Test Bank for Statistics for Managers Using Microsoft Excel 9th Levine

Access Complete Test Bank for Statistics for Managers Using Microsoft Excel 9th Levine

TEST BANK

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Birmingham Southern College

STATISTICS FOR MANAGERS
USING MICROSOFT® EXCEL®
NINTH EDITION

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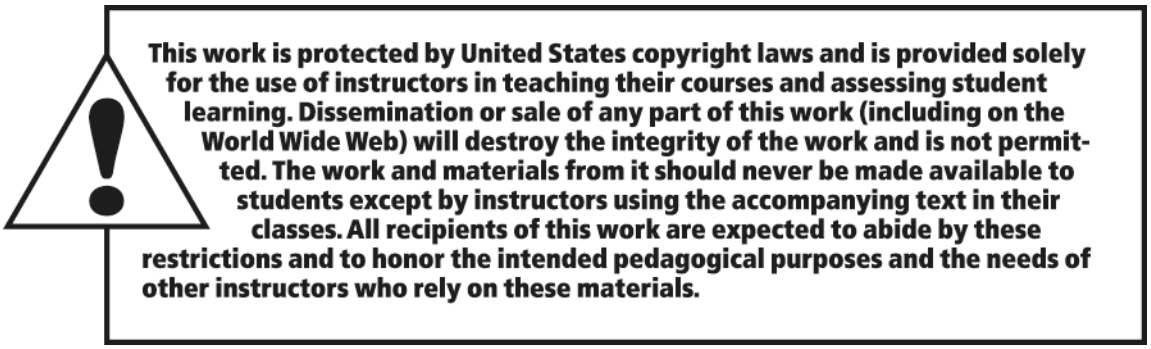

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Access Complete Test Bank for Statistics for Managers Using Microsoft Excel 9th Levine

CONTENTS

Getting Started: Important Things to Learn First 0-1
Chapter 1: Defining and Collecting Data..... 1-1
Chapter 2: Organizing and Visualizing Variables 2-1
Chapter 3: Numerical Descriptive Measures 3-1
Chapter 4: Basic Probability 4-1
Chapter 5: Discrete Probability Distributions..... 5-1
Chapter 6: The Normal Distribution and Other Continuous Distributions..... 6-1
Chapter 7: Sampling Distributions..... 7-1
Chapter 8: Confidence Interval Estimation..... 8-1
Chapter 9: Fundamentals of Hypothesis Testing: One-Sample Tests 9-1
Chapter 10: Two-Sample Tests..... 10-1
Chapter 11: Analysis of Variance 11-1
Chapter 12: Chi-Square and Nonparametric Tests 12-1
Chapter 13: Simple Linear Regression 13-1
Chapter 14: Introduction to Multiple Regression 14-1
Chapter 15: Multiple Regression Model Building..... 15-1
Chapter 16: Time-Series Forecasting..... 16-1
Chapter 17: Business Analytics 17-1
Chapter 18: A Roadmap for Analyzing Data..... 18-1
Chapter 19: Statistical Applications in Quality Management (ONLINE) 19-1
Chapter 20: Decision Making (ONLINE)..... 20-1

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Getting Started: Important Things to Learn First

1. The process of using data collected from a small group to reach conclusions about a large group is called
   a) statistical inference.
   b) DCOVA framework.
   c) operational definition.
   d) descriptive statistics.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: inferential statistics

2. Those methods involving the collection, presentation, and characterization of a set of data in order to properly describe the various features of that set of data are called
   a) statistical inference.
   b) DCOVA framework.
   c) operational definition.
   d) descriptive statistics.

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: descriptive statistics

3. The collection and summarization of the socioeconomic and physical characteristics of the employees of a particular firm are examples of
   a) inferential statistics.
   b) descriptive statistics.
   c) operational definition.
   d) DCOVA framework.

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: descriptive statistics

4. The estimation of the population average family expenditure on food based on the sample average expenditure of 1,000 families is an example of
   a) inferential statistics.
   b) descriptive statistics.
   c) DCOVA framework.
   d) operational definition.

ANSWER:
a

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TYPE: MC DIFFICULTY: Easy
KEYWORDS: inferential statistics

5. Which of the following is not an element of descriptive statistical problems?
   a) An inference made about the population based on the sample.
   b) The population or sample of interest.
   c) Tables, graphs, or numerical summary tools.
   d) Identification of patterns in the data.

ANSWER:
a
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: descriptive statistics

6. A study is under way in Yosemite National Forest to determine the adult height of American pine trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 feet tall. It is estimated that the forest contains 25,000 adult American pines. The study involves collecting heights from 250 randomly selected adult American pine trees and analyzing the results. Identify the variable of interest in the study.
   a) The age of an American pine tree in Yosemite National Forest.
   b) The height of an American pine tree in Yosemite National Forest.
   c) The number of American pine trees in Yosemite National Forest.
   d) The species of trees in Yosemite National Forest.

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: variable

7. Most analysts focus on the cost of tuition as the way to measure the cost of a college education. But incidentals, such as textbook costs, are rarely considered. A researcher at Drummand University wishes to estimate the textbook costs of first-year students at Drummand. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was $600 per semester. Identify the variable of interest to the researcher.
   a) The textbook cost of first-year Drummand University students.
   b) The year in school of Drummand University students.
   c) The age of Drummand University students.
   d) The cost of incidental expenses of Drummand University students.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: variable

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8. True or False: Problems may arise when statistically unsophisticated users who do not understand the assumptions behind the statistical procedures or their limitations are misled by results obtained from computer software.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: statistical package

9. True or False: Managers need an understanding of statistics to be able to present and describe information accurately, draw conclusions about large populations based on small samples, improve processes, and make reliable forecasts.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: reasons for learning statistics

10. True or False: A professor computed the sample average exam score of 20 students and used it to estimate the average exam score of the 1,500 students taking the exam. This is an example of inferential statistics.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: descriptive statistics, inferential statistics

11. True or False: Using the number of registered voters who turned out to vote for the primary in Iowa to predict the number of registered voters who will turn out to vote in Vermont's primary is an example of descriptive statistics.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: descriptive statistics, inferential statistics

12. True or False: Compiling the number of registered voters who turned out to vote for the primary in Iowa is an example of descriptive statistics.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: descriptive statistics, inferential statistics

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13. The Human Resources Director of a large corporation wishes to develop an employee benefit package and decides to select 500 employees from a list of all (N = 40,000)workers in order to study their preferences for the various components of a potential package. In this study, methods involving the collection, presentation, and characterization of the data are called _____.

ANSWER:
descriptive statistics/methods
TYPE: FI DIFFICULTY: Easy
KEYWORDS: descriptive statistics

14. The Human Resources Director of a large corporation wishes to develop an employee benefit package and decides to select 500 employees from a list of all (N = 40,000)workers in order to study their preferences for the various components of a potential package. In this study, methods that result in decisions concerning population characteristics based only on the sample results are called _____.

ANSWER:
inferential statistics/methods
TYPE: FI DIFFICULTY: Easy
KEYWORDS: inferential statistics

15. The oranges grown in corporate farms in an agricultural state were damaged by some unknown fungi a few years ago. Suppose the manager of a large farm wanted to study the impact of the fungi on the orange crops on a daily basis over a 6-week period. On each day a random sample of orange trees was selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. In this study, drawing conclusions on any one day about the true population characteristics based on information obtained from the sample is called _____.

