

**1.8****Challenge Practice**

For use with pages 47-51

The point  $(a, b)$  is in Quadrant IV of a coordinate plane. Tell what quadrant the point with the given coordinates is in.

1.  $(-a, |b|)$

2.  $(|a|, -b)$

3.  $(-b, a)$

The variables  $a$  and  $b$  represent nonzero, unequal integers. The points represented by the given coordinates are plotted and connected in order and the first point is connected to the last. Tell what type of shape is formed.

4.  $(b, b), (-b, b), (-b, -b), (b, -b)$

5.  $(a, b), (b, a), (a, a)$

6.  $(-b, a), (-b, b), (0, b), (b, b), (b, a)$

7. For the following points,  $a = 2b$ :  $(0, a), (-b, -a), (a, b), (-a, b), (b, -a)$

Data are collected for the situation described. A scatter plot is made for the data. Will the points *rise* or *fall* from left to right?

8. The distance traveled by an object moving at a constant speed is measured at different points in time. The number of seconds elapsed is represented by the  $x$ -axis and the overall distance traveled is represented by the  $y$ -axis.
9. The amount of fuel in a boat's fuel tank is recorded every fifteen minutes during a boat ride. The time passed in minutes is represented by the  $x$ -axis and the amount of fuel in gallons is represented by the  $y$ -axis.
10. An airplane's altitude is recorded every 60 seconds from take-off until landing for a flight. The time passed in minutes is represented by the  $x$ -axis and the altitude in meters is represented by the  $y$ -axis.