

Lesson 1-9

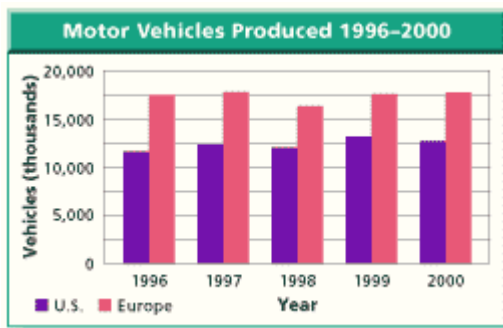
Example 1 Analyze a Bar Graph

The table shows the number of motor vehicles produced in the United States and Europe between 1996 and 2000.

Motor Vehicles Produced 1996-2000 (in thousands)					
Year	1996	1997	1998	1999	2000
U.S.	11,799	12,119	12,047	13,107	12,855
Europe	17,550	17,773	16,332	17,603	17,657

Source: *The World Almanac*

This same data is displayed in a bar graph.



a. Describe the general trend shown in the graph.

The data shows that for the first four years the U.S. was increasing its production while Europe's production went down between 1997 and 1998. Europe's production has been greater than the production in the U.S.

b. Approximately how many more motor vehicles were produced by Europe in 2000?

The bar for Europe is about 17,500 while the bar for the U.S. is about 13,000. So, Europe produced approximately $17,500 - 13,000$ or about 4,500 more motor vehicles in 2000.

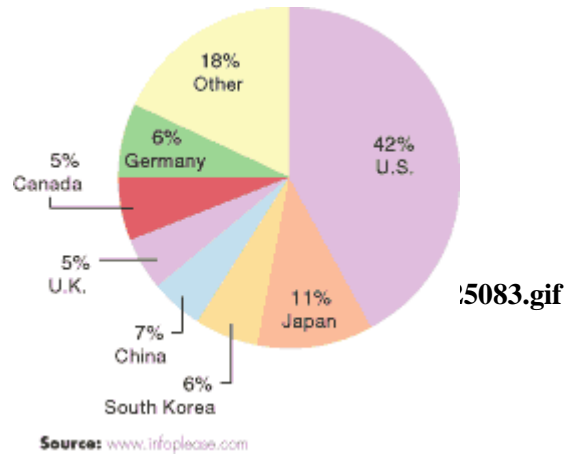
c. What was the total number of motor vehicles produced in the U.S. and Europe in 1998?

Since the table shows the exact numbers, use that data.

$$16,332 + 12,047 = 28,379$$

Example 2 Analyze a Circle Graph

In 2000 a survey was conducted to determine how many people in various countries used the Internet. The circle graph displays the percent of the total Internet users that live in various countries.



Source: www.infoplease.com

- a. If the total number of Internet users for 2000 was 321.2 million, how many users were in the United States?

The section of the graph that represents the U.S. is 42% of the circle, so find 42% of 321.2.
 $0.42 \times 321.2 = 134.904$

There were approximately 134.9 million Internet users in the U.S. in 2000.

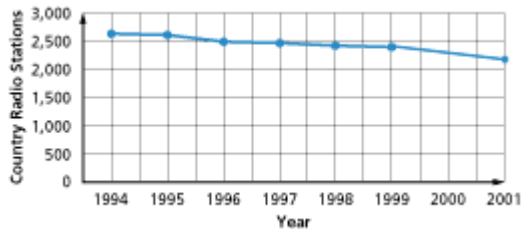
- b. If the percent of internet users in each country stays the same but the total internet users grows to 400 million in 2001, how many internet users would you expect to be from Canada?

5% of users are from Canada, so find 5% of 400 million.
 $0.05 \times 400 = 20$

There would be about 20 million Internet users in Canada in 2001.

Example 3 Analyze a Line Graph

Refer to the graph below.



- a. Estimate the change in Country Radio Stations between 1996 and 2001.

In 1996 there were about 2,500 Country Radio Stations and in 2001 there were about 2,200 Country Radio Stations. So, the change in Country Radio Stations is $2,200 - 2,500$ or a decline of about 300.

- b. If the rate of growth between 1999 and 2001 continues, predict the number of Country Radio Stations in 2010.

Based on the graph, the decrease in number of radio stations between 1999 and 2001 is about 100. So, the number of stations should decrease by 50 each year.

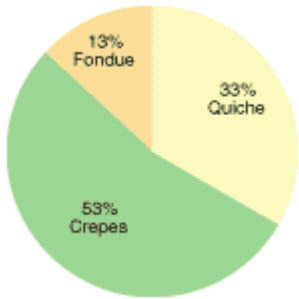
$$2,200 - 50(9) = 2,200 - 450 = 1,750$$

Multiply the annual decrease, 100, by the number of years, 9.

The number of Country Radio Stations in the U.S. should be about 1,750 in the year 2010.

Example 4 Misleading Graphs

A survey was conducted to determine what food would be served at the French club party. Explain how the graph misrepresents the data.



The percents on the circle graph do not sum to 100.