

Moving you from Meek to Geek in a Nanosecond (or two)©!

Excelling @ Excel: Level 1 – The FUNDamentals



Prepared especially for You!

Presented and Written by:

Greg Creech

Techedutainment Services Inc.

Technology ★ Education ★ Entertainment

Hey! It's Chic 2B Geek® Series!

Excel for Excellent Business Management



An Excellent Table of Contents

<i>An Excellent Table of Contents</i>	2
<i>Oops! and Legal Stuff</i>	5
<i>Introducing Greg Creech</i>	6
<i>Welcome to Excelling at Excel</i>	7
<i>Welcome! To Excel</i>	8
Worksheet Window	9
My Favorite Excel Shortcuts	15
Important Tips to make your Excel Experience Easier	16
Resizing columns and rows.....	16
Rename a Worksheet	16
✍A Hot Tip! Status Bar and Calculations.....	17
Go To and Scrolling Bars.....	18
<i>Customizing Excel for Productivity</i>	20
Quick Access Toolbar Options and Customization	20
Tabs and The Ribbon Shortcuts.....	28
Keyboard Shortcuts and Key Tips.....	31
<i>File Management</i>	35
Open and Recent Files.....	36
<i>The Five F's of Excel</i>	38
F1: Formatting for Appearances Sake	39
Formatting Groups	41
The Merge and Center	41
Font Group	43
Format Cells Dialogue Box: Font.....	43
Alignment Dialogue Box and Group.....	44
Number: Format Cells Dialogue Box and Group	45
Important Tips to make your Formatting Experience Easier	47
Themes	47
Format Painter.....	48
Cells Group	49
Undo.....	50
Insert and Hiding Columns and Rows.....	50
Comments	51
F2: Filler' up with the AutoFill Handle!	55
Fill with Months and Weekdays.....	55
Months	56
Days.....	56

Filling in a series of Numbers	57
Consecutive Numbers.....	57
Multiples of a Number	57
Text with a Number.....	58
Filling in Dates.....	58
Consecutive Dates	58
Bi-Weekly or other Weekly Dates	58
Monthly Dates	59
Relative Dates	59
Flash Fill.....	61
F3: Forming our Formulas	63
Mathematical Operators	63
Symbols in Formulas and Functions	64
Cell Referencing and Addressing.....	65
Relative Address	65
Absolute Address	65
Mixed Address	65
3-D References	65
F4: Putting the Fun into “Fun”ctions	68
AutoSum	68
Other Functions	71
F5: Filters and Sorts.....	74
Excel Database	74
Filter through A List	75
Multiple Filters.....	80
Top 10	81
Custom Filters	83
Number Custom Filters	83
Text Custom Filter	84
Date Custom Filters.....	85
Yes/No Filter	86
Sorting	87
Sorting Command Buttons: A Single Sort	88
Custom Sort: Sorting by Multiple Items	90
Quick Analysis.....	93
Worksheet Organization	94
Worksheet Efficiencies and Navigation.....	94
Worksheet Tabs and Shortcuts	94
Isn’t that Special? The Copy Cat, Clear, Paste Preview and Paste Special	101
Home Tab Command Buttons.....	102
Keyboard Shortcut	102
Right Click or Shortcut Menu.....	102
Click and Drag.....	103
(Best for small amounts of data that will not be moved or copied to another worksheet or distant locations)	103



Paste Preview and Paste Special.....	104
<i>It's A Setup! Views, Page Layout and Printing.....</i>	<i>107</i>
Freeze those panes Or I have a Splitting Pane.....	107
Whose Zoomin' who? And other view options	110
Switching and Arranging	110
Zooms	111
New Window and Hide	111
Print Preview and Print	112
Page Layout and Page Setup	115
Page Layout Tab	115
Margins	117
Header/Footer.....	118
Sheet Options and Print Areas	122
Gimme a Break - Page Breaks.....	125
Print Preview and Printing	127
<i>An Excellent Excel Index</i>	<i>128</i>

Oops! and Legal Stuff

While I have made every effort to ensure the accuracy of this document, including grammar and instructions, I make mistakes. (*Surprise!*) If you find an error or want to provide constructive feedback, please contact me. Thank you! *Enjoy Excelling at Excel and this document.*

Greg Creech

Techedutainment Services, Inc.

P. O. Box 1431

Pine Lake, GA 30072

www.gregcreech.com

- ✓ *International Association of Administrative Professionals Member/Partner*
- ✓ *Association of Talent Development*
- ✓ *Society for Human Resource Management*
- ✓ *Microsoft Certified Application Specialist – Instructor*
- ✓ *Certified Technical Trainer + - CompTIA*
- ✓ *A+ Certified through CompTIA*
- ✓ *Microsoft Certified Technical Trainer*

Excel ® is a most excellent product from *Microsoft* ® Corporation and is part of the *Office* ® Suite of products and services.

Copyright © 2017 Greg Creech, Techedutainment Services, Inc. All rights reserved. This publication, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, storage in an information retrieval system, or otherwise, without express written permission of Greg Creech, P. O. Box 1431, Pine Lake, GA 30072-1431, www.gregcreech.com.



Introducing Greg Creech

Shop Talk from The Atlanta Journal-Constitution

Sunday, Oct. 29, 2000 R3 - JOBS

Why I Love my Job – Greg Creech

What I Do: I teach technology courses and make presentations to beginner and expert computer users and professionals. I use humor and the piano. I train all levels from first-time computer users to systems technicians acquiring A+ certification. As an A+ certified trainer, MOUS expert, and technical trainer, my certifications and knowledge give me a career in the technology. My humor, the piano, and people keep me in the technology training field. I sing to my students sometimes and perform stand-up comedy about computers.

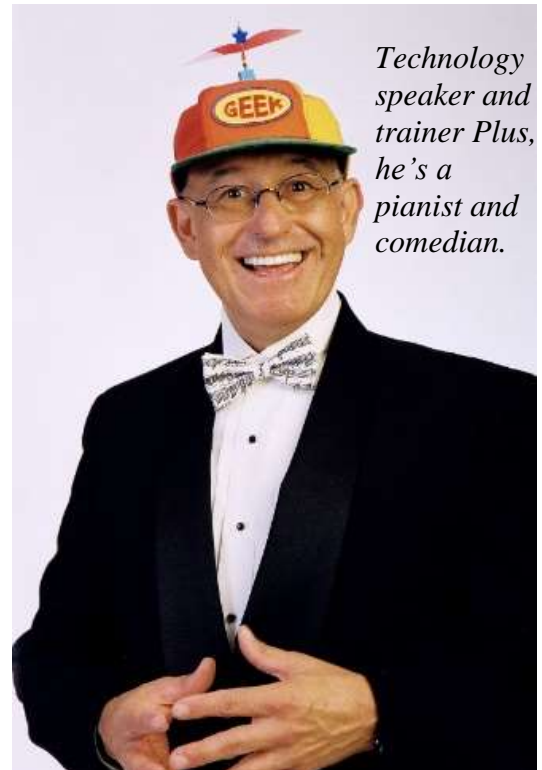
How I got started: I won Best Actor in a Supporting Role at Southside Theatre Guild for “A Funny Thing Happened on the Way to the Forum” and studied comedy under Jerry Farber. I have played the piano since 8 years of age and had the first personal computer with a 1 MB of memory. In order to learn the PC, I associated the PC with the piano -- both use a language to translate, both have keyboards, and now - both provide music and information. I must admit I miss the days when I only played the piano and programmed the PC. Now, I play the PC and have to program my piano. In 1998 after seventeen years of technology business experience in the corporate market, I decided to take a leap of faith on my own. I call my presentations “Showminars,” a combination of a show and a seminar.

The Best Part: Hearing the laughter and the comments: “You have saved me so much time,” and “I remember complicated macros because of the way you taught them.” I have a passion for teaching creative people to be more technical and technical people to be more creative – Mozart would be proud!

The Challenging Part: Explaining why I want my piano in a PC classroom. “Mainframers” who refuse to acknowledge the existence of the PC and the Web. People who attend training classes because they have to, not because they want to. Technical people who are not client- focused.

My Favorite Quotes: “To err is human, to really mess things up you need a computer.” “Forty-two percent of all households have a computer; only eight percent of those know how to use it.”

What Keeps me Going: I enjoy combining my love of people, the piano, processors, and humor into a unique speaking and learning experience.



Technology speaker and trainer Plus, he's a pianist and comedian.

Greg Creech sings to his students, and often he performs stand-up comedy about computers.

Welcome to Excelling at Excel

Welcome to your course that will lead to “Excellence” at *Excel*. I have used spreadsheets and predecessors to *Excel* since 1980. I have used *Excel* from the inception of the program. As an Operations Manager, Sales Support person, and Administrative Manager I have used and abused *Excel*, and *Excel* has used and abused me. Properly using *Excel* can be tricky and troublesome, but once you master the navigation in *Excel* and the powerful formula and functions your professional and personal life of number crunching will be much easier and more productive.

First, we will examine how to maneuver in *Excel* and some of the important efficiencies in *Excel* viewing an existing spreadsheet. We’ll examine the user interface in Excel and the *Ribbon* as well as new features and productivity in the new version. We will learn many shortcuts throughout the course.

Second, we will learn the *5 – Fs* of Excel as we construct our own Monthly and Annual Budget and Expenses worksheets. *The 5 Fs are:*

- ✓ *Formatting,*
- ✓ *Fills,*
- ✓ *Formulas,*
- ✓ *Functions,*
- ✓ *Filters and Sorts.*

The purpose of this course is not only to teach you but also to increase your productivity, because as we learn we will be building your personal or professional budgeting system using your data. I will provide guidance in class and in the document to assist you; however, the data is yours and your application will save you time and energy.

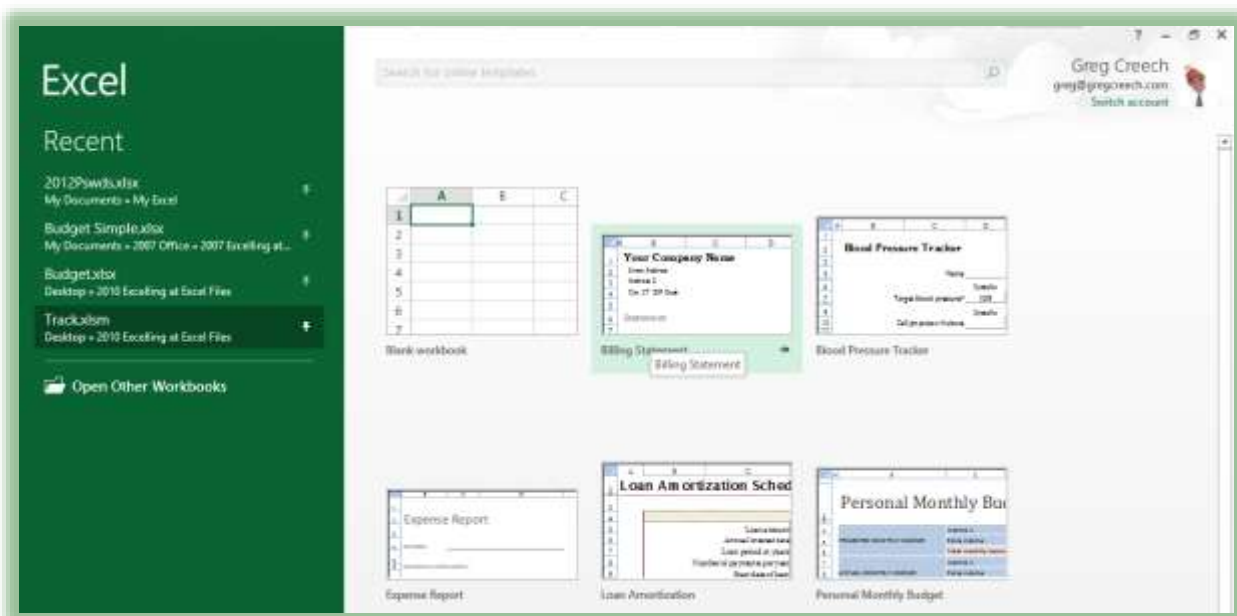
Again, Welcome. Let’s have fun and learn (flurn) together. Let’s begin Excelling at Excel.



