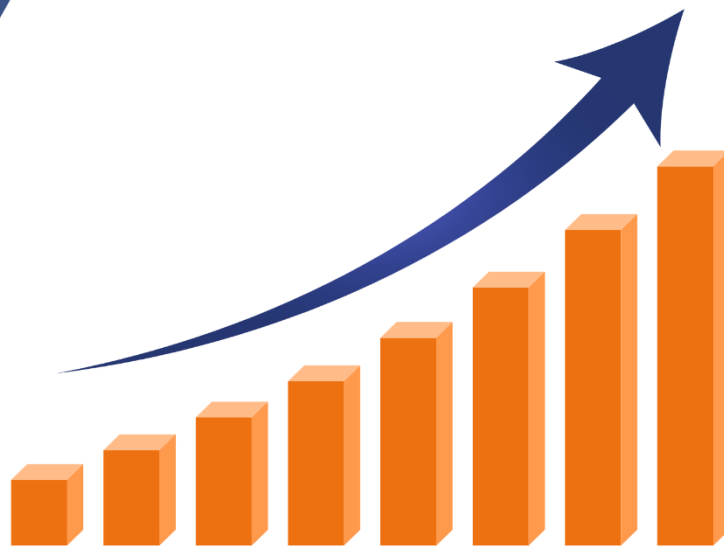


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# Statistics



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1. What is the measure of central tendency that is most sensitive to outliers?

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

**Ans. b) Median**

2. In statistics, what does variance measure?

- a. Spread of data
- b. Central tendency
- c. Skewness
- d. Kurtosis

**Ans. a) Spread of Data**

3. Which of the following is a measure of the dispersion of a probability distribution?

- a. Standard deviation
- b. Mean
- c. Median
- d. Mode

**Ans. a) Standard deviation**

4. What is the range of a dataset?

- a. The difference between the maximum and minimum values
- b. The sum of all values
- c. The average of all values
- d. The most frequently occurring value

**Ans. a) The difference between the maximum and minimum values**

5. The interquartile range (IQR) is a measure of:

- a. Central tendency
- b. Spread or dispersion
- c. Skewness
- d. Variance

**Ans. b) Spread or dispersion**

6. Which of the following is a measure of the strength and direction of a linear relationship between two variables?

- a. Variance
- b. Correlation coefficient
- c. Covariance
- d. Standard deviation

**Ans. b) Correlation coefficient**



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7. In probability theory, what is the complement of an event?

- a. The event itself
- b. The intersection of events
- c. The union of events
- d. All outcomes not in the event

**Ans. d) All outcomes not in the event**

8. What is the purpose of a confidence interval?

- a. To determine the probability of an event
- b. To estimate the population parameter with a range of values
- c. To test hypotheses about a population parameter
- d. To measure the spread of data

**Ans. b) To estimate the population parameter with a range of values**

9. What does the term "null hypothesis" represent in statistical hypothesis testing?

- a. A hypothesis that is proven to be true
- b. A hypothesis that is assumed to be false
- c. A hypothesis that is tested against the alternative hypothesis
- d. A hypothesis that is always accepted

**Ans. c) A hypothesis that is tested against the alternative hypothesis**

10. What is the purpose of regression analysis?

- a. To make predictions based on historical data
- b. To test hypotheses about means
- c. To determine the relationship between two variables
- d. To analyze categorical data

**Ans. c) To determine the relationship between two variables**

11. Which probability distribution is commonly used to model the number of successes in a fixed number of independent Bernoulli trials?

- a. Normal distribution
- b. Poisson distribution
- c. Exponential distribution
- d. Binomial distribution

**Ans. d) Binomial distribution**

**Ans. b) The entire dataset**



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12. What is sampling in statistics?

- a. Collecting the entire population data
- b. Collecting a subset of the population data
- c. Estimating population parameters
- d. Analyzing the entire dataset

**Ans. b) Collecting a subset of the population data**

13. What is a population in the context of statistics?

- a. A sample group
- b. The entire dataset
- c. A statistical measured.
- d. A subset of the data

**Ans. b) The entire dataset**

14. Which of the following is an example of non-probability sampling?

- a. Simple random sampling
- b. Stratified sampling
- c. Convenience sampling
- d. Cluster sampling

**Ans. c) Convenience sampling**

15. What is stratified sampling?

- a. Randomly selecting individuals from the entire population
- b. Dividing the population into subgroups and sampling from each subgroup
- c. Selecting every nth individual from the population
- d. Sampling individuals who are readily available

**Answer: b) Dividing the population into subgroups and sampling from each subgroup**

16. In systematic sampling, how are individuals chosen for the sample?

- a. Randomly
- b. Based on a specific order or pattern
- c. By dividing the population into strata
- d. By selecting individuals with certain characteristics

**Ans. b) Based on a specific order or pattern**



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17. What is the purpose of random sampling?

- a. To ensure a convenient sample
- b. To eliminate bias and ensure each member has an equal chance of being selected
- c. To select individuals with specific characteristics
- d. To sample from easily accessible individuals

**Answer: b) To eliminate bias and ensure each member has an equal chance of being selected**

18. What is cluster sampling?

- a. Randomly selecting individuals from different clusters in the population
- b. Selecting individuals who are close to each other in the dataset
- c. Dividing the population into clusters and randomly selecting entire clusters
- d. Sampling individuals based on their characteristics

**Answer: c) Dividing the population into clusters and randomly selecting entire clusters**

19. Which of the following is an advantage of stratified sampling?

- a. Easy to implement
- b. Eliminates bias
- c. Requires a small sample size
- d. Useful for studying specific subgroups

**Answer: d) Useful for studying specific subgroups**

20. What is the sampling frame?

- a. The entire population
- b. The list of individuals from which the sample is drawn
- c. The process of selecting a sample
- d. The sampling errors

**Answer: b) The list of individuals from which the sample is drawn**