Sec. 9.1: pp. 376-377 (#1-17, skip #15)

1. They must be ordered pairs so there are equal amounts of x- and y-values.

2. It is a data point that is far removed from the other points in a data set.

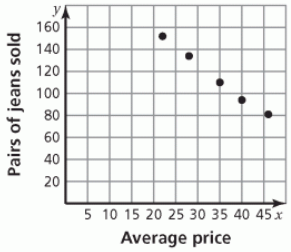
3. no relationship; A student's shoe size is not related to his or her IQ.

4. negative linear relationship; As time passes, the distance to the destination decreases.

5. nonlinear relationship; On each successive bounce, the ball rebounds to a height less than its previous bounce.

6. positive linear relationship; As the number of toppings increases, the price of the pizza will increase.

7. a. (22, 152), (40, 94), (28, 134), (35, 110), (46, 81);



b. As the average price of jeans increases, the number of pairs of jeans sold decreases.

8. a. 2011
   b. about 875 SUVs
   c. negative linear

9a. 3.5 hrs.
 b. $85
 c. positive relationship: as hours worked increase, so do earnings

10. negative linear relationship; outlier at (15, 10), gap between x-values of 15 to 25 and y-values of 23 to 33

11. nonlinear relationship; no outliers, gaps, or clusters

12. no relationship; no obvious outliers, gaps, or clusters

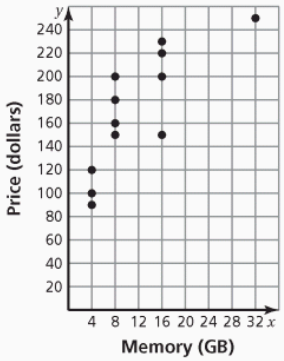
13. positive linear relationship

(continued)

14a. positive linear relationship

b. As time spent studying increases, generally so does the test score.

16. a.



The data show a weak positive linear relationship.

b. *Sample answer:* The point (32, 250) is an outlier because the store only offers one 32 GB 7-inch tablet and 32 GB is significantly greater than the other options. There are gaps between $x = 4$, $x = 8$, and $x = 16$ because these are the only available options for memory. There are clusters along $x = 4$, $x = 8$, and $x = 16$ because these are the only available options for memory.

17. No, people do not buy beach towels *because* they are buying sunglasses. However, since hot weather generally causes people to be more likely to buy both of these items, it makes sense that as sales of one item increase, so do sales of the other item.