NAME _____ DATE _____ PERIOD _____

9-9 Study Guide and Intervention

Scatter Plots

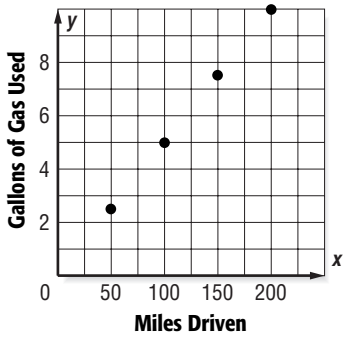
When you graph two sets of data as ordered pairs, you make a **scatter plot**. The pattern of the data points determines the relationship between the two sets of data.

- Data points that go generally upward show a *positive* relationship.
- Data points that go generally downward show a *negative* relationship.
- Data points with no clear pattern show *no* relationship between the data sets.

Examples **Explain whether the scatter plot of the data shows a *positive*, *negative*, or *no* relationship.**

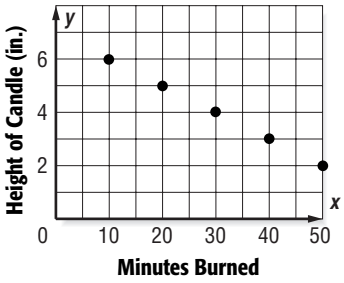
1 **miles driven and gallons of gas used**

As the number of miles driven increases, the amount of gas used increases. Therefore, the scatter plot will show a positive relationship.



2 **number of minutes a candle burns and a candle's height**

As the number of minutes increases, the height of the candle will decrease. Therefore, the scatter plot will show a negative relationship.



Exercises

Explain whether the scatter plot of the data for the following shows a *positive*, *negative*, or *no* relationship.

1. a student's age and the student's grade level in school
2. number of words written and amount of ink remaining in a pen
3. square feet of floor space and the cost of carpet for the entire floor
4. a person's height and the number of siblings the person has
5. length of time for a shower and the amount of hot water remaining
6. number of sides of a polygon and the area of the polygon

Lesson 9-9

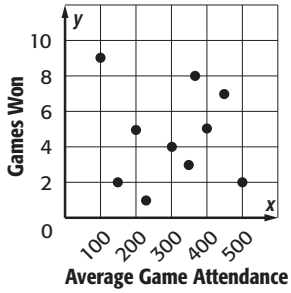
NAME _____ DATE _____ PERIOD _____

9-9 Practice

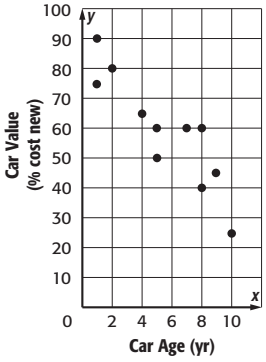
Scatter Plots

Explain whether the scatter plot of the data for each of the following shows a *positive, negative,* or *no* relationship.

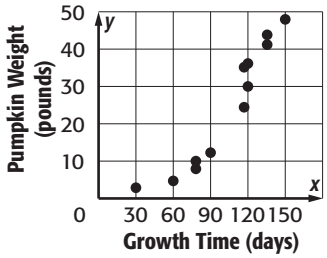
1.



2.



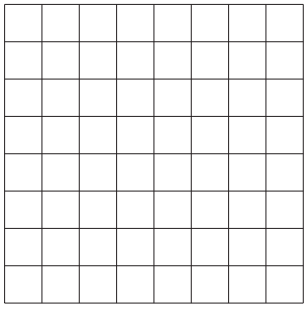
3.



For Exercises 4–6, use the following table.

River Width (m)	15	18	20	28	30	32	38	40	42	45
Water Speed (km/h)	12.6	10.7	11.2	9.7	8.1	8.7	6.9	5.4	3.9	4.1

4. Draw a scatter plot for the data. Then draw a line of fit.



5. Write an equation for the line of fit.

6. Use your equation to estimate the speed of the water when the river is 50 meters wide.

Explain whether a scatter plot of the data for each of the following would show a *positive, negative,* or *no* relationship.

7. daily attendance at an outdoor carnival and the number of hours of rain

8. number of diagonals of a polygon and the number of sides of a polygon