

CHAPTER 2

Frequency Distributions and Graphs

Difficulty is based on a scale of 1 = easy; 2 = medium; 3 = hard

Multiple Choice Questions

1. What level of data cannot be organized to form an array?
 - a. nominal
 - b. ordinal
 - c. interval
 - d. ratio

Answer: a

Page Ref: 24

Difficulty: 1

2. What frequency distribution could help the reader of a research report to learn what percentage of a research sample of clients were younger than age 40?
 - a. an absolute frequency distribution
 - b. a percentage distribution
 - c. a cumulative frequency distribution
 - d. a cumulative percentage distribution

Answer: d

Page Ref: 30

Difficulty: 2

3. When constructing grouped frequency distributions, the different categories (intervals) should:
 - a. not contain more than five values.
 - b. all contain the same number of values.
 - c. contain cases that are similar in relation to the variable being described.
 - d. not be more than five in number.

Answer: c

Page Ref: 29

Difficulty: 3

4. In assigning whole values to cases to form a frequency distribution, researchers generally assign the value 5 if the actual value falls between:
- 4 and 5
 - 5 and 6
 - 4.5 and 5.5
 - 4.50 and 5.49

Answer: d

Page Ref: 27

Difficulty: 2

5. In selecting a frequency distribution or graph to display data, the most important consideration should be:
- how clearly it communicates the findings.
 - how easy it is to construct.
 - how much it is likely to impress others about our knowledge of statistics.
 - the amount of data that it can contain.

Answer: a

Page Ref: 24

Difficulty: 1

6. When is it helpful to include percentages along with frequencies in an absolute frequency distribution?
- always
 - when the number of cases is more than 10, but less than 100
 - when the number of cases is large and an uneven number
 - never. The frequencies are easily understandable by themselves.

Answer: c

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Difficulty: 2

7. For the variable "age," Emmalyn fell at approximately the 27th percentile rank in her class. What does this mean?
- She is 27 years old.
 - She is the 27th oldest member of her class.
 - She is older than approximately 27% of her class.
 - She is younger than approximately 27% of her class.

Answer: c

Page Ref: 31

Difficulty: 3

8. Which graph can be used to portray the distribution of the value categories of a nominal level variable?
- a pie chart
 - a histogram
 - a stem and leaf plot
 - all of the above

Answer: a

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Difficulty: 3

9. In a social agency, a pie chart was used to display the distribution of the variable "years of education" of current clients. One-fourth (50 of 200) current clients had 12 years of education. How many degrees should the angle in the center of the chart be for the slice of the pie representing this group?
- 4 degrees
 - 25 degrees
 - 50 degrees
 - 90 degrees

Answer: a

Page Ref: 35

Difficulty: 3

10. Analogy: A bar graph is to nominal level data as a _____ is to interval or ratio level data.
- pie chart
 - line diagram
 - histogram
 - stem and leaf plot

Answer: c

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Difficulty: 2

11. What type of graph portrays the overall shape of the distribution of a variable?
- a histogram
 - a pie chart
 - a bar chart
 - a frequency polygon

Answer: d

Page Ref: 36-37

Difficulty: 1

12. What type of graph portrays the actual value for every individual case in a data set?
- a pie chart
 - a histogram
 - a line diagram
 - a stem and leaf plot

Answer: d

Page Ref: 37-38

Difficulty: 2

13. The horizontal line on which the different values appear in the graph of an interval level variable is called the:
- point of origin.
 - x-axis or abscissa.
 - y-axis or ordinate.
 - percentile rank.

Answer: b

Page Ref: 33

Difficulty: 2

14. In a bar chart the frequencies for the measurements of a variable are reflected in:
- the thickness of the bars
 - the number of bars in the chart
 - the height of the bars
 - the space between the bars

Answer: c

Page Ref: 34

Difficulty: 2

15. LeRon is one of four social work students who is 25-years-old. In a stem and leaf plot of the variable "age" among the students, what number is the "leaf" representing LeRon's age?
- 4
 - 2
 - 5
 - 25

Answer: c

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Difficulty: 3