Chapter 1 Test Bank

Note to instructor: Test items marked with this star symbol also appear in the chapter quiz on the book’s open-access Student Study Site.

1. When humans first realized that counting was a good idea, this became a useful skill for people to have:
   a. Knowing the alphabet
   b. Asking questions
   *c. Collecting information
   d. Making decisions

2. In early times, once numbers became part of the human language, the next step was to attach numbers to:
   *a. Outcomes
   b. Letters
   c. Places
   d. Time

3. After the first set of data having to do with populations was collected during the 17th century scientists needed to develop:
   a. General tools to answer general questions
   b. General tools to answer specific questions
   c. Specific tools to answer general questions
   *d. Specific tools to answer specific questions

4. Most of the basic statistical procedures were first developed and used in other fields and used to study human behavior much later.
5. The past 100 years has seen numerous examples of new ways to use old ideas.
*a. True
b. False

6. One of the most used statistical programs that has opened up the use of sophisticated techniques to those who want to explore is:
*a. SPSS
b. Microsoft Word
c. Mini Tab
d. None of the above

7. Today, statisticians in many different professional areas find themselves using ________ techniques to answer different questions.
a. Varied
b. New
*c. The same
d. Experimental

8. Generally, although sometimes called different things, the same statistics are used in most disciplines.
*a. True
b. False
9. Statistics describes a set of __________ that is used for describing, organizing, and interpreting information.
   a. Statements
   b. Rules and exceptions
   *c. Tools and techniques
   d. Numbers and letters

10. __________ statistics involve collecting, organizing, and summarizing data.
   a. Experimental
   *b. Descriptive
   c. Inferential
   d. Organizational

11. Inferential statistics involve __________ the data.
   a. Organizing
   b. Balancing
   c. Editing
   *d. Interpreting

12. The type of descriptive statistic that tells you the most popular/most frequent choice from a number of choices is the:
   a. Median
   *b. Mode
   c. Mean
   d. Average
13. The descriptive statistic that is also referred to as the “average” is the:
   a. Median
   b. Mode
   *c. Mean
   d. Descriptor

14. _______ statistics are often (but not always) the next step after you have some basic understanding of data.
   a. Descriptive
   *b. Inferential
   c. Experimental
   d. Observational

15. _______ is to smaller group of data as population is to larger group of data.
   a. Micro group
   b. Mini group
   c. Micro data
   *d. Sample

16. A population can be considered all of the occurrences with certain characteristics.
   *a. True
   b. False

17. All members of a sample are members of the population.
   *a. True
b. False

18. Descriptive and inferential statistics work hand in hand, and which one you use and when depends on:

*a. The question you want answered.

b. The methods you choose for investigation.

c. The sample you select.

d. The population you choose.

19. The introduction of personal computers and their use in statistical analyses has been both good and bad. Give an example of a “good” reason and one example of a “bad” reason.

*a. GOOD: most statistical analyses no longer require access to a huge and expensive mainframe computer; a simple computer typically costing less than $500 can do most of what’s needed.

BAD: Less than adequately educated students will take available data and think that by running it through a sophisticated analysis they will have reliable, trustworthy, and meaningful outcomes when they do not.

20. The study of statistics can be intimidating, but it can also be rewarding. Describe at least two benefits to your life as a student by engaging in the study of statistics.

*a. Varies

21. What term is used to describe the science of organizing and analyzing information to make the information more easily understood?

a. Analysis

b. Data

c. Interpretation

*d. Statistics
22. Which of the following individuals used statistical methods during the 17th century to study
the intelligence of his family members?

a. Charles Darwin
*b. Francis Galton
c. Isaac Newton
d. Alfred Binet

23. Which of the following would be used to describe the type of statistical methods used to
organize and describe the characteristics of a collection of data?

a. Inferential statistics
*b. Descriptive statistics
c. Sampling methods
d. Population methods

24. When did the first collection of a set of data pertaining to populations occur?

a. 15th century
*b. 17th century
c. 19th century
d. 21st century

25. Who popularized the use of the correlation coefficient?

a. Charles Darwin
b. Neil Salkind
*c. Francis Galton
d. R.A. Fisher
26. What terms is defined as a set of tool and techniques used for describing, organizing, and interpreting data?

a. Inferential  
b. Population  
c. Sample  
*d. Statistics

27. If your professor tells you, "if you don't start with reliable data, you'll end up with unreliable results," what does he/she mean?

a. A bird in the hand is worth two in the bush.  
b. A watched pot never boils.  
c. Don't cry over spilt milk.  
*d. Garbage in, garbage out.