Welcome! To Excel

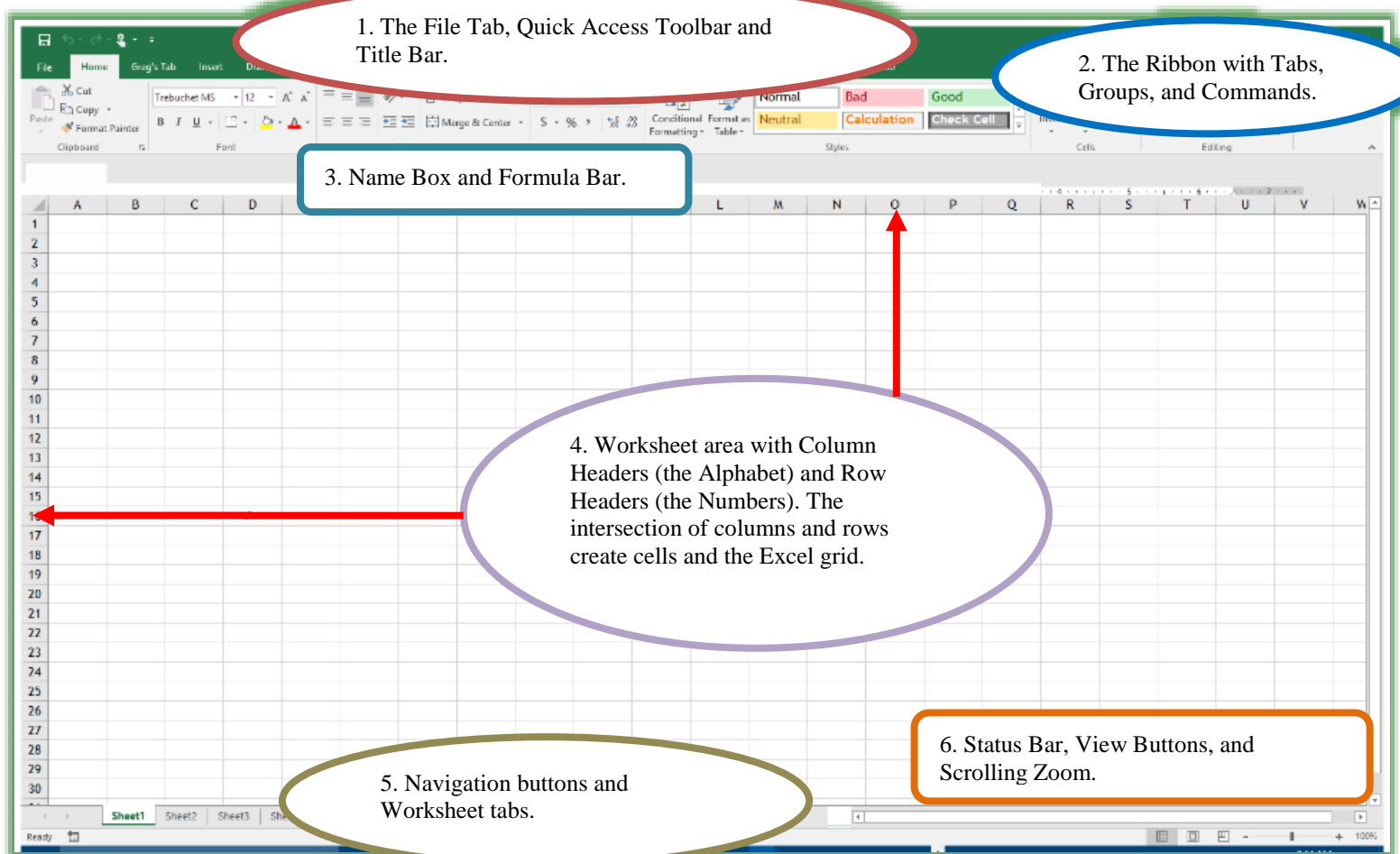
Let's look at Excel's main window and components of the interface.

1. **Open Excel.** Excel will present a blank Worksheet ready for you to begin or Excel may provide a screen for you to use templates or open other files, as displayed below for you. In any event, create a new blank workbook by clicking the Blank workbook item.
2. **Pictured below is the Worksheet Window for Excel 2013/2016.** The pane at the left part of your screen has your pinned and recent files providing quick access to your frequent workbooks.
3. **Let's take a tour of your Worksheet Window.**

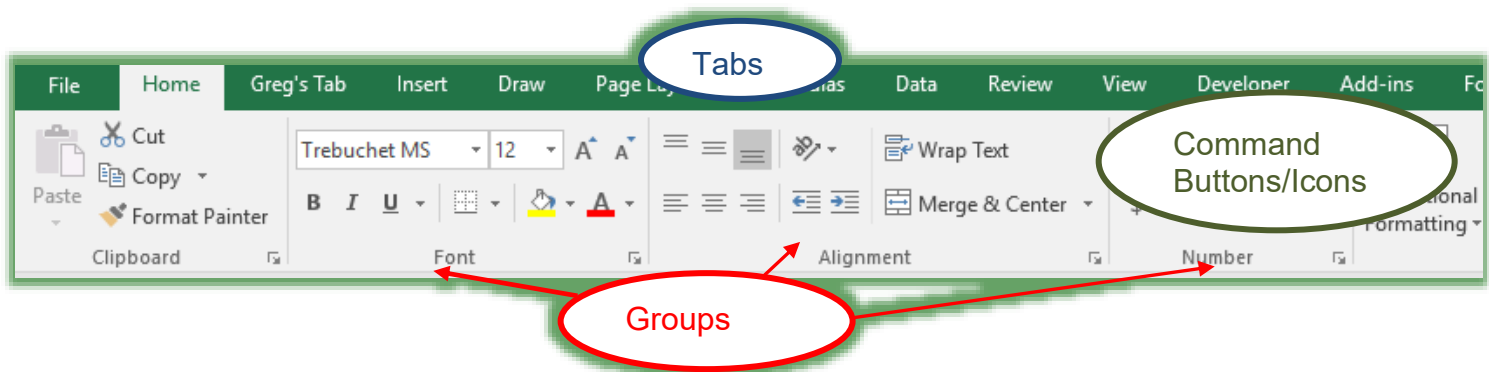


Worksheet Window

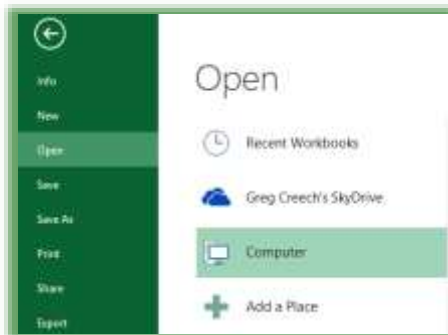
The top area of your screen is the **Quick Access Toolbar with the Title Bar**. The **File Tab** which is the first tab in the **Office Ribbon** allows you to print, save, and perform other file functions; we'll learn much more about this including using the **Excel Options** button. Next in this area of your worksheet is the **Quick Access Toolbar** which allows you to quickly access



your favorite commands and you may add and delete commands from this toolbar. We'll learn how to customize the toolbar and other options for using this productive tool in Excel. The **Title Bar** displays your Excel File or Workbook Name and contains the **Help, Ribbon Display Options, Minimize, Restore/Maximize, and Close commands**.



As pictured above, the next area is *The Ribbon*. *The Ribbon* contains three areas – *The Tabs*, *The Commands*, and *The Groups with the Dialogue Box launcher*. We will use the Ribbon extensively in all aspects of Excel from formatting to creating formulas and functions.



1. Let's open a sample workbook to use in our demonstration.
2. Click the File Tab.
3. From the Menu, Click Open.
4. Navigate to where your files are stored for this course.

5. With the Budget.xlsx file selected, Click Open *OR* Double Click the Budget.xlsx icon to open the file in Excel.

6. If you are prompted to Enable Macros, please click Enable Macros.

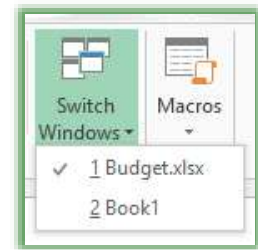
Our workbook opens. We should have two workbooks open a blank workbook and the Budget.xlsx workbook.

If you don't have two workbooks open then follow these steps.

1. Click the File Tab and Click New or use the Keyboard Shortcut CTRL + N (Pressing the Control key and the "N" keys simultaneously) for a new Workbook.
2. From the New Workbook screen click the Blank Workbook item and then click the Create button at the lower right of your screen.

We can "toggle" or move between the two files using *our View Tab on the Ribbon and Clicking the Switch Windows command button*. Let's try this.

1. Click the View Tab and click the Switch Window,
2. Click the File that is not active, for example my Book1 as displayed here and the file activates.
3. If your View tab is still active (or if not then click it to activate it again), and then click your Budget workbook to activate it.



Below *the Ribbon* and *Groups* are the *Name Box*

and the *Formula Bar*. The *Name box* indicates your position and selected cell in the worksheet

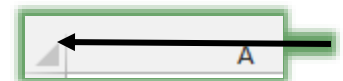
and allows you to give selected cells an English name or code which we learn later in our course.

This allows you to quickly move to this area of your worksheet and to calculate formulas using names.



The *Formula Bar* illustrates the contents of your cell whether numeric or alpha text. You edit your functions and formulas in this box. *Formula and functions begin with an equal sign (=), we'll learn a lot more about this in the Formula and Functions part of our course.* Cell A1 in this worksheet uses the *=TODAY()* function.

➤ A Hot Tip! Select All Button: There is a magic box in the upper left part of your worksheet (bounded by the Column header A and Row header 1). This magic box selects the entire worksheet with one click of this button; this is the Select All Button. If you are not clicked in the table of data, you may select the entire worksheet by pressing the CTRL + A keys together; if your cursor and selection is in the table of budget and expense figures CTRL + A keys selects the data table not the worksheet. This is a terrific way of selecting a table or database in Excel using CTRL + A key rather than selecting a big area of the worksheet through Click and Drag or other methods of selection that we will learn. ➤



Column Headers are the Alpha characters of the column. You may click on a *Column Header* and the entire column selects or highlights. You may click on a column header and drag to the



desired column to select multiple continuous columns. You may select columns that are not continuous by left clicking, pressing the CTRL keyboard button, and then left clicking the desired columns; when complete release you CTRL key and mouse button and Viola your columns are selected. You may use this method to select various cells and rows, as well, that are NOT continuous.

🔥 **A Hot Tip! In this document when we want to select cells and areas that are not contiguous I will use the term Ctrl + Click to indicate using the Ctrl key and click method of selection. When we want to select areas that are contiguous I will use the term Shift + Click or we may also use Click and Drag to select continuous areas of our worksheets.** 🔥

Row Headers are the numeric characters or numbers of the row and operate in the same fashion as **Column Headers**.

