

Answer on Question #65199 – Math – Statistics and Probability

Question

Can you help me define null hypothesis? I have made one but I'm not sure if it correctly and completely covers all aspects of this hypothesis:

Null hypothesis is a hypothesis which states that there is no difference between an observed and a theoretical distribution or the scores of two variables. It is the statement that is tested in a test of statistical significance.

Solution

The null hypothesis is the hypothesis that the researcher is trying to disprove.

Test for comparing two means [1]

For example, the scores of two variables X and Y are given.

Null hypothesis: $\mu_1 - \mu_2 = 0$ (two population means are equal)

Alternative hypothesis: $\mu_1 - \mu_2 \neq 0$ (two population means are not equal).

Test of homogeneity [2]

Null hypothesis: The distribution of scores is the same for variable X as it is for Z .

Alternative hypothesis: The distribution of scores is not the same for Y as it is for Z .

Test of independence [3]

Null hypothesis: Variable X and variable Y are independent

Alternative hypothesis: Variable X and variable Y are not independent

References:

[1] Hypothesis Test: Difference Between Means. Retrieved from <http://stattrek.com/hypothesis-test/difference-in-means.aspx?Tutorial=AP>

[2] Chi-Square Test Of Homogeneity. Retrieved from <https://www.sophia.org/tutorials/chi-square-test-for-homogeneity-2>

[3] Chi-Square Test for Independence. Retrieved from <http://stattrek.com/chi-square-test/independence.aspx?Tutorial=AP>

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