28. What will you need to complete most statistical analyses?

*a. A personal computer  
b. Large computer mainframe  
c. A slide rule  
d. A highly trained technician

29. In what century, was the simplest test for examining differences between two groups first advanced?

a. 17th century  
b. 18th century  
c. 19th century  
*d. 20th century
30. Inferential statistics is most often used for which of the following?
   a. Summarizing data
   b. Organizing data
*  c. Interpreting data
   d. Collecting data

31. Which of the following is NOT a use of descriptive statistics?
   a. Organizing data
*  b. Interpreting data
   c. Summarizing data
   d. Collecting data

32. What type of statistics is used to organize and describe the characteristics of a collection of data?
   a. Inferential
   * b. Descriptive
   c. Ordinal
   d. Nominal

33. What is a collection of information also called?
   *a. Data set
   b. Sample statistic
   c. Descriptive statistic
   d. Population subset
34. When are descriptive measures most often used?
*a. To describe how often something occurs
b. To determine if a sample is representative of a population
c. To predict an outcome
d. To determine the effect of an intervention

35. How are inferential statistics most often used?
a. To infer to the quality of data collected
b. To organize and describe data
*c. To make inferences from the sample to the population
d. To plot the data

36. What is the small subset of the population from whom you collect data called?
a. Population
*b. Sample
c. Database
d. Group A

37. What is the larger group from which a sample is drawn?
a. Sample group
*b. Population
c. Median
d. Mode
38. What type of statistics employs the use of sample data that is used to infer information about the population?
   a. Descriptive statistics
   b. Ordinal statistics
   c. Nominal statistics
   *d. Inferential statistics

39. When should inferential statistics typically be used?
   a. Before descriptive statistics
   *b. After descriptive statistics
   c. At the same time as descriptive statistics
   d. Never with descriptive statistics

40. The average age of everyone in the class is an example of what type of statistics?
   a. Inferential
   b. Mode
   c. Median
   *d. Descriptive

41. Statistics is used in the following fields:
   a. Psychology
   b. Anthropology
   c. Education
   *d. All of the above
42. A common goal in statistics is to:
   *a. Generalize results from a sample to a population

b. Generalize results from a population to a sample
c. Generalize results from a population to a second population
d. Generalize results from a sample to a second sample

43. Statistics is a very general field in that it can be utilized in a wide variety of areas of study.
   *a. True
   b. False

44. Define descriptive statistics.
   *a. Descriptive statistics are used to organize and describe the characteristics of a collection of data.

45. Define inferential statistics.
   *a. Inferential statistics are used to make inferences from a smaller group of data (the sample) to the larger group (population).

46. What is the difference between descriptive and inferential statistics?
   *a. Descriptive statistics organizes and describes data, while inferential statistics is used to infer meaning about a larger population from a sample of the population.

47. What is a data set?
   *a. A collection of information or data

48. Name two common descriptive statistics.
*a. Mean, Median, Mode, Frequency (any of these may be considered correct)

49. What is a sample?
*a. A sample is a smaller portion (representative portion) of the larger group or population. The sample is the group from whom data is collected in hopes of generalizing results to the population.

50. Provide three examples of how taking a statistics class may benefit you.
*a. Looks good on a transcript, Separates you from others, Intellectual challenge, Prepares you for understanding concepts in other sciences, You need it for graduate school, People will think you are smart (Note: Other answers may also be considered acceptable at the discretion of the professor)

51. List five ways to succeed in this statistics class.
*a. Remind yourself you are not dumb (even when lessons are difficult); Keep an open mind (and good attitude) about statistics; Work through the chapters sequentially (don’t skip lessons); Form a study group; Ask the teacher or friend questions; Complete the exercises at the end of each chapter; Practice, practice, practice; Look for applications; Browse the chapters, then go back and read; Have fun – celebrate small successes.