A **Cell** is the intersection of a column and row. Cells are signified by the column letter and row number position, such as Cell C4 is the intersection of Column C and Row 4 or G10 is column G, Row 10 (BINGO! Ha, ha!) You may select multiple cells by left clicking on a cell and dragging to the area that you desire and release your left click button.

Budget and Expenses	Expenses	Difference
\$ 1,200.00	\$ 1,050.00	\$ 150.00
\$ 5,000.00	\$ 5,000.00	\$ -
\$ 450.00	\$ 425.00	\$ 25.00
\$ 375.00	\$ 400.00	\$ (25.00)

Let's practice selecting continuous and non-continuous columns and hiding and unhiding them.

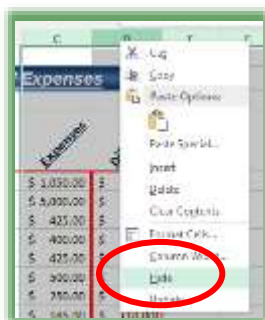
1. With your Budget Workbook open and your January tab active, click column header C.

2. Press your Shift Key and Click the column header G. Columns C through G

highlight for you.

🔥 **A Hot Tip: You may get the small dark arrow to select your column header and click and drag to select your continuous columns, too.** 🔥

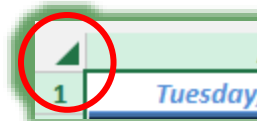
3. With these columns selected, right click on one of the Column header's letter and from the shortcut menu click Hide and the columns disappear.



.....

Let's unhide them and then hide columns that are not continuous.

4. Click the **Select All** button at the top of your workspace area to select the entire workbook.
5. Right click on a column header and from the menu click unhide.
6. Now, click column header C and press the CTRL (or Control) Key and keep it pressed as you click other columns.
7. With your CTRL key pressed, click column header F and column header H. These columns select for you as you click them with the CTRL key pressed.
8. Now, right click one of your selected column headers and from the short cut menu choose hide.
9. These non-continuous columns hide for you.
10. Let's unhide them. Click the **Select All** button at the top of your workspace area to select the entire workbook. Right click on a column header and from the menu click unhide.



Notes:

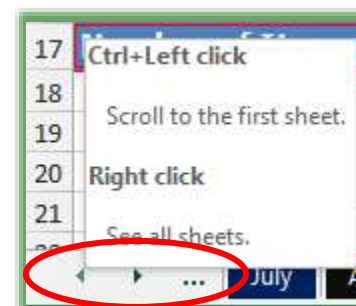
♫ If you want to unhide a specific column but keep the others hidden for example, if I want to unhide Column C but keep the other columns hidden, I can select Columns B through D with Column C hidden and right click on the two selected column headers and from the shortcut menu choose unhide and only Column C is unhidden.

♫ If you click inside of the Budget and Expenses and press CTRL + A only the table of data selects not the entire worksheet. You may use the **Select All** button to select the entire worksheet or CTRL + A to only select a table or database in Excel.

Worksheet area is the area surrounded by the column and row headers and is your primary work space in a worksheet.

Worksheet Navigation Buttons and Worksheet Tabs: The Navigation

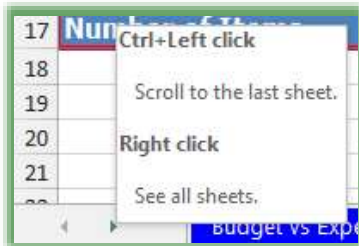
Buttons at the lower left of your workspace area scroll to various worksheets within your workbook in order for you to select the worksheet in which you



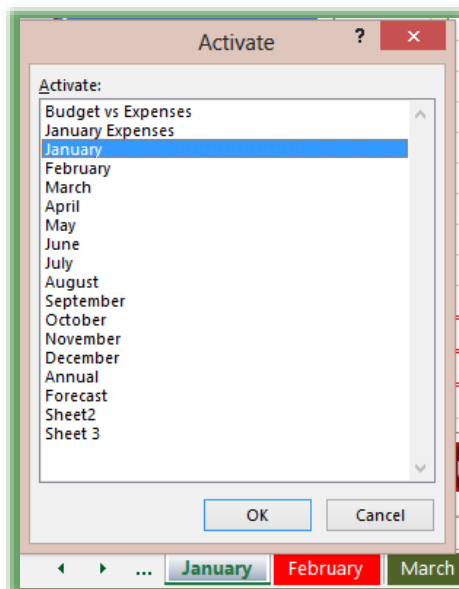


desire to work. A description from left to right by clicking the appropriate button is:

Button 1: The small left arrow scrolls through the worksheets to the left. Notice the shortcut menu if you hover on the left arrow as displayed here. CTRL + Left clicking this arrow will display the first worksheet. Right clicking this area displays all sheets as described in the Hot Tip below.



Button 2: The small right arrow scrolls through the worksheets to the right and CTRL + Left clicking this arrow will display the last worksheet for you.



✍ A Hot Tip! If you have multiple worksheets as the Budget file does, you can quickly go to a specific sheet by right clicking on the navigation buttons to get a shortcut menu and then left clicking the sheet you desire. In the picture at right my January sheet is active and all of the sheets are displayed. If I wanted to go to the October sheet, I could click it and that sheet would activate. Worksheet tabs names your worksheet and become active upon clicking on the tab. ✍

The Status Bar displays information about your worksheet and cells, displays whether your Number Lock and Caps Locks are activate, whether you are recording a macro, and has a nifty *Calculation box that we will use later.*

You can navigate in your worksheets and through your worksheets with several keyboard shortcuts, too, and select data in a column or row quickly.

My Favorite Excel Shortcuts

Keyboard Shortcut	What it Does
CTRL + Home	Takes you to the top of your worksheet, usually cell A1.
CTRL + End	Take you to the end of your worksheet.
PgUp (Page Up) and PgDn (Page Down)	Takes you down or up several rows (screen pages) at each press of the key.
CTRL + PgUp (Page Up) and CTRL+PgDn (Page Down)	Scrolls through your worksheets or tabs. CTRL+PgUp Scrolls to the Left for you and CTRL+PgDn scrolls to the Right.
CTRL + Shift + Down/Up Arrow	Selects an entire column of data/information based on the cell that is selected.
CTL + Shift + Left/Right Arrow	Selects an entire row of data/information based on the cell that is selected.
CTL + Shift + Home	Selects from your active/selected cell to the top of your worksheet.
CTL + Shift + End	Selects from your active/selected cell to the bottom of your worksheet.

With your Budget file open, use these navigation techniques to navigate around your worksheets and open the Track workbook and select a column and row data using the CTRL + Shift and arrow keys. You may use the Shift key and arrow keys to select individual row or columns and with the Shift key pressed, press the Page Up (PgUp) or Page Down (PgDn) to select a larger area of your worksheet.

✍ Write your notes here: _____



Important Tips to make your Excel Experience Easier

Resizing columns and rows

If you position your cursor between a column and row header, a double-headed arrow will appear as your cursor. Click and drag to resize your column or row. You should place your cursor to the right of the column you want expanded and below the row you want increased. For example, to change the width of column C move your cursor between column headers C and D



to get the double headed arrow to resize your width. To change the height of row 7 you would move your cursor between row 7 and 8 to get the double headed arrow to change the height of row 7. You may right click on a column or row header and from the Shortcut menu choose Column Width or Row Height and the screen here appears for you to type in a number for the width/height of your column/row.

✍ **A Hot Tip! If you double click your double headed arrow cursor, the row or column will automatically adjust to fit the information in the column or row. Pound symbols or hash tag marks (#####) will appear in column cells that are not large enough for you to view the data. The pound symbols or hash tag marks in a cell have "freaked out" many a new user to Excel, including me. I felt like I had done something terribly wrong. Simply resize your column width so the data in the column will fit.** ✍

Rename a Worksheet

To rename a worksheet, double click the worksheet tab at the bottom of the screen. For example, to rename Sheet 1 double click the Sheet 1 tab, the tab is highlighted, and type a new name and press enter. *Also, you may right click on the Sheet Tab for a short cut menu to Rename the worksheet. As well as Renaming your worksheet, Right clicking on the tab allows you to insert, delete, or move/copy your worksheet.* This is a great tool and short cut that we will be using throughout this course.

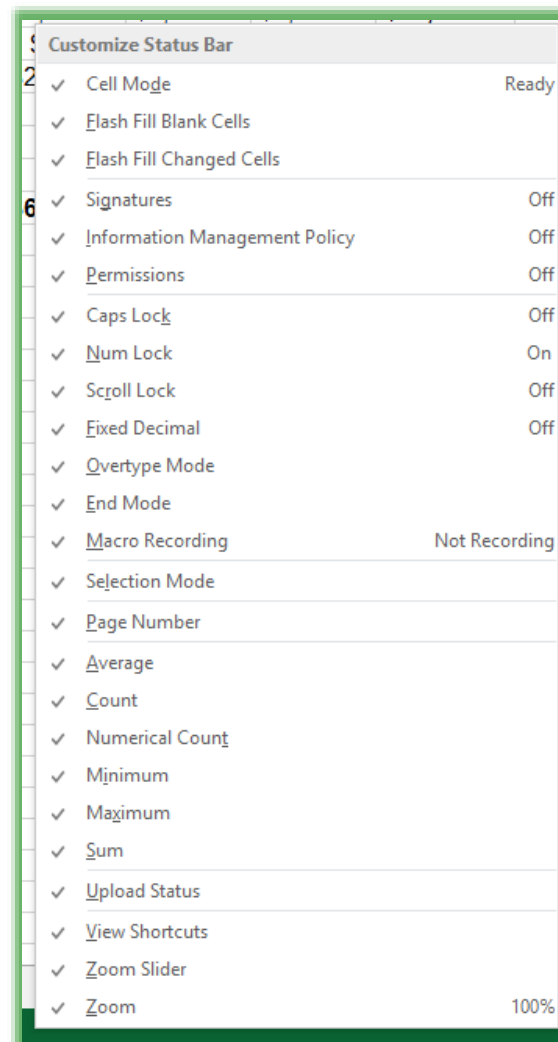
♪ **Notes:** Worksheet names should not contain special characters, such as /, ?, or [] and you may not use the same name twice in a workbook. You are limited to 31 characters for a name.

♪ **A Hot Tip! Status Bar and Calculations**

The **Status Bar** in Excel has many options from which to choose. I like having *the Sum, Count, Average*, and other functions on my Status bar. You may right click on your status bar and receive the **Customize Status Bar Pane** as pictured at right. I have activated all of my options as I learn Excel.

This doesn't affect your worksheet, but does provide the result of the functions based upon your selected range of cells. This is another excellent and quick tool for summarizing, averaging, etc. cells and information that are continuous or not. *Let's try it out*

1. In the January Tab of your Budget worksheet, Click and Drag cells B5 through B14 to select them.
2. The Sum, Average, Count and other functions of the cells should appear based on your selection in the Customize Status Bar pane.



