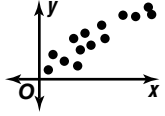
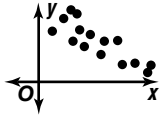
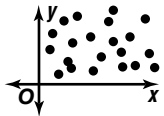


Scatter Plots (Pages 302–307)

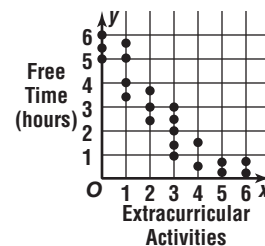
To determine if there is a relationship between two sets of data, we can display the data points in a graph called a **scatter plot**. In a scatter plot, the two sets of data are plotted as ordered pairs in the coordinate plane.

Types of Relationships	 <p>In this graph, x and y have a positive relationship. As x increases, y also increases.</p>	 <p>In this graph, x and y have a negative relationship. As x increases, y decreases.</p>	 <p>In this graph, x and y have no relationship.</p>
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EXAMPLE

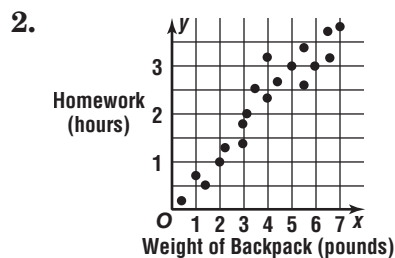
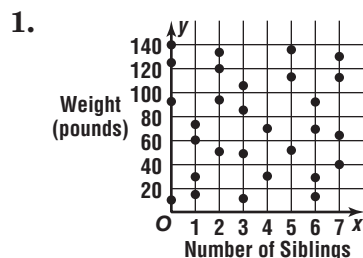
Determine whether the scatter plot at the right shows a *positive* relationship, a *negative* relationship, or *no* relationship. If there is a relationship, describe it.

There is a negative relationship between extracurricular activities and the amount of free time. The plot indicates that as extracurricular activities increase, the amount of free time decreases.



PRACTICE

Determine whether each scatter plot has a positive relationship, negative relationship, or no relationship. If there is a relationship, describe it.



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

- the number of cars on a freeway and the amount of time for a commute
- the amount of time concert tickets are on sale and the number of tickets left

5. **Standardized Test Practice** What type of relationship is there between the number of hours spent talking long distance on the telephone and the amount of the telephone bill?

- A positive relationship B no relationship
C negative relationship D need more information

Answers: 1. no relationship 2. positive; as the weight of the backpack increases, the hours of homework increase 3. positive 4. negative 5. A