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Excel Basic: Create Formulas

Overview: Let Excel do your math for you! After an introduction to some basic functions, you'll use a spreadsheet format to create a very simple budget.

Student Skill Level: Basic

Requirements: Good mouse skills (ability to move the mouse on the computer screen and click or double click as required with minimal assistance).

Length: 3 hours (with a 10 minute break)

Objectives

- The student will be able to understand the basics of using Microsoft Excel:
 - Understand the function of the File Tab
 - Use Ribbon, Tabs, and Groups to select commands
 - Select single cells and groups of cells in order to format them properly
 - Change Column Width
- The student will use these skills to set up a mock budget:
 - Decide how the spreadsheet will appear
 - Enter information using:
 - The keyboard
 - AutoFill
 - Create and edit formulas using the formula bar

This is the Example Budget we will create in this class.

	A	B	C	D
1		January	February	March
2	Job 1	913.96	900.26	961.47
3	Job 2	1,996.02	560.28	426.91
4				
5	Total Income	2,909.98	1,460.54	1,388.38
6				
7	Rent	900.00	900.00	1,250.00
8	Telephone	125.00	135.00	450.32
9	Electric	560.23	400.85	235.85
10	Groceries	280.69	263.52	460.87
11				
12	Total Expenses	1,865.92	1,699.37	2,397.04
13				
14	Difference	1,044.06	(238.83)	(1,008.66)
15				

Open Excel

There are **two** ways to open Excel:

Double click on the icon on the desktop

OR

Click once on the icon and then press the **enter** key on the keyboard

The icon will turn **blue** and then a small hourglass will appear as the program opens.



The File Tab on the Ribbon

Pictured here is part of the **File Tab** in Excel 2010. Clicking on this tab gives you access to some of the most powerful commands in Excel.

Save and Save As – to keep a copy of the workbook in the location of your choosing (hard drive, flash drive, etc)

Open – to find and re-open a previously saved workbook for editing

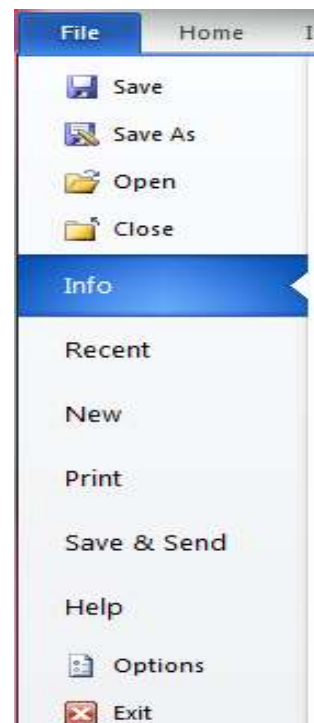
Close – shut down the current workbook

Info – information regarding the workbook including any possible compatibility issues (older to newer versions)

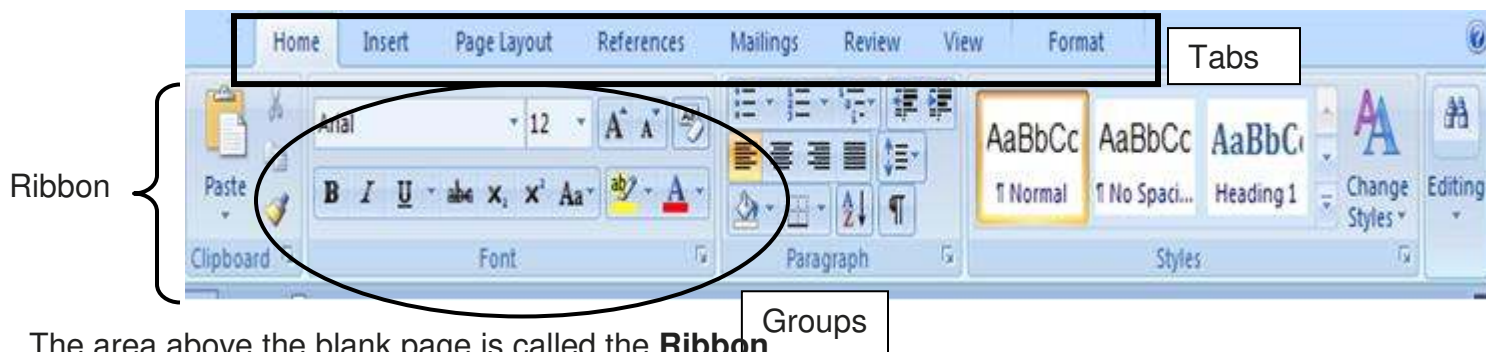
Recent – quickly re-open workbooks you have viewed or edited lately

New – create a brand-new workbook (allows you to choose a template if you want)

Print – get your workbook off the computer screen and on to paper!



