# Statistics Worksheet Solution

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

Ans:- 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?

Ans:- a) Central limit theorem

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

Ans:- b) Modeling bounded count data

4. Point out the correct statement.

Ans:-

5. _____ random variables are used to model rates.

Ans:- c) Poisson

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

Ans:- b) False

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

Ans:- b) Hypothesis

8. 4. Normalized data are centered at_____and have units equal to standard deviations of the original data.

Ans:- a) 0

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

Ans:- c) Outliers cann't conform to the regression relation

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

Ans:- Normal distribution is also known as Gaussian distribution, it's continuous 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. Normal distribution fundamental concept in statistics and probability, Normal distribution is appears in bell shape curve.

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

Ans:-

12. What is A/B testing?

Ans:- A/B testing is also know as split or bucket testing , it is a method of comparing performance and two versions of webpage, app or marketing campaign to determine which one perform better. It's a controlled experiments where two variants A and B are compared, typically by randomly assigning users to either A or B and measuring their response to each varience.

13. Is mean imputation of missing data acceptable practice?

Ans:-

14. What is linear regression in statistics?

Ans:- Linear regression is one of the most important tools which is quantifies the relationship between one or more predictor variables and one outcome variable. linear regression is commonly used for predictive analysis and modeling, Linear regression is widely used for prediction and forecasting in various fields such as economics, finance, social sciences, and natural sciences, It is also used for identifying relationships between variables, understanding the strength and direction of associations, and making decisions based on empirical data.

Linear regression types:

- Simple Linear Regression
- Multiple Linear Regression

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15. What are the various branches of statistics?

Ans:-