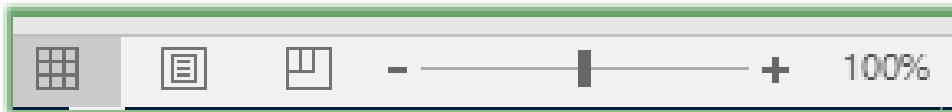
AVERAGE: \$887.50 COUNT: 10 NUMERICAL COUNT: 10 MIN: \$175.00 MAX: \$5,000.00 SUM: \$8,875.00

♪ **A Hot Tip!** Another neat trick is to use the CTRL + Click method to select cells that are not continuous, such as B5, B7, B9, the Calculations will provide the SUM (or other selected function) for the cells selected. This provides quick calculations for cells that are not continuous and prevents you from creating a formula or pulling out the good-old calculator. ♫



1. Let's select non-contiguous cells and see the results.
 2. Click Cell B5.
 3. Press your CTRL key and keep it pressed as you click the following cells: C7, C8, C10, C11, and B16.
 4. Notice that as you click your cells your calculations change.
 5. You can click away from the area to deselect your changes.
- ☹ An Important Gotcha! If you accidentally click the wrong cell or do not want a previously selected cell in the calculation, you cannot CTRL + Click the cell again to deselect it as you can in other applications and areas of Excel. You'll have to start from the beginning of selecting your cells using the CTRL + Click method again. ☹

There are important items at the end of your Status bar. The View command buttons for Normal, Page Layout, and Page Break Preview are here for you and the Scrolling Zoom.

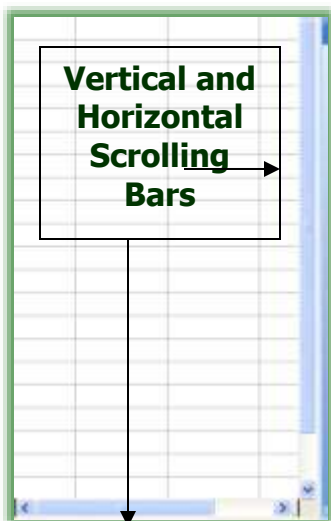


We'll look at these views later.

Click the Zoom selector

arrow and click and drag in out to see how Excel changes your view of your worksheet.

✍ A keyboard shortcut is to press your Control (CTRL) key and use your mouse's wheel (if you have one) to zoom in or out depending on the direction you are rolling your mouse wheel. ✍



Go To and Scrolling Bars

Use your *vertical and horizontal scroll bars* to quickly move through your worksheet area. You may move to a *Specific Cell* by *pressing your CTRL key and G key at the same time* or *pressing the F5 key on your keyboard* and the Go To dialogue box appears. Type the Cell you wish to go to in the reference section.

Let's practice this.

1. **Press CTRL and the G key simultaneously OR press**

the F5 Button on your key board.

2. Type B20 in the reference section,
3. Click OK or press Enter.
4. You are quickly in Cell B20.

A Little Review Here: Shift Clicking and CTRL Clicking: As explained in the Column Header section, if you desire to select continuous rows, columns, cells, and even worksheets click on an item, press shift, and click the last (Shift + Click) item you desire to be selected. (The columns, cells, or rows are selected continuously.) If you desire to select items that are not continuous, use the CTRL key to click your desired row headers, cells, column headers (etc.) and your item will be selected until you release the CTRL key and cease clicking (Ctrl + Click).

Note the *ScreenTip* as you position your cursor over a command button or area of your worksheet. This is very helpful to understand the purpose of the command button or area.

✍ **A Hot Tip! The ESC (Escape) key: Another handy key on your keyboard is the Esc (or the Escape) key. ✍ When doubt, press this a couple of times to clear your formula, selected cells, and other times when you feel you are making a mess or Excel won't let you move or navigate because you have not completed a function. The Escape key will help alleviate trouble, but may not prevent bad formulas and formatting. ✍**



Customizing Excel for Productivity

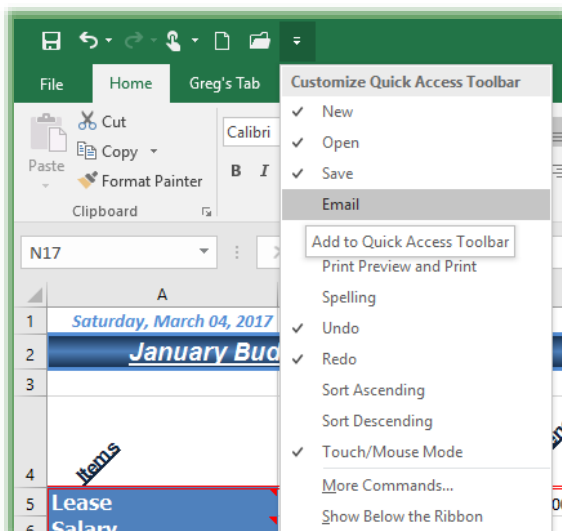
Quick Access Toolbar Options and Customization

As we begin using *Excel*, we need to learn the *Quick Access Toolbar* and how to add command buttons to it. We'll examine *the Ribbon* and other new interface techniques as well as using old (even ancient) *keyboard commands* that have been around since DOS and new keyboard commands called *Key Tips* that were new to Office 2007/2010. Adding your own *command buttons* to the *Quick Access Toolbar* ensures the command button is always available for you since your command buttons change based on which Tab you have active.

New with Office 2010 and continues with Office 2013/2016 is the ability to customize the Ribbon and create your own tab as well as to enable and disable tabs. We will accomplish this in your next section.

☹ **Important Gotcha! When your Excel Options menu is open and active nothing in Excel is operable and all tabs and groups are disabled.** ☹

Let's look at the Customize Options for our Quick Access Toolbar.



1. The Quick Access Toolbar is the only toolbar in Office and is located at the top area of your screen in the Title Bar area.

2. In a blank Worksheet or the Budget workbook, click the Arrow at the end of your Quick Access Toolbar to list the Customize Quick Access Toolbar command buttons and options.

3. You may quickly add command buttons to your toolbar by clicking them in this window to add them to your toolbar – the check mark represents a command

button already on your toolbar.

-
- 4. The cascading menu closes after you check an item to add, such as New, Open. I wish the menu could remain open as you check these command buttons. Check all of the buttons to add these to your Quick Access Toolbar.**

After adding these buttons, we will further customize the *Quick Access Toolbar* with some of my favorite and popular commands in Excel. We will use the *More Commands* from your *Customize Quick Access Toolbar Pane*.

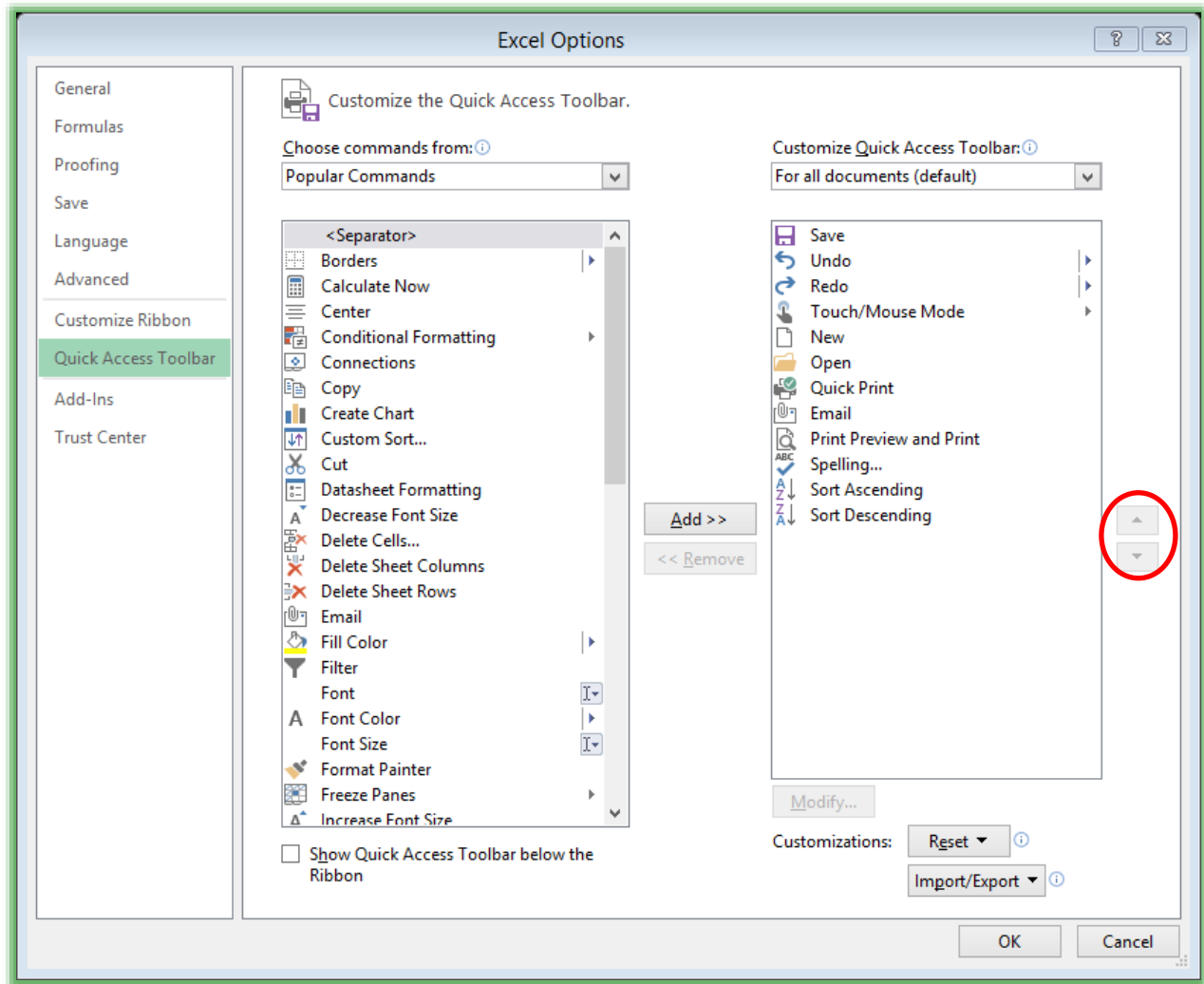
We are using the More Commands button and Excel option screen for three reasons:

- 1. You may rearrange and move your buttons as you like,*
- 2. You may add more than one button at a time,*
- 3. You may add buttons that do not exist in the Ribbon or Tabs.*

Let's rearrange our buttons and add some neat and helpful commands, so we may quickly use some of Excel best commands.

