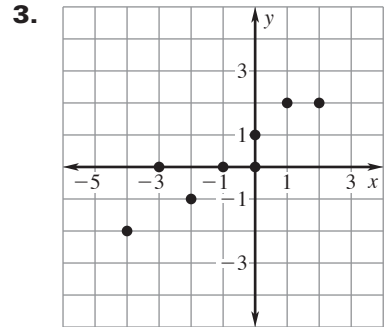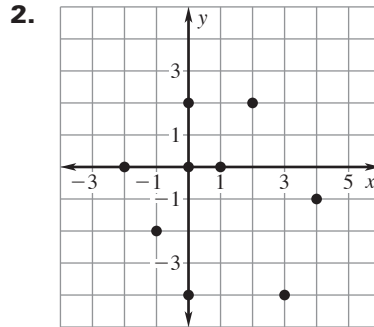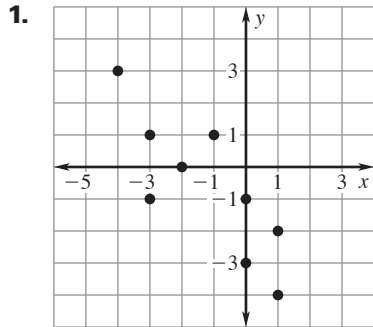**LESSON 4.6**

Practice C

For use with the lesson "Fit a Line to Data"

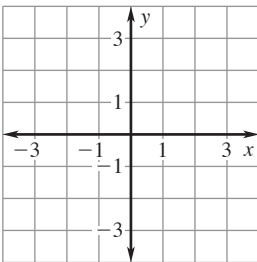**Tell whether *x* and *y* show a *positive correlation*, a *negative correlation*, or *relatively no correlation*.**

1.

2.

3.

Make a scatter plot of the data. Draw a line of fit. Write an equation for the line.

4.

x	−2	−1	−1	0	1	2
y	2	1	0	−1	−2	−3

5.

x	−5	−4	−3	−2	−1	0
y	1	0	1	3	2	4
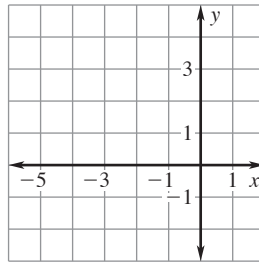
6.

x	−3	−2	−1	0	1	2
y	−1	1	0	2	4	5
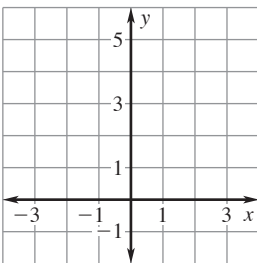
7.

x	−1	0	1	2	3	4
y	−5	−3	−2	−2	0	1
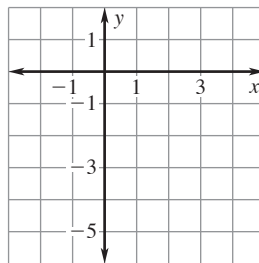
LESSON 4.6

Practice C *continued*
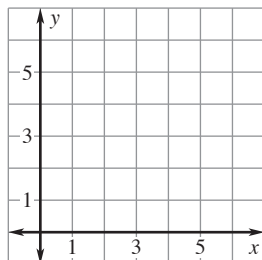*For use with the lesson "Fit a Line to Data"*

Make a scatter plot of the data. *Describe* the correlation of the data.
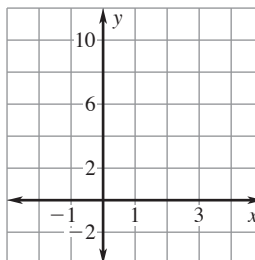**If possible, fit a line to the data and write an equation of the line.**

8.

x	4.8	5	5.4	5.8	6.1	6.3	6.5
y	1	2	1	3	4	6	5

9.

x	3	2	2	2	1	1	0
y	9	8	6	3	4	2	0

**10. Local Government** The table shows the number of local governments in the United States from 1972 to 2002.

Year	1972	1977	1982	1987	1992	1997	2002
Number of local governments	78,218	79,862	81,780	83,186	84,955	87,453	87,525

   a. Write an equation that models the number of local governments as a function of the number of years since 1972.

   b. Do you expect the trend described by the equation to continue indefinitely? *Explain*.

11. Saturn's Moons The table shows a moon's mean distance from Saturn, the moon's diameter, and the number of days it takes the moon to orbit Saturn.

Moon	Mimas	Janus	Tethys	Prometheus	Titan
Mean distance (km)	185,520	151,470	294,660	139,350	1,221,830
Days of orbit	0.94	0.6945	1.88	0.6139	15.94
Diameter (km)	392	178	1060	92	5150

   a. Make a scatter plot where x is the number of days of orbit and y is the mean distance from Saturn. Make another scatter plot where x is the number of days of orbit and y is the diameter of the moon.
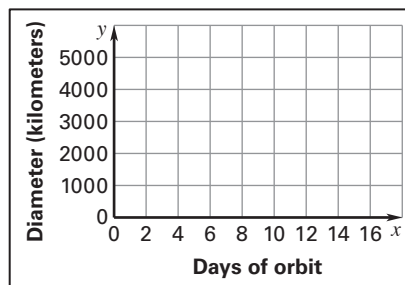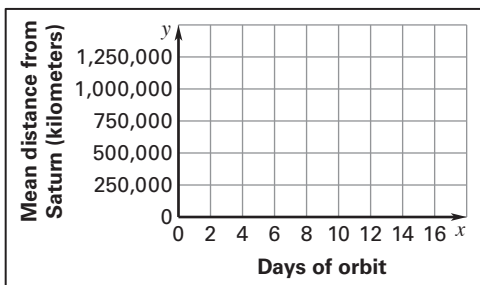
   b. Draw conclusions about the data.