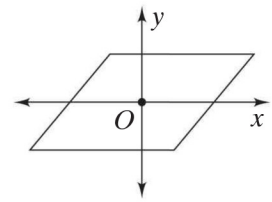




Draw the image of the figure at the right after the following rotations.

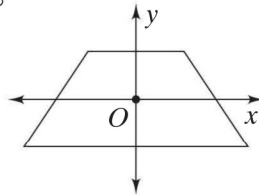
14.  $90^\circ$       15.  $180^\circ$       16.  $270^\circ$



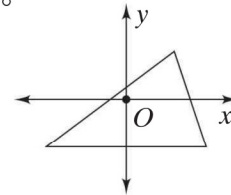
17. **Writing in Math** Explain how the design in the tie at the left can be made by using rotations and translations.

Copy each figure. Then draw the image of the figure after the given rotation about the origin.

18.  $180^\circ$



19.  $270^\circ$



20. **Challenge** Graph  $\triangle PQR$  with vertices  $P(3, 2)$ ,  $Q(1, 0)$ , and  $R(3, -2)$ . Draw the triangle after it is reflected across the  $y$ -axis. How can you get the same image using a rotation? Explain.



## Test Prep and Mixed Review

**Practice**

### Multiple Choice

21. Look at the pattern. What is the eighth figure in the pattern?



- (A) (B) (C) (D)

22. Plastic cups cost \$4.50 per bag, plastic plates cost \$4.30 per package, and plastic utensils cost \$2.25 per box. Scott buys 2 bags of cups, 1 package of plates, and 2 boxes of utensils. How much will he pay after using a coupon for half off his entire purchase?

- (F) \$5.53      (G) \$8.90      (H) \$9.15      (J) \$18.30

23. Alejandro wants to buy a digital audio player for \$124. His mother will pay  $\frac{1}{3}$  of the cost. Alejandro has \$32.74. How much more money does he need to make the purchase?

- (A) \$8.59      (B) \$49.93      (C) \$60.84      (D) \$74.07

### GO for Help

For Exercises	See Lesson
24–25	3–6

For  $M(0, -3)$ , give the coordinates of its image after each translation.

24. right 2 units and down 1 unit      25. left 3 units and up 3 units