ANSWER:
inferential statistics/methods
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: inferential statistics

16. The oranges grown in corporate farms in an agricultural state were damaged by some unknown fungi a few years ago. Suppose the manager of a large farm wanted to study the impact of the fungi on the orange crops on a daily basis over a 6-week period. On each day a random sample of orange trees was selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. In this study, the presentation and characterization of the two main measures calculated each day (i.e., average number of damaged oranges per tree and proportion of trees having damaged oranges) is called _____ .

ANSWER:
descriptive statistics/methods
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: descriptive statistics

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17. The Commissioner of Health in New York State wanted to study malpractice litigation in New York. A sample of 31 thousand medical records was drawn from a population of 2.7 million patients who were discharged during 2010. Using the information obtained from the sample to predict population characteristics with respect to malpractice litigation is an example of _____.

ANSWER:
inferential statistics
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: inferential statistics

18. The Commissioner of Health in New York State wanted to study malpractice litigation in New York. A sample of 31 thousand medical records was drawn from a population of 2.7 million patients who were discharged during 2010. The collection, presentation, and characterization of the data from patient medical records are examples of _____.

ANSWER:
descriptive statistics/methods
TYPE: FI DIFFICULTY: Easy
KEYWORDS: descriptive statistics

19. True or False: Business analytics combine "traditional" statistical methods with methods and techniques from management science and information systems to form an interdisciplinary tool that supports fact-based management decision making.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: business analytics

20. Which of the following is not true about business analytics?
    a) It enables you to use statistical methods to analyze and explore data to uncover unforeseen relationships.
    b) It enables you to use management science methods to develop optimization models that impact an organization's strategy, planning, and operations.
    c) It enables you to use complex mathematics to replace the need for organizational decision making and problem solving.
    d) It enables you to use information systems methods to collect and process data sets of all sizes.

ANSWER:
c
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: business analytics

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21. True or False: “Big data” is a concrete concept with a precise operational definition.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: big data

22. True or False: “Big data” are data being collected in huge volumes and at very fast rates, and they typically arrive in a variety of forms, organized and unorganized.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: big data

23. True or False: In the current data-driven environment of business, the decisions you make will be increasingly based on gut or intuition supported by personal experience.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: business analytics

24. True or False: The D in the DCOVA framework stands for “data”.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

25. True or False: The D in the DCOVA framework stands for “define”.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

26. True or False: The C in the DCOVA framework stands for “categorize”.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

27. True or False: The C in the DCOVA framework stands for “collect”.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

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28. True or False: The O in the DCOVA framework stands for "operationalize".

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

29. True or False: The O in the DCOVA framework stands for "organize".

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

30. True or False: The V in the DCOVA framework stands for "verify".

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

31. True or False: The V in the DCOVA framework stands for "visualize".

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

32. True or False: The A in the DCOVA framework stands for "apply".

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

33. True or False: The V in the DCOVA framework stands for "value".

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: DCOVA framework

34. Which of the following is not an attribute of big data?
    a) Variegated
    b) Velocity
    c) Volume
    d) Variety

ANSWER:
a

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TYPE: TF DIFFICULTY: Easy
KEYWORDS: business analytics

35. True or False: If rising temperatures are followed immediately by an increase in crime in urban areas, we would attribute the two events to be an instance of logical causality.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: Starting points for learning statistics, page 6 text

36. An online marketing system that uses customer demand to adjust its item or service pricing is using _____ _____ in its strategy.

ANSWER:
dynamic pricing
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: flexibility, demand, page 1 text

37. Using software, you perform calculations more easily than by hand. This means which of the following:
    a) Using software is a guarantee you will not produce inappropriate solutions
    b) Memorization of software commands is necessary to using software competently
    c) Using the software while understanding the concepts that give the results is more important than having advanced arithmetic skills.
    d) Being able to construct statistical software applications from scratch is a necessary skill.

ANSWER:
c
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: arithmetic skills, analytical skills

38. The Excel command used to insert a new worksheet into a workbook is _____ .

ANSWER: INSERT on the worksheet tab
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: EG.4 WORKING WITH a WORKBOOK

39. The Excel command used to display and review formulas is _____.

ANSWER:
CTRL + ` (grave accent)
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: EG.6 REVIEWING WORKSHEETS

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Chapter 1: Defining and Collecting Data

1. Which of the following is a discrete quantitative (numerical) variable?
   a) The Dow Jones Industrial average
   b) The volume of water released from a dam
   c) The distance you drove yesterday.
   d) The number of employees of an insurance company

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

2. Which of the following is a continuous quantitative (numerical) variable?
   a) The color of a student's eyes
   b) The number of employees of an insurance company
   c) The amount of milk in a 2-liter carton.
   d) The number of gallons of milk sold at the local grocery store yesterday

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: continuous variable, types of data

3. To monitor campus security, the campus police office is taking a survey of the number of students in a parking lot each 30 minutes of a 24-hour period with the goal of determining when patrols of the lot would serve the most students. If X is the number of students in the lot each period, then X is an example of
   a) a categorical variable.
   b) a discrete variable.
   c) a continuous variable.
   d) a statistic.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

4. Researchers are concerned that the weight of the average American school child is increasing implying, among other things, that children's clothing should be manufactured and marketed in larger sizes. If X is the weight of school children sampled in a nationwide study without rounding, then X is an example of
   a) a categorical variable.
   b) a discrete variable.
   c) a continuous variable.
   d) a table of random numbers.

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ANSWER:
c
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: continuous variable, types of data

5. The classification of student class designation (freshman, sophomore, junior, senior) is an example of
   a) a categorical variable.
   b) a discrete variable.
   c) a continuous variable.
   d) a table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

6. The classification of student major (accounting, economics, management, marketing, other) is an example of
   a) a categorical variable.
   b) a discrete variable.
   c) a continuous variable.
   d) a table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

7. The chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited campus bars on the weekend before the final exam week. Her assistant took a random sample of 250 students. The answer on "whether you visited campus bars on the weekend before the final exam week" from students in the sample is an example of _____.
   a) a categorical variable.
   b) a discrete variable.
   c) a continuous variable.
   d) a table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

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SCENARIO 1-1
The manager of the customer service division of a major consumer electronics company is interested in determining whether the customers who have purchased a Blu-ray player made by the company over the past 12 months are satisfied with their products.

8. Referring to Scenario 1-1, the possible responses to the question "How many Blu-ray players made by other manufacturers have you used?" are values from a
   a) discrete variable.
   b) continuous variable.
   c) categorical variable.
   d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

9. Referring to Scenario 1-1, the possible responses to the question "Are you happy, indifferent, or unhappy with the performance per dollar spent on the Blu-ray player?" are values from a
   a) discrete numerical variable.
   b) continuous numerical variable.
   c) categorical variable.
   d) table of random numbers.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

10. Referring to Scenario 1-1, the possible responses to the question "What is your annual income rounded to the nearest thousands?" are values from a
   a) discrete numerical variable.
   b) continuous numerical variable.
   c) categorical variable.
   d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: discrete variable, types of data
EXPLANATION: Even though money is usually considered as a continuous variable, it should be considered as a discrete variable when rounded to the nearest thousands.

