

Chapter 1: Statistics or Sadistics? It's Up to You

Test Bank

Multiple Choice

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

Ans: c

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

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

Ans: a

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

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

Ans: d

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

4. _____ is one of the most popular, most powerful analytic tools available today.

- a. SPSS

- b. Microsoft Word
- c. Mini Tab
- d. Excel

Ans: a

Answer Location: And Why SPSS

Learning Objective: Why you should take statistics

Cognitive Domain: Knowledge

Difficulty Level: Easy

5. Today, statisticians in many different professional areas find themselves using _____ techniques to answer different questions.

- a. varied
- b. new
- c. the same
- d. experimental

Ans: c

Answer Location: A 5-Minute History of Statistics

Learning Objective: Why you should take statistics

Cognitive Domain: Knowledge

Difficulty Level: Easy

6. Statistics describes a set of _____ that are used for describing, organizing, and interpreting information.

- a. statements
- b. rules and exceptions
- c. tools and techniques
- d. numbers and letters

Ans: c

Answer Location: Statistics: What It Is (and Isn't)

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

7. _____ statistics involve collecting, organizing, and summarizing data.

- a. Experimental
- b. Descriptive
- c. Inferential
- d. Organizational

Ans: b

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

8. Inferential statistics involve _____ the data.

- a. organizing

- b. balancing
- c. editing
- d. interpreting

Ans: d

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Comprehension

Difficulty Level: Easy

9. The type of descriptive statistic that tells you the most popular or most frequent choice from a number of choices is the _____.

- a. median
- b. mode
- c. mean
- d. average

Ans: b

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

10. The descriptive statistic that is also referred to as the *average* is the _____.

- a. median
- b. mode
- c. mean
- d. descriptor

Ans: c

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

11. _____ 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

Ans: b

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

12. _____ is to a smaller group of data as population is to a larger group of data.

- a. Micro group

- b. Mini group
- c. Micro data
- d. Sample

Ans: d

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Comprehension

Difficulty Level: Medium

13. 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

Ans: a

Answer Location: In Other Words . . .

Learning Objective: How to succeed in this course

Cognitive Domain: Knowledge

Difficulty Level: Easy

14. 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

Ans: d

Answer Location: Statistics: What It Is (and Isn't)

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

15. 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

Ans: b

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

16. 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

Ans: b

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

17. 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

Ans: b

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

18. Who popularized the use of the correlation coefficient?

- a. Charles Darwin
- b. Neil Salkind
- c. Francis Galton
- d. R. A. Fisher

Ans: c

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

19. What term is defined as a set of tools and techniques used for describing, organizing, and interpreting data?

- a. inference
- b. population
- c. sample
- d. statistics

Ans: d

Answer Location: Statistics: What It Is (and Isn't)

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

20. If your professor tells you, “If you don’t start with reliable data, you’ll end up with unreliable results,” what does he or 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.

Ans: d

Answer Location: A 5-Minute History of Statistics

Learning Objective: How to succeed in this course

Cognitive Domain: Comprehension

Difficulty Level: Easy

21. 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

Ans: a

Answer Location: A 5-Minute History of Statistics

Learning Objective: How to succeed in this course

Cognitive Domain: Knowledge

Difficulty Level: Easy

22. 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

Ans: d

Answer Location: A 5-Minute History of Statistics

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

23. Inferential statistics is most often used for which of the following?

- a. summarizing data
- b. organizing data
- c. interpreting data
- d. collecting data

Ans: c

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

24. Which of the following is NOT a use of descriptive statistics?

- a. organizing data
- b. interpreting data
- c. summarizing data
- d. collecting data

Ans: b

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

25. 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

Ans: b

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

26. What is a collection of information also called?

- a. data set
- b. sample statistic
- c. descriptive statistic
- d. population subset

Ans: a

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

27. 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

Ans: a

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

28. 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

Ans: c

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

29. What is the small subset of the population from whom you collect data called?

- a. population
- b. sample
- c. database
- d. group A

Ans: b

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

30. What is the larger group from which a sample is drawn?

- a. sample group
- b. population
- c. median
- d. mode

Ans: b

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

31. 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

Ans: d

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

32. 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

Ans: b

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Easy

33. The average age of everyone in the class is an example of what type of statistics?

- a. inferential
- b. mode
- c. median
- d. descriptive

Ans: d

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Comprehension

Difficulty Level: Easy

34. 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

Ans: a

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Comprehension

Difficulty Level: Medium

35. A knowledge of statistics helps us make decisions based on _____ evidence.

- a. logical
- b. unobserved
- c. possible
- d. empirical

Ans: d

Answer Location: In Other Words. . .

