

Abstract: This study was done in order to test the hypothesis that there is a difference in basic algebra skills between freshman and seniors at Tates Creek High School (that the mean score of seniors would be higher than the mean score of freshman). This hypothesis was tested with a two sample t-test, in which we used the mean scores on a five question algebra test that was administered to a sample from both populations (freshman and seniors).

Abstract: The purpose of this study is to determine which of two paper airplanes has the superior plying power. The goal is to measure the distance flown by each plane then compare the average distance flown of both. The null hypothesis is that there is no difference between the average distance flown by plane A and the average distance flown by plane B. The alternative hypothesis is that there is a difference between the average distance flown by each plane. We will be sampling from two different paper plane and perform an inference for the mean. To do this we will conduct a t test.

Population Inference: Bravo HS Students

Two classrooms were used for the treatment with music and two classrooms were used for the control groups. A test on vocabulary consisted of 10 vocabularies were given to two of these classrooms where the vocabulary words are provided prior to the test to see if music will affect the student's memory. No name was required to be written on the tests, of course.

Classical music was played during the entirety of the experiment.

5 minutes were given for studying for the test and 5 minutes were given for taking the test.

The number correct were averaged from the two classrooms treated with music and the scores correct were averaged from the two classrooms with no music playing. The differences between these averages were compared using a two-sample mean inference testing.

μ_1 represents the control group's average score, μ_2 represents the treatment group's average percentage.

The null hypothesis (H_0): there is no difference in test score with and without music: $\mu_1 = \mu_2$;

The alternative hypothesis (H_a); there is a difference in test score with and without music: $\mu_1 \neq \mu_2$

Amstat 2010

Kevin Zhang and Sherry Yang
Effectiveness of Antibacterial Soap
Hatboro-Horsham High School, Horsham, Pennsylvania
Bacteria dishes 3 times 12 dishes.