

1. Bernoulli random variables take (only) the values 1 and 0.

B) True

2. Which of the following theorem states that the distribution of averages of iid variables, properly normalized, becomes that of a standard normal as the sample size increases?

A) Central Limit Theorem

3. Which of the following is incorrect with respect to use of Poisson distribution?

B) Modeling bounded count data

4. Point out the correct statement.

a) The exponent of normally distributed random variables follows what is called the log- normal distribution

b) Sums of normally distributed random variables are again normally distributed even if the variables are dependent

c) The square of a standard normal random variable follows what is called chi-squared distribution

d) All of the mentioned

- Ans. D) All of the mentioned above

5. _____ random variables are used to model rates.

- Poission

6. Usually replacing the standard error by its estimated value does change the CLT.

- False

7. Which of the following testing is concerned with making decisions using data?

-B) Hypothesis

8. Normalized data are centered at _____ and have units equal to standard deviations of the original data.

-A) 0

9. Which of the following statement is incorrect with respect to outliers?

a) Outliers can have varying degrees of influence

b) Outliers can be the result of spurious or real processes

c) Outliers cannot conform to the regression relationship

d) None of the mentioned

-C) Outliers cannot conform to the regression relationship

10. What do you understand by the term Normal Distribution?

- A probability distribution that is symmetric about the mean, showing that data near the mean are more frequent in occurrence than data far from the mean

11. How do you handle missing data? What imputation techniques do you recommend?

12. What is A/B testing?

- With an A/B test, one element is changed between the original and the test version to see if this modification has any impact on user behaviour or conversion rates

13. Is mean imputation of missing data acceptable practice?

14. What is linear regression in statistics?

- Linear regression analysis is used to predict the value of a variable based on the value of another variable. The variable you want to predict is called the dependent variable. The variable you are using to predict the other variable's value is called the independent variable.

15. What are the various branches of statistics?

- The two main branches of statistics are descriptive statistics and inferential statistics. Both of these are employed in scientific analysis of data and both are equally important for the student of statistics.