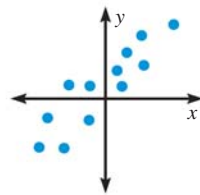# 2.6 Draw Scatter Plots and Best-Fitting Lines

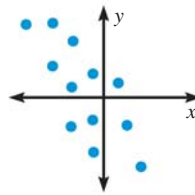| Before	You wrote equations of lines.
Now	You will fit lines to data in scatter plots.
Why?	So you can model sports trends, as in Ex. 27.

Key Vocabulary
- scatter plot
- positive correlation
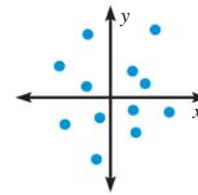- negative correlation
- correlation coefficient
- best-fitting line

A **scatter plot** is a graph of a set of data pairs (x, y). If y tends to increase as x increases, then the data have a **positive correlation**. If y tends to decrease as x increases, then the data have a **negative correlation**. If the points show no obvious pattern, then the data have *approximately no correlation*.
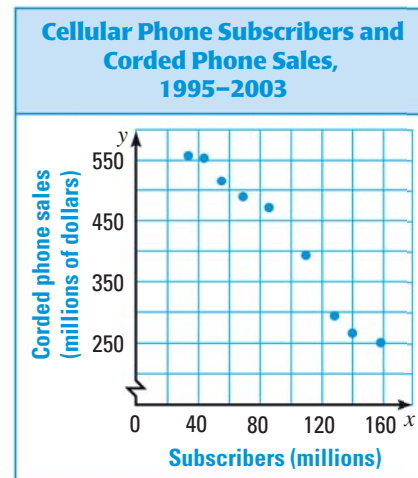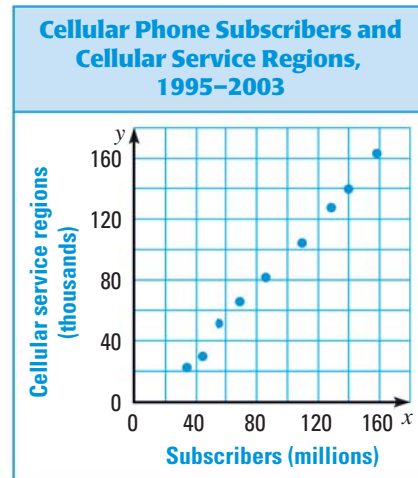

Positive correlation	Negative correlation	Approximately no correlation

EXAMPLE 1 Describe correlation

TELEPHONES Describe the correlation shown by each scatter plot.

Cellular Phone Subscribers and Cellular Service Regions, 1995–2003

Cellular Phone Subscribers and Corded Phone Sales, 1995–2003

Solution

The first scatter plot shows a positive correlation, because as the number of cellular phone subscribers increased, the number of cellular service regions tended to increase.

The second scatter plot shows a negative correlation, because as the number of cellular phone subscribers increased, corded phone sales tended to decrease.