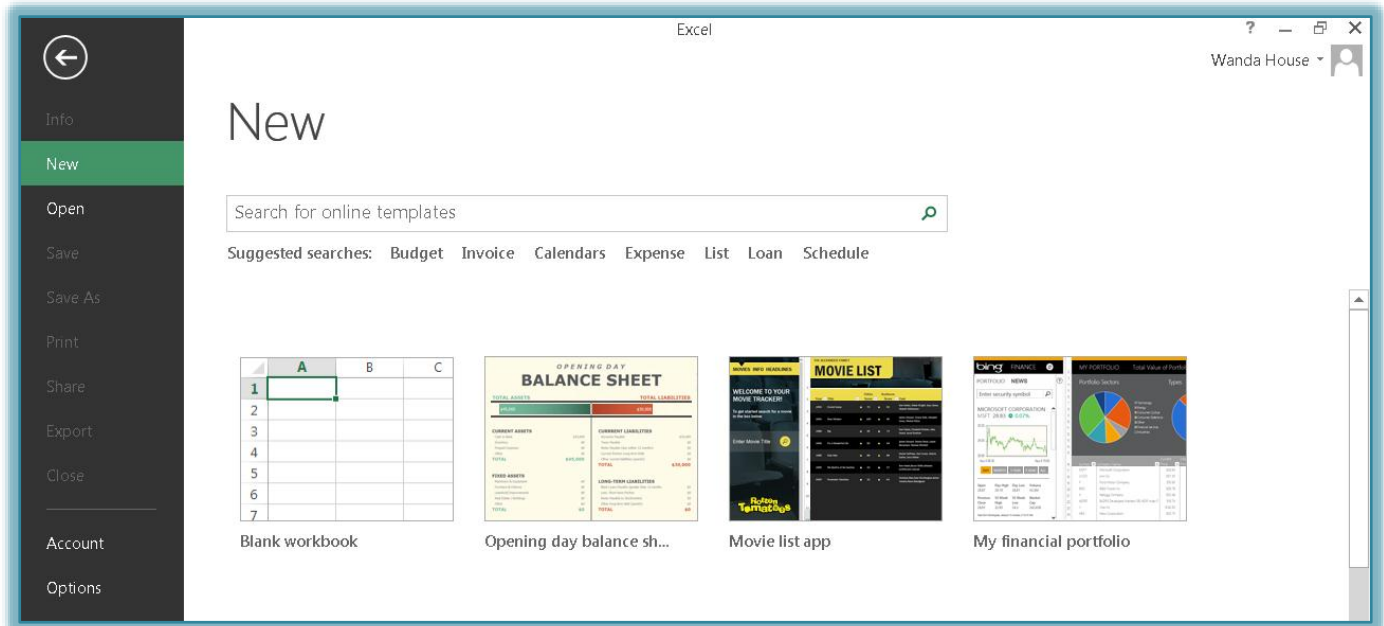


## CREATE WORKSHEET WITH FORMULAS AND FUNCTIONS

It is a very simple process to create a worksheet in Excel. As an example of creating a workbook in Excel, you will create the following worksheet. Follow the steps carefully. For information about cells, columns, and rows, click the link for Excel Basics. When the Excel program is first opened, a new workbook window will display. However, it is sometimes necessary to create a new workbook when another workbook has been closed.

### CREATE A NEW BLANK WORKBOOK

- ✚ Click the **File Tab** to open **Backstage View**.
- ✚ Click the **New** button.
- ✚ The **New** window will display (see illustration below).



- ✚ Click the **Blank Workbook** option to create the new workbook.

### INPUT DATA

- ✚ Click cell **A1** and input **High-Tech Stock Club**.
- ✚ Press the **Enter** key to move to cell **A2**.
- ✚ Type **Stock** and press the right arrow key.
- ✚ Type **Symbol** and press the right arrow key.
- ✚ Type **Date** and press **Alt+Enter**. This command allows you to enter two lines of information into a single cell.
- ✚ Type **Acquired** and press the right arrow key.
- ✚ Type **Shares** and press the right arrow key.
- ✚ Type **Initial** and press **Alt+Enter**.
- ✚ Type **Price** and then press the right arrow key.
- ✚ Type **Current** and press **Alt+Enter**.
- ✚ Type **Price** and press the right arrow key.
- ✚ Input the rest of the data for the worksheet as shown in the Table below.

