1-3 Basic Skills and Concepts

Statistical Literacy and Critical Thinking

1. Parameter and Statistic What is a parameter, and what is a statistic?

2. Quantitative/Categorical Data How do quantitative data and categorical data differ?

3. Discrete/Continuous Data Which of the following describe discrete data?

a. The numbers of people surveyed in each of the next several Gallup polls

b. The exact heights of individuals in a sample of several statistics students

c. The number of Super Bowl football games that must be played before one of the teams scores exactly 75 points

4. Identifying the Population In a Gallup poll of 1010 adults in the United States, 55% of the respondents said that they used local TV stations daily as a source of news. Is the 1010 value a statistic or a parameter? Is the 55% value a statistic or a parameter? Describe the population.

In Exercises 5–12, determine whether the given value is a statistic or a parameter.

5. Distracted Driving In a AAA Foundation for Traffic Safety survey, 21% of the respondents said that they recently texted or e-mailed while driving.

6. States There are 50 state capitols in the United States.

7. Titanic A study was conducted of all 2223 passengers aboard the *Titanic* when it sank.

8. Late Flights Among the flights included in the sample of flights in Data Set 15 of Appendix B, 21% arrived late.

9. IQ Scores The mean IQ score for subjects taking the Wechsler Adult Intelligence Scale IQ test is 100.

10. Periodic Table The average (mean) atomic weight of all elements in the periodic table is 134.355 unified atomic mass units.

11. Brain Volume The average (mean) volume of the brains included in Data Set 6 of Appendix B is 1126.0 cm³.

12. HDTV Penetration In a random sample of households, it was found that 47% of the sampled households had high-definition TVs.

In Exercises 13–20, determine whether the given values are from a discrete or continuous data set.

13. Honda Civic Crash Test In Data Set 13 of Appendix B, the measured chest deceleration of a Honda Civic in a crash test is 39 g, where g is a force of gravity.

14. Honda Civic Cylinders The Honda Civic has 4 cylinders.

15. Word Count From Data Set 17 in Appendix B we see that a male spoke 13,825 words in one day.

16. First President George Washington was 188 cm tall.

17. House of Representatives Currently the House of Representatives has 435 members.