

Name \_\_\_\_\_ Date \_\_\_\_\_

## Scatter Plots (Pages 168–170)

A graph of two sets of data as ordered pairs is a **scatter plot**. Scatter plots can suggest whether two sets of data are related.

### Determining the Relationship

To determine whether two sets of data are related, imagine a line drawn so that half of the points are above the line and half are below it.

- A line that slopes upward to the right shows a positive relationship.
- A line that slopes downward to the right shows a negative relationship.
- When the points are very spread out instead of clustering along a line, the scatter plot shows that there is no relationship between the data sets.

### EXAMPLE

Determine whether a scatter plot of the data for age and weight of people younger than 21 would show a positive, negative, or no relationship.

*In children and young people, as the age increases, so does the weight in most cases. A scatter plot of this data would show a positive relationship.*

### Try These Together

1. Determine whether a scatter plot of the data for bank balance and money spent would show a positive, negative, or no relationship. Assume everyone considered has the same income.  
*HINT: Does the bank balance rise or fall as money spent increases?*
2. Determine whether a scatter plot of the data for hours of sleep per night and height would show a positive, negative, or no relationship.  
*HINT: Do hours of sleep per night and height have any influence on each other?*

### PRACTICE

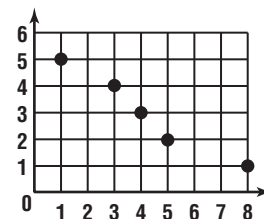
**Determine whether a scatter plot of the data below would show a positive, negative, or no relationship.**

3. temperature and hours of sunlight
4. age past 70 and number of health problems
5. age of a computer and its value
6. hours of battery use and remaining battery life
7. number of seats in a car and the last digit in its license plate number



8. **Standardized Test Practice** What kind of a relationship does this scatter plot show?

- A** positive                      **B** negative  
**C** no                                **D** inverse



Answers: 1. negative 2. no relationship 3. positive 4. positive 5. negative 6. negative 7. no relationship 8. B