High Tech Stock Club					
Stock	Symbol	Date Acquired	Shares	Initial Price	Current Price
Hewlett-Packard	HP	5/30/2007	550	60.5	80.75
Dell	DELL	1/15/2007	400	30	120.5
Intel	INTE	3/15/2007	550	45.5	75.5
Microsoft	MICR	12/30/2006	300	50	129.5
Compaq	COMP	1/21/2007	150	80	65

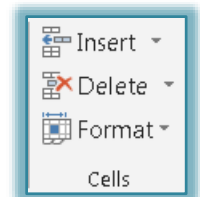
### INPUT ADDITIONAL LABELS

- † Select cell **A8** and input **Total**.
- † Press the **Enter** key to move to cell **A9**.
- † Input **Average**.
- † Press **Enter** and input **Highest**.
- † Press **Enter** again and input **Lowest**.
- † Press **Enter** one more time and input **Percentage Gain/Loss =====>**
- † Save the worksheet by clicking the **Save** button on the **Quick Access** toolbar.

### INSERT COLUMNS AND ROWS

#### Insert a Column

- † When inserting a column, you have to select the column to the right of the one to be inserted.
  - † Select column **F** by clicking on the letter **F** above the column.
  - † Click the **Home** Tab, if necessary.
  - † In the **Cells** Group, click the **Insert** button (see illustration at right).
- or
- † Right-click on the letter **F** and then click **Insert**.
  - † A column will be inserted and column **F** will become column **G**.
  - † In cell **F2**, input **Initial**.
  - † Press **Alt + Enter**.
  - † Input **Cost**.
  - † Go to cell **H2** and input **Current Value** so it appears on two lines.
  - † Press the right arrow key to move to cell **I2**.
  - † Input the text **Gain/Loss**.
  - † Don't worry if the data in column **I** goes to two lines. That will be corrected later.



#### Insert a Row

- † When inserting a row, you have to select the row below the one to be inserted.
- † Select **row 2** by clicking the number **2** in the gray area.
- † Click the **right** mouse button.
- † Choose **Insert** from the list of choices.
- † A new row will be inserted after the title line.
- † Complete the same procedure to insert a row between the **Total** row and the **Average** row.

### WORK WITH FORMULAS AND FUNCTIONS

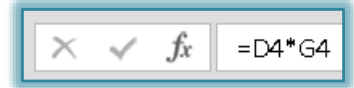
#### Enter Formulas Using the Keyboard

- † Click in cell **F4**, and type **=d4\*e4**. All formulas and functions must start with an equal (=) sign.

- † The formula will appear in cell **F4** and in the **Formula Bar**.
- † Press the right arrow key twice to select cell **H4**.
- † Instead of displaying the formula in **F4**, the result of the formula will be displayed.

### Enter Formulas Using the Point Method

- † With cell **H4** selected, input the **equal (=) sign**. All formulas and functions must start with an equal (=) sign.
- † Click cell **D4** to select it.
- † A marquee will appear around cell **D4** and **D4** will appear in the formula.
- † Input an **asterisk** (multiplication sign \*) and then click cell **G4**.
- † Click the **Enter** button (check mark) on the **Formula Bar** (see illustration at right) or press the **Enter** key.
- † Click cell **I4**.
- † Press the **equal sign (=)** on the keyboard to start the formula.
- † Click cell **H4**.
- † Input a **hyphen** (minus sign -).
- † Click cell **F4**.
- † The formula **=H4-F4** should appear in cell **I4** and in the **Formula Bar**.
- † Press the **Enter** key or click the **Enter** button (check mark) on the **Formula Bar** to accept the formula (see illustration at right).
- † To cancel the operation, click the **Cancel** button (X) on the **Formula Bar**.



### Copy Formulas Using the Fill Handle

- † Click cell **F4** then point to the **Fill Handle**.
- † The **Fill Handle** is the **small square** in the **lower right corner** of the cell selector (see illustration at right.)
- † Move the mouse pointer to the bottom right corner of the box until the mouse pointer turns to a black plus sign (see illustration at right.)
- † Click and drag the **Fill Handle** through cell **F8**.
- † The results of the formula should appear in all the cells.
- † Select cells **H4** and **I4**.
- † Move the mouse pointer to the bottom right corner of the box in cell **I4**.
- † Drag the **Fill Handle** down through **H8:I8**.
- † The results of the formulas that were entered in cells **H4:I4** will be copied to cells **H5:I8**.