- 1. At the end of your Quick Access Toolbar click the arrow and then click the More Commands. . . item in this menu.**
- 2. The Excel Options Pane opens at the Customize screen ready for you to select commands and add them to your toolbar. First, let's move some of the commands we have already added.**

Write your notes here: _____



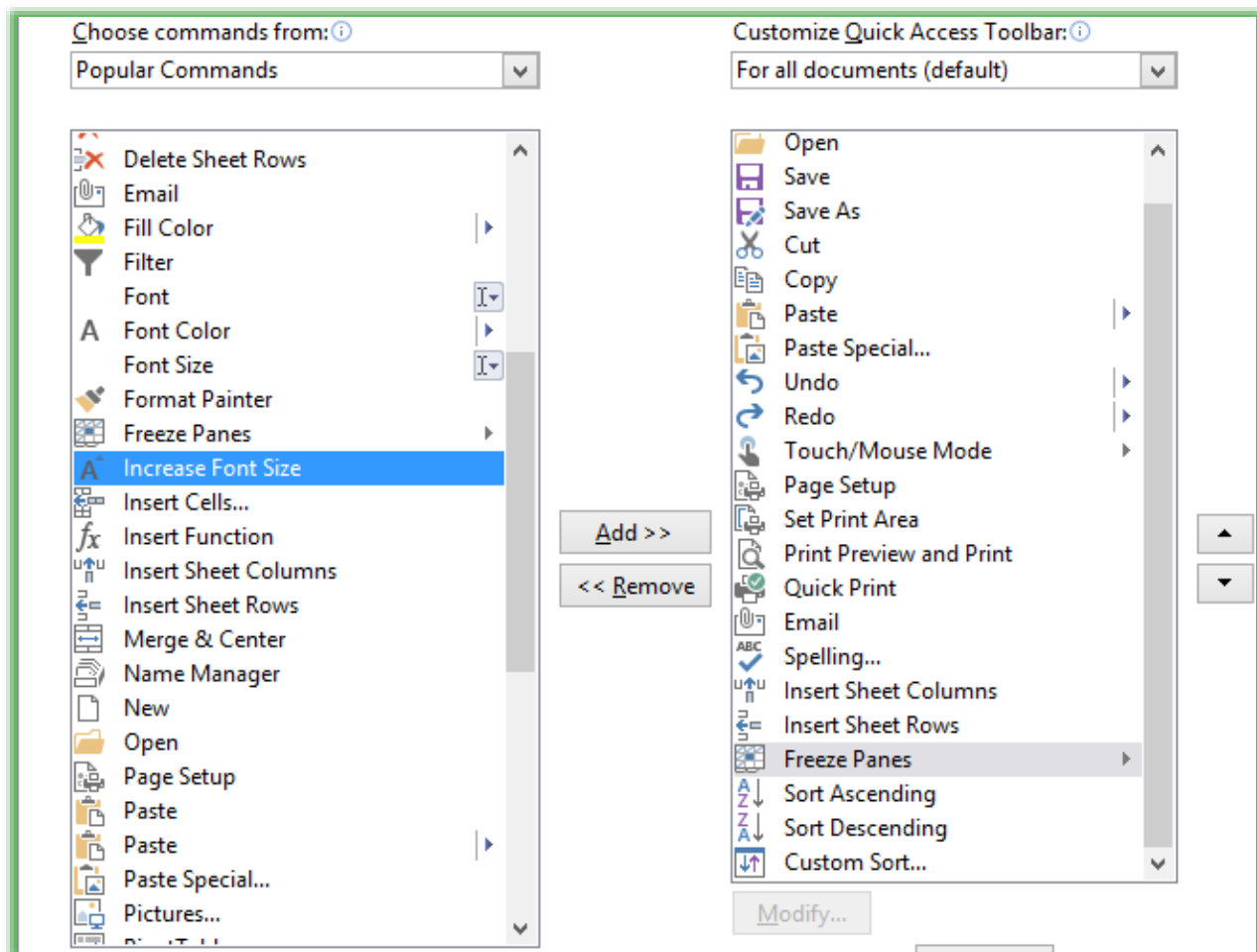
3. Click the New command button and using the Up arrow click to move the command button to the top as displayed above. Next move the Open and the Open Recent File... below the New button. Rearrange your buttons to fit your needs.

Now, let's add buttons to our Quick Access Toolbar. You may add buttons by selecting the command you want on the left part of the pane and double clicking the button or clicking the Add button in the center of the Pane.

Hot Tip! You may add your button to your Quick Access toolbar in the position you want by selecting the Quick Access Command, such as Sort Descending and the double clicking or clicking the Add button and the Custom Sort button is beneath your Sort Ascending and Descending buttons. Excel

places the new command button below where your selection is on the right part of your pane. ✎

1. I have added some of my favorite command buttons from the Popular Commands section. As you use Excel, you will find command buttons that you will want always available for you. Using the Popular Commands item in the *Choose commands from:* box, here are some of my favorite commands to add to and rearrange on my Quick Access Toolbar using the Popular commands item:



- ✓ **Save as,**
- ✓ **Custom Sort,**
- ✓ **Cut,**

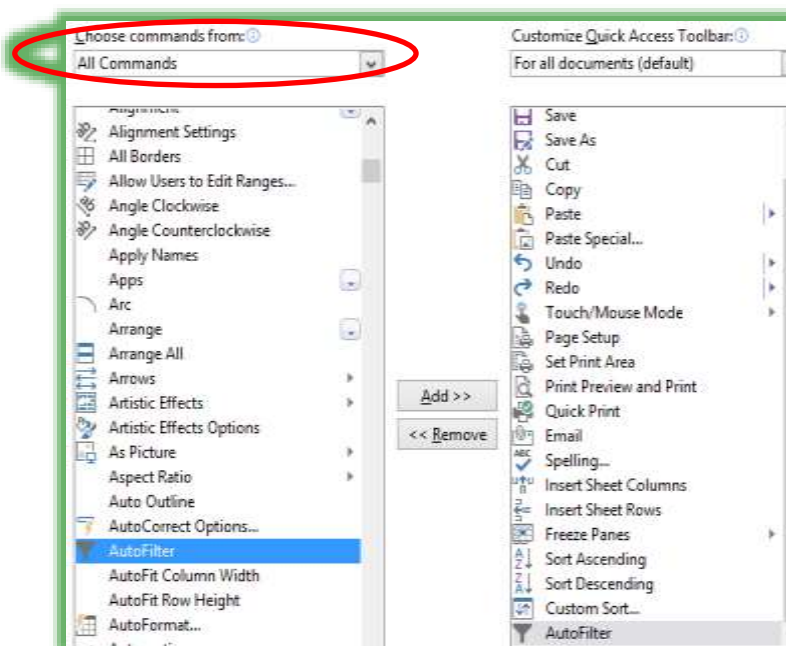


- ✓ **Copy,**
- ✓ **Paste**
- ✓ **Paste Special**
- ✓ **Insert Sheet Rows**
- ✓ **Insert Sheet Columns**
- ✓ **Set Print Area**
- ✓ **Freeze Panes**
- ✓ **Page Setup**
- ✓ **Paste Special**
- ✓ **Insert PivotTable**

Add your popular commands and rearrange them on the Quick Access toolbar by selecting a command and using the Up and Down arrows to move your buttons.

The Drop-down box (circled below) at the top of the customize screen allows you to choose other Tabs or All Commands in order to add other command buttons to your toolbar; this is

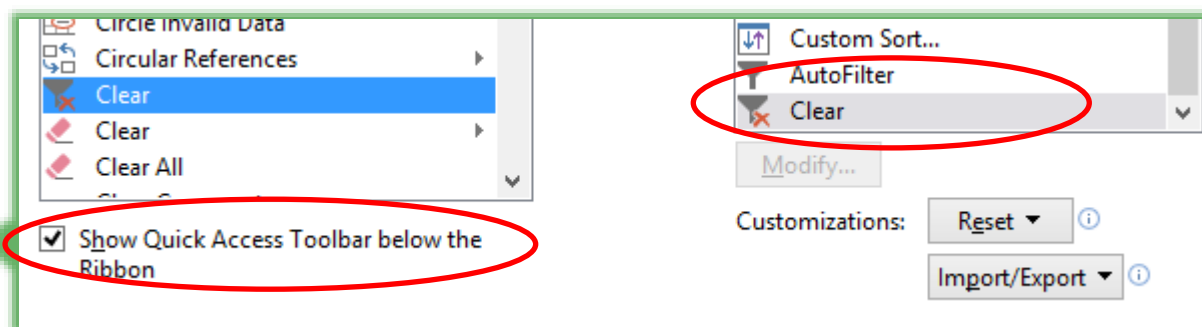
the Choose commands from box. The second box at the right allows you to use the custom Quick Access Toolbar in all workbooks or only the current workbook. We want this for all of our workbooks.



1. Next change your Choose commands from box to All Commands as circled here. Click in your list of commands to select a command and press the letter A and scroll to AutoFilter. Pressing the letter on the keyboard and keeping the letter pressed, Excel will scroll through

all of the commands associated with the first letter. Add AutoFilter to your Quick Access Toolbar this command button doesn't appear on the Ribbon and is very helpful. This one button accomplishes two tasks –

- first, it will filter for whatever you have selected, and second, it will turn on your filtering for you. I also add the Clear Filter button. Notice ALL of the Commands in Excel and add your buttons as you wish.
2. Next, click back in the All Commands list and press the letter C on your keyboard. Excel jumps to the C for you to scroll down or continue pressing the letter C on your keyboard to find the Clear All Filters button. You want the Clear button with the Funnel or Filter.
 3. Next, decide if you want to show the Quick Access Toolbar above or below the Ribbon. Since I use so many commands on my Quick Access Toolbar which crowds my Title bar, I like having my Quick Access Toolbar below the Ribbon so I have checked the box.



4. Click OK.

✍ **Speak! Another button I add in Excel is Speak Cells. This is a cool feature to have your computer and Excel read your selected cells. You'll like this for two reasons:**

1. **It does not turn itself on; you'll select the area you want Excel to read out loud and then click this button.**
2. **It only reads what you have selected (columns, rows, and cells).**

I used this as a Compensation Manager to read Social Security Numbers and salaries; I was the only person that could know this confidential information. I had to be perfect in my salary treatment using Excel; having Excel speak the numbers ensured perfection (not easy for me to be perfect!).



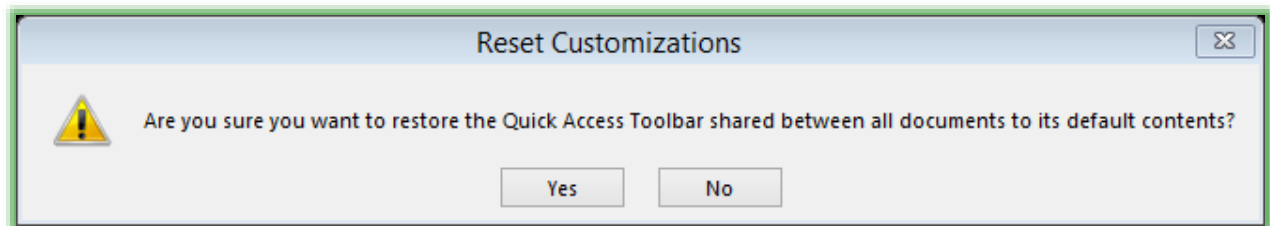
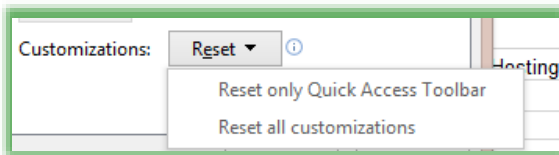
You may stop speak by clicking the button again or pressing the ESC key. This works in the other Office applications, too. So, enjoy having your computer talk to you with Excel data.



Make a mess – here is how to reset your Quick Access Toolbar.

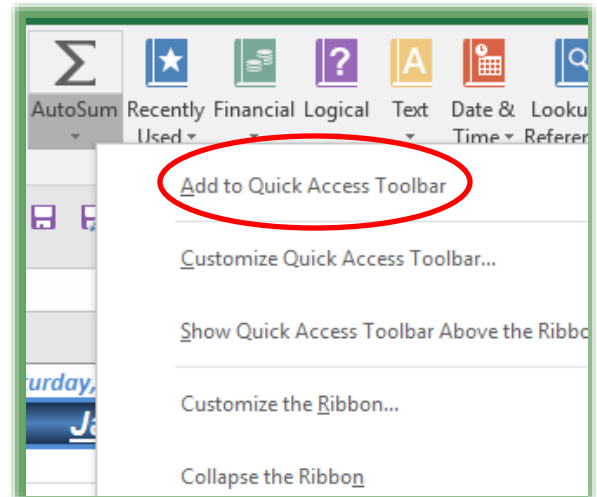
🔥A Hot Tip! The Reset button will restore your Quick Access Toolbar back to the Factory Standard with no customization. Pressing the Reset buttons offers you to Reset only the Quick Acces Toolbar or All Customizations. The Dialogue box

below appears when you click the Reset button. I sure do not want to click yes, since we will use our Quick Access Toolbar throughout the course. 🐼



There is a quicker and easier way to add buttons to your Quick Access Toolbar and here's the HOT TIP for you.

