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# A New Approach for Comparing the Means of Two Populations

Brad Moss

*Indiana University - Purdue University Fort Wayne*

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## A New Approach for Comparing the Means of Two Populations

Brad Moss

Dr. Chauhan

Mathematics Master of Science in Applied Mathematics

Purdue University in Fort Wayne

Estimating the difference between unknown means of two independent populations is a very useful project in many fields of study. Some standard tests or confidence intervals of the difference of two means exist. However, the existing tests are valid only when the two populations have known variances, or unknown but equal variances. The real world hardly ever gives such conditions. Many alternative tests have been devised to deal with the problem of unequal variances. In this paper, a new method will be suggested to deal with this problem. Traditional thought on comparing the means typically follows the idea to take the difference of the means. What sets this solution apart is that instead of taking the difference of the two means, a ratio of the two means is formed. This method works well when the variance of one population is significantly less than that of the other population. The precision of the suggested method is discussed in this paper.