The Ribbon, Tabs, and Groups



The area above the blank page is called the **Ribbon**.

To use commands and options available to you in Excel, simply click the **button** on the correct **Tab**: Home, Insert, Page Layout, References, Mailings, Review, View, or Format.

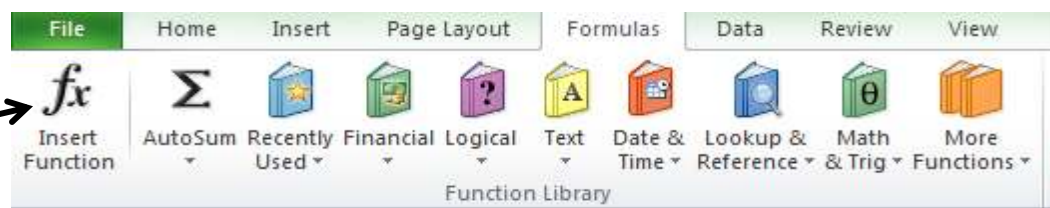
Buttons are arranged in **Groups**. In general, the most used commands are in the **Home** Tab. For example, it contains the **Clipboard** and **Basic Text Groups**.

Cut, Copy, Paste, Bold, Italicize, Underline, Center, Font Type: They're all included in these two groups.

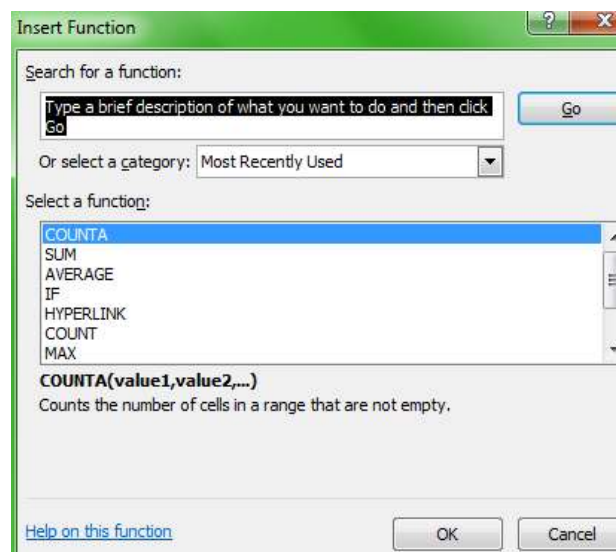
Special Note on the Ribbon: The Formulas Tab

Many people ask, “How do I find out what formulas to use in Excel?” There are really three ways to do this: use the Formulas Tab, the Help menu, or Google. A word on each:

Here’s **part** of the Formulas Tab. Click the **Insert Function** button



This is one way to find the name of a formula in Excel. All math functions are done by **name**.



The **Help** menu may also be used to search for formula names. Type your question in and, hopefully, it will display an answer.



Last, but not least, you may type your Excel question into the Google search engine. Be sure to be very specific with your question and Excel version, because Google will search the entire Web to find any answer pertaining to almost anything in your question. This can mean a lot of irrelevant answers!

The cursor, cells, and the formula bar

Cells are boxes in which the rows and the columns intersect. It (a cell) is bound on four sides like any other block. All types of information are kept in a cell – including numbers and text.

Cells are delineated by a letter (across top of worksheet) and a number (down the side). For example, cell G3 is selected on this sheet:

	A	B	C	D	E	F	G	H
1								
2								
3								

Cursor “marks the position where text or data can be entered, modified, or deleted” (HP). In Excel, the cursor is in **both** the **cell** and the **formula bar**. What is shown in the cell is not always what is in the formula bar – as we will see as we practice.

Formula bar is the place where formulas are entered; formulas are “use[d] to add, subtract, multiply or divide the values in a spreadsheet” (Author Unknown). It’s located directly **below** the **Ribbon** with an “fx” at the start:



This is important because the formula bar is where you will make corrections to virtually anything in the cells.

Click once in the proper **cell** then click once in the **formula** bar. You will see the **cursor** in the bar, and then you are ready to make corrections (with the **Backspace** or **Delete** keys)

Select Cells

Before performing any task in Excel, you must select the cells you want to work with. Selected cells appear highlighted on your screen.

