

Foundations of Statistics and Probability

Statistics & Probability · Answer Key · 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