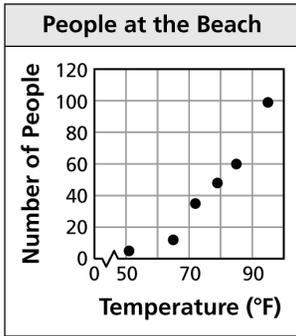


**Lesson**  
**3.5**

**Enrichment and Extension**

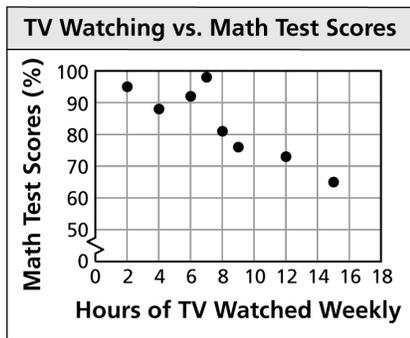
**Scatter Plots and Correlation**

A **scatter plot** is used to show relationships between two sets of numerical data with plotted points on a graph. Scatter plots also help you to see **correlations** in data.

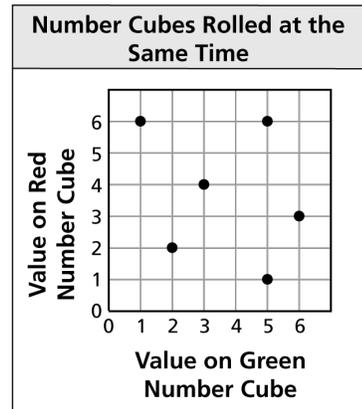


|                         |    |    |    |    |    |    |
|-------------------------|----|----|----|----|----|----|
| <b>Number of people</b> | 60 | 48 | 35 | 5  | 99 | 12 |
| <b>Temperature (°F)</b> | 85 | 79 | 72 | 51 | 95 | 65 |

This scatter plot shows a **positive correlation**: as the temperature *increases*, there are *more* people at the beach.



This scatter plot shows a **negative correlation**: students who watch *more* TV, get *lower* scores on their math tests.



This scatter plot shows **no correlation**: there is no relationship between the values on two number cubes.

**Predict whether the following will have a positive correlation, negative correlation, or no correlation.**

1. Money spent on car repairs vs. mileage on the odometer
2. Years of education vs. number of convicted crimes
3. Number of letters in a state’s name vs. number of parks in the state
4. Age of a computer vs. value of the computer
5. After making your prediction for the following data, create a scatter plot to test your prediction.

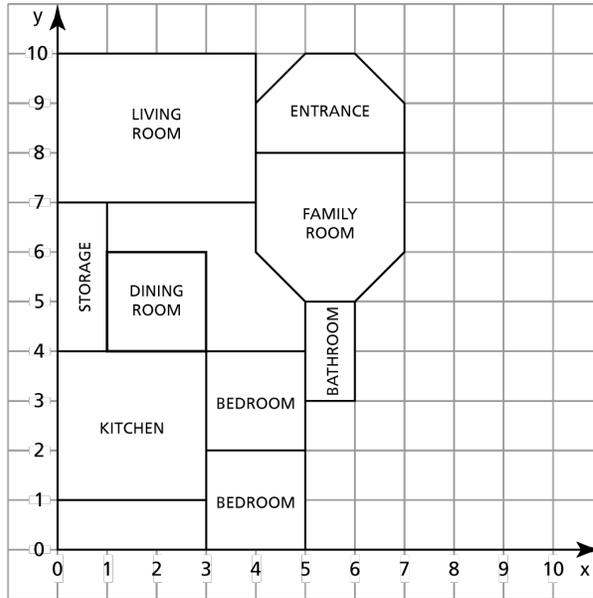
|                               |    |      |      |   |    |    |    |    |    |   |
|-------------------------------|----|------|------|---|----|----|----|----|----|---|
| <b>Baby’s age (months)</b>    | 2  | 10   | 5    | 0 | 4  | 6  | 12 | 9  | 8  | 1 |
| <b>Baby’s weight (pounds)</b> | 10 | 22.5 | 16.5 | 7 | 15 | 17 | 24 | 21 | 20 | 8 |

**Lesson  
3.6**

**Enrichment and Extension**

**Using a Blueprint**

Blueprints are used when constructing a house. The measurements on a blueprint correspond to the actual measurement the house will be when completed.



Use the blueprint above for Exercises 1–7.

1. Draw a line by connecting points (4, 9) and (7, 9). Do the same for points (4, 6) and (7, 6). Name the shapes the Entrance and Family Room are now broken into.
2. Which labeled rooms are rectangles?
3. Which labeled rooms are squares?
4. What is the length of the wall that separates the Entrance from the Family Room?
5. What is the total area of the labeled rooms that are rectangles?
6. The builder wants to order wood trim for the living room and dining room. What are the perimeters of these two rooms?
7. How much greater is the maximum length of the house than the maximum width of the house?