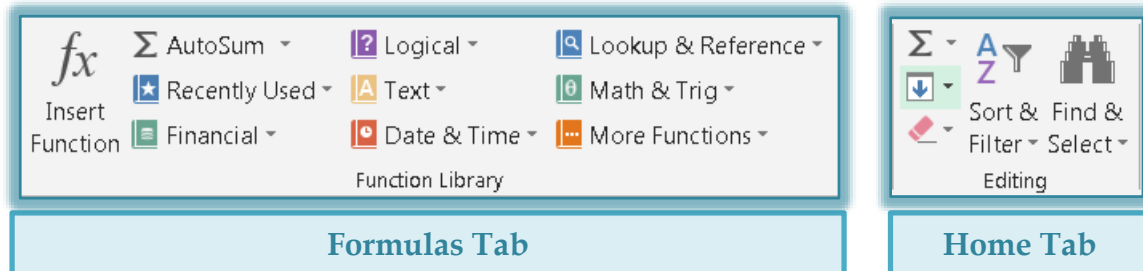
### Functions

- † Functions take a value or values, perform an operation, and return a value or values.
- † Each function begins with an equal sign.
- † Arguments are included in parentheses. An example of a function is =AVERAGE(D3:D7). In this function:
  - ✦ AVERAGE is the function name.
  - ✦ D3:D7 is the argument.
    - ▣ The arguments are the cells in the worksheet for which the calculation is being performed.
    - ▣ The argument must be included in parentheses.

## COMPLETE THE TOTAL, AVERAGE, HIGHEST, AND LOWEST FUNCTIONS

### Sum Columns of Numbers

- † Select cells **F4** through **F9**.
  - † Click the **Formulas Tab**.
  - † In the **Function Library Group**, click the **AutoSum** button (see illustration below).
- or**
- † Click the **Home Tab**.

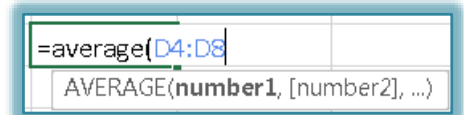


- † In the **Editing Group**, click the **AutoSum** button (see illustration below).
- † The **Total** for the column **Initial Cost** should appear in row **9**.
- † Select cells **H4** through **I9** and click the **AutoSum** button.
- † The total for the columns **Current Value** and **Gain/Loss** should appear in row **9**.

### Input Formulas/Functions

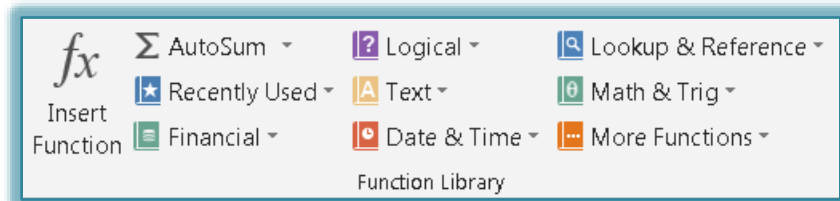
#### Average Function

- † Select cell **D11** and input **=Average(**.
- † Click cell **D4** and drag through cell **D8** to select the range **D4** through **D8**.
- † A marquee will surround the range.
- † **D4:D8** will appear in the cell after the parentheses (see illustration at right).
- † Click the **Enter** button next to the **Formula Bar**.
  - ✦ It is not necessary to input a closing parenthesis to close the function.
  - ✦ The parenthesis will be inserted by the Excel program when the Enter key is clicked.