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11. Referring to Scenario 1-1, the possible responses to the question "How much time do you use the Blu-ray player every week on the average?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: continuous variable, types of data

12. Referring to Scenario 1-1, the possible responses to the question "How many people are there in your household?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

13. Referring to Scenario 1-1, the possible responses to the question "How would you rate the quality of your purchase experience with 1 = excellent, 2 = good, 3 = decent, 4 = poor, 5 = terrible?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

14. Referring to Scenario 1-1, the possible responses to the question "What brand of Blu-ray player did you purchase?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

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15. Referring to Scenario 1-1, the possible responses to the question "Out of a 100-point score with 100 being the highest and 0 being the lowest, what is your satisfaction level on the videocassette recorder that you purchased?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

16. Referring to Scenario 1-1, the possible responses to the question "In which year were you born?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

17. Referring to Scenario 1-1, the possible responses to the question "How many Blu-ray players made by other manufacturers have you used? “results in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data

18. Referring to Scenario 1-1, the possible responses to the question "Are you happy, indifferent, or unhappy with the performance per dollar spent on the Blu-ray player?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ordinal scale, types of data

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19. Referring to Scenario 1-1, the possible responses to the question "What is your annual income rounded to the nearest thousands?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data

20. Referring to Scenario 1-1, the possible responses to the question "How much time do you use the Blu-ray player every week on the average?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data

21. Referring to Scenario 1-1, the possible responses to the question "How many people are there in your household?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data

22. Referring to Scenario 1-1, the possible responses to the question "How would you rate the quality of your purchase experience with 1 = excellent, 2 = good, 3 = decent, 4 = poor, 5 = terrible?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate

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EXPLANATION: The rating is ordinal scale not an interval scale because the difference in rating between "excellent" and "good" does not have to be the same as the difference between "poor" and "terrible".
KEYWORDS: ordinal scale, types of data

23. Referring to Scenario 1-1, the possible responses to the question "What brand of Blu-ray player did you purchase?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: nominal scale, types of data

24. Referring to Scenario 1-1, the possible responses to the question "Out of a 100-point score with 100 being the highest and 0 being the lowest, what is your satisfaction level with the Blu-ray player that you purchased results in:
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
c
TYPE: MC DIFFICULTY: Difficult
EXPLANATION: The rating is interval scale not ordinal scale because the difference in rating between "80" and "90" can be treated as the same as the difference between "30" and "40" but a rating of "80" does not imply twice the level of satisfaction level as a rating of "40".
KEYWORDS: interval scale, types of data

25. Referring to Scenario 1-1, the possible responses to the question "What is your age at last birthday ?" results in:
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d- A 40-year-old is twice as old as a 20-year-old
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: interval scale, types of data

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26. True or False: The possible responses to the question "How long have you been living at your current residence?" are values from a continuous variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: continuous variable, types of data

27. True or False: The possible responses to the question "How many times in the past three months have you visited a city park?" are values from a discrete variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

28. True or False: A continuous variable may take on any value within its relevant range even though the measurement device may not be precise enough to record it.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: continuous variable, types of data

29. True or False: Faculty rank (professor to lecturer) is an example of discrete numerical data.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

30. True or False: Student grades (A to F) are an example of continuous numerical data.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: categorical variables, types of data

31. True or False: The amount of coffee consumed by an individual in a day is an example of a discrete numerical variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: continuous variables, types of data

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32. True or False: The answer to the question "What is your favorite color?" is an example of an ordinal scaled variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nominal scale

33. True or False: The answer to the question "How do you rate the quality of your business statistics course" is an example of an ordinal scaled variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ordinal scale

34. True or False: The answer to the question "How many hours on average do you spend watching TV every week?" is an example of a ratio scaled variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ratio scale

35. True or False: The answer to the question "What is your sleeping bag temperature rating?" is an example of a ratio scaled variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: interval scale

36. An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. The number of claims a person has made in the last 3 years is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

37. An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. The distance a person drives in a year is an example of a _____ variable.

ANSWER:
continuous
TYPE: FI DIFFICULTY: Easy
KEYWORDS: continuous variable, types of data

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38. An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. A person's age is an example of a _____ numerical variable.

ANSWER:
continuous
TYPE: FI DIFFICULTY: Easy
KEYWORDS: continuous variable, types of data

39. An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. How long a person has been a licensed driver is an example of a _____ numerical variable.

ANSWER:
continuous
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: continuous variable, types of data

40. An insurance company evaluates many numerical variables about a person before deciding on an appropriate rate for automobile insurance. The number of tickets a person has received in the last 3 years is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

41. In purchasing an automobile, there are several variables to consider. The body style of the car (sedan, coupe, wagon, etc.) is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

42. In purchasing an automobile, there are several variables to consider. The classification of the car as a subcompact, compact, standard, or luxury size is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

43. In purchasing an automobile, there are several variables to consider. The color of the car is an example of a _____ variable.

ANSWER:
categorical

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TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

44. Most colleges admit students based on their achievements in several different areas. Whether a student has taken any advanced placement courses is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

45. Most colleges admit students based on their achievements in several different areas. The grade obtained in senior level English. (A, B, C, D, or F) is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: categorical variable, types of data

46. Most colleges admit students based on their achievements in several different areas. The total SAT score achieved by a student is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

47. The Dean of Students conducted a survey on campus. The gender of the student is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

48. The Dean of Students conducted a survey on campus. Class designation (Freshman, Sophomore, Junior, Senior) is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

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49. The Dean of Students conducted a survey on campus. Major area of study is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

50. The Dean of Students conducted a survey on campus. SAT score in mathematics is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Easy
KEYWORDS: continuous variable, types of data

51. The Dean of Students conducted a survey on campus. Grade point average (GPA) is an example of a _____ numerical variable.

ANSWER:
continuous
TYPE: FI DIFFICULTY: Easy
KEYWORDS: continuous variable, types of data

52. The Dean of Students conducted a survey on campus. Number of credits currently enrolled for is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

53. The Dean of Students conducted a survey on campus. Number of clubs, groups, teams, and organizations affiliated with on campus is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Easy

54. A personal computer user survey was conducted. Computer brand primarily used is an example of a _____ variable.

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

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55. A personal computer user survey was conducted. Number of personal computers owned is an example of a _____ numeric variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

56. A personal computer user survey was conducted. The number of years using a personal computer is an example of a _____ numeric variable

ANSWER:
continuous
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: continuous variable, types of data

57. A personal computer user survey was conducted. Hours of personal computer use per week is an example of a _____ numeric variable

ANSWER:
continuous
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: continuous variable, types of data

58. A personal computer user survey was conducted. Primary word processing package used is an example of a _____ variable

ANSWER:
categorical
TYPE: FI DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

59. A personal computer user survey was conducted. The number of computer magazine subscriptions is an example of a _____ numerical variable.

