

1. A one-way analysis of variance is used when the data are divided into groups according to only one factor. The questions of interest are usually: (a) Is there a significant difference between the groups?, and (b) If so, which groups are significantly different from which others? Statistical tests are provided to compare group means, group medians, and group standard deviations. When comparing means, multiple range tests are used, the most popular of which is Tukey's HSD procedure. For equal size samples, significant group differences can be determined by examining the means plot and identifying those intervals that do not overlap. For detailed information visit the following link [here](#).
2. The Two Sample Comparison procedure is designed to compare two independent samples of variable data. Tests are run to determine whether or not there are significant differences between the means, variances, and/or medians of the populations from which the samples were taken. In addition, the data may be displayed graphically in various ways, including a dual histogram, a multiple box-and-whisker plot, and a quantile-quantile plot. The following link shows how this could be implemented in statgraphics [here](#).
3. The simplest regression models involve a single response variable Y and a single predictor variable X . STATGRAPHICS will fit a variety of functional forms, listing the models in decreasing order of R-squared. If outliers are suspected, resistant methods can be used to fit the models instead of least squares. For detailed information visit [here](#). And we can discuss in the lecture which plots could be included in the lab report.