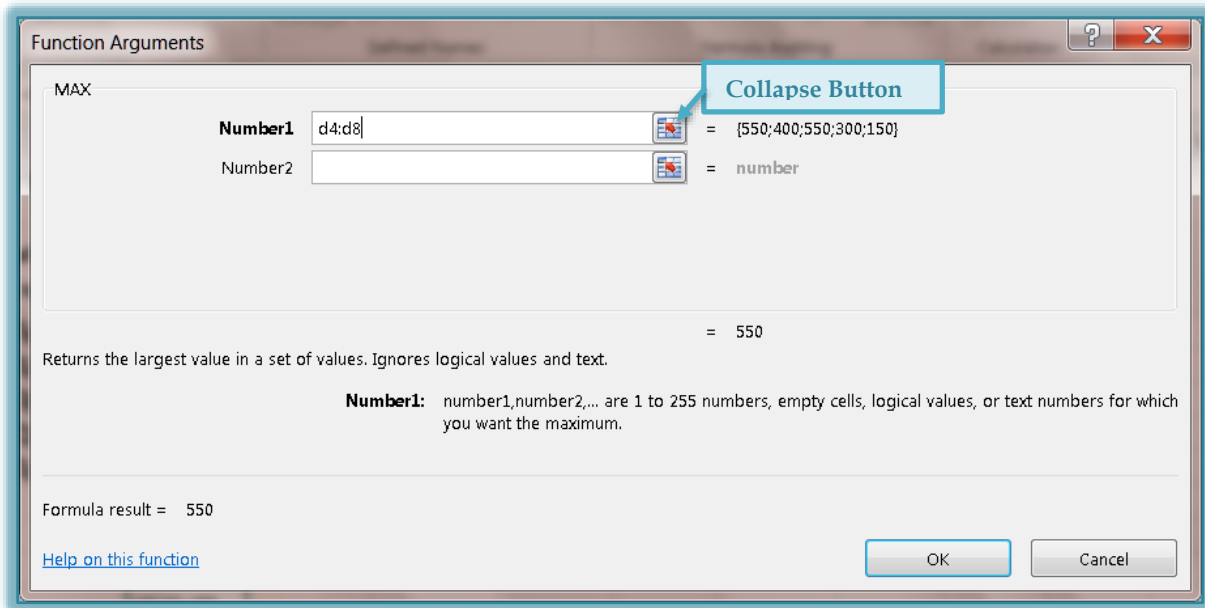
#### Maximum Function

- † Select cell **D12**.
- † Click the **Formulas Tab**.
- † In the **Function Library Group**, click the **More Functions** button (see illustration below).



- † Choose **Statistical** from the list.
- † A list of **Statistical** functions will appear.
- † Scroll down the list to locate the **MAX** function. The functions are listed in alphabetical order.
- † Click **MAX**.
- † The **Function Arguments** dialog box will appear (see illustration on next page).

✦ Input **D4:D8** inside the **Number 1** box (see illustration below).



✦ Click **OK**.

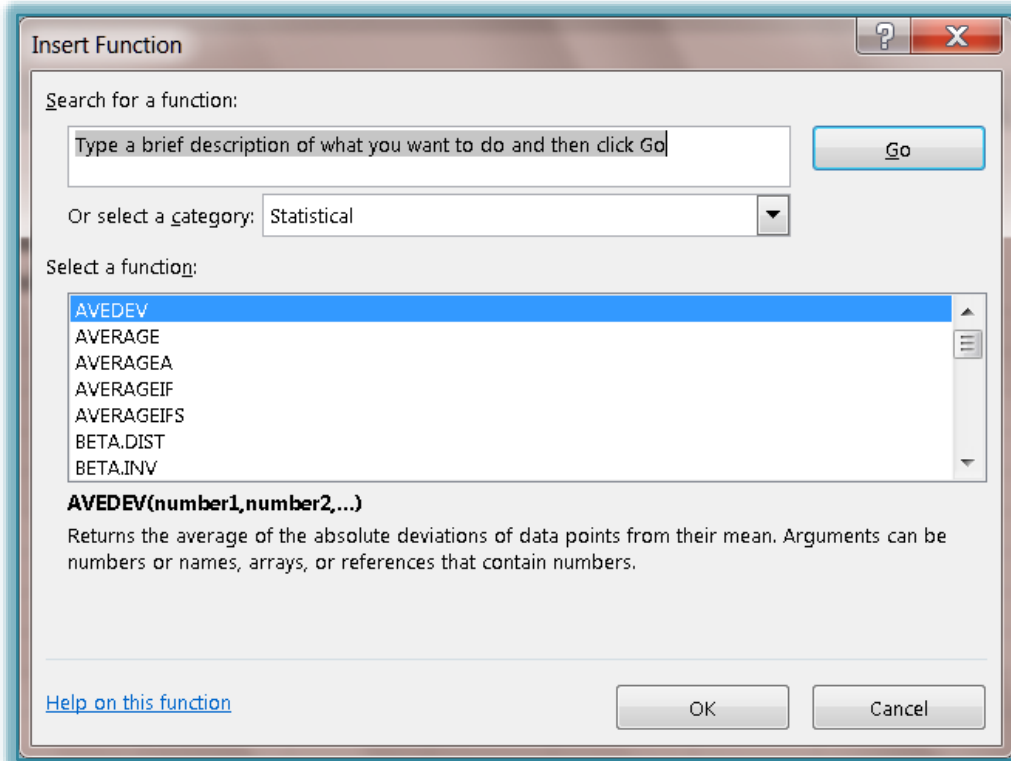
✦ The Highest number **550** should appear in the cell.

