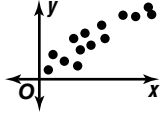
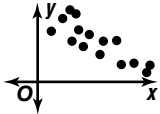
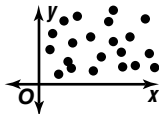


# Scatter Plots (Pages 302–307)

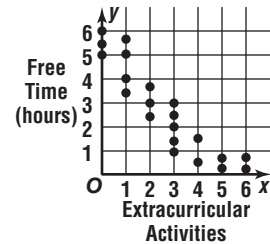
To determine if there is a relationship between two sets of data, we can display the data points in a graph called a **scatter plot**. In a scatter plot, the two sets of data are plotted as ordered pairs in the coordinate plane.

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

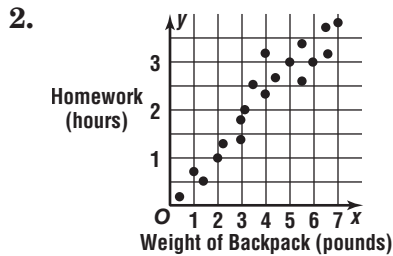
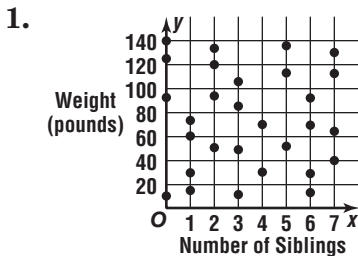
Determine whether the scatter plot at the right shows a *positive* relationship, a *negative* relationship, or *no* relationship. If there is a relationship, describe it.

*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