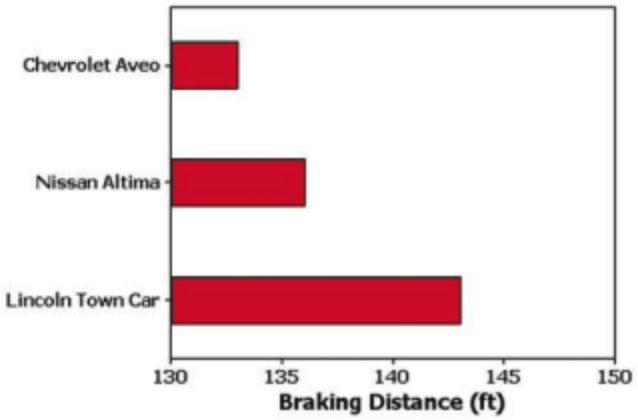
24. Braking Distance Data Set 14 in Appendix B lists braking distances (ft) of different cars, and the braking distances of three of those cars are shown in the accompanying illustration.



2-4 Beyond the Basics

25. Back-to-Back Stemplots Exercise 19 in Section 2-3 used back-to-back relative frequency histograms for the ages of actresses and actors that are listed in Data Set 11 of Appendix B. Use the same method to construct back-to-back stemplots of the ages of actresses and actors, and then use the results to compare the two data sets.

26. Expanded and Condensed Stemplots

a. A stemplot can be *expanded* by subdividing rows into those with leaves having digits of 0 through 4 and those with leaves having digits 5 through 9. Using the body temperatures from 12 AM on Day 2 listed in Data Set 3 of Appendix B, the first three rows of an expanded stemplot have stems of 96 (for leaves between 5 and 9 inclusive), 97 (for leaves between 0 and 4 inclusive), and 97 (for leaves between 5 and 9 inclusive). Construct the complete expanded stemplot for the body temperatures from 12 AM on Day 2 listed in Data Set 3 of Appendix B.

b. A stemplot can be *condensed* by combining adjacent rows. Using the LDL cholesterol measurements from males in Data Set 1 of Appendix B, we obtain the first two rows of the condensed stemplot as shown below. Note that we insert an asterisk to separate digits in the leaves associated with the numbers in each stem. Every row in the condensed plot must include exactly one asterisk so that the shape of the condensed stemplot is not distorted. Complete the condensed stemplot. What is an advantage of using a condensed stemplot instead of one that is not condensed?

```
6-7 | 79*778
8-9 | 45678*049
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Chapter 2 Review

This chapter presented methods for organizing, summarizing, and graphing data sets. When one is investigating a data set, the characteristics of center, variation, distribution, outliers, and changing pattern over time are generally very important, and this chapter includes a variety of tools for investigating the distribution of the data. After completing this chapter, you should be able to do the following:

- Construct a frequency distribution or relative frequency distribution to summarize data (Section 2-2).
- Construct a histogram or relative frequency histogram to show the distribution of data (Section 2-3).