### Minimum Function

✦ Select cell **D13** and click the **Insert Function** button on the **Formula Bar** (see illustration at right).



✦ The **Insert Function** dialog box will appear (see illustration below).



✦ Make sure that **Statistical** is selected for the **Category**.

✦ Choose **MIN** under **Select a Function**.

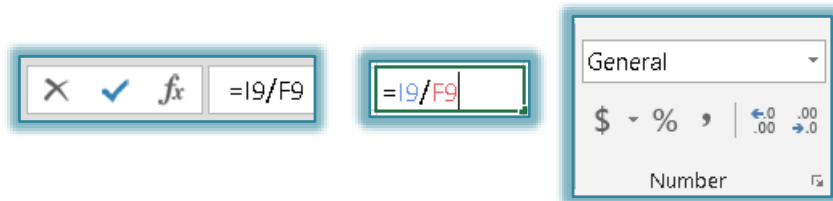
- † Click the **OK** button.
- † The **Function Arguments** dialog box will display (see illustration at top of previous page).
- † Click the **Collapse** button in the **Number 1** text box. This is the one with a red arrow that appears at the end of the box where the cell references appear.
- † Select cells **D4:D8** and then click the **Expand** button. This is the one that appears at the end of the text box (see illustration below).



- † Click the **OK** button. The lowest number in the column should appear.
- † Select cells **D11** through **D13**.
- † Use the **AutoFill** feature to copy these functions from columns **E** through **I**.

### Figure the Percentage of Gain/Loss

- † Click cell **D14** and input an **equals (=) sign**.
- † Click cell **I9** and input a forward slash to indicate division.
- † Click cell **F9**.
- † The **Formula =I9/F9** should appear in the cell and in the **Formula Bar** as shown in the first two illustrations below.



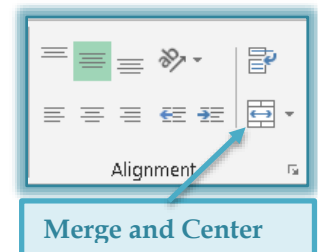
- † Click the **Enter** button on the **Formula Bar** or press the **Enter** key.
- † The value **0.878083** should appear in the cell.
- † Select **F9** again.
- † On the **Home Tab** in the **Number Group**, click the **Percent** button (see illustration above right).
- † Save the worksheet.

### DELETE ROWS

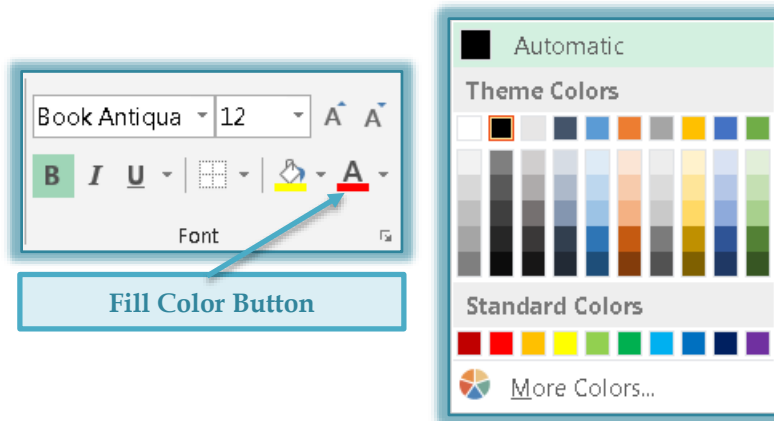
- † Select row **2** by clicking on the number **2** in the gray area.
- † Click the right mouse button.
- † Choose **Delete** from the list of options.
- † Follow the same procedure to remove the row between **Total** and **Average**.

### CHANGE THE FONT AND CENTER THE TITLE

- † Select cell **A1** and then click the **Home Tab**, if necessary.
- † Change the **Font** to **Arial Black** and the **Point Size** to **20 point**.
- † Select cells **A1** through **I1**.
- † Click the **Home Tab**, if necessary.
- † In the **Alignment Group**, click the **Merge and Center** button (see illustration at right).



