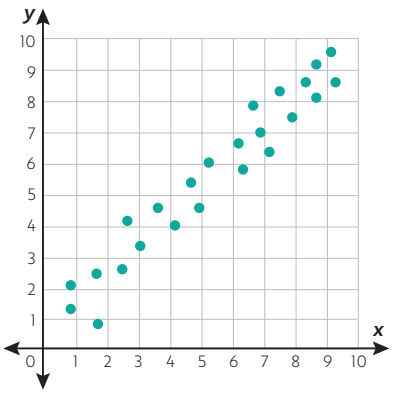
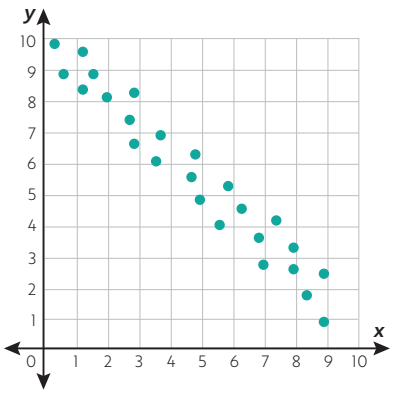
Scatter Plots

A **scatter plot** is a type of graph that uses points to show values for two different variables. Scatter plots can show relationships, or **associations**, between the two variables.

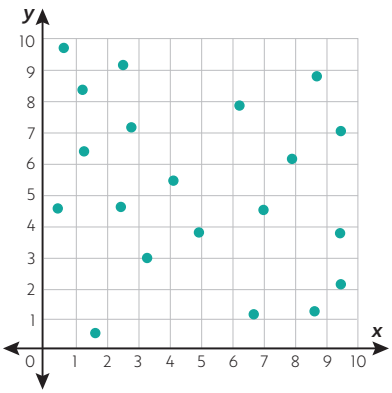
This graph shows a **positive association**. The *y*-values tend to increase as the *x*-values increase.



This graph shows a **negative association**. The *y*-values tend to decrease as the *x*-values increase.



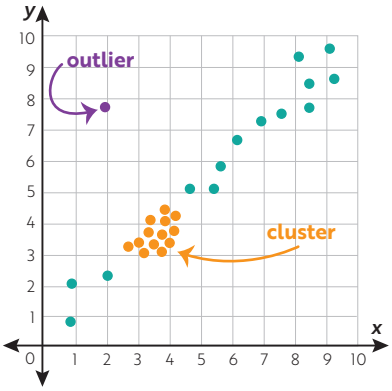
This graph shows **no association.** There is no pattern between the *y*-values and *x*-values.



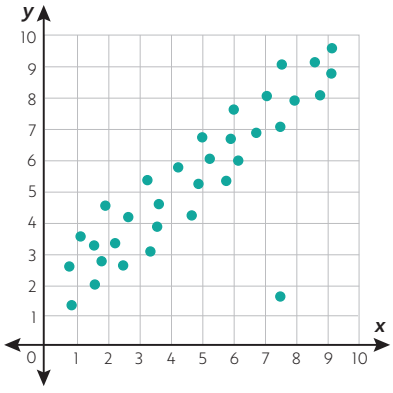
Here are some things you might see on a scatter plot:

An **outlier** is an extreme data point that is set apart from the rest of the points.

A **cluster** is a group of data points that are close together.



Try it yourself! Determine if each scatter plot has a positive association, a negative association, or no association. Write your answer on the blank. Then determine if the scatter plot has an outlier. If so, circle it.



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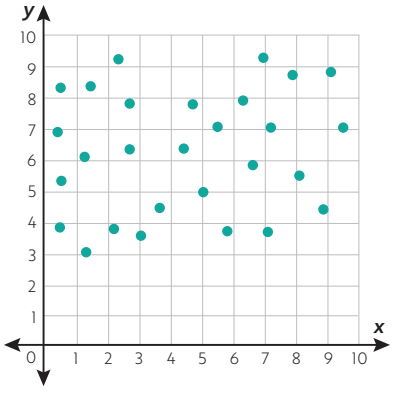

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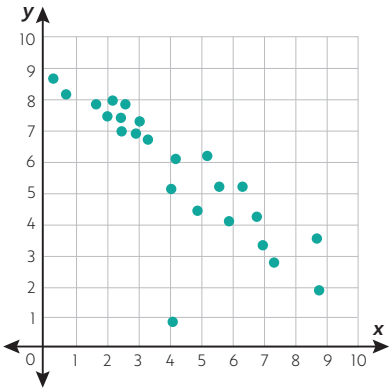
Scatter Plots

Keep going! Determine if each scatter plot has a positive association, a negative association, or no association. Write your answer on the blank. Then determine if the scatter plot has an outlier. If so, circle it.



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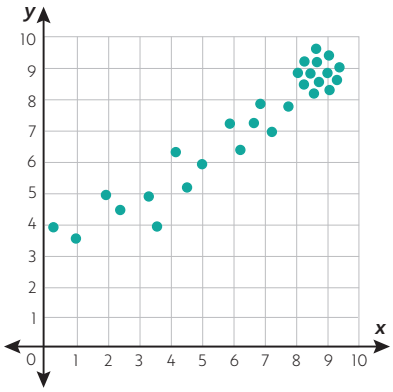

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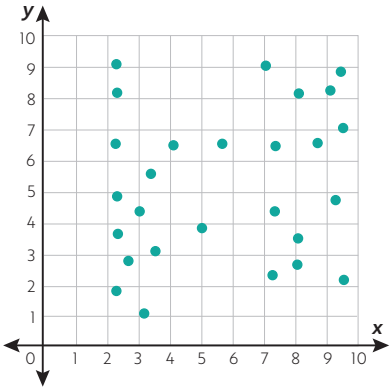

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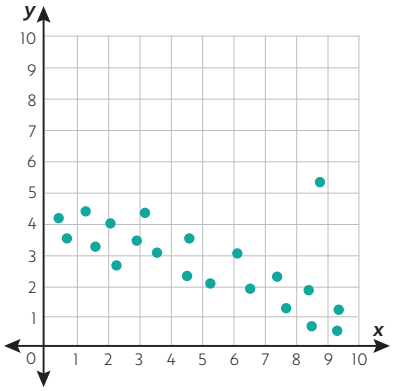

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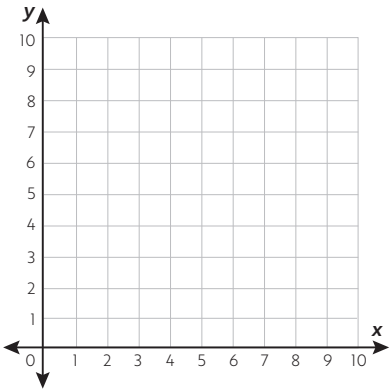
Challenge! Create your own scatter plots based on the directions below.

Create a scatter plot with a positive association and an outlier at (9, 2).



Create a scatter plot with a negative association and a cluster.