Learning Objective: The meaning of empiricism

Cognitive Domain: Knowledge

Difficulty Level: Medium

36. Don't skip lessons—work through the chapters in sequence because _____.

- a. each chapter is important
- b. each chapter is full of information
- c. each chapter provides a foundation for the next chapter

d. each chapter is useful

Ans: c

Answer Location: Ten Ways to Use This Book

Learning Objective: Learning methods

Cognitive Domain: Comprehension

Difficulty Level: Easy

37. According to the author, when you are done with the course, you may _____.

a. sell the book

b. use the book as a reference

c. continue doing book exercises

d. do not sell the book

Ans: b

Answer Location: Ten Ways to Use This Book

Learning Objective: Learning methods

Cognitive Domain: Comprehension

Difficulty Level: Easy

38. One of the most basic ways to ensure some success in doing well in this course is to _____.

a. form a study group

b. take notes

c. talk to your friends

d. look up in dictionary

Ans: a

Answer Location: Ten Ways to Use This Book

Learning Objective: Learning methods

Cognitive Domain: Comprehension

Difficulty Level: Easy

39. If you do not understand what you are being taught in class, _____.

a. ask your professors first

b. ask your friends first

c. read your book first

d. think about it first

Ans: a

Answer Location: Ten Ways to Use This Book

Learning Objective: Learning methods

Cognitive Domain: Comprehension

Difficulty Level: Easy

40. The best way to learn statistics is to _____.

a. ask lots of questions

b. think a lot

c. practice a lot

d. read a lot

Ans: c

Answer Location: Ten Ways to Use This Book
Learning Objective: Learning methods
Cognitive Domain: Comprehension
Difficulty Level: Easy

True/False

1. Most of the basic statistical procedures were first developed and used in other fields and used to study human behavior much later.

Ans: T

Answer Location: A 5-Minute History of Statistics
Learning Objective: What statistics is all about
Cognitive Domain: Knowledge
Difficulty Level: Easy

2. The past 100 years have seen numerous examples of new ways to use old ideas.

Ans: T

Answer Location: A 5-Minute History of Statistics
Learning Objective: What statistics is all about
Cognitive Domain: Knowledge
Difficulty Level: Easy

3. Generally, although sometimes called different things, the same statistics are used in most disciplines.

Ans: T

Answer Location: A 5-Minute History of Statistics
Learning Objective: Why you should take statistics
Cognitive Domain: Knowledge
Difficulty Level: Easy

4. A population can be considered all of the occurrences with certain characteristics.

Ans: T

Answer Location: What Are Inferential Statistics?
Learning Objective: What statistics is all about
Cognitive Domain: Knowledge
Difficulty Level: Easy

5. All members of a sample are members of the population.

Ans: T

Answer Location: What Are Inferential Statistics?
Learning Objective: What statistics is all about
Cognitive Domain: Comprehension
Difficulty Level: Medium

Short Answer

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

Ans: 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 those data through a sophisticated analysis they will have reliable, trustworthy, and meaningful outcomes when they do not.

Ans: Examples should reflect knowledge demonstrated in passage above.

Answer Location: A 5-Minute History of Statistics

Learning Objective: Why you should take statistics

Cognitive Domain: Application

Difficulty Level: Medium

2. 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.

Ans: Varies

Answer Location: Why Statistics?

Learning Objective: Why you should take statistics

Cognitive Domain: Application

Difficulty Level: Easy

3. Define *descriptive statistics*.

Ans: Descriptive statistics are used to organize and describe the characteristics of a collection of data.

Answer Location: What Are Descriptive Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Medium

4. Define *inferential statistics*.

Ans: Inferential statistics are used to make inferences from a smaller group of data (the sample) to the larger group (population).

Answer Location: What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Knowledge

Difficulty Level: Medium

5. What is the difference between descriptive and inferential statistics?

Ans: Descriptive statistics organize and describe data while inferential statistics are used to infer meaning about a larger population from a sample of the population.

Answer Location: What Are Descriptive Statistics?; What Are Inferential Statistics?

Learning Objective: What statistics is all about

Cognitive Domain: Analysis

Difficulty Level: Medium

Salkind, *Statistics for People Who (Think They) Hate Statistics*, 6e
SAGE Publishing, 2017