✍ **A Hot Tip:** You may add any command button to the Quick Access Toolbar by right clicking the command button and from the menu choose add to Quick Access Toolbar. I have right clicked the Arrow under the AutoSum button in the Formulas Tab and the menu displays for me to click the Add to Quick Access Toolbar item and Excel places the command button on the toolbar for me. Using this method places the button at the end of your toolbar, unfortunately you must use the Customize Quick Access Toolbar pane in Excel Options to rearrange the commands position, as we accomplished earlier. I like have my Sum, Average, and Count functions quickly available for me without using the Home or Formulas Tabs.✍



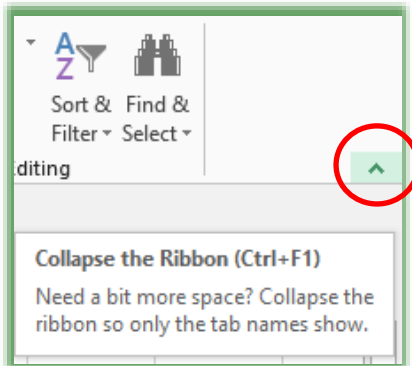
✍ Write your notes here: _____



Tabs and The Ribbon Shortcuts

As we begin our study of the tabs and groups, here are a couple of important and time saving Hot Tips for you in using the Ribbon and Tabs!

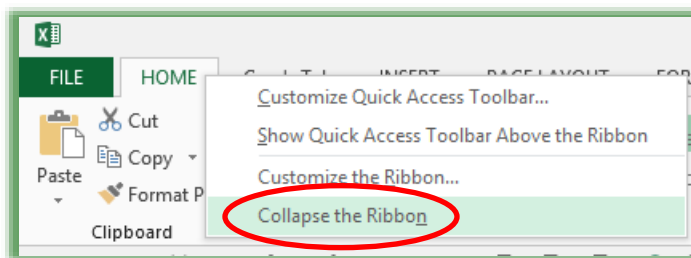
➤ **Hot Tip 1: Minimize the Ribbon! Four ways to minimize the Ribbon – First, the Ribbon takes up a lot of space on your screen. You may minimize the Ribbon and use it only when you click on a Tab.**



1. Office 2013/2016 has the Collapse (Office 2007 and 2010 uses the term Minimize) Ribbon arrow at the top of your window next to the Help button. The Collapse the Ribbon button appears here. With the Ribbon minimized the button becomes the Expand the Ribbon button in 2013 or a push pin in 2016.

2. To collapse/minimize the ribbon double click the active Tab's Name. Double clicking a tab expands/collapses the ribbon, too, or as the short cut menu suggests use the Keyboard shortcut of F1 described next.

3. Keyboard shortcut of CTRL + F1 – when you press your CTRL (Control) and the F1 keys simultaneously on your keyboard the Office application minimizes and expands your Ribbon, too.



4. Right click on any tab or command button on the Ribbon and from the short cut menu choose Collapse the Ribbon at the bottom of the menu. ➤

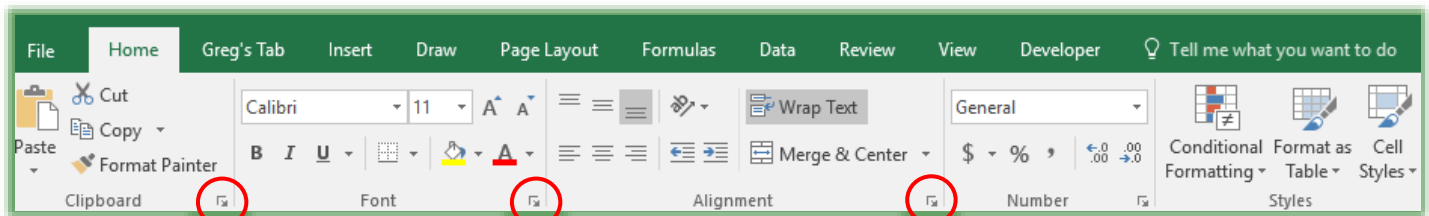
Why minimize The Ribbon? The Ribbon takes a lot of space. With the Ribbon minimized you have more room in which to work on your file. With the Ribbon minimized, to use a tab, you click the tab and the Ribbon's tab expands for you to use the Command Buttons. After clicking the button you want and you click back into the body of your document, worksheet, or presentation the Ribbon minimizes again. This is similar to using the old Menu bar. The difference is the Menu bar was vertical and text oriented and the Ribbon is horizontal and more graphically oriented.

➤ **Hot Tip 2: Second, if you have a scroll wheel/button on your mouse and the Ribbon is NOT minimized, you may scroll through the different tabs rather than clicking the tab. Moving your cursor to the Ribbon and rolling your scrolling button/wheel up or down changes the tabs for you! You must first click on a tab for this to work; otherwise, the application will scroll through your file – not the Ribbon. ➤**

⊗ **An Important Gotcha! With the Ribbon minimized you cannot scroll through the Tabs as described above. You'll have to maximize the ribbon in order to scroll through your tabs and command items. ⊗**

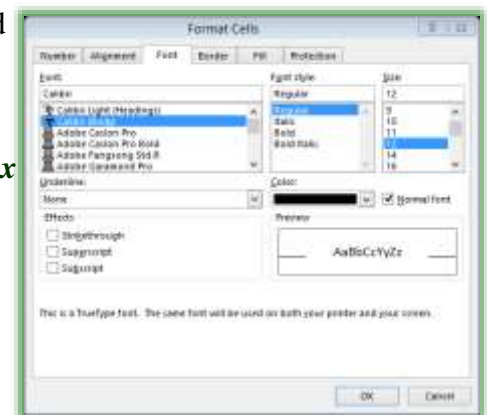
Try these two shortcuts, I think you'll like using these two features in Office.

Excel's interface includes *the Ribbon* which contains tabs as we have studied and within the tabs there are *groups* such as the *Clipboard group*, *Font Group*, and *Alignment Group* as displayed

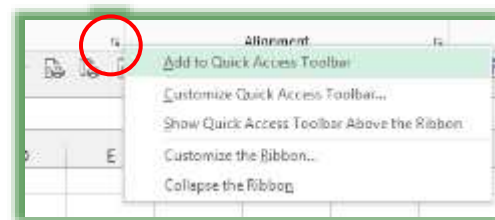


here. At the bottom of some groups you will notice an arrow, as circled above, this arrow is the *Dialogue Box Launcher* which offers more options for you. Activating a *Dialogue box* from this group opens the *Dialogue box* tab for that group. When I clicked the *Font Dialogue box launcher*, the *Format Cells Dialogue* box opens at the *Font Tab*.

We will use many of these tabs, groups, panes, and dialogue boxes throughout this book. We'll start with the *Home Tab* and Formatting options, including the *Mini Toolbar*, after we look at some of the *Keyboard shortcuts* and *Key Tips*.



➤ **Hot Tip! You may add a Dialogue box to your Quick Access Toolbar by right clicking the Dialogue Launcher Arrow and from the menu choosing Add to Quick Access toolbar just as we**





.....

accomplished with the AutoSum button. As displayed here I am adding my Font format cells dialogue box to my Quick Access Toolbar. ↗

Write your notes here: _____

Keyboard Shortcuts and Key Tips

Here's a nifty table of my favorite Office, including Excel, shortcut keys.

My Favorite Keyboard Shortcuts			
Keyboard shortcut	Command	Keyboard shortcut	Command
CTRL + A	Selects a Table when clicked in the table or Selects All if not in a data table.	CTRL + T	Excel Create Table
CTRL + B	Bold	CTRL + U	Underline
CTRL + C	Copy	CTRL + V	Paste
CTRL + D	Excel – Fill Down – Duplicate PowerPoint – Duplicate Word – Font Dialogue Box Outlook - Delete	CTRL + W	Close – Closes the Workbook in Excel,
CTRL + E	Word and PowerPoint Center Alignment – Paragraph Excel – Flash Fill (2013/2016)	CTRL + X	Cut
CTRL + F	Find	CTRL + Y	Repeat Last Action
CTRL + G	Go To	CTRL + Z	Undo
CTRL + H	Replace	ESC	This key cancels the current command or operation.
CTRL + I	Italic	CTRL + Home	Top
CTRL + J	Word and PowerPoint Justify Alignment – Paragraph Excel- Unassigned/Doesn't work	CTRL + End	End/Bottom
CTRL + K	Insert Hyperlink	F1	Help
CTRL + L	Word and PowerPoint Left Alignment – Paragraph Excel-Creates a Table	F5	Go To
CTRL + N	New	F7	Spell Check
CTRL + O	Open	F10	Key Tips
CTRL + P	Print	F12	Save As
CTRL + Q	Quick Analysis Toolbar (Click in data table)	CTRL + Mouse Wheel	Using a scrolling wheel on your mouse, you may press your CTRL (Control Key) and with it pressed, roll your scrolling wheel up to increase the size of your document, worksheet, etc. and roll the wheel down to decrease the size. This is the keyboard shortcut for the zoom feature.
CTRL + R	Right Align		
CTRL + S	Save		



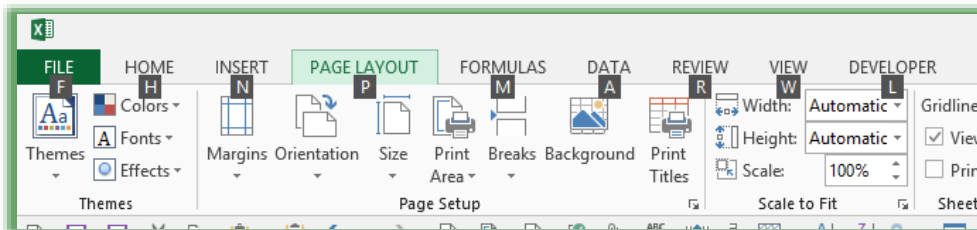
There are other keyboard shortcuts, too. You can use the help system in Excel for a list of all keyboard shortcuts that perform a variety of operations for you, just type **Keyboard Shortcuts** in the **Help Search Box** (*“Tell me what you want to do” box in Excel 2016*)



Now, in the Office Suite are keyboard shortcuts called **Key Tips**. To activate your **Key Tips**, press the **ALT** or **F10** key on your keyboard. Excel displays screen tips or Microsoft calls these badges pictured here. To activate a Tab press the corresponding badge key, for example press **H** to activate the **Home** Tab and the badges for this tab's commands.

Let's try this in Excel.

1. Open Budget workbook.
2. Press your Alt key to activate your Key Tips or you may press the Function 10 (F10) key on your keyboard to display the Key Tips.



and Key Tips on all of your commands on the Page Layout Tab appear.

4. Press the O key to activate your Portrait or Landscape Orientation.



press enter to activate the selection. Your worksheet is now Landscape.

