

**Chapter 15**  
**Multiple Choice Questions**  
**(The answers are provided after the last question.)**

1. What is the median of the following set of scores?  
18, 6, 12, 10, 14 ?
  - a. 10
  - b. 14
  - c. 18
  - d. 12
  
2. Approximately what percentage of scores fall within one standard deviation of the mean in a normal distribution?
  - a. 34%
  - b. 95%
  - c. 99%
  - d. 68%
  
3. The denominator (bottom) of the z-score formula is
  - a. The standard deviation
  - b. The difference between a score and the mean
  - c. The range
  - d. The mean
  
4. Let's suppose we are predicting score on a training posttest from number of years of education and the score on an aptitude test given before training. Here is the regression equation  $Y = 25 + .5X_1 + 10X_2$ ,  
where  $X_1$  = years of education and  $X_2$  = aptitude test score.  
What is the predicted score for someone with 10 years of education and a aptitude test score of 5?
  - a. 25
  - b. 50
  - c. 35
  - d. 80
  
5. The standard deviation is:
  - a. The square root of the variance
  - b. A measure of variability
  - c. An approximate indicator of how numbers vary from the mean
  - d. All of the above
  
6. Hypothesis testing and estimation are both types of descriptive statistics.
  - a. True
  - b. False

7. A set of data organized in a participants(rows)-by-variables(columns) format is known as a “data set.”

- a. True
- b. False

8. A graph that uses vertical bars to represent data is called a \_\_\_\_\_.

- a. Line graph
- b. Bar graph
- c. Scatterplot
- d. Vertical graph

9. The goal of \_\_\_\_\_ is to focus on summarizing and explaining a specific set of data.

- a. Inferential statistics
- b. Descriptive statistics
- c. None of the above
- d. All of the above

10. The most frequently occurring number in a set of values is called the \_\_\_\_\_.

- a. Mean
- b. Median
- c. Mode
- d. Range

11. As a general rule, the \_\_\_\_\_ is the best measure of central tendency because it is more precise.

- a. Mean
- b. Median
- c. Mode
- d. Range

12. Focusing on describing or explaining data versus going beyond immediate data and making inferences is the difference between \_\_\_\_\_.

- a. Central tendency and common tendency
- b. Mutually exclusive and mutually exhaustive properties
- c. Descriptive and inferential
- d. Positive skew and negative skew

13. Why are variance and standard deviation the most popular measures of variability?

- a. They are the most stable and are foundations for more advanced statistical analysis
- b. They are the most simple to calculate with large data sets
- c. They provide nominally scaled data
- d. None of the above

14. \_\_\_\_\_ is the set of procedures used to explain or predict the values of a dependent variable based on the values of one or more independent variables.

- a. Regression analysis

- b. Regression coefficient
- c. Regression equation
- d. Regression line

15. The \_\_\_\_\_ is the value you calculate when you want the arithmetic average.

- a. Mean
- b. Median
- c. Mode
- d. All of the above

16. \_\_\_\_\_ are used when you want to visually examine the relationship between two quantitative variables.

- a. Bar graphs
- b. Pie graphs
- c. Line graphs
- d. Scatterplots

17. The \_\_\_\_\_ is often the preferred measure of central tendency if the data are severely skewed.

- a. Mean
- b. Median
- c. Mode
- d. Range

18. Which of the following is the formula for range?

- a.  $H + L$
- b.  $L \times H$
- c.  $L - H$
- d.  $H - L$

19. Which is a raw score that has been transformed into standard deviation units?

- a. z score
- b. SDU score
- c. t score
- d. e score

20. Which of the following is NOT a measure of variability?

- a. Median
- b. Variance
- c. Standard deviation
- d. Range

21. Which of the following is NOT a common measure of central tendency?

- a. Mode
- b. Range
- c. Median

d. Mean

22. What is the median of this set of numbers: 4, 6, 7, 9, 2000000?

- a. 7.5
- b. 6
- c. 7
- d. 4

23. What is the mean of this set of numbers: 4, 6, 7, 9, 2000000?

- a. 7.5
- b. 400,005.2
- c. 7
- d. 4

24. Which of the following is interpreted as the percentage of scores in a reference group that falls below a particular raw score?

- a. Standard scores
- b. Percentile rank
- c. Reference group
- d. None of the above

25. The median is \_\_\_\_\_.

- a. The middle point
- b. The highest number
- c. The average
- d. Affected by extreme scores

26. Which measure of central tendency takes into account the magnitude of scores?

- a. Mean
- b. Median
- c. Mode
- d. Range

27. If a test was generally very easy, except for a few students who had very low scores, then the distribution of scores would be \_\_\_\_\_.

- a. Positively skewed
- b. Negatively skewed
- c. Not skewed at all
- d. Normal

28. How many dependent variables are used in multiple regression?

- a. One
- b. One or more
- c. Two or more
- d. Two

29. Which of the following represents the fiftieth percentile, or the middle point in a set of numbers arranged in order of magnitude?
- Mode
  - Median
  - Mean
  - Variance
30. If a distribution is skewed to the left, then it is \_\_\_\_\_.
- Negatively skewed
  - Positively skewed
  - Symmetrically skewed
  - Symmetrical
31. In a grouped frequency distribution, the intervals should be what?
- Mutually exclusive
  - Exhaustive
  - Both A and B
  - Neither A nor B
32. When a set of numbers is heterogeneous, you can place more trust in the measure of central tendency as representing the typical person or unit.
- True
  - False
33. Non-overlapping categories or intervals are known as \_\_\_\_\_.
- Inclusive
  - Exhaustive
  - Mutually exclusive
  - Mutually exclusive and exhaustive
34. To interpret the relationship between two categorical variables, a contingency table should be constructed with either column or row percentages, and ----.
- If the percentages are calculated down the columns, then comparisons should be made across the rows
  - If the percentages are calculated across the rows, comparisons should be made down the columns
  - Both a and b are correct
  - Neither a nor b is correct

**Answers:**

- d
- d
- a
- d
- d

- 6. b
- 7. a
- 8. b
- 9. b
- 10. c
- 11. a
- 12. c
- 13. a
- 14. a
- 15. a
- 16. d
- 17. b
- 18. d
- 19. a
- 20. a
- 21. b
- 22. c
- 23. b
- 24. b
- 25. a
- 26. a
- 27. b
- 28. a
- 29. b
- 30. a
- 31. c
- 32. b
- 33. c
- 34. c