2. Histogram of Brain Volumes Construct the histogram that corresponds to the frequency distribution from Exercise 1. Applying a very strict interpretation of the requirements for a normal distribution, does the histogram suggest that the data are from a population having a normal distribution? Why or why not?

3. Dotplot of California Lottery In the California Daily 4 lottery, four digits are randomly selected each day. Listed below are the digits that were selected in one recent week. Construct a dotplot. Does the dotplot suggest that the lottery is fair?

5 3 8 9 2 9 1 1 3 0 9 7 3 8 7 4 7 4 8 5 6 8 0 0 4 7 5 3

4. Stemplot of IQ Scores Listed below are the first eight IQ scores from Data Set 6 in Appendix B. Construct a stemplot of these eight values. Is this data set large enough to reveal the true nature of the distribution of IQ scores for the population from which the sample is obtained?

96 89 87 87 101 103 103 96

5. CO Emissions Listed below are the amounts (million metric tons) of carbon monoxide emissions in the United States for each year of a recent ten-year period. The data are listed in order. Construct the graph that is most appropriate for these data. What type of graph is best? What does the graph suggest?

5638 5708 5893 5807 5881 5939 6024 6032 5946 6022

6. CO and NO Emissions Exercise 5 lists the amounts of carbon monoxide emissions, and listed below are the amounts (million metric tons) of nitrous oxide emissions in the United States for the same ten-year period as in Exercise 5. What graph is best for exploring the relationship between carbon monoxide emissions and nitrous oxide emissions? Construct that graph. Does the graph suggest that there is a relationship between carbon monoxide emissions and nitrous oxide emissions?

351 349 345 339 335 335 362 371 376 384

7. Sports Equipment According to *USA Today*, the largest categories of sports equipment sales are as follows: fishing ($2.0 billion); firearms and hunting ($3.1 billion); camping ($1.7 billion); golf ($2.5 billion). Construct the graph that best depicts these different categories and their relative amounts. What type of graph is best?

Cumulative Review Exercises

In Exercises 1–5, refer to the table in the margin, which summarizes results from 641 people who responded to a USA Today survey. Participants responded to this question: "Who do you most like to get compliments from at work?"

Response	Frequency
Co-workers	260
Boss	241
Strangers	82
People who report to me	58

1. Graph Which of the following graphs would be best for visually illustrating the data in the table: histogram; dotplot; scatterplot; Pareto chart; stemplot?

2. Level of Measurement Is the level of measurement of the 641 individual responses nominal, ordinal, interval, or ratio? Why?

3. Sampling The results in the table were obtained by posting the question on a Web site, and readers of *USA Today* could respond to the question if they chose to. What is this type of sampling called? Is this type of sample likely to be representative of the population of all workers? Why or why not?

4. Misleading Graph How is the accompanying graph misleading? How could it be modified so that it would not be misleading? (The graph is on the top of the next page.)