Advanced Statistics Concepts for Young Minds

Statistics · Practice Test · 10 Questions

1. Which statistical measure best describes the typical value in a dataset that has extreme outliers (very large or very small numbers)?

A) Mean (average)
B) Mode (most frequent)
C) Range (highest minus lowest)
D) Median (middle value)

2. If you flip a fair coin 100 times, what is the most likely number of 'heads' you would expect to get?

A) Exactly 100 heads
B) Exactly 0 heads
C) Around 50 heads
D) Exactly 75 heads

3. In a survey, if 70% of people prefer apples, and 30% prefer oranges, what type of data are the preferences (apple or orange) considered?

A) Quantitative Discrete
B) Quantitative Continuous
C) Qualitative Nominal
D) Qualitative Ordinal

4. What is the primary purpose of calculating the standard deviation of a dataset?

A) To find the most common value
B) To measure how spread out the data points are from the average
C) To determine the difference between the largest and smallest values
D) To find the middle value of the dataset

5. If a bag contains 3 red marbles and 7 blue marbles, what is the probability of drawing a red marble on the first try (without replacement)?

A) 1/3
B) 3/7
C) 3/10
D) 7/10

6. Which of these is a measure of 'central tendency'?

A) Interquartile Range (IQR)
B) Variance
C) Mode
D) Outlier

7. What does a correlation coefficient of +1.0 indicate about two variables?

A) They have no relationship
B) As one increases, the other tends to decrease
C) As one increases, the other tends to increase perfectly
D) As one decreases, the other decreases perfectly

8. If you are looking at the results of a dice roll, what is the probability of rolling a number greater than 4?

A) 1/6
B) 2/6
C) 3/6
D) 4/6

9. In a box plot, what does the line inside the box typically represent?

A) The range of the data
B) The median of the data
C) The mode of the data
D) The average of the data

10. When dealing with numerical data that can only take specific, separate values (like the number of goals scored in a game), what type of data is it?

A) Qualitative Nominal
B) Qualitative Ordinal
C) Quantitative Continuous
D) Quantitative Discrete