

EXAMPLE 2 Make a scatter plot

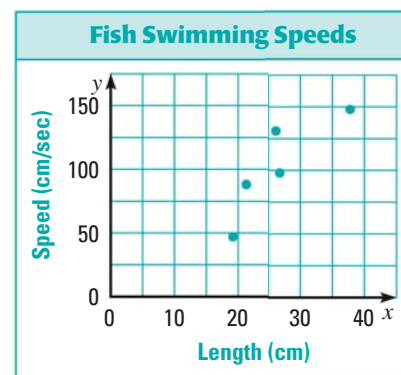
SWIMMING SPEEDS The table shows the lengths (in centimeters) and swimming speeds (in centimeters per second) of six fish.

Fish	Pike	Red gurnard	Black bass	Gurnard	Norway haddock
Length (cm)	37.8	19.2	21.3	26.2	26.8
Speed (cm/sec)	148	47	88	131	98

- Make a scatter plot of the data.
- Describe the correlation of the data.

Solution

- Treat the data as ordered pairs. Let x represent the fish length (in centimeters), and let y represent the speed (in centimeters per second). Plot the ordered pairs as points in a coordinate plane.
- The scatter plot shows a positive correlation, which means that longer fish tend to swim faster.



GUIDED PRACTICE for Example 2

- Make a scatter plot of the data in the table. Describe the correlation of the data.

x	1	1	2	3	3	4	5	5	6
y	2	3	4	4	5	5	5	7	8

MODELING DATA When data show a positive or negative correlation, you can model the trend in the data using a **line of fit**.

KEY CONCEPT

For Your Notebook

Using a Line of Fit to Model Data

- STEP 1** Make a scatter plot of the data.
- STEP 2** Decide whether the data can be modeled by a line.
- STEP 3** Draw a line that appears to fit the data closely. There should be approximately as many points above the line as below it.
- STEP 4** Write an equation using two points on the line. The points do not have to represent actual data pairs, but they must lie on the line of fit.