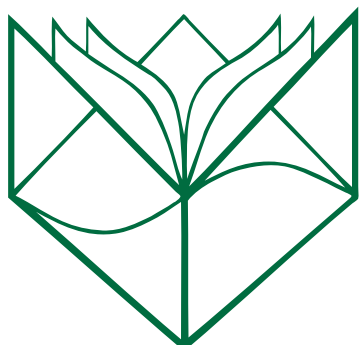


MICROSOFT EXCEL 2.0 AT THE DEERFIELD PUBLIC LIBRARY



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CLASS OUTLINE:

- 1) Sheets
- 2) Inserting Functions
- 3) Autofill and Copy Handle
- 4) Goal Seek
- 5) Tables
- 6) Charts and Graphs
- 7) Sparklines

EXPECTED OUTCOMES:

- 1) Familiarity with the functions of Excel
- 2) Ability to customize and save your work

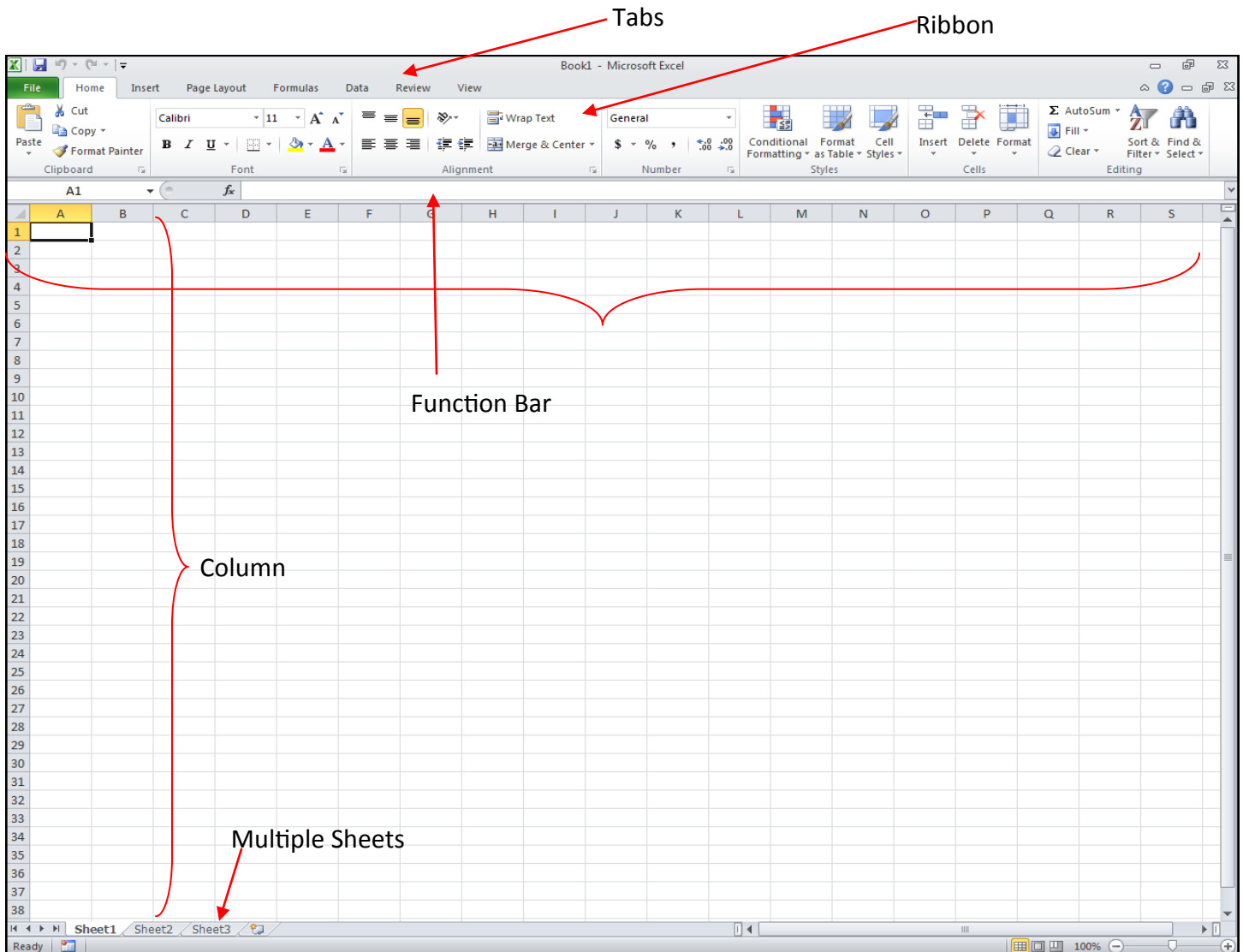
WHAT IS MICROSOFT EXCEL?



Microsoft Excel is a spreadsheet is the computer equivalent of a paper ledger sheet. It consists of a grid made from columns and rows. It is an environment that can make number manipulation easy and somewhat painless.

It is part of the Microsoft Office Suite.

UNDERSTANDING WHAT YOU SEE ON THE HOME TAB



Ribbon and Tabs: The Ribbon/Tab presentation style is pretty standard across all of your Microsoft Office Suite programs. Microsoft Word has tried to streamline the appearance of its options by hiding away extra menus. This is called backstaging and occurs inside each Tab. There are a few popular buttons up front on the Ribbon to help with certain tasks, but there are many more options behind the scenes. You can get to the extra options by clicking the grey arrows in the lower right hand corner of each grouping.

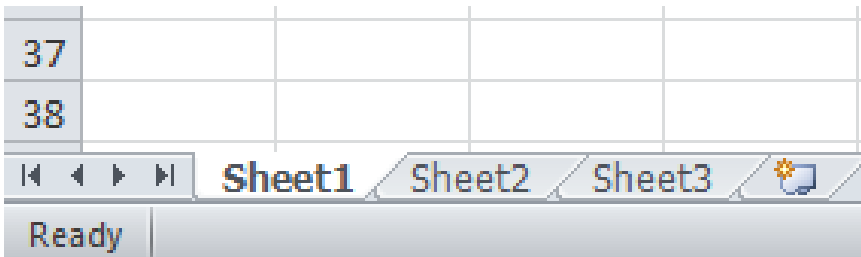
Multiple Sheets: Spreadsheets can use multiple sheets, and you can move from one sheet to another. There are even functions that are built into Excel (under the Formulas tab) that will make your sheets automatically coordinate.

Row vs. Column: Rows are the lines that move HORIZONTALLY across the paper and have a number at the beginning. COLUMNS are the divisions that run VERTICALLY across the paper and have a letter at the top. When you are identifying a cell, it will be done with the Letter:Number (Column:Row).

Function Bar: The long bar across the top is a place for you to see how your text will appear as you are entering it. The text can also be entered directly into the cell, but it is a bit easier to edit the text in the larger line. The box to the left of this viewer is called the Identifier box and gives you “the cell’s address.”

WORKING WITH MULTIPLE SHEETS

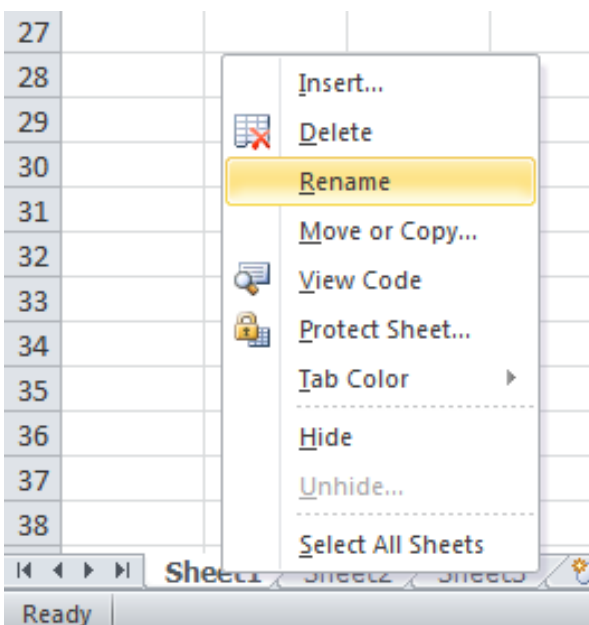
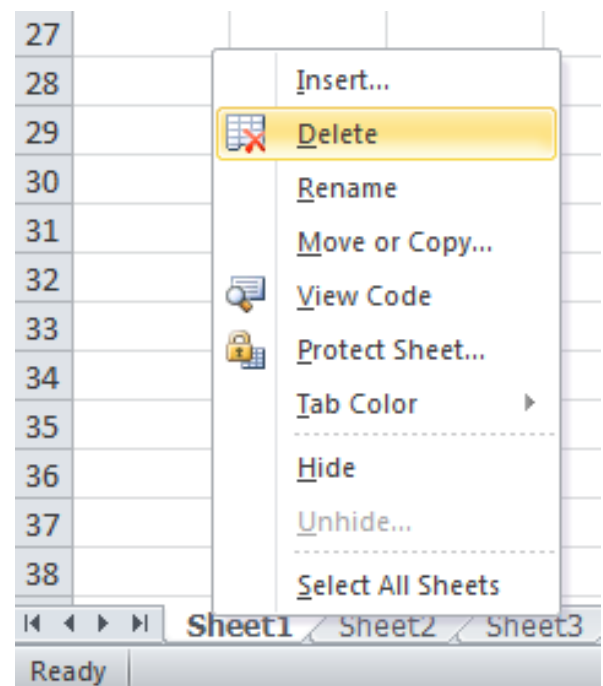
One of the bonuses of using Excel as opposed to a paper ledger is the ability to have multiple worksheets in one Excel workbook. Each workbook starts with three sheets, which can be seen at the bottom left corner of the screen.



In order to add a new sheet, simply click on the button with the star and worksheet symbol (at the right) and a new sheet will be added!

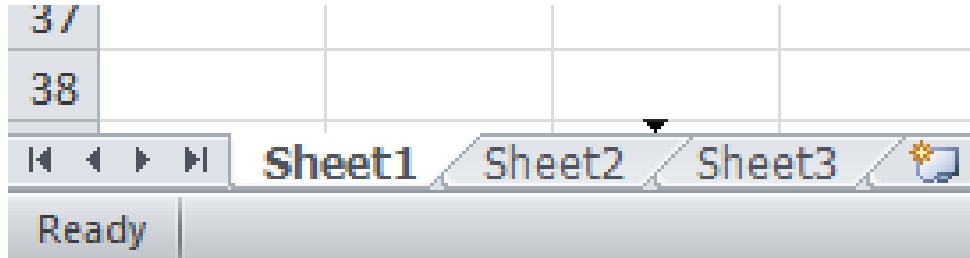
To delete a sheet, simply **right click** on the sheet and select **Delete** from the menu options that appear.

Keep in Mind: If you delete a sheet, you will also be deleting all of the information contained within that sheet!



You're also not stuck with the sheet names Excel automatically gives! In order to rename a sheet, simply **right click** on the sheet and select **Rename** from the menu options that appear.

You can move sheets around by **left clicking** on the sheet and, while holding the click down, dragging the mouse to the right or left. The sheet will end up wherever the black arrow is located. In this example, Sheet1 would be moved in between Sheet2 and Sheet3.



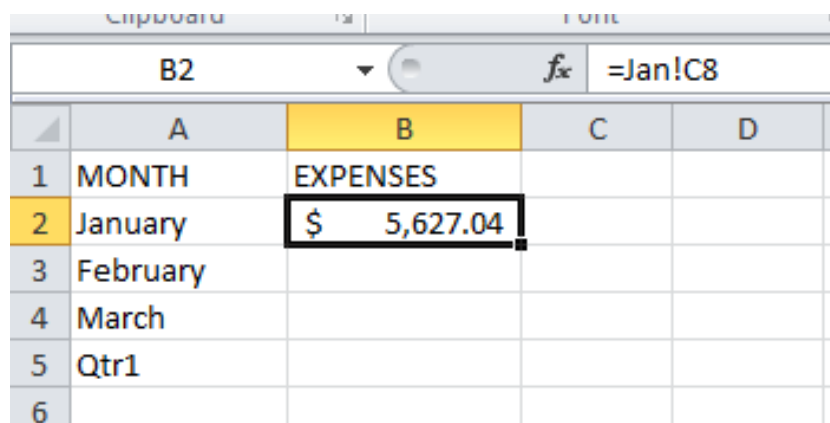
You can also use the information from one worksheet on another worksheet in the workbook. To do so:

- 1) Click on the **empty cell** where you would like to put data.
- 2) Type = (the equals sign) into the cell.
- 3) Click over to the worksheet from which you wish to get your data.
- 4) Click on the cell on that worksheet with the data in it.
- 5) Hit **Enter**.

When you look at the worksheet that has the formula on it, you will see that the formula looks like this:

=[Sheet Name]![Cell]

For example, if I want to keep track of expenditures for each month on a separate sheet, but be able to quickly get an idea of how much I've spent on one worksheet, it would look something like this:



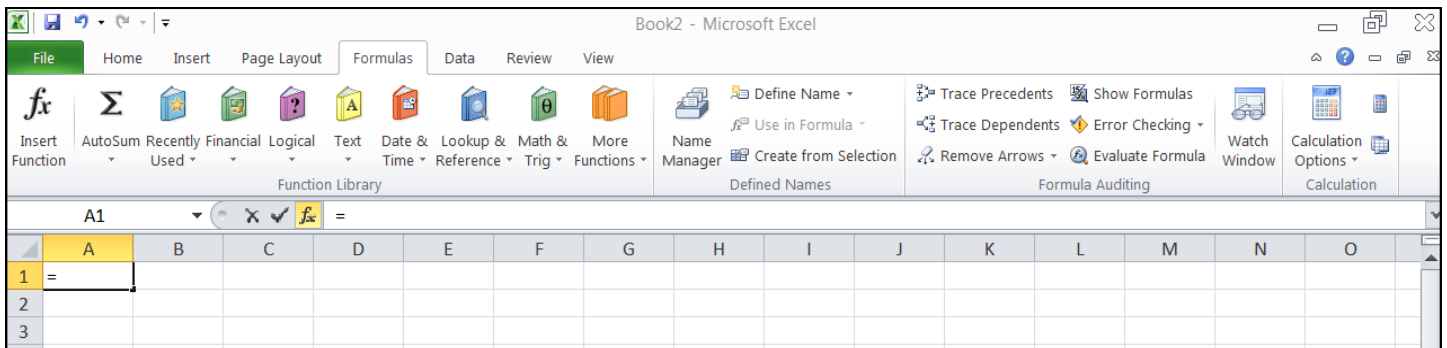
	A	B	C	D
1	MONTH	EXPENSES		
2	January	\$ 5,627.04		
3	February			
4	March			
5	Qtr1			
6				

Note that in the actual cell the sum of how much I've spent in January appears (\$ 5,627.04) but if you look in the **formula bar** above the actual information is coming from cell C8 on the Jan worksheet.

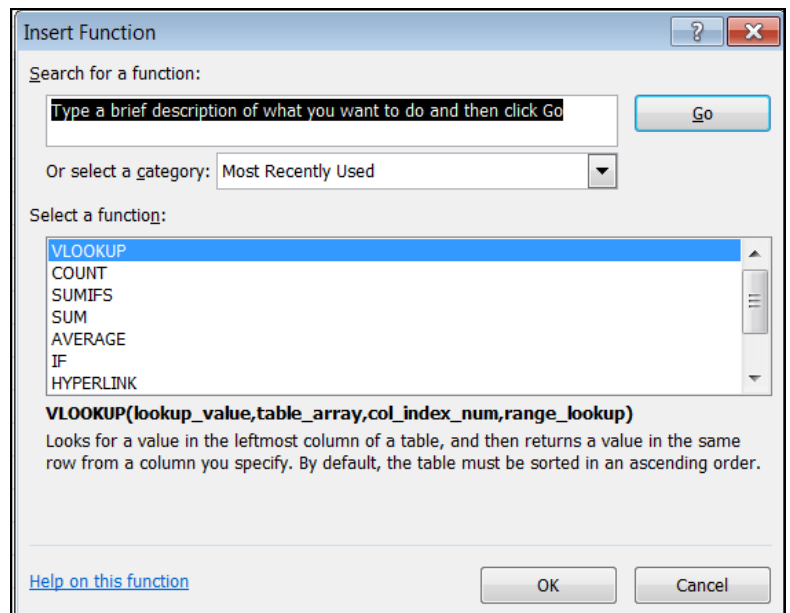
This saves you time because if you change the information on the January spreadsheet, it will automatically update here on the year total worksheet too!

INSERTING A FUNCTION

There are many functions that come built in with your Excel program. You can access them in one of two ways:



You can utilize the Formula Tab and then select the functions that you are trying to put into your worksheet. Notice that on the tab, there is an option to use a recent formula!



You can also manually enter formulas into your worksheet. This can be done directly into a cell or by using the Function Bar across the top.

- Always remember to type in the equal sign first.
- Type the mathematical term for your answer: SUM, PRODUCT, QUOTIENT, AVERAGE, etc.
- Use Parentheses (Open it AND Close it!)
- Use a colon between the cells that you are trying to combine)
- An equation can be between an entire range of information or between just two pieces of information.
- The only thing that will appear in the cell on the workbook is the answer. However, in the function bar, you will see the entire equation.
- Remember that using the COLON is an inclusive term. Using a COMMA is exclusive.

AUTOFILL AND CUSTOM LISTS

Autofill lets you quickly add information to your worksheets.

1. Select the cell or cells containing the content you want to use. You can fill cell content either vertically or horizontally.
2. Position your mouse over the fill handle so that the white cross becomes a black cross.
3. Click and drag the fill handle until all the cells you want are highlighted.
4. Release the mouse and your cells will be filled.
(This is a great tool when you're doing a multi-add!)

	A	B	C
1	Office Christmas Party		
2			
3	Employee	Attending	Not Attending
4			
5	Peraza, Brian	X	
6	Swensen, Liz		X
7	Harris, Jane		X
8	Lewty, Alice	X	
9	Olvera, Emily K.		
10	Wodal, Matthew		
11	McMillan, J.E.		
12	Dees, Robert		
13	Wimblet, Grace		
14	Salter, Joe Ann		

	A	B	C
1	Office Christmas Party		
2			
3	Employee	Attending	Not Attending
4			
5	Peraza, Brian	X	
6	Swensen, Liz		X
7	Harris, Jane		X
8	Lewty, Alice	X	
9	Olvera, Emily K.	X	
10	Wodal, Matthew	X	
11	McMillan, J.E.	X	
12	Dees, Robert		
13	Wimblet, Grace		
14	Salter, Joe Ann		

If you have repeating information, it will continue it on (like the X markings). If the information is a part of a **series** (numbers, days of the week, months, years, etc.) Autofill can automatically continue those series too!

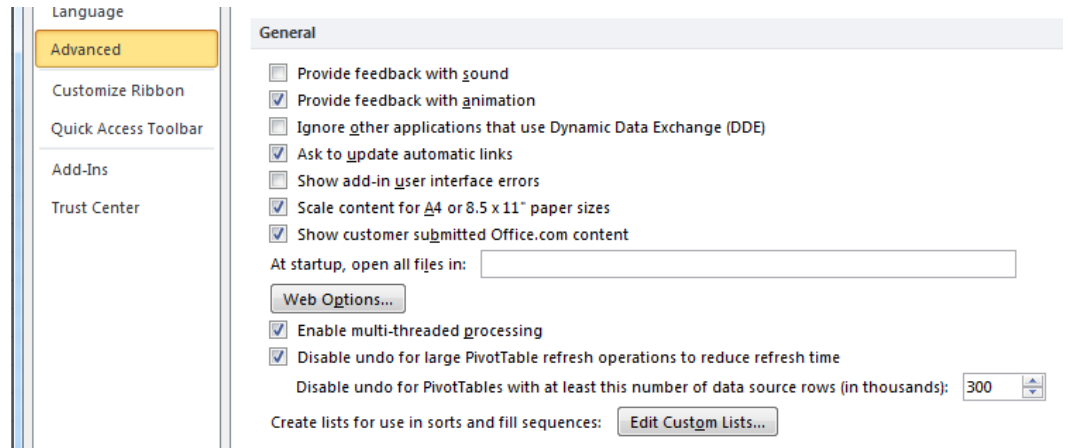
	A	B
1	MONTH	EXPENSES
2	January	\$ 5,627.04
3		



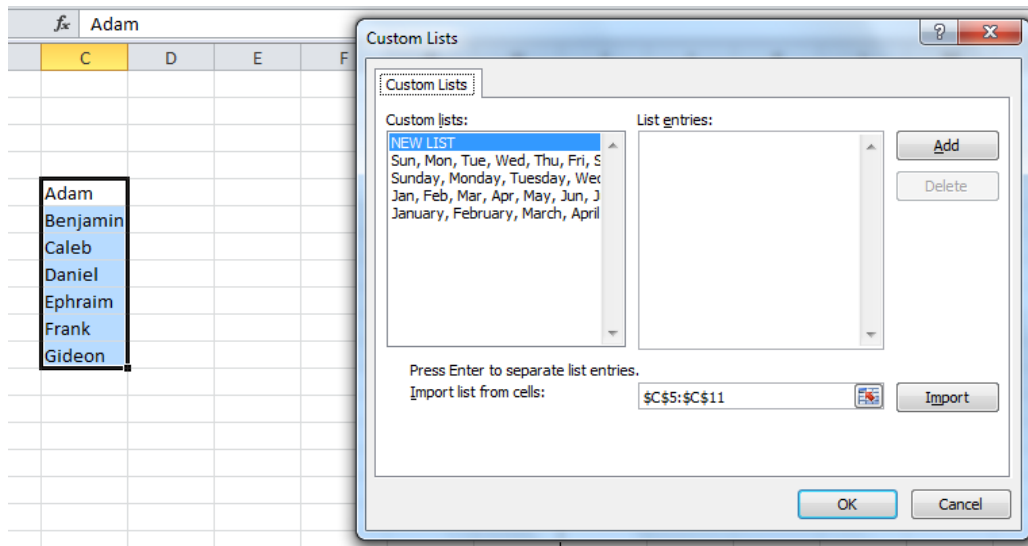
	A	B
1	MONTH	EXPENSES
2	January	\$ 5,627.04
3	February	
4	March	
5	April	
6	May	
7	June	
8		

If you find you have a list that you often use, you can even add it to Excel's memory as a **Custom List**. To do so:

1. Write the list out once.
2. Click on the **File** tab.
3. Click on **Options**
4. Select **Advanced**
5. Scroll down to **General**
6. Click on **Edit Custom Lists**
7. Select **Import**



Now you should be able to type any one of the items on your list and be able to use Autofill to fill out the rest!



GOAL SEEK FUNCTIONS IN YOUR WORKBOOK

Whenever you create a formula or function in Excel, you put various parts together to calculate the result. Goal Seek works in the opposite way: It lets you start with the desired result, and it calculates the input value that will give you that result.

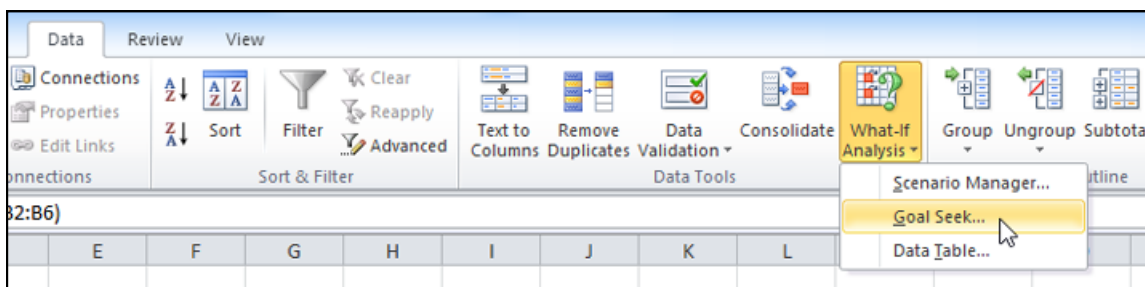
Here, we will use Goal Seek to figure out what grade we need in order to pass the class with a 70%.. Start out by entering the formula to find the Average in cell B7. The Goal Seek formula will tell us what we need to get on Test 3.

	A	B	C	D
1	Assignment	Grade		
2	Test 1	58		
3	Paper 1	70		
4	Test 2	72		
5	Paper 2	60		
6	Test 3			
7	Final	=AVERAGE(B2:B6)		
8				

Select the cell whose value you wish to change. Whenever you use Goal Seek, you'll need to select a cell that already contains a formula or function. In our example, we'll select cell B7 because it contains the formula =AVERAGE(B2:B6).

	A	B	C	D
1	Assignment	Grade		
2	Test 1	58		
3	Paper 1	70		
4	Test 2	72		
5	Paper 2	60		
6	Test 3			
7	Final Grade	65		
8				

From the Data tab, click the What-If Analysis command and select Goal Seek from the drop-down menu.

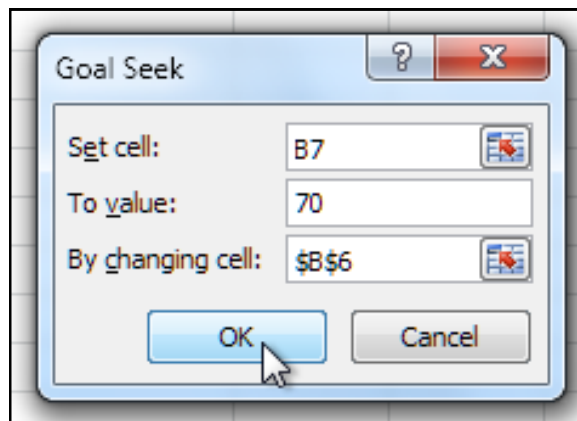


A dialog box will appear with three fields:

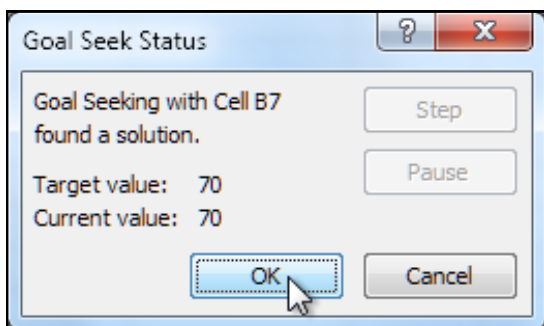
Set cell: The cell that will contain the desired result. In our example, cell B7 is already selected.

To value: The desired result. In our example, we'll enter 70 because we need to earn at least that to pass the class.

By changing cell: The cell where Goal Seek will place its answer. In our example, we'll select cell B6, because we want to determine the grade we need to earn on the final assignment.



The dialog box will tell you if Goal Seek was able to find a solution. Click OK.



The result will appear in the specified cell. In our example, Goal Seek calculated that we will need to score at least a 90 on the final assignment to earn a passing grade.

	A	B	C	D	E
1	Assignment	Grade			
2	Test 1	58			
3	Paper 1	70			
4	Test 2	72			
5	Paper 2	60			
6	Test 3	90			
7	Final Grade	70			
8					

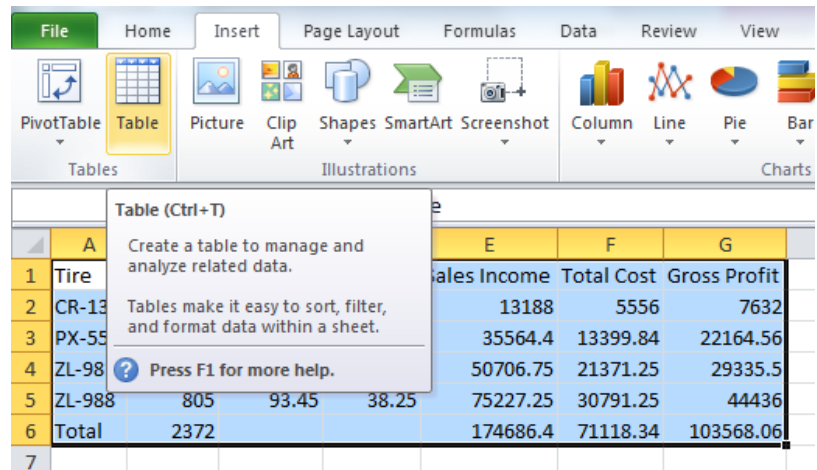
Value
determined by
Goal Seek

TURNING YOUR DATA INTO A TABLE

Turning your data into a table can make it easier to read and allows you to filter the information when you're looking for specific things.

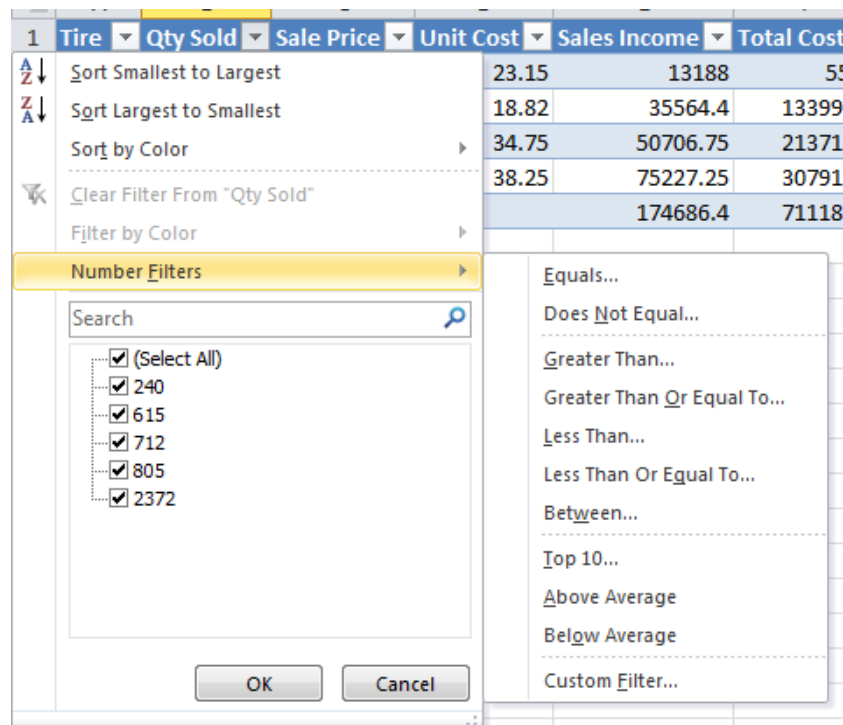
1. **Select** all of the data you wish to put into a table.
2. On the **Insert** tab, selected **Table**
3. From there, you can customize your table using the **Design** tab.

***** NOTE: THE TABLE DESIGN TAB ONLY APPEARS WHEN YOU HAVE CLICKED WITHIN THE TABLE. *****



You can filter the information on your table by clicking on any of the down arrows next to the appropriate column and selecting what you are going to do.

In addition to selecting certain values, filtering lets you choose something (for example, numbers greater than or equal to 700) and filter down the information on your table to reflect only that!



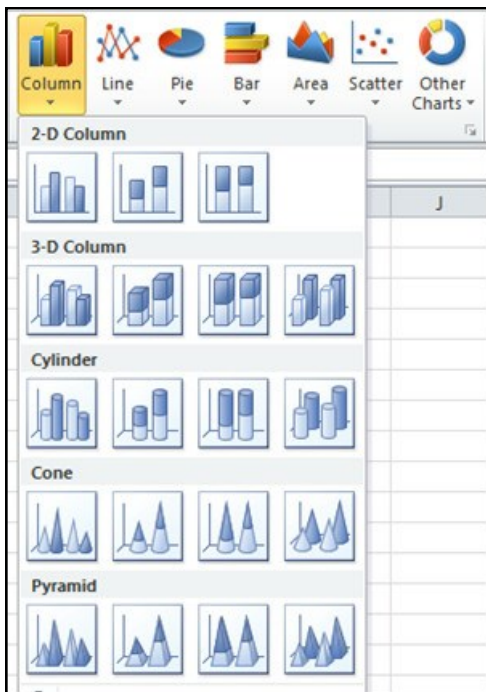
1	Tire	Qty Sold	Sale Price	Unit Cost	Sales Income	Total Cost	Gross Profit
3	PX-557	712	49.95	18.82	35564.4	13399.84	22164.56
5	ZL-988	805	93.45	38.25	75227.25	30791.25	44436
6	Total	2372			174686.4	71118.34	103568.06

USING CHARTS AND GRAPHS:

- First of all make sure that there is some data in your excel sheet and that your excel sheet does not contain any blank cells between the different columns, then click the Insert menu and choose the chart type that you wish to draw.
- Visit the Insert Tab. There, you can make one of any chart that will best represent your data.

The screenshot shows the Microsoft Excel ribbon with the 'Insert' tab selected. The 'Column' chart icon is highlighted in the 'Illustrations' group. Below the ribbon, a data table is visible with columns A, B, and C containing numerical values.

	A	B	C	D
1	5	10	54	
2	4	15	74	
3	6	48	8	
4	7	95	9	
5	8	85	12	
6	9	47	120	
7				
8				
9				
10				



- Once the chart is drawn, it becomes very easy to change the attributes, right-click the chart and you will see the options for changing chart types, data, and other formatting.

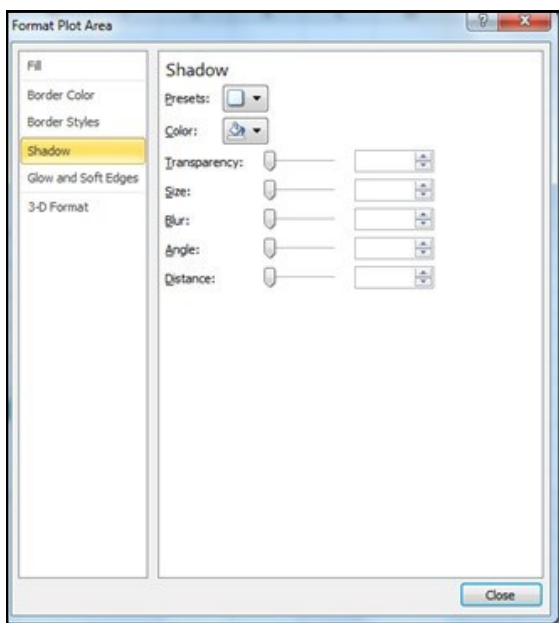
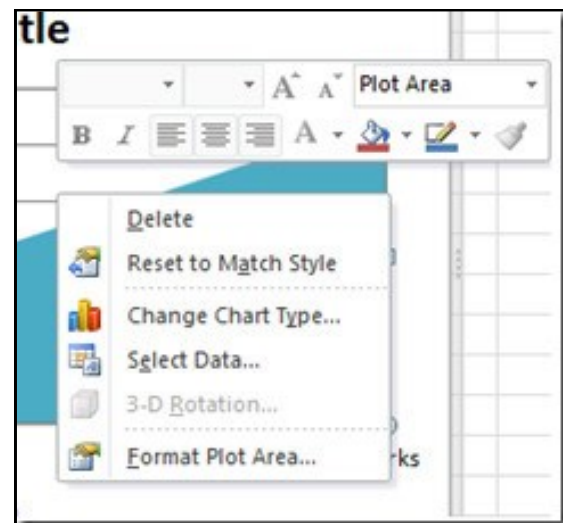
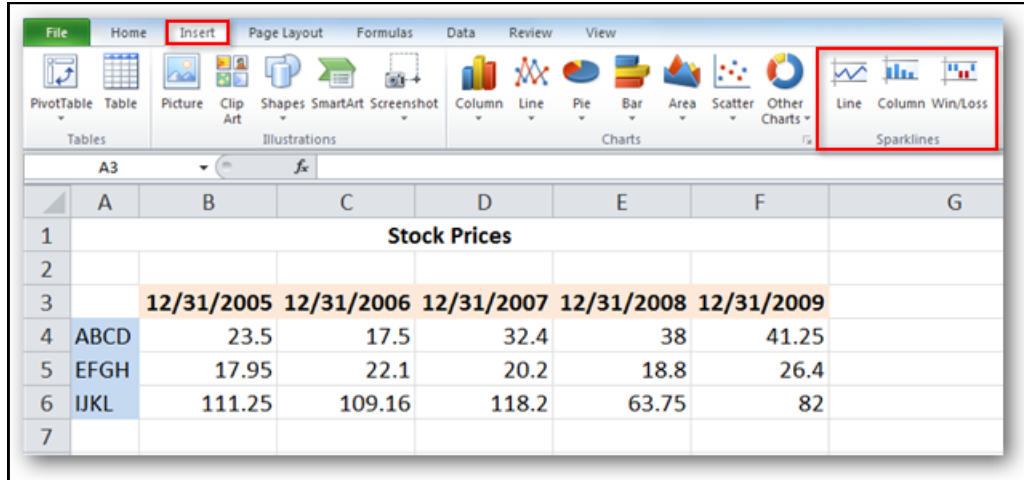


CHART PLOT AREA: The area that is covered by a specific chart is called the chart plot area. By default Excel draws charts according to the default configuration, but its very easy to edit the plot area, simply right-click the chart and choose the *Format Plot Area* option. Now you will see a dialogue box which lets you set the chart's fill style, borders, Glow and soft Edges, and 3-D effects.

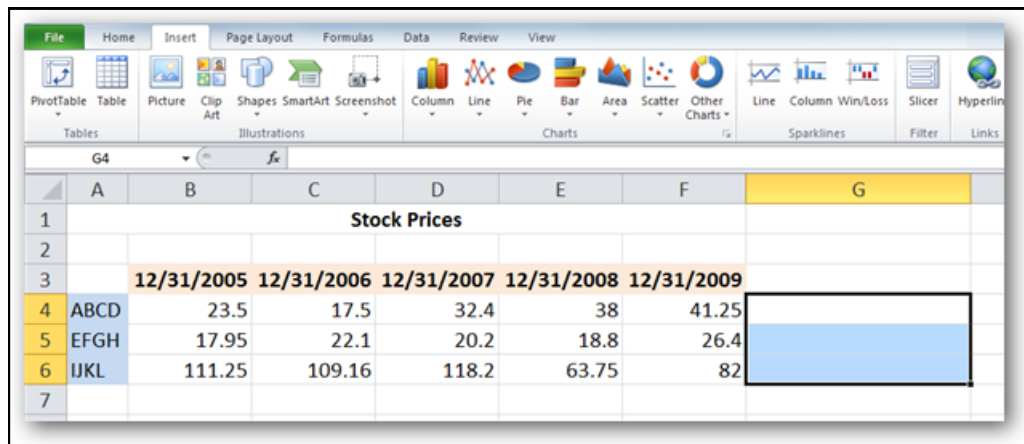
CREATING SPARKLINES

A Sparkline is a little chart displayed in a cell representing your selected data set that allows you to quickly and easily spot trends at a glance.

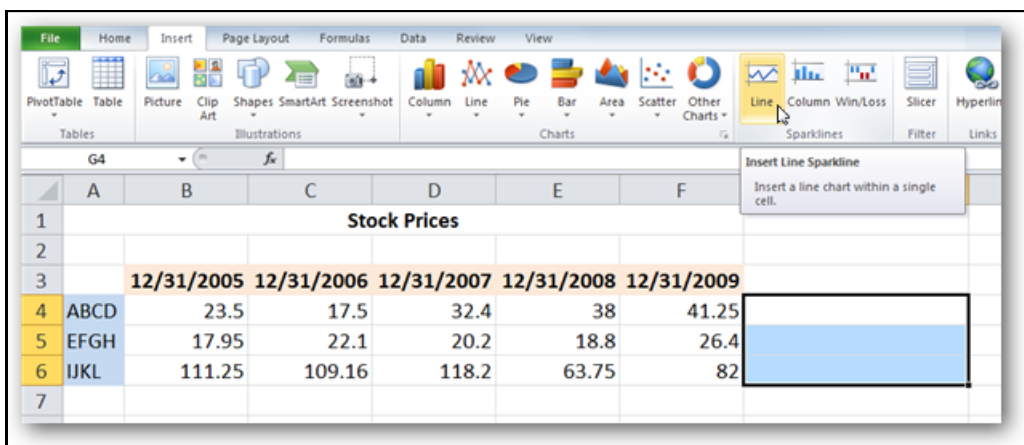
You will find the Sparklines group located on the Insert tab.



Select the cell or cells where you wish to display your Sparklines.

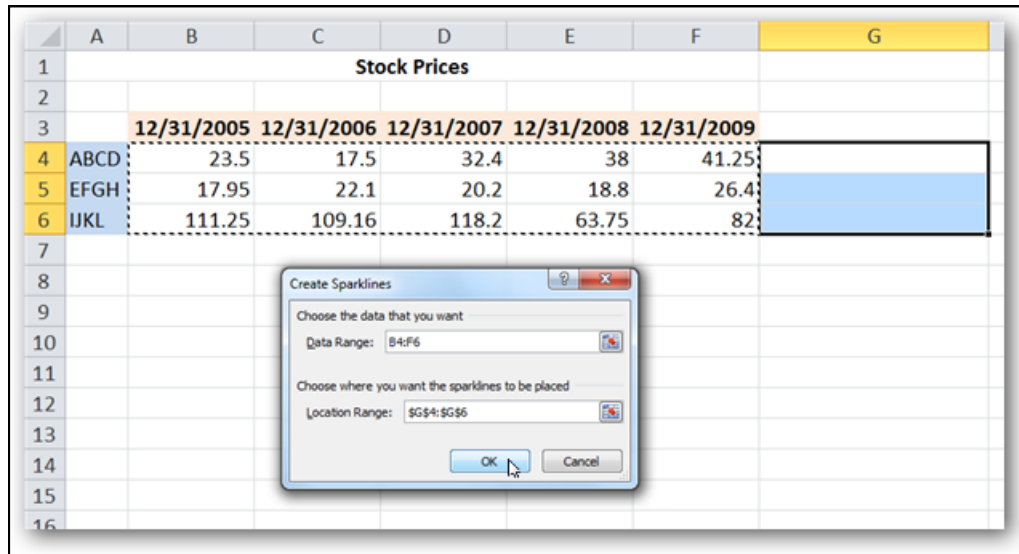


Select the type of Sparkline you'd like to add to your spreadsheet. You'll notice there are three types of Sparklines, Line, Column, and Win/Loss. We'll select Line for our example.

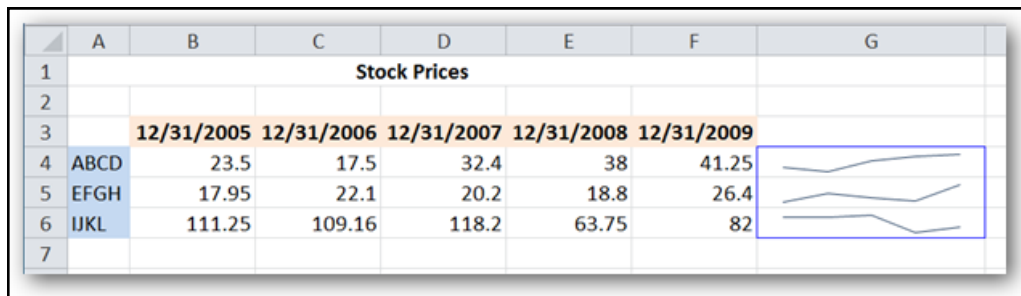


Create Sparklines pops up and will prompt you to enter a Data Range you are using to create the Sparklines. You'll notice that the location range (the range where the Sparklines will appear) is already filled in.

You can type in the data range manually, or click and drag with your mouse across to select the data range. This will auto-fill the data range for you. Click OK when you are finished.



You will see your Sparklines appear in the desired cells.



Customizing Sparklines

Select the one of more of the Sparklines to reveal the Design tab. You can display certain value points like high and low points, negative points, and first and last points by selecting the corresponding options from the Show group. You can also mark all value points by selecting Markers.

