

Discussion questions week 3



Discussion Questions – Week 3 The appropriate uses of one and two sample statistical t and z tests are as follows: a one-sample t test is only used when comparing one sample mean to a specific given value, while a two-sample t test is used when the two given sample sizes are equal. The t test is used to see if the variation of the two groups has significance. A sample statistical z test can only be used when trying to find a difference between the sample mean and the mean of the population, to see if the differences are large enough to know that it did not occur by chance. The z test is often used with determining standardized testing scores.

ANOVA (analysis of variance) is used to test the differences between more than two groups. The difference between ANOVA and sample statistical testing is that it compares more than just one or two variables.

The importance of hypothesis testing when conducting research is that it asks a hypothetical question as well as answers it. Without hypothesis testing, the hypothesis would be pointless because there were no attempts to prove or disprove it. Also, the point of coming up with a hypothesis is to test it, so that it can either be proven or disproven; in the case that it is proven, it can become a scientific theory.

There are very few cases when hypothesis testing is not used, and those cases are usually when the answer is quite obvious and it would be a waste of time and money to test on it. When someone comes up with a magnificent theory, the only thing they really can do is test it to see if it is plausible.

Hypothesis testing is a critical part of conducting research as it aids in one, doing the proper research to avoid messing up entirely and two, the come upon the wanted result (or in some cases, the unexpected result).