Now, in the Office Suite are keyboard shortcuts called **Key Tips**. To activate your **Key Tips**, press the **ALT** or **F10** key

3. Press your P key on your keyboard. Notice that Excel activates the Page Layout tab

5. Press the Down Arrow key on your keyboard to Select Landscape and

-
- 6. Let's return this to Portrait by pressing your ALT or F10 key, Pressing P for Page Layout, Press O for Orientation, and since Portrait is selected, press enter and the worksheet returns to Portrait Orientation for you.**

Why Key Tips? Many people still do not like using the mouse (YET) and prefer only using the keyboard; using key tips you never have to use the mouse for commands in the Ribbon or Quick Access Toolbar. Also, this aids people with Carpal Tunnel Syndrome.

Write your notes here: _____



.....

The *Functions Keys* and combination keys such as *Shift and a Function key* are still around, too. Here are some of the *Function Keys from Excel*.

Function Key	Command
F1	Excel Help.
F2	Edits the active cell and positions the cursor/insertion point at the end of the cell's contents.
F3	Paste Name Dialogue box appears
F4	Repeats the last command or action. Also, if you click in your formula bar at a cell, the F4 key will toggle through your various references that we will learn, such as relative or absolute.
F5	Go To Dialogue box activates.
F6	Switches between the worksheet, ribbon, panes, and other areas of your worksheet.
F7	Activates Spell Check.
F8	Extend your selection (or increases your highlighted areas.) Press the F8 key and then use your arrow keys or other keys to select cells, rows, and/or columns for you.
F9	Calculates all open worksheets.
F10	Show Key Tips.
F11	Creates a chart from the selected range.
F12	Activates Save As Dialogue box.

Activate the Help box by pressing the F1 key on your keyboard. Type in *Function keys* or *keyboard shortcuts* and Excel will list a lot of shortcuts for you. I encourage you to review these

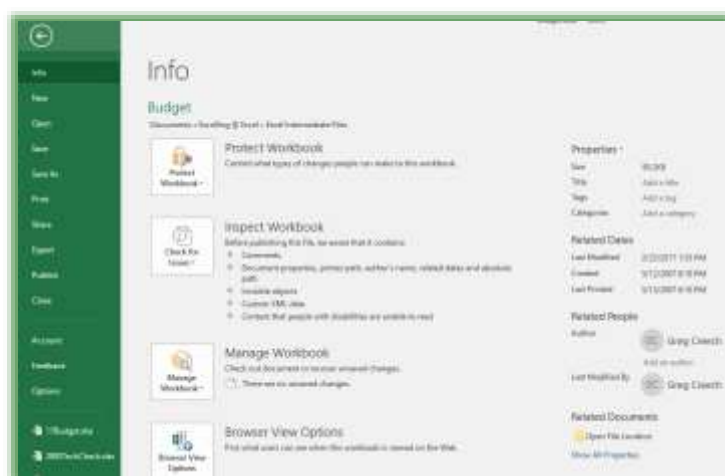
and find your favorite shortcuts as you use Excel. We will use many of these shortcuts and items throughout our course.

File Management

The **File Tab, Backstage View**, contains many important features in managing your Excel workbooks and properties. Let's overview the functionality of File that you will use a lot in Excel.

1. With an Excel File open, Click the File tab and click the Info item.

2. My Information pane appears here with the ability to set permissions,

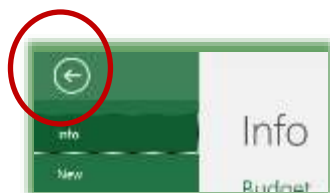


share, and to use important document properties. Notice that the left part of the pane contains our favorite commands of Save, Save As, Open, Close, and Print. Here are some of the items we will learn throughout our course in using the expanded, more powerful, and simpler File tab.

- ✓ *Open – For recent and pinned files,*
- ✓ *Print – One Stop Shopping – Print,*

Print Preview, and Page Set-up,

- ✓ *Save, Save As, and Export – Saving in popular (PDF) and email at one place,*
- ✓ *Options – Setting Important Options throughout Excel.*



Microsoft calls the File area the Backstage view, since none of your other tabs and buttons work and are not visible in 2013/2016. You may return to your normal view by clicking the arrow at the top of the File menu. We'll examine each of these items as we move through the course.



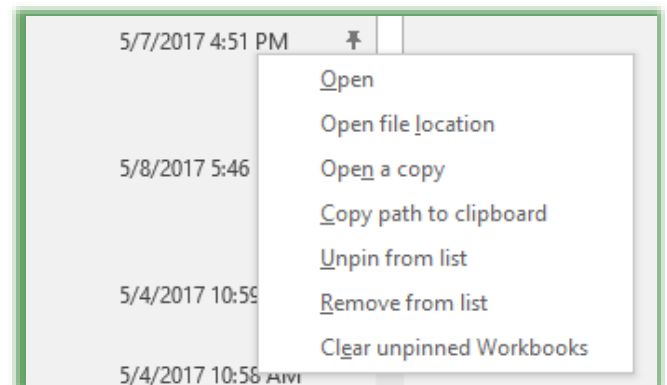
Open and Recent Files

When you click the **File Tab**, Excel should open at the **Info Pane**. The **Info**, **New**, **Open**, **Print**, and other items appear for you. My **Info Pane** and **File tab** appear above and my **Open** appears below. The **Open pane** is organized in three sections: **Your Common Tasks and Commands** in the left section, **Recent**, **Browse**, and **File Locations** in the middle section, and then **Pinned Files and your recently opened files grouped by date** to the right. The **Common Tasks and Commands** are consistent in the Office Suite.

1. Click the **Open** item on your **File Tab** (or use the button on your **Quick Access Toolbar** that we added earlier). I use my **Recent** pane and pinned documents for workbooks that I use frequently.



➤ **A Hot Tip! Pinning document, workbooks, presentations, etc.** The Office Suite, except Outlook, helps you quickly open your favorite and often-used files. You pin your favorite files by clicking the push pin button at the right of the document in the Open pane. This pins the file at the top of the pane. You may unpin and remove from the list by right clicking on the file and the shortcut menu as displayed appears for you to perform popular options, including Opening, Pinning/Unpinning, and Removing from



List. You should pin your Recent Files as you begin opening and using your files in Office 2013/2016. ✍

We examine Print, Options and these other areas of the *Backstage View* throughout our course.

Now, that we are familiar with the interface, shortcuts, and other Excel items, let's start Excelling at Excel with the 5 F's of Excel.

✍ Write your notes here: _____



The Five F's of Excel

We begin our journey learning Excel through the *5 F's*. Here are the *Five F's* that we will learn in detail during this section and we will re-enforce our knowledge and build upon the *5 F's* throughout our time together.

F1: Formatting

F2: Fills

F3: Formulas

F4: Functions

F5: Filters and Sorts

F1: Formatting for Appearances Sake

Now, let's look at *the 5 Fs* of Excel. The First F is **Formatting**. Let's have fun with formatting our cells and worksheets. Primarily you will use the **Formatting Groups on the Home Tab** or the **Format Cells Dialogue box**.

➤ **A Hot Tip! You may activate the Format Cells dialogue box by pressing your CTRL key and the number 1 key at the top of your keyboard (not the 1 key on your key pad) simultaneously. Also, you can right click on your selected cells and from the shortcut menu choose Format Cells. If you added the Format Cells button to your Quick Access Toolbar, you use that too.** ➤

We will learn in detail all of these command buttons on the **Home Tab**. We will use all of the



tabs on the **Format Cells dialogue box**, too. Before we format, we need to enter data into our blank worksheet.

- 1. Open Excel, if you are not in Excel.**
- 2. You should be at a blank new workbook. If not, click the New Icon, if you added it to your Quick Access Toolbar or Press the CTRL key + N key simultaneously. This creates a new workbook file for you. Excel will display Book2 (or another number) on the title bar for you.**
- 3. Click in Cell A2 and type: January Budget and Expenses.**

To enter numeric data or alpha data simply begin typing in a cell. As you type your input appears on the **Formula Bar** and in the Cell in which you are typing. Since there is no data in cell B2, our text will display; otherwise, our text would be truncated in Cell A2.

To Move from Cell to Cell you may Click, Tab, or press Enter. Depending upon your options pressing Tab takes you to the right one cell or Enter may take you down. To Edit previously Input data, Use the Formula Bar to highlight and select the data you want to change and type over the information or type in the cell.



♫ A Re-enforcement Note that your Name Box displays the cell in which you are working and the Formula Box displays the contents of the cell. Move to different cells using your return key, tab key, arrow keys, or mouse button. It is important to input the information first – accomplish your formatting once some of your input is complete. ♫

1. Input as follows or enter your professional budget and expense data in the cells.

Cell	Data/Text
A4	Item
B4	Budget
C4	Expenses
D4	Difference

2. Save your Workbook as My Budget.xlsx (Click the Save Icon or use File, Save to Save your file.)
3. Continue inputting the information as pictured here.
4. In Cell A14, Type Total. We will use a function later for Excel to Total the information.
5. In Cell A15, Type Average. We will use a function later for Excel to Average our information.

	A	B	C	D
1				
2	January Budget and Expenses			
3				
4	Items	Budget	Expenses	Difference
5	Lease	1200	1050	
6	Salary	5000	5000	
7	Insurance	450	425	
8	Telecommunications	375	400	
9	Education/Training	350	425	
10	Supplies	525	500	
11	Technology	175	185	
12	Entertainment	350	350	
13	Mileage	200	225	
14	Total			
15	Average			
16				

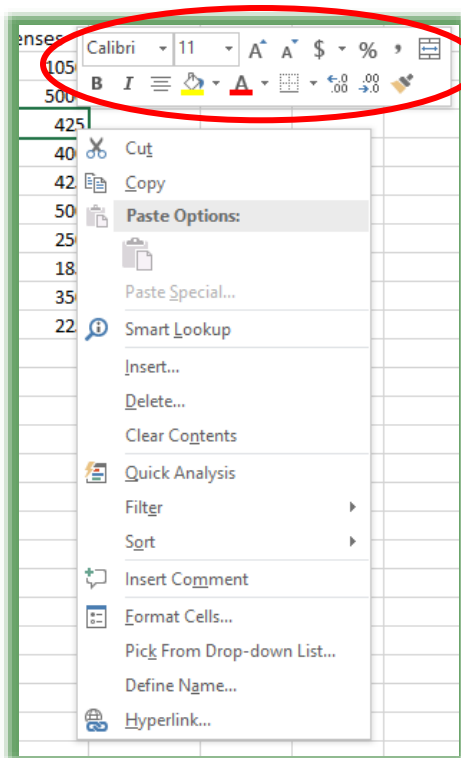
♫ A Hot Tip! Entering data in Excel by Selecting and Using the Tab Key. If you Select the areas of A5 through C15 and using the Tab Key to move from cell to cell, Excel will highlight this area and remain in this area for input and will not move to column D or row 21, until the selected range is cleared or press an arrow key. You can press the Shift key and the Tab Key together to go backwards. You may press the Enter key to go down and the Shift and Enter Key together to go up. Simply select the area for input, type your

information in a cell, press the tab key, and Excel will move to the next cell to the right. This assists in data input accuracy. However, you may not use the arrow keys or delete key; these will deselect your area or delete everything! You may use the Backspace key to remove characters and make corrections. ✂

Formatting Groups

Once data is in our cells and worksheet, we are ready to format. We will format our selected rows, columns, and cells in several ways:

- ✓ *Formatting command buttons on the Home Tab and Font, Alignment, Number, and Styles Groups,*
- ✓ *The Format Cells Dialogue Box,*
- ✓ *Use our Quick Access Toolbar or Custom Tab,*
- ✓ *The Mini Toolbar.*



✂ A Hot Tip: The Mini Toolbar. When you right click selected cells, rows, or columns, Excel provides a Mini Toolbar containing many popular commands, including formatting commands, such as font, font size, dollars, bold, colors, and so on. We will use this a lot in this course. Excel provides a short cut menu when you right click, too. You may activate the Format Cells Dialogue Box from this menu and perform

many other helpful actions. ✂

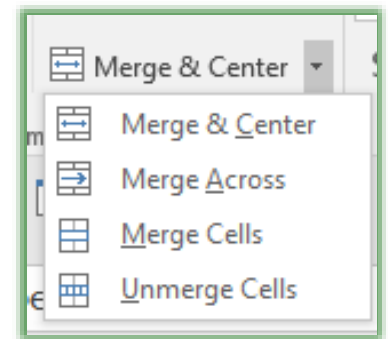
The Merge and Center

Okay, let' have fun with formatting; we first want to have our title *January Budget and Expenses* centered across our worksheet area. In using Excel, the text and information for a cell will display unless there is text and data in the adjacent cell, then your data is truncated or cut-off. The text and data are still there just not visible except on the **Formula Bar**. You have three choices:



- ✓ To make the column wider so your information will fit,
- ✓ To use Wrap text in the cell (which we will learn later),
- ✓ To use the Merge and Center button.