ANSWER:
discrete
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

60. The brand of TV one owns is an example of an ordinal scaled variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nominal scale, ordinal scale

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61. The brand of TV one owns is an example of a numerical variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable

62. Whether the university is private, or public is an example of a nominal scaled variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nominal scale

63. Whether the university is private, or public is an example of a categorical variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable

64. Marital status is an example of an ordinal scaled variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nominal scale, ordinal scale

65. Marital status is an example of a numerical variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable

66. The grade level (K-12) of a student is an example of a nominal scaled variable.

ANSWER:
True- Nominal scale is used just to identify the grade level as would be as a vehicle identification number. No subjective value is imputed.
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nominal scale, ordinal scale

67. The grade level (K-12) of a student is an example of a numerical variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable

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68. The level of satisfaction ("Very unsatisfied", "Fairly unsatisfied", "Fairly satisfied", and "Very satisfied") in a class is an example of an ordinal scaled variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ordinal scale

69. The level of satisfaction ("Very unsatisfied", "Fairly unsatisfied", "Fairly satisfied", and "Very satisfied") in a class is an example of a categorical variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable

70. The quality ("terrible", "poor", "fair", "acceptable", "very good" and "excellent") of a day care center is an example of a nominal scaled variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nominal scale, ordinal scale

71. The quality ("terrible", "poor", "fair", "acceptable", "very good" and "excellent") of a day care center is an example of a numerical variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: categorical variable

72. The amount of alcohol consumed by a person per week will be measured on an interval scale.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: interval scale, ratio scale

73. The amount of alcohol consumed by a person per week is an example of a continuous variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: continuous variable

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74. The number of defective apples in a single box will be measured on an interval scale.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: interval scale, ratio scale

75. The number of defective apples in a single box is an example of a continuous variable.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: discrete variable, continuous variable

76. The number of calories contained in a 12-ounce package of cheese will be measured on a ratio scale.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ratio scale

77. The number of calories contained in a 12-ounce package of cheese is an example of a discrete variable.

ANSWER:
True- Calories are measured in whole numbers
TYPE: TF DIFFICULTY: Easy
KEYWORDS: discrete variable, continuous variable

78. The amount of time a student spent studying for an exam will be measured on a ratio scale.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ratio scale

79. The amount of time a student spent studying for an exam is an example of a continuous variable.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: continuous variable

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SCENARIO 1-2
A *Wall Street Journal* poll asked 2,150 adults in the U.S. a series of questions to find out their view on the U.S. economy.

80. Referring to Scenario 1-2, the population of interest is
    a) all the males living in the U.S. when the polled was taken.
    b) all the females living in the U.S. when the polled was taken.
    c) all the adults living in the U.S. when the poll was taken.
    d) all the people living in the U.S. when the poll was taken.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: population

81. Referring to Scenario 1-2, the 2,150 adults make up
    a) the population
    b) the sample
    c) the primary data source
    d) the secondary data source

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sample

82. Referring to Scenario 1-2, the possible responses to the question "How satisfied are you with the U.S. economy today with 1 = very satisfied, 2 = moderately satisfied, 3 = neutral, 4 = moderately dissatisfied and 5 = very dissatisfied?" are values from a
    a) discrete variable.
    b) continuous variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

83. Referring to Scenario 1-2, the possible responses to the question "How many people in your household are unemployed currently?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a

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TYPE: MC DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

84. Referring to Scenario 1-2, the possible responses to the question "What do you think is the current number of people unemployed in the country?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

85. Referring to Scenario 1-2, the possible responses to the question "How many more months do you think the U.S. economy will require to get out of a recession?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

86. Referring to Scenario 1-2, the possible responses to the question "How many out of every 10 U.S. voters do you think feel that the U.S. economy is in a good shape?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
EXPLANATION: The percentage of voters is the ratio of two discrete variables and, hence, the ratio is also a discrete variable.
KEYWORDS: discrete variable, types of data

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87. Referring to Scenario 1-2, the possible responses to the question "How would you rate the condition of the U.S. economy with 1 = excellent, 2 = good, 3 = decent, 4 = poor, 5 = terrible?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy

88. Referring to Scenario 1-2, the possible responses to the question "Are you 1. Currently employed, 2. Unemployed but actively looking for job, 3. Unemployed and quit looking for job?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: categorical variable, types of data

89. Referring to Scenario 1-2, the possible responses to the question "In which year do you think the last recession in the U.S. started?" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: discrete variable, types of data

90. Referring to Scenario 1-2, the possible responses to the question "On the scale of 1 to 100 with 1 being extremely anxious and 100 being total not anxious, rate your level of anxiety in this U.S. economy" are values from a
    a) discrete numerical variable.
    b) continuous numerical variable.
    c) categorical variable.
    d) table of random numbers.

ANSWER:
a

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TYPE: MC DIFFICULTY: Moderate
KEYWORDS: discrete variable, types of data

91. Referring to Scenario 1-2, the possible responses to the question "How satisfied are you with the U.S. economy today with 1 = very satisfied, 2 = moderately satisfied, 3 = neutral, 4 = moderately dissatisfied and 5 = very dissatisfied?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data
1-20 Defining and Collecting Data

92. Referring to Scenario 1-2, the possible responses to the question "How many people in your household are unemployed currently?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ordinal scale, types of data

93. Referring to Scenario 1-2, the possible responses to the question "What do you think is the current unemployment rate?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data

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94. Referring to Scenario 1-2, the possible responses to the question "How many out of every 10 U.S. voters do you think feel that the U.S. economy is in a good shape?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ratio scale, types of data

95. Referring to Scenario 1-2, the possible responses to the question "How would you rate the condition of the U.S. economy with 1 = excellent, 2 = good, 3 = decent, 4 = poor, 5 = terrible?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: ordinal scale, types of data

96. Referring to Scenario 1-2, the possible responses to the question "Are you 1. Currently employed, 2. Unemployed but actively looking for job, 3. Unemployed and quit looking for job?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
a
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: nominal scale, types of data

97. Referring to Scenario 1-2, the possible responses to the question "In which year do you think the last recession in the U.S. started?" result in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
c
TYPE: MC DIFFICULTY: Difficult

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KEYWORDS: interval scale, types of data
EXPLANATION: The calendar year does not have a true zero and, hence, is an interval scale variable.

98. Referring to Scenario 1-2, the possible responses to the question "On the scale of 1 to 100 with 1 being extremely anxious and 100 being totally not anxious, rate your level of anxiety in this U.S. economy?" results in
    a) a nominal scale variable.
    b) an ordinal scale variable.
    c) an interval scale variable.
    d) a ratio scale variable.

ANSWER:
c
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: interval scale, types of data

99. The universe or "totality of items or things" under consideration is called
    a) a sample.
    b) a population.
    c) a primary data source.
    d) a secondary data source.

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: population

100. The portion of the universe that has been selected for analysis is called
    a) a sample.
    b) a frame.
    c) a primary data source.
    d) a secondary data source.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sample

101. Which of the following is most likely a population as opposed to a sample?
    a) respondents to a newspaper survey.
    b) the first 5 students completing an assignment.
    c) every third person to arrive at the bank.
    d) registered voters in a county.

