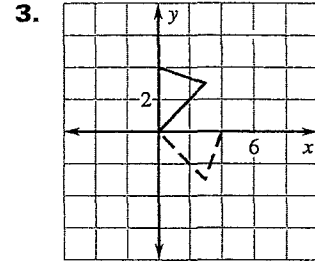
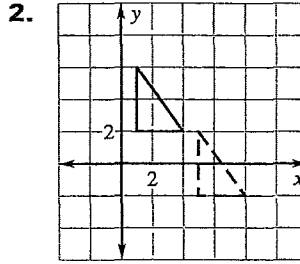
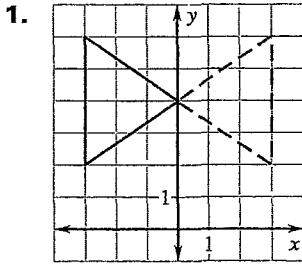


LESSON
4.8

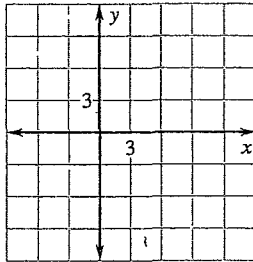
Practice

For use with pages 271–279

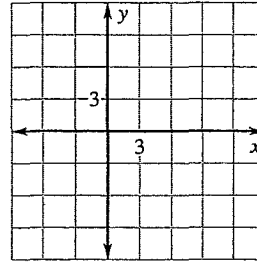
Name the type of transformation shown.



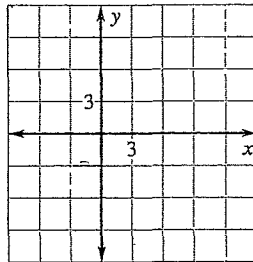
4. Figure $ABCD$ has vertices $A(1, 2)$, $B(4, -3)$, $C(5, 5)$, and $D(4, 7)$. Sketch $ABCD$ and draw its image after the translation $(x, y) \rightarrow (x + 5, y + 3)$.



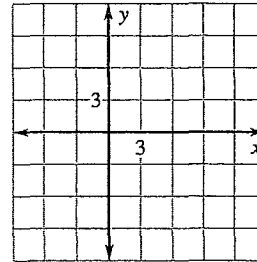
5. Figure $ABCD$ has vertices $A(-2, 3)$, $B(1, 7)$, $C(6, 2)$, and $D(-1, -2)$. Sketch $ABCD$ and draw its image after the translation $(x, y) \rightarrow (x - 2, y - 4)$.



6. Figure $ABCD$ has vertices $A(3, -1)$, $B(6, -2)$, $C(5, 3)$, and $D(0, 4)$. Sketch $ABCD$ and draw its image after the translation $(x, y) \rightarrow (x - 3, y + 2)$.



7. Figure $ABCD$ has vertices $A(-1, 3)$, $B(4, -1)$, $C(6, 4)$, and $D(1, 5)$. Sketch $ABCD$ and draw its image after the translation $(x, y) \rightarrow (x + 4, y - 5)$.



Name _____

Date _____

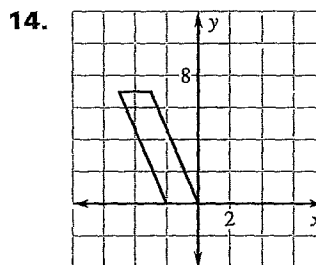
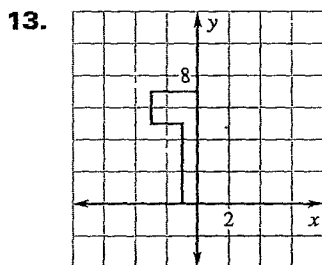
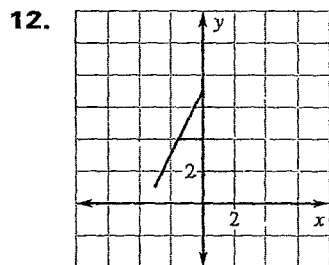
LESSON
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Practice *continued*
For use with pages 271–279

Use coordinate notation to describe the translation.

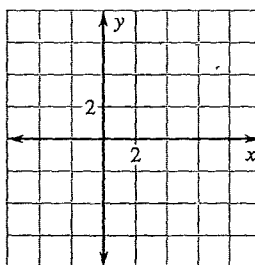
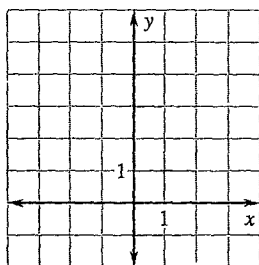
8. 3 units to the right, 5 units down 9. 7 units to the left, 2 units down
10. 4 units to the left, 6 units up 11. 1 unit to the right, 8 units up

Use a reflection in the y -axis to draw the other half of the figure.



Use the coordinates to graph \overline{AB} and \overline{CD} . Tell whether \overline{CD} is a rotation of \overline{AB} about the origin. If so, give the angle and direction of rotation.

15. $A(-2, 5), B(-2, 0), C(0, 1), D(3, 1)$ 16. $A(1, 4), B(4, 1), C(1, -4), D(4, -1)$



LESSON
4.8
Practice *continued*
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Complete the statement using the description of the translation. In the description, points (2, 0) and (3, 4) are two vertices of a triangle.

17. If (2, 0) translates to (4, 1), then (3, 4) translates to ?.

18. If (2, 0) translates to (−2, −1), then (3, 4) translates to ?.

A point on an image and the transformation are given. Find the corresponding point on the original figure.

19. Point on image: (2, −4); transformation: $(x, y) \rightarrow (x - 4, y + 3)$

20. Point on image: (−5, −7); transformation: $(x, y) \rightarrow (x, -y)$

21. **Verifying Congruence** Verify that $\triangle DEF$ is a congruence transformation of $\triangle ABC$. *Explain* your reasoning.