To select one cell:

Click the cell you want to select

The cell becomes the active cell and displays a thick border

Use **Scroll Bars** to move up and down or across the worksheet

TAB brings you across rows to the right

Enter moves you down the column

Shift/TAB brings you across columns to the left

Arrow keys bring you up, down, left, or right across cells

Page Down brings you to the next page of worksheet

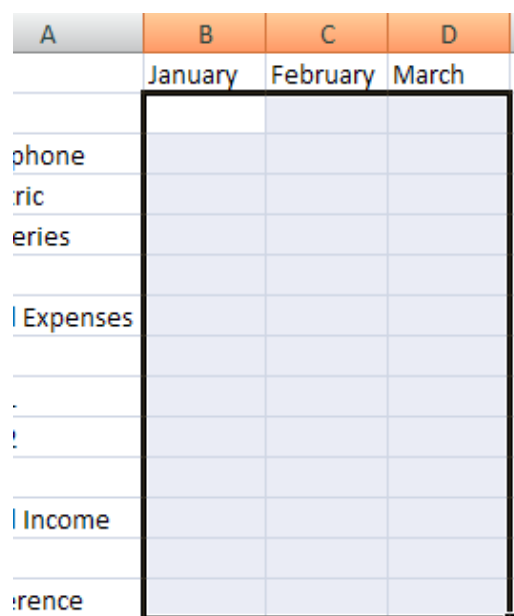
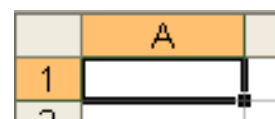
Page Up brings you to previous page of worksheet

CTRL/Home brings you to cell A1 at the beginning of worksheet

Selecting a Group of Cells:

Position the mouse over the **first** cell you want to select

Click and hold the mouse button and drag the mouse to highlight all the cells you want to select (a thick black line will surround the selected cells with the first cell in **white**, the rest **blue**)



AutoFill

AutoFill is used on **patterns** of numbers or text in cells.

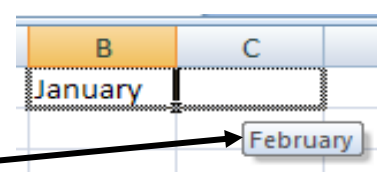
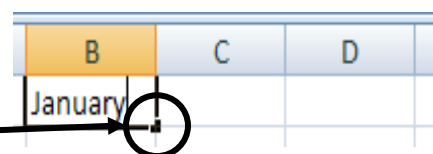
Enter the start of a sequence (**January**)

Position the mouse cursor over the **bottom right corner** of the cell (mouse turns into a plus sign (+))

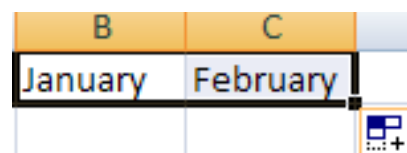
Click and hold the mouse button and drag the mouse cursor (+) over the cells you want to receive your data

The cells will be outlined in gray and the results appear in small type

Let the mouse button up and the cells will automatically fill with your data



Note: **AutoFill** will also fill in a number or text sequence you create, or **known sequences** (for example, days of the week or months of the year)



.....Practice.....

Click cell A2. Type **Job 1**

Now use the **Enter** key to continue typing the income labels

Please type in **four types** of expenses (we're only using four different expenses in this class)

Click cell B1. Type "January." Use **AutoFill** to complete the sequence of months in Row 1, if you haven't already.

	A	B	
1		January	Febr
2	Job 1		
3	Job 2		
4			
5	Total Income		
6			
7	Rent		
8	Telephone		
9	Electric		
10	Groceries		
11			
12	Total Expenses		
13			
14	Difference		

Change Column Width

Total Expenses now hangs over our **January** column. Correct this by changing the column width (first, make sure you're in an empty cell):

Position the mouse indicator over the right edge of the column heading. (The **column heading** is between the letters at the top of the column.) You will know you're in the right place when the cursor appears as such:



Click and hold the mouse button, dragging the column edge until the dotted line displays the column width you want.

OR

Position the mouse indicator over the right edge of the column heading and double click.

	A	B	
1		January	Febr
2	Job 1		
3	Job 2		
4			
5	Total Income		
6			
7	Rent		
8	Telephone		
9	Electric		
10	Groceries		
11			
12	Total Expenses		
13			
14	Difference		
15			

Format Cells (for numeric values)

REMEMBER to select the cells you wish to format FIRST. Since we're entering data into cells B2 to D14, we will use the mouse. Your spreadsheet should look like this:

	A	B	C	D
		January	February	March
Job 1				
Job 2				
Total Income				
Rent				
Telephone				
Electric				
Groceries				
Total Expenses				
Difference				

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