STATISTICS WORKSHEET - submitted by Sukhpal Singh Int 34

1. b. False
2. b. The underlying distribution
3. a. True
4. b. We are 95% confident that the results have not occurred by chance
5. c. If the region of rejection is located in one or two tails of the distribution
6. b. We reject a null hypothesis when it is true
7. a. It is a sample proportion.
8. a. .013
9. b. 0.745
10. c. –2.50
11. d. There is no conclusive evidence of a gender difference in the proportion belonging to sports clubs.
12. b. It is reasonable to say that more than 40% of Americans exercise regularly.
13. To find the test statistic for two samples, you need to first calculate the difference between the means of the two samples. Then, divide this difference by the standard error of the difference. The standard error of the difference is calculated using the standard deviations and sample sizes of both samples. The resulting test statistic will have a t-distribution with degrees of freedom equal to the sum of the sample sizes minus two.
14. To find the sample mean difference, you need to subtract the mean of one sample from the mean of the other sample. This will give you a single value that represents the difference between the two means. This value can be used to determine whether the difference between the two samples is statistically significant or not.
15. A two sample t-test is used to compare the means of two different groups or samples. For example, a researcher may use a two sample t-test to compare the mean test scores of male and female students. The null hypothesis would be that there is no significant difference between the means of the two groups, while the alternative hypothesis would be that there is a significant difference. The test statistic is calculated as the difference between the means divided by the standard error of the difference, and the results are compared to a t-distribution with degrees of freedom equal to the sum of the sample sizes minus two.