

Useful Commands in Excel 2007

Note that the document titled “Useful Commands in Excel” in the course notebook gives useful commands in Excel 2003 while this document gives the same information for Excel 2007.

The following is a list of useful Excel commands. I have used *italic* type when referring to Excel menu commands or dialog box statements. In the terminology used below, “click” refers to a left click of the mouse. If a right click of the mouse is required, the directions will say “right click.”

To use the statistical functions in Excel you will need to load the Excel Add-In called Analysis ToolPak. To see if you have this already loaded, click on *Data*. If *Data Analysis* appears in the *Analysis* group (far right-hand group), then the Add-In has been previously loaded. If *Data Analysis* does not appear, then use the following procedure to load the Add-In.

To load the Excel Add-In Analysis ToolPak, click on the *Office Button* in the upper left-hand corner, click on *Excel Options* (in the lower right corner of the dialog box), click *Add-Ins*, select *Excel Add-Ins* in the *Manage* box (at the bottom of the dialog box), and click *Go*. Then select *Analysis ToolPak* and click on *OK*. If you now click on the *Data* tab, *Data Analysis* should appear in the *Analysis* group.

To read data from an Excel worksheet, click on the *Office Button* in the upper left-hand corner, click on *Open*, and then click on the name of the file containing the Excel worksheet.

To read data from an ASCII (text) file into an Excel worksheet, click on the *Office Button* in the upper left-hand corner, click on *Open*, click on the name of the file containing the data, click on *Delimited* or *Fixed Width* (depending on how the data are written in the data file) and then click on *Next*. Check that the data are properly aligned in the window and if so click on *Next* (if not, click on *Back* to go back to the choice of *Delimited* or *Fixed Width*, and click on the one you did not use the first time), then click on *Finish*.

To name each column, click on the number 1 on the left side of the first row, click on *Home*, click on *Insert* in the *Cells* group, click on *Insert Sheet Rows*, and then type the names.

To compute descriptive statistics, click on *Data*, click on *Data Analysis* in the *Analysis* group, click on *Descriptive Statistics* and then click *OK*. In the Descriptive Statistics dialog box, click on the box next to *Input Range*, and then highlight the columns in your worksheet that you want to compute descriptive statistics for. If there are names in the first row of each column (and you highlighted the names as well as the data in the column), then click on the box next to *Labels in First Row*. Under *Output options*, you need to tell Excel where to place the results. Then click on the box next to *Summary statistics* and click *OK*.

To properly format the width of the cells containing the descriptive statistics, highlight the cells containing the descriptive statistics output, click on *Home*, click on *Format* in the *Cells* group, and then click on *AutoFit Column Width*.

To plot y against x, you must first rearrange the columns so that *x* is in the column immediately to the left of *y* (i.e. *x* and *y* must be in contiguous columns with *x* on the left and *y* on the right). To plot *y* against *x*, highlight the two columns containing *x* and *y*, click on *Insert*, click on *Scatter* in the *Charts* group, and then click on *Scatter with only Markers* (in the upper left-hand corner of the pop-up menu).

To format the graph:

- (1) **To add a title**, click anywhere on the graph, click on *Layout*, click on *Chart Title* in the *Labels* group, click on *Above Chart*, click on the current title for the plot, type the title you want (it will show up initially in the box just to the right of *fx*), and hit the *Enter* key.
- (2) **To add a label to the horizontal axis**, click on *Axis Title* in the *Labels* group, click on *Primary Horizontal Axis Title*, click on *Title Below Axis*, type the axis name you want, and hit the *Enter* key. Repeat the process to add a label to the vertical axis.
- (3) **To remove the gridlines**, click on *Gridlines* in the *Axes* group, click on *Primary Horizontal Gridlines*, and click on *None*.
- (4) **To remove the legend**, click on *Legend* in the *Labels* group, and click on *None*.
- (5) **To rescale the x-axis**, click on *Axes* in the *Axes* group, click on *Primary Horizontal Axis*, click on *More Primary Horizontal Axis Options*, click on *Fixed* next to *Minimum*, enter the minimum value for the *x*-axis, click on *Fixed* next to *Maximum*, and enter the maximum value for the *x*-axis. Then click on *Axis Value* (the next to last row in the dialog box), enter the same value as the minimum value entered above, and click on *Close*.
- (6) **To rescale the y-axis**, repeat the steps in (5) using the *Primary Vertical Axis* option.
- (7) **To resize the data points**, right click on any data point, click on *Format Data Series*, click on *Marker Options*, click on *Built-In*, change *Type* to a circle, and change *Size* to 3.

To increase the size of the graph, first click on any empty cell in the Excel worksheet. Then hold down the Shift key and left click on the graph, and click on the *Format* tab (one of the tabs across the top of the worksheet). You can now change the size of the graph using the values in the *Size* group.

To add the regression line to the plot, right click on any data point, click on *Add Trendline*, click on the circle next to *Linear*, check the box next to *Display equation on chart* and click *Close*. The displayed regression equation can be moved by dragging it to a different position.

To regress y against x , click on *Data*, click on *Data Analysis* in the *Analysis* group, click on *Regression* and then click *OK*. Click on the box next to *Input Y Range*, and then highlight the column in the worksheet containing y . Click on the box next to *Input X Range*, and then highlight the column in the worksheet containing x . (If you are running a multiple regression, then the columns containing the multiple explanatory variables must be contiguous, i.e. they must all be next to each other). If the x and y columns have names in the first row (and you highlighted the first row containing these names when you highlighted the columns containing x and y) then click on the box next to *Labels*. Under *Output options*, you need to tell Excel where to place the regression results. Under *Residuals*, click on the box next to *Residuals* and click on the box next to *Residual Plots*. Then click *OK*.

To properly format the width of the cells containing the regression output, highlight the cells containing the regression output, click on *Home*, click on *Format* in the *Cells* group, and then click on *AutoFit Column Width*.

To do a histogram of the residuals, click on *Data*, click on *Data Analysis* in the *Analysis* group, click on *Histogram*, and then click *OK*. Click on the box next to *Input Range*, and then highlight the column labeled *Residuals* in the Excel worksheet. Click on the box next to *Labels* if you highlighted the column name *Residuals* in the *Residuals* column. Under *Output options* you must tell Excel where to place the results. Then check the box next to *Chart Output* and click *OK*.

To properly scale the histogram, click on the lower boundary of the chart and drag it downward.