ANSWER:
d

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TYPE: MC DIFFICULTY: Moderate
KEYWORDS: population, sample

102. A study is under way in Yosemite National Forest to determine the adult height of American pine trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 feet tall. It is estimated that the forest contains 25,000 adult American pines. The study involves collecting heights from 250 randomly selected adult American pine trees and analyzing the results. Identify the population from which the study was sampled.
    a) The 250 randomly selected adult American pine trees.
    b) The 25,000 adult American pine trees in the forest.
    c) All the adult American pine trees taller than 60 feet.
    d) All American pine trees, of any age, in the forest.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: population, sample

103. A study is under way in Yosemite National Forest to determine the adult height of American pine trees. Specifically, the study is attempting to determine what factors aid a tree in reaching heights greater than 60 feet tall. It is estimated that the forest contains 25,000 adult American pines. The study involves collecting heights from 250 randomly selected adult American pine trees and analyzing the results. Identify the sample in the study.
    a) The 250 randomly selected adult American pine trees.
    b) The 25,000 adult American pine trees in the forest.
    c) All the adult American pine trees taller than 60 feet.
    d) All American pine trees, of any age, in the forest.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: population, sample

104. Most analysts focus on the cost of tuition as the way to measure the cost of a college education. But incidentals, such as textbook costs, are rarely considered. A researcher at Drummand University wishes to estimate the textbook costs of first-year students at Drummand. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was $600 per semester. Identify the population of interest to the researcher.
    a) All Drummand University students.
    b) All college students.
    c) All first-year Drummand University students.
    d) The 250 students that were monitored.

ANSWER:
c

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TYPE: MC DIFFICULTY: Easy
KEYWORDS: population, sample

105. Most analysts focus on the cost of tuition as the way to measure the cost of a college education. But incidentals, such as textbook costs, are rarely considered. A researcher at Drummand University wishes to estimate the textbook costs of first-year students at Drummand. To do so, she monitored the textbook cost of 250 first-year students and found that their average textbook cost was $600 per semester. Identify the sample in the study.
    a) All Drummand University students.
    b) All college students.
    c) All first-year Drummand University students.
    d) The 250 students that were monitored.

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: population, sample

106. Researchers suspect that the average number of units earned per semester by college students is rising. A researcher at Calendula College wishes to estimate the number of units earned by students during the spring semester at Calendula. To do so, he randomly selects 100 student transcripts and records the number of units each student earned in the spring term. He found that the average number of semester units completed was 12.96 units per student. Identify the population of interest to the researcher.
    a) All Calendula College students.
    b) All college students.
    c) All Calendula College students enrolled in the spring.
    d) All college students enrolled in the spring.

ANSWER:
c
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: population, sample

107. The manager of the customer service division of a major consumer electronics company is interested in determining whether the customers who have purchased a Blu-ray player made by the company over the past 12 months are satisfied with their products. The population of interest is
    a) all the customers who have bought a Blu-ray player made by the company over the past 12 months.
    b) all the customers who have bought a Blu-ray player made by the company and brought it in for repair over the past 12 months.
    c) all the customers who have used a Blu-ray player over the past 12 months.
    d) all the customers who have ever bought a Blu-ray player made by the company.

ANSWER:
a

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TYPE: MC DIFFICULTY: Difficult
KEYWORDS: population

108. True or False: A population is the totality of items or things under consideration.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: population

109. True or False: A sample is the portion of the universe that is selected for analysis.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: sample

110. The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all ($N = 40{,}000$) workers to study their preferences for the various components of a potential package. All the employees in the corporation constitute the _____.

ANSWER:
population
TYPE: FI DIFFICULTY: Easy
KEYWORDS: population

111. The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all ($N = 40{,}000$) workers to study their preferences for the various components of a potential package. The 500 employees who will participate in this study constitute the _____.

ANSWER:
sample
TYPE: FI DIFFICULTY: Easy
KEYWORDS: sample

112. A summary measure that is computed to describe a characteristic from only a sample of the population is called
    a) an ordered array.
    b) a summary table.
    c) a statistic.
    d) a parameter.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: statistic

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113. A summary measure that is computed to describe a characteristic of an entire population is called
    a) a parameter.
    b) an ordered array.
    c) a statistic.
    d) a summary table.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: parameter

114. Which of the following is most likely a parameter as opposed to a statistic?
    a) The average score of the first five students completing an assignment.
    b) The proportion of females registered to vote in a county.
    c) The average height of people randomly selected from a database.
    d) The proportion of trucks stopped yesterday that were cited for bad brakes.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: parameter, statistic

115. The chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited campus bars on the weekend before the final exam week. Her assistant took a random sample of 250 students and computed the portion of students in the sample who visited campus bars on the weekend before the final exam. The portion of all students at her university who visited campus bars on the weekend before the final exam week is an example of
    a) a categorical variable.
    b) a discrete variable.
    c) a parameter.
    d) a statistic.

ANSWER:
c
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: parameter

116. The chancellor of a major university was concerned about alcohol abuse on her campus and wanted to find out the proportion of students at her university who visited campus bars on the weekend before the final exam week. Her assistant took a random sample of 250 students. The portion of students in the sample who visited campus bars on the weekend before the final exam week is an example of _____.
    a) a summary table.
    b) a categorical variable.
    c) a parameter.
    d) a statistic

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ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: statistic

117. True or False: A statistic is usually used to provide an estimate for a usually unobserved parameter.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: statistic, parameter, inferential statistics

118. True or False: A statistic is usually unobservable while a parameter is usually observable.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: statistic, parameter, inferential statistic

119. The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all ($N = 40{,}000$) workers in order to study their preferences for the various components of a potential package. The Director will use the data from the sample to compute _____.

ANSWER:
statistics
TYPE: FI DIFFICULTY: Easy
KEYWORDS: statistic

120. The Human Resources Director of a large corporation wishes to develop an employee benefits package and decides to select 500 employees from a list of all ($N = 40{,}000$) workers in order to study their preferences for the various components of a potential package. Information obtained from the sample will be used to draw conclusions about the true population _____.

ANSWER:
parameters
TYPE: FI DIFFICULTY: Easy
KEYWORDS: parameter

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121. The oranges grown in corporate farms in an agricultural state were damaged by some unknown fungi a few years ago. Suppose the manager of a large farm wanted to study the impact of the fungi on the orange crops daily over a 6-week period. On each day a random sample of orange trees was selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. The two main measures calculated each day (i.e., average number of damaged oranges per tree and proportion of trees having damaged oranges) are called _____.

ANSWER:
statistics
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: statistic

122. The oranges grown in corporate farms in an agricultural state were damaged by some unknown fungi a few years ago. Suppose the manager of a large farm wanted to study the impact of the fungi on the orange crops daily over a 6-week period. On each day a random sample of orange trees was selected from within a random sample of acres. The daily average number of damaged oranges per tree and the proportion of trees having damaged oranges were calculated. The two main measures calculated each day (i.e., average number of damaged oranges per tree and proportion of trees having damaged oranges) may be used daily to estimate the respective true population _____.

ANSWER:
parameters
TYPE: FI DIFFICULTY: Easy
KEYWORDS: parameters

123. The Quality Assurance Department of a large urban hospital is attempting to monitor and evaluate patient satisfaction with hospital services. Prior to discharge, a random sample of patients is asked to fill out a questionnaire to rate such services as medical care, nursing, therapy, laboratory, food, and cleaning. The Quality Assurance Department prepares weekly reports that are presented at the Board of Directors meetings and extraordinary/atypical ratings are easy to flag. Values computed from the sample results each week are called _____.

ANSWER:
statistics
TYPE: FI DIFFICULTY: Easy
KEYWORDS: statistic

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124. The Quality Assurance Department of a large urban hospital is attempting to monitor and evaluate patient satisfaction with hospital services. Prior to discharge, a random sample of patients is asked to fill out a questionnaire to rate such services as medical care, nursing, therapy, laboratory, food, and cleaning. The Quality Assurance Department prepares weekly reports that are presented at the Board of Directors meetings and extraordinary/atypical ratings are easy to flag. True population characteristics estimated from the sample results each week are called _____.