In most cases make the column wider is acceptable; however, your column heading may be too wide for the data in the rest of the column. 🚩 **A Hot Tip!** For Headings and Titles You will want to use *the Merge and Center Command Button*. The *Merge and Center command button* will collapse your selected cells into one cell and center the information in this one cell.

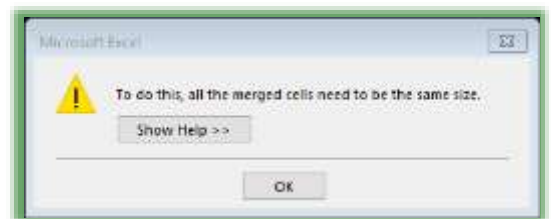


1. Using the Click and Drag method of selection, Select the cells A2 through D2.
2. Once selected, Click the Merge and Center command button or use your Mini Toolbar.

Our A2 cell is now one, big cell encompassing the former cells of B2 through D2. Click Cell D2, notice the *Name Box* displays A2. *The Merge and Center Command button*: This button is primarily used for titles that extend beyond one cell.

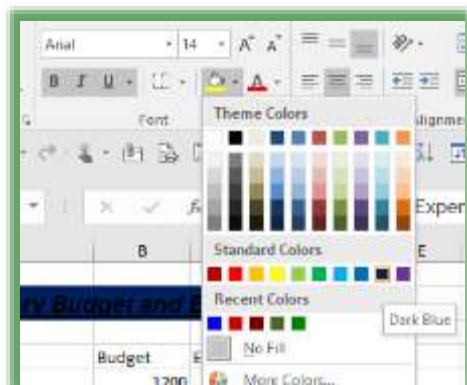
🔪 As a review, select the cells you want merged and click this button to transform multiple cells into one cell and center the information contained in the cell.

⊗ **An Important Gotcha!** If you try to sort your data do NOT include this cell. Excel will give you an error message as displayed at right. To remove *Merge and Center* from a Cell, Select the cell and click the *Merge and Center* command button, again. Or you may remove *Merge and Center* by using the Format Cells Dialogue Box and the Alignment Tab. At the Dialogue box click the Alignment tab and notice the check mark in the Merge cells box, uncheck (click the check mark) box in Merge cells.



Merged and Merged and Centered commands are only for titles and headings not for the data in tables. Table and databases do not have merged cells. ⊗

Font Group



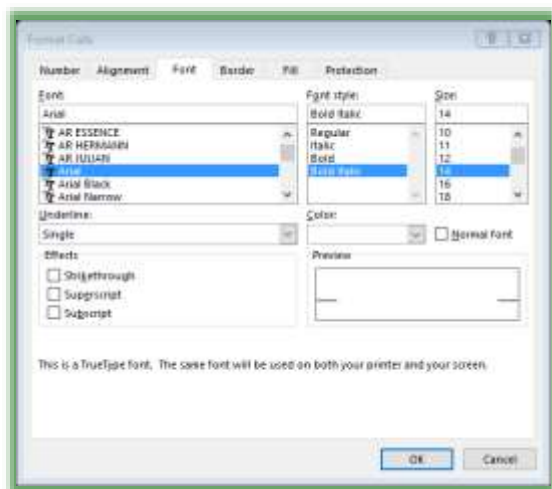
With Cell A2 the *Merge and Centered cell* selected and using the *Font Group's command buttons* please make the following changes:

1. **Change the Font to Arial using the font drop-down list,**
2. **Change the size to 14 using the list,**
3. **Click the Bold Icon,**
4. **Click the Italic Icon,**
5. **Click the Underline Icon,**
6. **Change the Fill Color to a dark color – I'm choosing a Dark Blue,**
7. **Change the Font Color to a light color, using the Drop-down Arrow Color by the Font Color Icon.**

Our changes take effect immediately.

Click the Save icon or use your keyboard shortcut by Pressing the CTRL + S keys.

Format Cells Dialogue Box: Font



While the *Formatting Command buttons and Mini Toolbar* offers quick and easy formatting options for us. We will want to use *the Format Cells Dialogue box* for more options and formatting, particularly for different number styles, dates, and special font/character positioning. The *Format Cells Dialogue Box Font Tab* pictured here displays when we click the *Font Group's Dialogue Box Launcher*. We will be using this dialogue box throughout our course including the *Protection tab* when we examine security and protection later.

The *Format Cells* dialogue box activates through these ways:

- ✓ *Right clicking in the selected cells and from the shortcut menu selecting Format Cells,*
- ✓ *Pressing the Shortcut key of CTRL + 1 (The Control Key and the number 1 key together),*

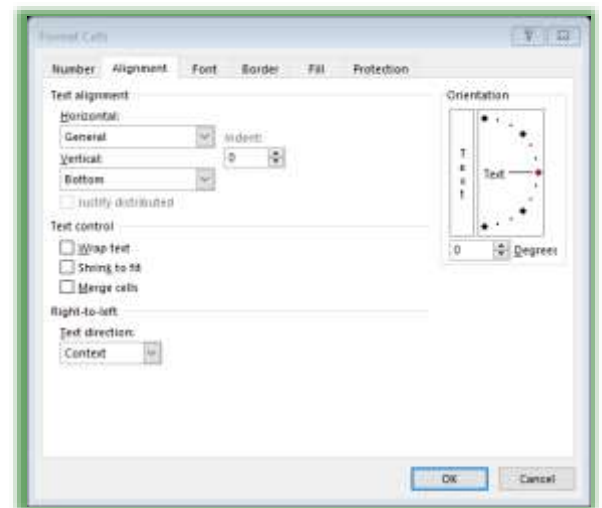


- ✓ *Use the General Drop-down List in the Number Group and the last item is More Number Formats. . .*
- ✓ *Use the Dialogue Box Launcher on the Font Group in the Home Tab.*

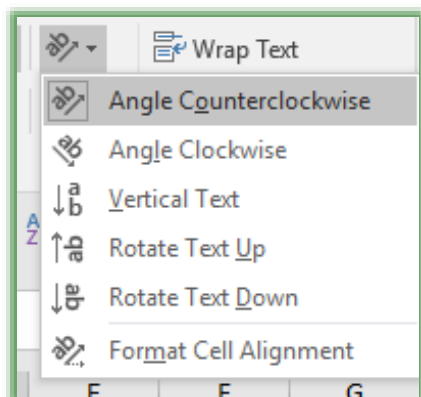
Alignment Dialogue Box and Group

Let's practice using the *Formatting Dialogue* box and some neat tricks for formatting our Headings.

1. **Click and Drag to Select the Cells A4, B4, C4, and D4 with the text Item, Budget, Expense, and Difference**
2. **Activate your Formatting Dialogue box by Right Click in the Selected cells and click Format Cells from the short cut menu.**
3. **With your Formatting Dialogue box displayed, Click the Font tab and select a different font, change your font size, and change your font color,**
4. **Click the Alignment Tab. Notice these important items:**
 - ✓ *Horizontal and Vertical Alignments for text in cells,*
 - ✓ *Text Control for Text Wrapping and Shrinking which we will use later,*
 - ✓ *The Merge Cells (we used the button for Merge Cells but we could have used this selection with center Alignment),*
 - ✓ *The Orientation section which allows you to make your text vertical and angled.*
5. **Click the Diamond for the 45 degrees or use the Spinner Control to select 45 degrees.**
6. **Click OK**



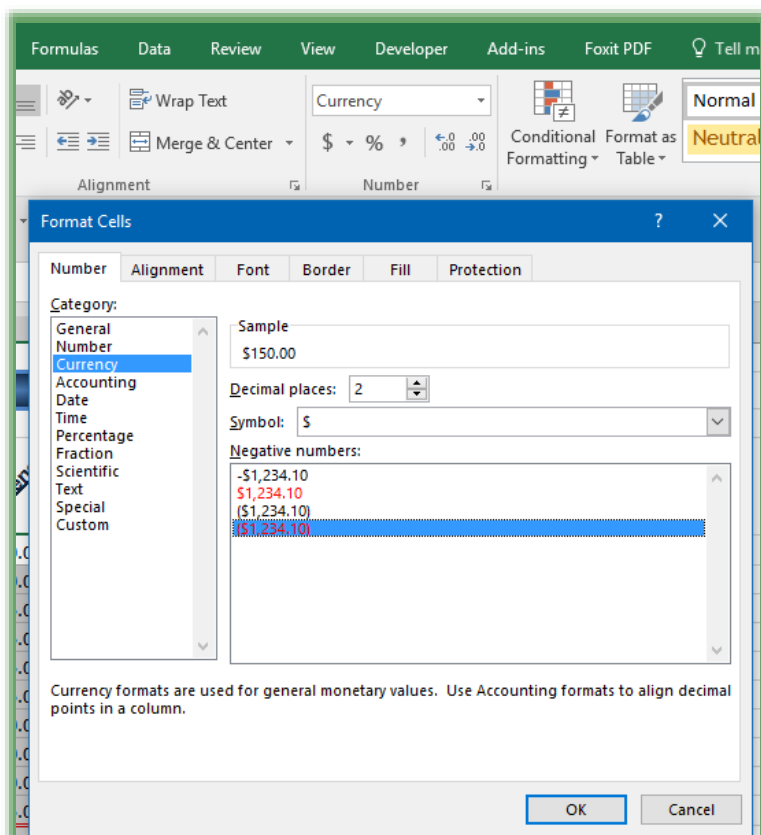
Wow! Look at your angled text.



➤ **A Hot Tip! Orientation Command Button.** While the Alignment Tab in the Format Cells Dialogue box contains many options, the quickest and easiest way to angle your text is through the Orientation Command Button in the Alignment Group of your Home Tab. As pictured here, this button allows you to use several popular angling and rotation options. At the bottom of the menu, the

Format Cell Alignment opens the Format Cells Dialogue Box at the Alignment Tab. ➤

⊗ **An Important Gotcha!** While angled text looks great here, angled text doesn't look good with shading and with borders – the colors and borders extend beyond your cells and you may not like it. When we learn Borders and Shading, try it and see if you like it. ