

Scenario

Recall in the one-sample t test, we tested a hypothesized value to make a claim about the population mean. Based on the sampled data, we calculated our p-value and either rejected or failed to reject that hypothesis. Now, instead of claiming that a population mean is equal to some number, you want to test whether two populations' means are equal.

Specifically, you want to test the population means of sale price for homes with and without masonry veneer. Is there a difference in sale price? Can you claim that the population means are statistically different from one another? To answer this question, let's explore the two-sample t test.

The null hypothesis for the two-sample t test is that the means for the two groups are equal, which is $\mu_1 = \mu_2$, or $\mu_1 - \mu_2 = 0$. The alternative hypothesis is that the means for the two groups are not equal, or $\mu_1 - \mu_2$ does not equal 0.

Statistics 1: Introduction to ANOVA, Regression, and Logistic Regression

Copyright © 2019 SAS Institute Inc., Cary, NC, USA. All rights reserved.

Close