

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.
- proportion; median
 - percentage; midpoint
 - proportion; percentage
 - 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:
- 10/20.
 - 10/30.
 - 20/10.
 - 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.
- percentage
 - proportion
 - rate
 - 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:
- percentage.
 - 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

Topic: Cumulative Distributions
Level: Knowledge
Difficulty: Easy

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?
- Column
 - Row
 - Total
 - All of these answers are correct.

Answer: b. Row

Objective: 2.12. Illustrate three possible ways to determine percentages for cross-tabulations

Topic: Cross-Tabulations

Level: Knowledge

Difficulty: Easy

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

Answer: d. Grouped frequency distribution

Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings

Topic: Graphic Presentations

Level: Knowledge

Difficulty: Easy

13. _____ typically are used to display continuous measures.
- Pie charts
 - Bar graphs
 - Histograms
 - All of these answers are correct.

Answer: c. Histograms

Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings

Topic: Graphic Presentations

Level: Knowledge

Difficulty: Easy

14. Pie charts are particularly useful for what type of data?
- Nominal level data
 - Ordinal level data
 - Interval level data
 - 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:
- peakedness of a distribution.
 - skewness of distribution.
 - cumulative frequency of a distribution.
 - 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:
- the normal distribution of extreme scores.
 - the unequal distribution of extreme scores.
 - the central limit theorem.
 - 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:
- leptokurtic.
 - platykurtic.
 - mesokurtic.
 - skewed.

Answer: a. leptokurtic.

Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings

Topic: Graphic Presentations

Level: Knowledge

Difficulty: Easy

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

Objective: 2.13 Illustrate different forms of graphic presentations that enhance the clarity of research findings

Topic: Graphic Presentations

Level: Knowledge

Difficulty: Easy

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

Objective: 2.10 Demonstrate approaches to establishing class limits

Topic: More on Class Limits

Level: Apply

Difficulty: Medium

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

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

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?
- 45.8
 - 54.2
 - 84.6
 - 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