

STATISTICS WORKSHEET 3

1. b) Total Variation = Residual Variation + Regression Variation
2. c) binomial
3. a) 2
4. a) Type 1 error
5. d) confidence coefficient
6. b) increase
7. b) hypothesis
8. d) all of the mentioned
9. a) 0
10. Bayes' Theorem states that the conditional probability of an event, based on the occurrence of another event, is equal to the likelihood of the second event given the first event multiplied by the probability of the first event.
11. Z-score gives us an idea of how far the data points are from the mean of the data.
$$z = \frac{x - \mu}{\sigma}$$
12. A t-test is a test which basically compares the means of two samples. The data set here follows normal distribution.
13. A percentile is a term in statistics used to describe how a particular score is compared to the other scores from the same set. For example, if you score 95 percentiles, that means you perform better than 95 % of the others from the same set.
14. Analysis of Variance (ANOVA) is a statistical method used to compare means between three or more groups.
15. Since ANOVA test can be used to compare means between groups, then it can help us find how the mean of each of the independent variables differ from one another so that we can use this information to know if that variable has an actual relation with the dependent variable.