**BIO 162 Sample Data**

**Homework**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

For this assignment, you will run analyses on data that illustrate different factors that impact a scientist’s ability to find statistical significance in their data. Use the data file BIO162.Sample.HW.Data in order to answer the following questions.

**Summary Table of Statistics**

On the Multiple means applet, make sure that the “Unstacked”, “Boxplots”, and “Show ANOVA Table” boxes are checked. Copy/paste each data set into the statistics applet and click the “Use Data” button. Fill in the table with the values listed in the Summary Statistics and ANOVA tables.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Set | Group | Sample Size (n) | Mean | Standard Deviation | P-Value |
| #1 | A |  |  |  |  |
| B |  |  |  |
| #2 | A |  |  |  |  |
| B |  |  |  |
| #3 | A |  |  |  |  |
| B |  |  |  |
| #4 | A |  |  |  |  |
| B |  |  |  |

**Graphs**

For each data set, take a screen grab of the graph of the data (with boxplots) and paste it below.

Data Set #1

Data Set #2

Data Set #3

Data Set #4

**Significance Interpretation**

For each data set, state whether the result was statistically significant. If it was **NOT** significant, what about the data may have led to being unable to detect significance? To determine this, look for patterns in the table and graphs above.

Data Set #1

Data Set #2

Data Set #3

Data Set #4