FORMULAS & CHARTING IN MICROSOFT EXCEL

A. ENTERING FORMULAS
1) Select the cell where you wish to have your calculation.
2) Type “=”
3) Type in the first cell reference to be added to.
4) Use the “+” sign (to add) and enter the next cell reference to be added, etc.
5) Press “Enter” and the total will appear where you entered the formula.

Please note: You can use the following operation signs: “+” for addition, “-” for subtraction, “*” for multiplication, “/” for divide.
Excel will follow the Order of Operations when calculating an entered formula:
1st - Parentheses
2nd - Exponents
3rd - Multiplication & Division (in order encountered)
4th - Addition and Subtraction (in order encountered)

B. USING FUNCTIONS (Pre-Programed Formulas)
1) Select the cell where you wish to have your calculation.
2) Click on the function icon in the menu bar or select “Function” from the “Insert” drop down menu.
3) Select the “Function Name” you wish to use from the menu box. You can select a “Function Catagories” to see a list of the Function Names under each category.
4) Click “OK”
5) Click on the icon at the end of the box labeled “Number 1” and select the range of cells that you are using with the function.

6) Click “OK”

Please Note: You can copy and paste formulas and Excel will automatically change the data that it is referencing based on where you copy to and what the formula states.

C. WORKING WITH ABSOLUTE CELL REFERENCES (When you wish to work with a specific cell and not have Excel change the data referenced in a formula.)
1) Double click on the formula entered.
2) You will see the formula appear in the Formula Bar. Click in front of the cell you wish to make an absolute reference in the formula bar.
3) Enter a “$” in front of the column reference to make that absolute and enter a “$” in front of the row reference to make that absolute. (For example: $D$8)
4) Click “Enter” when you have finished.

D. CREATING A CHART
1) Select the data that you want to create a chart for.
   i. If the data is adjacent, select the range of cells by highlighting (Excel will ignore the upper left cell of the selected information.)
ii. If the data is not adjacent:
   1. Select the first range of cells.
   3. Hold down the “Ctrl” key while selecting the second range of cells.

2) Creating a Chart Sheet (Separate Spreadsheet)
   i. Press the “F11” key. You will see a new sheet tab appear at the bottom of
      the worksheet titled “Chart 1.” Click on the tab to view the graph.
   ii. To change the title of the tab, double click on the tab, type in the new title
       and press “Enter.”

3) Creating an Embedded Chart (Within the Spreadsheet)
   i. Select the “Chart Wizard” icon in the menu bar or select “Chart” from the
      “Insert” drop down menu.
   ii. Select the Chart Type (The example that follows is for a column type
       chart. Directions are similar for other chart types.) and click “Next”

   1. Column Type Chart
      a. Under the “Data Range” tab, select “rows” or “columns” for which
         set of information you intend to represent.
b. Under the “Series” tab, series information can be added or removed or reselected. Clicking on each series listed will indicate what data is represented by each series name.

c. Click “Next”

d. Chart Options Menu Box
   i) Titles Tab - Enter the title of the chart, y-axis title and x-axis title
   ii) Axes Tab - Choose how to show the x-axis labels and whether or not you wish to have the y-axis labels show.
   iii) Gridlines Tab - Choose to have major and/or minor gridlines show on your graph.
   iv) Legend Tab – Choose to have the Legend show and where it will be placed.
   v) Data Labels Tab – Choose to have data labels added to the columns.
   vi) Data Table Tab – Choose to have the data table show with the chart.
   vii) Click Next

e. Chart Location
   i) If you want the chart on it’s own spreadsheet, select “As new sheet”
   ii) If you want the chart on the spreadsheet with your data, select “As object in”
   iii) Click Finish

f. You can click and hold the left mouse button on top of the chart and move it around the spreadsheet. Let go of the mouse button when you have the chart placed where you want it.
E. EDITING A CREATED CHART

1) Y-Axis
   i. Double click on the y-axis.
      1. Click on the Patterns Tab to edit the axis and the tick marks.
      2. Click on the Scale Tab to edit the numerical scale.
      3. Click on the Font Tab to edit the font style and size.
      4. Click on the Number Tab to edit the type of number. You may
         select the number of decimals places for certain number types.
      5. Click on the Alignment Tab to rotate the labels.

2) X-Axis
   i. Double click on the x-axis and follow the steps for the y-axis.

3) Body of Chart
   i. Double click on the center of the chart. The background color and the
      border can be changed.

4) Legend
   i. Double click on the legend.
      1. Click on the Patterns Tab to edit the border and the background
         color.
      2. Click on the Font Tab to edit the font style and size.
      3. Click on the Placement Tab to select where the legend will be
         placed in relation to the chart.