CHAPTER 2 Organizing the Data

Multiple Choice Questions

1. What data must be included in the columns of a frequency table for nominal data?
   a. category and frequency
   b. category and percentage
   c. cumulative percentage
   d. frequency and percentage

   Answer: a. category and frequency
   Objective: 2.1 Examine how the frequency distribution of nominal data transforms raw data into an easy-to-understand summary form
   Topic: Frequency Distributions of Nominal Data
   Level: Knowledge
   Difficulty: Easy

2. When organizing a frequency table for a variable measured at the ordinal level, categories should be ordered as:
   a. lowest to highest or highest to lowest.
   b. lowest to highest only.
   c. any order chosen by the researcher.
   d. highest to lowest only.

   Answer: a. lowest to highest or highest to lowest
   Objective: 2.5 Compute the simple frequency distributions of ordinal and interval data
   Topic: Simple Frequency Distributions of Ordinal and Interval Data
   Level: Knowledge
   Difficulty: Easy

3. When constructing class intervals, it is important to take into consideration:
   a. the measurement level of the data one has.
   b. the pattern within the data that one wants to reveal.
   c. the number of variables one uses.
   d. none of these answers are correct.

   Answer: b. the pattern within the data that one wants to reveal
   Objective: 2.6 Illustrate the grouped frequency distributions of interval data when the scores are spread over a wide range
   Topic: Grouped Frequency Distributions of Interval Data
   Level: Knowledge
   Difficulty: Easy
4. The________ and the ________are two of the most popular and useful methods of standardizing for size and comparing distributions.
   a. proportion; median
   b. percentage; midpoint
   c. proportion; percentage
   d. median; midpoint

   Answer: c. proportion; percentage
   Objective: 2.3 Demonstrate how proportions and percentages are used to standardize size and compare distributions
   Topic: Proportions and Percentages
   Level: Knowledge
   Difficulty: Easy

5. If there are 20 girls and 10 boys in a class, the ratio of boys to girls is calculated as:
   a. 10/20.
   b. 10/30.
   c. 20/10.
   d. 30/20.

   Answer: a. 10/20
   Objective: 2.4 Calculate the ratio and the rate to understand the relationship between groups
   Topic: Ratios and Rates
   Level: Apply
   Difficulty: Medium

6. In a frequency distribution, the cumulative percentage may be obtained by summing the ________ distribution.
   a. percentage
   b. proportion
   c. rate
   d. ratio

   Answer: a. percentage
   Objective: 2.7 Construct cumulative distributions to locate the position of one case relative to the overall group performance
   Topic: Cumulative Distributions
   Level: Knowledge
   Difficulty: Easy

7. A comparison of the actual number of people who violate the speed limit to the total number of drivers is an example of a:
   a. percentage.
   b. proportion.
c. rate.
d. ratio.

Answer: c. rate
Objective: 2.9 Illustrate how decimals impact statistical calculations
Topic: Dealing with Decimal Data
Level: Knowledge
Difficulty: Easy

8. Which of the following class intervals has a width of 0.5, assuming data is recorded with one decimal place?
   a. 3.0–3.4
   b. 3.2–3.6
   c. 3.1–3.4
   d. 3.5–4.0

Answer: a. 3.0–3.4
Objective: 2.9 Illustrate how decimals impact statistical calculations
Topic: Dealing with Decimal Data
Level: Apply
Difficulty: Medium

9. The cumulative frequency is defined as the number of scores:
   a. at any given value.
   b. below any given value.
   c. at or below any given score.
   d. at or above any given value.

Answer: c. at or below any given score
Objective: 2.7 Construct cumulative distributions to locate the position of one case relative to the overall group performance
Topic: Cumulative Distributions
Level: Knowledge
Difficulty: Easy

10. The cumulative percentage is defined as the:
    a. percentage of scores at a given value.
    b. percentage of scores above a given value.
    c. proportion of scores at or below a given value.
    d. percentage of scores at or below a given value.

Answer: d. percentage of scores at or below a given value
Objective: 2.7 Construct cumulative distributions to locate the position of one case relative to the overall group performance
11. If the independent variable is in the rows of a cross-tabulation and the dependent variable is in the columns, which percents do we use for comparisons?
   a. Column
   b. Row
   c. Total
   d. All of these answers are correct.

   Answer: b. Row

12. Which of the following is not a commonly used form of graphic representation?
   a. Pie chart
   b. Map
   c. Line chart
   d. Grouped frequency distribution

   Answer: d. Grouped frequency distribution

13. _________ typically are used to display continuous measures.
   a. Pie charts
   b. Bar graphs
   c. Histograms
   d. All of these answers are correct.

   Answer: c. Histograms
14. Pie charts are particularly useful for what type of data?
   a. Nominal level data
   b. Ordinal level data
   c. Interval level data
   d. None of these answers are correct

   Answer: a. Nominal level data

   Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings
   Topic: Graphic Presentations
   Level: Knowledge
   Difficulty: Easy

15. Kurtosis refers to the:
   a. peakedness of a distribution.
   b. skewness of distribution.
   c. cumulative frequency of a distribution.
   d. symmetry of a distribution.

   Answer: a. peakedness of a distribution

   Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings
   Topic: Graphic Presentations
   Level: Knowledge
   Difficulty: Easy

16. Skewness refers to:
   a. the normal distribution of extreme scores.
   b. the unequal distribution of extreme scores.
   c. the central limit theorem.
   d. none of these answers are correct.

   Answer: b. the unequal distribution of extreme scores

   Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings
   Topic: Graphic Presentations
   Level: Knowledge
   Difficulty: Easy

17. A symmetrical distribution that is extremely tall is:
   a. leptokurtic.
   b. platykurtic.
   c. mesokurtic.
   d. skewed.
18. A distribution with a tail situated to the right is:
   a. negatively skewed.
   b. positively skewed.
   c. symmetrical.
   d. a normal curve.

   Answer: b. positively skewed

19. What is the upper limit of the class interval 80–89?
   a. 80.5
   b. 79.5
   c. 88.5
   d. 89.5

   Answer: d. 89.5

20. What is the midpoint of the class interval 24 to 29?
   a. 26.5
   b. 26
   c. 27
   d. 27.5

   Answer: a. 26.5
Difficulty: Easy

21. In a cross-tabulation table where the rows correspond to gender (male or female), there are 44 males and 52 females. What value should appear in the % column opposite males?
   a. 45.8
   b. 54.2
   c. 84.6
   d. 1.18

   Answer: a: 45.8
   Objective: 2.12 Illustrate three possible ways to determine percentages for cross-tabulations
   Topic: Cross-Tabulations
   Level: Apply
   Difficulty: Medium

Short Answer

1. A cross-tabulation generally compares the outcomes of at least _______ variables at the same time.

   Answer: two

2. Variables cannot logically be presented in a grouped frequency distribution.

   Answer: Nominal

3. If a category in a frequency table has the values 40 up to 50, with a lower limit of 39.5, the midpoint is ________.

   Answer: 44.5

4. ___________ scores on one side of a distribution will cause skewness.

   Answer: Extreme

5. A _______ skewed distribution has its tail on the left.

   Answer: negatively

6. A positively skewed distribution has its tail on the.

   Answer: right
7. The terms bar graph and ________ are often used interchangeably, though the latter has its bars joined to emphasize continuity.

   Answer: histogram

8. When a frequency table for income has “$200,000 or more,” as its last category, this is an example of a __________ class interval.

   Answer: flexible

9. A platykurtic distribution tends to be very ________ .

   Answer: flat

10. A type of graph in which individual data points are shown, and are also connected to each other, is a __________ graph.

    Answer: line