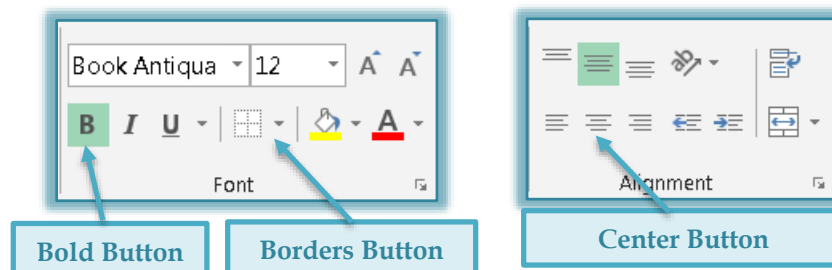
- † With cell **A1** selected, click the **Fill Color** button in the **Font Group** (see illustration below left).
- † The **Fill Color** gallery of colors will display (see illustration above right).



- † Click a color from the **Fill Color** gallery.
- † Click the **Font Color** button in the **Font Group**.
- † A gallery of different colors will display.
- † Select a color for the font from this gallery.

### Bold, Center, and Underline the Column Titles

- † Select the range **A2** through **I2**.
- † Click the **Home Tab**, if necessary.
- † In the **Font Group**, click the **Bold** button (see illustration below).
- † In the **Alignment Group**, click the **Center** button (see illustration below).

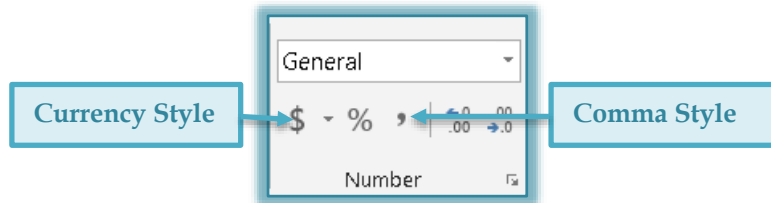


- † The column titles in **row 2** should be **bold** and **centered**.
- † Make sure the cell ranges **A2** through **I2** are still selected.
- † In the **Font Group**, click the list arrow beside the **Borders** button (see illustration above).
- † A list of different border styles will appear.
- † Click the **Thick Bottom Border** option from the list.
- † A heavy bottom border will be added to the range **A2** through **I2**.
- † Select the range **B3** through **B7**.
- † Hold down the **Ctrl** key.
- † Select the range **D3** through **D11**.
- † In the **Alignment Group**, click the **Center** button.

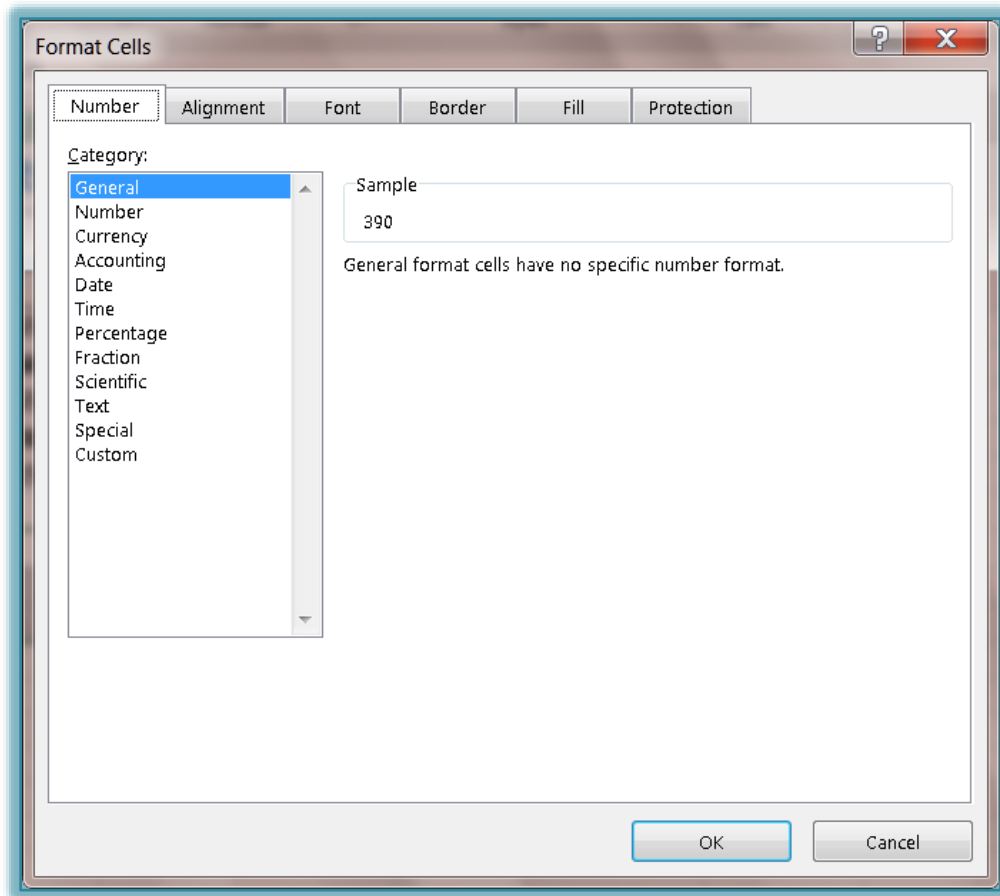
### FORMAT NUMBERS

- † Select the range **E3** through **I3**.
- † Hold down the **Control** key and select cells **E8** through **I8**.
- † Point to and then click the **Currency Style** button in the **Number Group** (see illustration on next page).





- † The cells will do one of the following:
  - ✦ The width of the cells may expand to accommodate the numbers.
  - ✦ The number may appear as pound symbols. Ignore this for right now; we will change that later
- † Select the range **E4** through **I7**.
- † Click the **Comma Style** button in the **Number Group** (see illustration above).
- † Select the range **A7** through **I7**.
- † Click the **Borders** button in the **Font Group**.
  - ✦ The Borders button remains set to the heavy bottom border assigned to row 2.
  - ✦ To assign the heavy bottom border to the range **A7** through **I7**, you simply click the **Borders** button.
- † Select the range **E9** through **I11**.
- † Right-click the selected range.
- † Click **Format Cells** from the list that appears.
- † The **Format Cells** dialog box will appear (see illustration below).



- † Click the **Number** tab in the **Format Cells** dialog box.

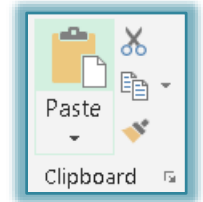


- † When this option is selected, it is possible to specify how numbers in the selected range are to be formatted.
- † Click **Currency** in the **Category** list.
- † Click **OK** to exit the dialog box and return to the worksheet.

### COPY CELL FORMATS

After formatting a cell on a worksheet, it might be necessary to apply this same formatting to other cells in the worksheet. Rather than selecting each item and formatting it, it is possible to copy the format of each cell and then paint (that is, copy) the format from one cell to the others.

- † Select cell **A12**.
- † Click the **Home Tab**, if necessary.
- † In the **Font Group**, click the **Bold** button.
- † In the **Clipboard Group**, click the **Format Painter** button (see illustration at right).
- † Drag to select the cells **A8** through **A11**.
- † When the mouse button is released, the selected cells will appear with the new formatting.



### CHANGE COLUMN WIDTH

- † Point to the boundary on the right side of the letter **B** in the column heading until the mouse turns to a double left and right black arrow with a straight up and down black line †
- † Drag until the **Screen Tip Width** displays approximately **7.14** or close to that number.
- † Release the mouse button.
- † Point to the **boundary** on the right side of the **column D** heading.
- † Drag the mouse to the **left** until the **Screen Tip Width** displays approximately **7.89**.
- † A dotted line will show the proposed right border of column **D**.
- † Release the mouse button.
- † Adjust all of the other columns so they are a little bit wider and so that all the labels and values appear properly.

### CHANGING ROW HEIGHT

- † Point to the boundary between **Row Heading 1** and **Row Heading 2**.
- † The mouse pointer should change to a double black up and down arrow with a right and left straight line (see illustration at right). †
- † Drag the mouse pointer down until the **Screen Tip Height** displays **36.00**.
- † Release the mouse button.
- † Click the **Home Tab**, if necessary.
- † In the **Alignment Group**, click the **Middle Align** button (see illustration at right).
- † Click the **Save** button on the **Quick Access Toolbar**.
- † Place a **Thick Bottom Border** below row 8.
- † Apply any other formatting that you think is appropriate to this worksheet.
- † Click the **Save** button on the **Quick Access Toolbar**.

