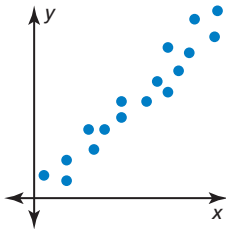


Scatter Plots

A **scatter plot** is a graph that shows the relationship between two data sets. The two data sets are graphed as ordered pairs in a coordinate plane. Scatter plots can show trends in the data.

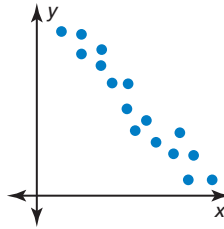
A **correlation** is a relationship between data sets. You can use a scatter plot to describe the correlation between data.

Positive Correlation



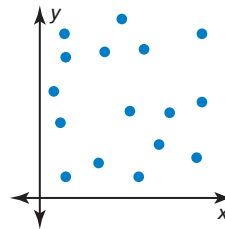
As x increases, y increases.

Negative Correlation



As x increases y decreases.

No Correlation



The points show no pattern.

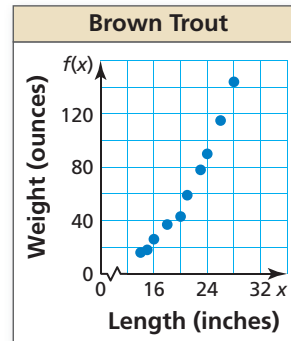
Example 1 The table shows the lengths and weights of 10 brown trout. Create a scatter plot of the data. Tell whether the data show a *positive*, a *negative*, or *no* correlation.

Length (inches), x	16	20	18	15	14	26	21	28	23	24
Weight (ounces), $f(x)$	26	43	37	18	16	115	59	144	78	90

Plot the ordered pairs in a coordinate plane.

As the length increases, the weight increases.

► So, the scatter plot shows a positive correlation.



Practice

Check your answers at BigIdeasMath.com.

Create a scatter plot of the data. Tell whether the data show a *positive*, a *negative*, or *no* correlation.

1.

Height (inches), x	72	68	64	70	67	65
Weight (pounds), $f(x)$	180	162	118	145	143	174

2.

Temperature (°F), x	38	80	54	76	31	46
Bowls of warm soup, $f(x)$	44	20	32	22	46	38