**Lesson 8-4**

Example 1 Display Data Using a Bar Graph
BOOKS   The table below shows responses to a survey about favorite types of books. Make a bar graph to display the data.

Book Type	Frequency of Response
Novel	25
Mystery	9
Non-fiction	11
History	4
Romance	14

Step 1 Draw a horizontal axis and a vertical axis. The horizontal axis will represent the book types and the vertical axis will represent the frequencies. Add a title.

Step 2 Draw a bar to represent each category. In this case, a bar is used to represent the frequency of each type of book.
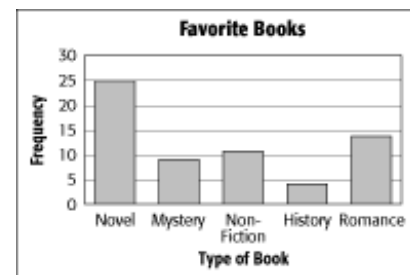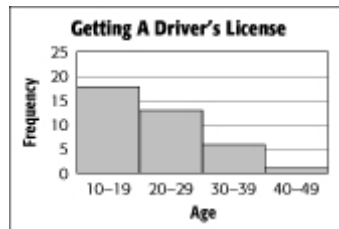
Example 2 Display Data Using a Histogram
DRIVING **The ages at which people first got a driver's license have been organized into a frequency table. Make a histogram of the data.**

Age	Frequency
10–19	18
20–29	13
30–39	6
40–49	1

**Step 1** Draw and label horizontal and vertical axes. Add a title.

Step 2 Draw a bar to represent the frequency of each interval.

The two highest bars represent a majority of the data. From the graph, you can easily see that most people were between 10 and 29 years of age when they got their driver's license.

Example 3 Analyze Data to Make Inferences
AUTOMOBILES **Refer to the graphs below.**
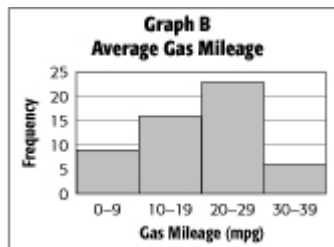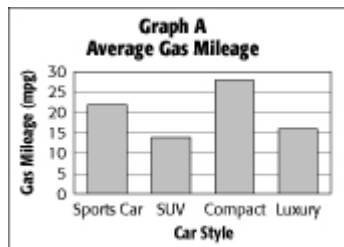
Which graph would you use to determine how many cars had a gas mileage less than 20 miles per gallon? Which gas mileage range had the largest number of cars?
Graph B; Look for the range of miles per gallon with the highest number of cars. The graph shows that the range 20 – 29 mpg had the highest frequency of cars.

Example 4 Analyze Data to Make Inferences
AUTOMOBILES   Refer to the graphs below.
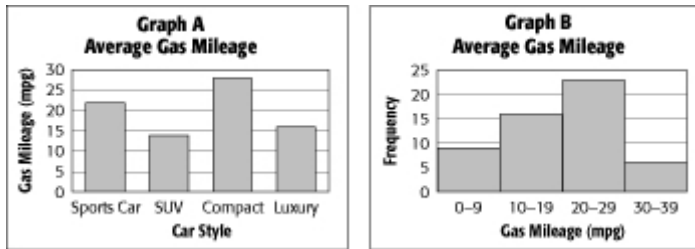
Which graph would you use to determine the average gas mileage of a compact car? Compare the average gas mileages for SUV's and compact cars.
Graph A; The average gas mileage for compact cars is almost twice that of the average gas mileage for SUV's.