $C(4, -1)$. Translate $\triangle ABC$ using the given vector. Graph $\triangle ABC$ and its image.

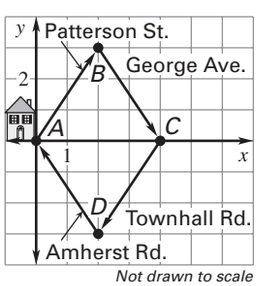
14. $\langle -3, 1 \rangle$



15. $\langle 2, -3 \rangle$



16. Exercise You and a friend run for exercise every morning. You start at your house and run down the sidewalk of Patterson Street to George Avenue. You take George Avenue to Townhall Road and finally take Amherst Road back to your house. The distances in the diagram are in miles.



Not drawn to scale

a. Write the component form for $\overrightarrow{AB}$, $\overrightarrow{BC}$, $\overrightarrow{CD}$, and $\overrightarrow{DA}$.

b. What is the total distance you and your friend run every morning?