ANSWER:
parameters
TYPE: FI DIFFICULTY: Easy
KEYWORDS: parameter

125. The Commissioner of Health in New York State wanted to study malpractice litigation in New York. A sample of 31 thousand medical records was drawn from a population of 2.7 million patients who were discharged during 2010. The proportion of malpractice claims filed from the sample of 31 thousand patients is a _____.

ANSWER:
statistic
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: statistic

126. The Commissioner of Health in New York State wanted to study malpractice litigation in New York. A sample of 31 thousand medical records was drawn from a population of 2.7 million patients who were discharged during 2010. The true proportion of malpractice claims filed from the population of 2.7 million patients is a _____.

ANSWER:
parameter
TYPE: FI DIFFICULTY: Easy
KEYWORDS: parameter

127. Jared was working on a project to look at global warming and accessed an Internet site where he captured average global surface temperatures from 1866. Which of the four methods of data collection was he using?
    a) Published sources
    b) Experimentation
    c) Surveying
    d) Observation

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data

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128. The British Airways Internet site provides a questionnaire instrument that can be answered electronically. Which of the 4 methods of data collection is involved when people complete the questionnaire?
    a) Published sources
    b) Experimentation
    c) Surveying
    d) Observation

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data

129. A marketing research firm, in conducting a comparative taste test, provided three types of peanut butter to a sample of households randomly selected within the state. Which of the 4 methods of data collection is involved when people are asked to compare the three types of peanut butter?
    a) Published sources
    b) Experimentation
    c) Surveying
    d) Observation

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data

130. Tim was planning for a meeting with his boss to discuss a raise in his annual salary. In preparation, he wanted to use the Consumer Price Index to determine the percentage increase in his real (inflation-adjusted) salary over the last three years. Which of the 4 methods of data collection was involved when he used the Consumer Price Index?
    a) Published sources
    b) Experimentation
    c) Surveying
    d) Observation

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data

131. Which of the 4 methods of data collection is involved when a person counts the number of cars passing designated locations on the Los Angeles freeway system?
    a) Published sources
    b) Experimentation
    c) Surveying
    d) Observation

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ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: sources of data

132. A statistics student found a reference in the campus library that contained the median family incomes for all 50 states. She would report her data as being collected using
    a) a designed experiment.
    b) observational data.
    c) a random sample.
    d) a published source.

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data
.

133. The personnel director at a large company studied the eating habits of the company's employees. The director noted whether employees brought their own lunches to work, ate at the company cafeteria, or went out to lunch. The goal of the study was to improve the food service at the company cafeteria. This type of data collection would best be considered as
    a) an observational study.
    b) a designed experiment.
    c) a random sample.
    d) a quota sample.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data

134. A study attempted to estimate the proportion of Florida residents who were willing to spend more tax dollars on protecting the beaches from environmental disasters. Twenty-five hundred Florida residents were surveyed. What type of data collection procedure was most likely used to collect the data for this study?
    a) A designed experiment
    b) A published source
    c) A random sample
    d) Observational data

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sources of data

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135. Which of the following is NOT a reason for the need for sampling?
    a) It is usually too costly to study the whole population.
    b) It is usually too time consuming to look at the whole population.
    c) It is sometimes destructive to observe the entire population.
    d) It is always more informative by investigating a sample than the entire population.

ANSWER:
d
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: reasons for sampling

136. Which of the following is NOT a reason for selecting a sample?
    a) A sample is less time consuming than a census.
    b) A sample is less costly to administer than a census.
    c) A sample is usually not a good representation of the target population.
    d) A sample is less cumbersome and more practical to administer.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: reasons for sampling

137. Which of the following sampling methods is a probability sample?
    a) Convenience sample
    b) Quota sample
    c) Stratified sample
    d) Judgment sample

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: probability sample

138. At US Data Corporation's web site, they advertised that "Because of our commitment to quality and our vast amount of industry knowledge and experience, we have grown to be one of America's leading providers of mailing lists, marketing data, sales leads and research data. We maintain databases of information on consumers and businesses nationwide that set industry standards for mission critical currency, reliability and accuracy." Trying to reach 500 potential donors for their annual phone donation campaign, a local fire department purchased a list of donors from the company. This list is an example of a
    a) stratified sample
    b) systematic sample
    c) judgment sample
    d) frame

ANSWER:
d

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TYPE: MC DIFFICULTY: Easy
KEYWORDS: frame

139. The manager of the customer service division of a major consumer electronics company is interested in determining whether the customers who have purchased a Blu-ray player made by the company over the past 12 months are satisfied with their products. Which of the following will be a good frame for drawing a sample?
    a) Telephone directory.
    b) Voting registry.
    c) The list of customers who returned the registration card.
    d) A list of potential customers purchased from a database marketing company.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: frame

140. A sample of 300 subscribers to a magazine is selected from a population frame of 9,000 subscribers. If, upon examining the data, it is determined that no subscriber had been selected in the sample more than once,
    a) the sample could not have been random.
    b) the sample may have been selected without replacement or with replacement.
    c) the sample had to have been selected with replacement.
    d) the sample had to have been selected without replacement.

ANSWER:
b
TYPE: MC DIFFICULTY: Moderate
KEYWORDS: sampling method, sampling with replacement, sampling without replacement

141. Which of the following scenarios will yield a nonprobability sample?
    a) The subjects of the sample are chosen based on known probability.
    b) Items or individuals are chosen without regard to their probability of occurrence.
    c) Every individual or item from the frame has an equal chance of being selected. Selection may be with replacement or without replacement.
    d) Decide on a sample size, n; divide the frame of N individuals into groups of k individuals where $k = N/n$; randomly select one individual from the first group; select every kth individual thereafter.

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, nonprobability sample, sampling with replacement, sampling without replacement

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142. To obtain a sample of 10 books in the store, the manager walked to the first shelf next to the cash register to pick the first 10 books on that shelf. This is an example of a
    a) systematic sample
    b) simple random sample
    c) stratified sample
    d) convenience sample

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, nonprobability sample, convenience sample

143. To demonstrate a sampling method, the instructor in a class picked the first 5 students sitting in the last row of the class. This is an example of a
    a) systematic sample
    b) simple random sample
    c) stratified sample
    d) convenience sample

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, nonprobability sample, convenience sample

144. A company selling apparel online sends out emails every Monday to all its customers who made a purchase. This is an example of a
    a) systematic sample
    b) convenience sample
    c) simple random sample
    d) stratified sample

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, nonprobability sample, convenience sample

145. To gather information on the preferences of instructors at universities on topics for a business statistics textbook that it will publish, a publishing company invited 10 faculty members who have adopted one of the textbooks that it has published. This is an example of a
    a) systematic sample
    b) judgment sample
    c) simple random sample
    d) stratified sample

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, nonprobability sample, judgment sample

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146. To find out the potential impact of a new zoning law on a neighborhood, the legislators conduct a focus group interview by inviting the members of the housing owner's association of that neighborhood. This is an example of a
    a) systematic sample
    b) simple random sample
    c) judgment sample
    d) cluster sample

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, nonprobability sample, judgment sample

147. Which of the following yields a systematic sample?
    a) All students in a class are divided into groups of 15. One student is randomly chosen from the 1st group, the remaining observations are every 15th student thereafter.
    b) The best 15 students, according to the opinion of the instructor, in a class are selected.
    c) All students in a class are grouped according to their gender. A random sample of 8 is selected from the males and a separate random sample of 7 is drawn from the females.
    d) A random sample of 15 students is selected from a class without replacement.

