

Introduction to Basic Statistics

Mathematics · Answer Key · 12 Questions

1. What is the arithmetic mean of a dataset?

- A) The sum of all values divided by the total number of values**
- B) The middle value in an ordered list
- C) The value that appears most frequently
- D) The difference between the highest and lowest values

2. Which measure of central tendency represents the middle value in a sorted dataset?

- A) Mode
- B) Median**
- C) Mean
- D) Variance

3. What does the mode of a dataset represent?

- A) The average value
- B) The middle value
- C) The most frequently occurring value**
- D) The spread of the dataset

4. How is the range of a dataset calculated?

- A) By adding all values together
- B) By subtracting the minimum value from the maximum value**
- C) By dividing the sum by the count
- D) By taking the square root of the variance

5. In statistics, what is defined as a 'population'?

- A) A subset selected for testing
- B) The entire group of individuals or items under study**
- C) A graphical summary of data
- D) The probability of an error

6. What is a 'sample' in statistical terms?

- A) The complete set of all data points
- B) A subset of a population selected to represent the group**
- C) A visual representation like a pie chart
- D) The average value of a population

7. Data represented by non-numerical categories such as favorite colors is called what?

- A) Quantitative continuous data
- B) Quantitative discrete data
- C) Qualitative or categorical data**
- D) Interval data

8. Which classification best describes data measured on a continuous scale, such as height or temperature?

- A) Discrete quantitative data
- B) Continuous quantitative data**
- C) Qualitative data
- D) Nominal data

9. What does standard deviation measure?

- A) The central value of a dataset
- B) The spread or dispersion of data points relative to the mean**
- C) The number of data points in a sample
- D) The ratio of sample size to population size

10. What is the total sum of probabilities for all possible outcomes in a complete sample space?

- A) 0.5
- B) 1.0**
- C) 10.0
- D) 100.0

11. Which visual display uses adjacent rectangular bars to depict continuous numerical data divided into intervals?

- A) Pie chart
- B) Histogram**
- C) Line graph
- D) Venn diagram

12. Which type of plot uses dots on a two-dimensional grid to show the relationship between two variables?

- A) Bar chart
- B) Histogram
- C) Scatter plot**
- D) Box plot