

Foundations of Statistics and Probability

Statistics & Probability · Practice Test · 18 Questions

1. In statistics, what is the 'mean' of a data set?

- A) The most frequent value
- B) The middle value
- C) The average of all values
- D) The difference between values

2. What is the term for the middle value in a data set when the numbers are listed in order?

- A) Mean
- B) Mode
- C) Range
- D) Median

3. Which statistical term describes the value that appears most frequently in a data set?

- A) Mode
- B) Median
- C) Standard Deviation
- D) Outlier

4. In probability theory, what is the numerical range of the probability scale?

- A) -1 to 1
- B) 0 to 100
- C) 0 to 1
- D) 1 to 10

5. What is the probability of an event that is considered mathematically impossible?

- A) 0.5
- B) 1
- C) 0
- D) -1

6. Which term refers to the set of all possible outcomes of a probability experiment?

- A) Event space
- B) Sample space
- C) Frequency table
- D) Dataset

7. What is the probability of rolling a 4 on a standard, fair six-sided die?

- A) $\frac{1}{4}$
- B) $\frac{1}{6}$
- C) $\frac{1}{2}$
- D) $\frac{1}{3}$

8. What is the result of subtracting the smallest value from the largest value in a data set?

- A) Variance
- B) Sum
- C) Mean
- D) Range

9. Which term describes a data point that is significantly distant from the other observations in a set?

- A) Median
- B) Mode
- C) Outlier
- D) Variable

10. What is the probability of flipping a fair coin and it landing on 'heads'?

- A) 0.25
- B) 1.0
- C) 0.5
- D) 0.75

11. Which type of data is descriptive and categorized by traits or labels rather than numbers?

- A) Quantitative
- B) Qualitative
- C) Discrete
- D) Continuous

12. What does a probability of 1 indicate about an event?

- A) It is impossible
- B) It is unlikely
- C) It is equally likely
- D) It is certain to occur

13. In statistics, what is a survey that collects data from every single member of a population called?

- A) Sample
- B) Poll
- C) Census
- D) Experiment

14. Which type of graph uses bars to represent the frequency of data grouped into continuous intervals?

- A) Pie chart
- B) Scatter plot
- C) Histogram
- D) Line graph

15. What are events called when the outcome of the first event does not affect the outcome of the second?

- A) Dependent events
- B) Independent events
- C) Mutual events
- D) Compound events

16. What statistical measure is used to quantify the amount of variation or dispersion in a set of data values?

- A) Standard deviation
- B) Mean
- C) Median
- D) Mode

17. Which type of data can only take specific, separate numerical values, such as the number of students in a class?

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

18. What is the sum of the probabilities of all possible outcomes in a single sample space?

- A) 0
- B) 0.5
- C) 1
- D) 100