Examples for using Microsoft Excel in Math 141

Multiplying matrices:

    Enter the first matrix and enter the second matrix

    With the cursor, highlight the cells in which the product will be computed

    = MMULT (…select the first matrix … **,** …select the second matrix … **)**

    Ctrl-Shift-Enter

Matrix inverses:

    Enter the inverse for which you want an inverse

    With the cursor, highlight the cells in which the inverse will be computed

    = MINVERSE (…select the matrix to invert… **)**

    Ctrl-Shift-Enter

Also see http://www.youtube.com/watch?v=G8w-d9U3PJM for a step-by-step, guided explanation of
using Excel to multiply matrices and to find a matrix inverse, or try googling "Excel matrix multiplication."

Least squares:

    Enter your data into two columns: one column with x-values, the other with y-values

    Highlight/select the two columns

    Select "Insert" from the menu at top of Excel, then the X Y (Scatter) without lines (the first one shown).

    Right-click on any of the points, and select "Add Trendline…"

    The "Linear" option should be the default already selected. Click on "Display Equation on chart."

    This plot and line are dynamic: they will change if you change your x or y data.

Counting:

    Combinations: **= COMBIN(10,5)**

    Permutations: **= PERMUT(10,5)**

    Factorial: **= FACT(10)**

Statistics

    Mean: **= AVERAGE (** …select desired cells… **)**

    Median: **= MEDIAN (** …selected desired cells… **)**

    Variance (sample):   **= VAR (** …selected desired cells… **)**

    Variance (population):   **= VARP (** …selected desired cells… **)**

    Standard deviation (sample):   **= STDEV (** …selected desired cells… **)**

    Standard deviation (population): **= STDEVP (** …selected desired cells… **)**

Normal distribution

    Find probability below a given z-value   **= NORMSDIST(1.75)**

    Find probability between two z-values   **= NORMSDIST(1.75) - NORMSDIST(.5)**

    Find z-value for a given probability   **= NORMSINV(.05)**

See http://www.exceluser.com/explore/statsnormal.htm for more detail or google "excel normal distribution."