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, probability sample, systematic sample

148. Which of the following yields a stratified sample?
    a) All students in a class are divided into groups of 15. One student is randomly chosen from the 1st group, the remaining observations are every 15th student thereafter.
    b) The best 15 students, according to the opinion of the instructor, in a class are selected.
    c) All students in a class are grouped according to their gender. A random sample of 8 is selected from the males and a separate random sample of 7 is drawn from the females.
    d) The first 15 students in a class are selected without replacement.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, probability sample, stratified sample

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149. Which of the following yields a cluster sample?
    a) All students in a class are divided into groups of 15. One student is randomly chosen from the 1st group, the remaining observations are every 15th student thereafter.
    b) The best 15 students, according to the opinion of the instructor, in a class are selected.
    c) All students in a class are grouped according to their gender. A random sample of 8 is selected from the males and a separate random sample of 7 is selected from the females.
    d) All students in a class are divided into groups according to the rows that they are seated. One of the groups is randomly selected.

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, probability sample, cluster sample

150. Which of the following yields a simple random sample?
    a) All students in a class are divided into groups of 15. One student is randomly chosen from the 1st group, the remaining observations are every 15th student thereafter.
    b) The best 15 students, according to the opinion of the instructor, in a class are selected.
    c) The names of 50 students in a class are written on 50 different pieces of paper and put in a hat. The first 15 pieces of paper are selected blindly one at a time without replacing them back in the hat after shuffling the papers thoroughly.
    d) All students in a class are divided into groups according to the rows that they are seated. One of the groups is randomly selected.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, probability sample, simple random sample

151. Which of the following yields a simple random sample?
    a) All students in a class are grouped according to their gender. A random sample of 8 is selected from the males and a separate rando sample of 7 is drawn from the females.
    b) The best 15 students, according to the opinion of the instructor, in a class are selected.
    c) The names of 50 students in a class are written on 50 different pieces of paper and put in a hat. The first 15 pieces of paper are selected blindly one at a time after shuffling the papers thoroughly and each of the selected pieces is placed back into the hat before the next piece is selected.
    d) All students in a class are divided into groups according to the rows that they are seated. One of the groups is randomly selected.

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: sampling method, probability sample, simple random sample

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152. For a population frame containing $N = 1{,}007$ individuals, what code number should you assign to the first person on the list to use a table of random numbers?
    a) 0
    b) 1
    c) 01
    d) 0001

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: random number

153. Which of the following types of samples can you use if you want to make valid statistical inferences from a sample to a population?
    a) A judgment sample
    b) A quota sample
    c) A convenience sample
    d) A probability sample

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: probability sample, sampling method

154. The evening host of a dinner dance reached into a bowl, mixed all the tickets around, and selected the ticket to award the grand door prize. What sampling method was used?
    a) Simple random sample
    b) Systematic sample
    c) Stratified sample
    d) Cluster sample

ANSWER:
a
TYPE: MC DIFFICULTY: Easy
KEYWORDS: simple random sample, probability sample, sampling method

155. The Dean of Students mailed a survey to a total of 400 students. The sample included 100 students randomly selected from each of the freshman, sophomore, junior, and senior classes on campus last term. What sampling method was used?
    a) Simple random sample
    b) Systematic sample
    c) Stratified sample
    d) Cluster sample

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: stratified sample, probability sample, sampling method

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156. A telemarketer set the company's computerized dialing system to contact every 25th person listed in the local telephone directory. What sampling method was used?
    a) Simple random sample
    b) Systematic sample
    c) Stratified sample
    d) Cluster sample

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: systematic sample, probability sample, sampling method

157. Since a _____ is not a randomly selected probability sample, there is no way to know how well it represents the overall population.
    a) Simple random sample
    b) Convenience sample
    c) Stratified sample
    d) Cluster sample

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: convenience sample, nonprobability sample, sampling method

158. A population frame for a survey contains a listing of 72,345 names. Using a table of random numbers, how many digits will the code numbers for each member of your population contain?
    a) 3
    b) 4
    c) 5
    d) 6

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: random number

159. A population frame for a survey contains a listing of 6,179 names. Using a table of random numbers, which of the following code numbers will appear on your list?
    a) 06
    b) 0694
    c) 6946
    d) 61790

ANSWER:
b
TYPE: MC DIFFICULTY: Easy
KEYWORDS: random number

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160. Which of the following can be reduced by proper interviewer training?
    a) Sampling error
    b) Measurement error
    c) Both above
    d) None of the above

ANSWER:
b
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: measurement error, survey worthiness

161. Which of the following sampling methods will more likely be susceptible to ethical violation?
    a) Simple random sample
    b) Cluster sample
    c) Convenience sample
    d) Stratified sample

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: ethical issues, sampling method

162. Which of the following sampling methods will more likely be susceptible to ethical violation when used to form conclusions about the entire population?
    a) Simple random sample
    b) Cluster sample
    c) Judgment sample
    d) Stratified sample

ANSWER:
c
TYPE: MC DIFFICULTY: Easy
KEYWORDS: judgment sample, ethical issues, sampling method

163. Which of the following sampling methods will more likely be susceptible to ethical violation when used to form conclusions about the entire population?
    a) Simple random sample
    b) Cluster sample
    c) Systematic sample
    d) Convenience sample

ANSWER:
d
TYPE: MC DIFFICULTY: Easy
KEYWORDS: convenience sample, ethical issues, sampling method

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164. True or False: As a population becomes large, it is usually better to obtain statistical information from the entire population.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: population, sample, reasons for samplings

165. True or False: If a simple random sample is chosen with replacement, everyone has the same chance of selection on every selection.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: simple random sample, probability sample, sampling method, sampling with replacement, sampling without replacement

166. True or False: When dealing with human surveys, we are usually interested in sampling with replacement.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: sampling with replacement, sampling method, survey worthiness

167. True or False: The only reliable way a researcher can make statistical inferences from a sample to a population is to use nonprobability sampling methods.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nonprobability, probability sample, sampling method

168. True or False: A sample is always a good representation of the target population.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: sample, population, sampling method

169. True or False: There can be only one sample selected from a population.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: sample, sampling method

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170. True or False: Using different frames to generate data can lead to totally different conclusions.

ANSWER:
True
TYPE:TF DIFFICULTY: Easy
KEYWORDS: frame, sampling method

171. True or False: Sampling error can be eliminated by taking larger sample sizes.

ANSWER:
False
TYPE: TF DIFFICULTY: Difficult
KEYWORDS: sampling error

172. True or False: Sampling error can be reduced by taking larger sample sizes.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: sampling error

173. True or False: A convenience sample is a type of probability sample.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: convenience sample

174. True or False: Items or individuals in a judgment sample are chosen according to their probability of occurrence.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: judgment sample, nonprobability sample

175. True or False: When participants can self-select into the sample, you have a nonprobability sample.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nonprobability sample

176. True or False: Systematic samples are less efficient than a stratified sample.

ANSWER:
True

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TYPE: TF DIFFICULTY: Easy
KEYWORDS: systematic sample, stratified sample

177. True or False: The professor of a business statistics class wanted to find out the mean amount of time per week her students spent studying for the class. Among the 50 students in her class, 20% were freshmen, 50% were sophomores and 30% were juniors. She decided to select 2 students randomly from the freshmen, 5 randomly from the sophomores and 3 randomly from the juniors. This is an example of a systematic sample.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: stratified sample

178. To estimate the mean number of hours a student at a major university spent in the library, a researcher obtained the list of students from the registrar's office, from which she can select a random sample of 200 students. This list is a _____.

