**One-way ANOVA in Excel**

You may conduct a one-way ANOVA using Excel.

(Preliminary step) First, make sure that the “Analysis ToolPak” is installed.

(1.) Under “Tools” select “Data Analysis”

In the window that appears select “ANOVA: One factor” and click “OK.”

(2.) Using your mouse highlight the cells containing the data. Be sure to include the labels (row 1)

And click on “Labels in First Row”.

(3.) Select “Columns” if each treatment is its own column or “Row” if each treatment is its own

row.

(4.) Set your level of significance. (The default is 5% or 0.05.)

(5.) Click “OK” and the ANOVA output will appear on a new worksheet.

Output reference:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ANOVA Results from Excel:

SUMMARY

*Groups Count Sum Average Variance*

Column 1 3 2000 666.6667 972.3333

Column 2 3 1421 473.6667 2417.333

Column 3 3 1342 447.3333 1737.333

ANOVA

*Source of Variation SS df MS F P-value F crit*

Between Groups 86049.55556 2 43024.78 25.17541 0.001207 5.143249

Within Groups 10254 6 1709

Total 96303.55556 8

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The results under the heading “SUMMARY” simply provides you with summary statistics for

each of your samples. The results of the ANOVA test are provided under the heading

“ANOVA.” Comparing these figures with the example above, it should be simple to determine the meaning of the Excel output.