ANSWER:
frame
TYPE: FI DIFFICULTY: Easy
KEYWORDS: frame

179. _____results from the exclusion of certain groups of subjects from a population frame.

ANSWER:
Coverage error
TYPE: FI DIFFICULTY: Difficult
KEYWORDS: coverage error, survey worthiness, frame

180. Coverage error results in a _____.

ANSWER:
selection bias
TYPE: FI DIFFICULTY: Difficult
KEYWORDS: selection bias, survey worthiness

181. _____results from the failure to collect data on all subjects in the sample.

ANSWER:
Nonresponse error or bias
TYPE: FI DIFFICULTY: Moderate
KEYWORDS: nonresponse error, survey worthiness

182. The sampling process begins by locating appropriate data sources called _____.

ANSWER:
frames

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TYPE: FI DIFFICULTY: Easy
KEYWORDS: frames, sampling method

183. True or False: If you randomly select a student from the first row of a business statistics class and then every other fifth student thereafter until you get a sample of 20 students, this is an example of a convenience sample.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: chunk sample

184. True or False: You stand at the main entrance to a departmental store and pick the first 20 customers that enter the store after it has opened its door for business on a single day. This is an example of a systematic sample.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: systematic sample

185. True or False: An electronic appliance chain gathered customer opinions on their services using the customer feedback forms that are attached to the product registration forms. This is an example of a convenience sample.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: convenience sample

186. True or False: To gather opinions on the efficacy of U.S. foreign policies, a sample of 50 faculty members is selected from the pool of university professors who have taught political science at the graduate level. This is an example of a judgment sample.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: judgment sample

187. True or False: In business statistics class students sit randomly without preferences. A sample is selected by including everybody who sits in the first row. This is an example of a cluster sample.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: cluster sample

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188. True or False: The question "How many times have you abused illicit drugs in the last 6 months?" will most likely result in nonresponse error.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: nonresponse error, survey worthiness

189. True or False: The question "Is your household income last year somewhere between $50,000 and $100,000?" will most likely result in coverage error.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: coverage error, survey worthiness

190. True or False: The only way one can eliminate sampling error is to take the whole population as the sample.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: sampling error, survey worthiness

191. True or False: Coverage error can become an ethical issue if a group is intentionally excluded from the frame.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ethical issue, coverage error, survey worthiness, frame

192. True or False: Measurement error will become an ethical issue when the findings are presented without reference to sample size and margin of error.

ANSWER:
False
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ethical issue, measurement error, sampling error, survey worthiness

193. True or False: Measurement error can become an ethical issue when a survey sponsor chooses leading questions that guide the responses in a direction.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ethical issue, measurement error, survey worthiness

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194. True or False: Measurement error can become an ethical issue when an interviewer purposely guides the responses in a direction.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ethical issue, measurement error, survey worthiness

195. True or False: Sampling error becomes an ethical issue if the findings are purposely presented without reference to sample size and margin of error so that the sponsor can promote a viewpoint that might otherwise be truly insignificant.

ANSWER:
True
TYPE: TF DIFFICULTY: Easy
KEYWORDS: ethical issue, sampling error, survey worthiness

196. True or False: The professor of a business statistics class wanted to find out the mean amount of time per week her students spent studying for the class. She divided the students into the left, right and center groups according to the location they sat in the class that day. One of these 3 groups was randomly selected and everyone in the group was asked the mean amount of time per week he/she spent studying for the class. This is an example of a cluster sample.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: cluster sample

197. True or False: The professor of a business statistics class wanted to find out the mean amount of time per week her students spent studying for the class. She divided the fifty students on her roster into ten groups starting from the first student on the roster. The first student was randomly selected from the first group. Then every tenth student was selected from the remaining students. This is an example of a cluster sample.

ANSWER:
False
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: systematic sample

198. True or False: Selection bias occurs more frequently in systematic samples than in simple random samples.

ANSWER:
True
TYPE: TF DIFFICULTY: easy
KEYWORDS: simple random sample, systematic sample

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199. True or False: The question: "Have you used any form of illicit drugs over the past 2 months?" will most likely result in measurement error if the question is answered.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: measurement error, survey worthiness

200. True or False: The question: "How much did you earn last year rounded to the nearest hundreds of dollars?" will most likely result in measurement error.

ANSWER:
True
TYPE: TF DIFFICULTY: Moderate
KEYWORDS: measurement error, survey worthiness

SCENARIO 1-3
The manager of the customer service division of a major consumer electronics company is interested in determining whether the customers who have purchased a Blu-ray player made by the company over the past 12 months are satisfied with their products.

201. Referring to Scenario 1-3, the manager decides to ask a sample of customers, who have bought a Blu-ray player made by the company and filed a complaint over the past year, to fill in a survey about whether they are satisfied with the product. This method will most likely suffer from
    a) nonresponse error.
    b) measurement error.
    c) coverage error.
    d) non-probability sampling.

ANSWER:
c
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: coverage error, survey worthiness

202. Referring to Scenario 1-3, if there are 4 different brands of Blu-ray players made by the company, the best sampling strategy would be to use a
    a) a simple random sample.
    b) a stratified sample.
    c) a cluster sample.
    d) a systematic sample.

ANSWER:
b
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: stratified sample, probability sample, sampling method

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203. Referring to Scenario 1-3, which of the following questions in the survey will NOT likely induce a measurement error?
    a) How many times have you illegally copied copyrighted sporting events?
    b) What is your exact annual income?
    c) How many times have you brought the Blu-ray player back for service?
    d) How many times have you failed to set the time on the Blu-ray player?

ANSWER:
c
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: measurement error, survey worthiness

204. Referring to Scenario 1-3, if a customer survey questionnaire is included in all the Blu-ray players made and sold by the company over the past 12 months, this method of collecting data will most like suffer from
    a) nonresponse error.
    b) measurement error.
    c) coverage error.
    d) nonprobability sampling.

ANSWER:
a
TYPE: MC DIFFICULTY: Difficult
KEYWORDS: nonresponse error, survey worthiness

205. If Excel discovers a column containing numbers, it treats the column as a ____ _____.

ANSWER:
Numeric variable
TYPE: FI DIFFICULTY: Easy
KEYWORDS: Classifying variables by type

206. If Excel discovers a column containing words or alphanumeric data, it treats the column as a ____ _____ _____.

ANSWER:
Non-numerical or categorical variable
TYPE: FI DIFFICULTY: Easy
KEYWORDS: Classifying variables by type

207. For selecting a random number between 1 and 50, the Excel function to be used is _____.

ANSWER: =RANDBETWEEN(1,50)
TYPE: FI DIFFICULTY: Easy
KEYWORDS: EG1.3 Types of Sampling Methods

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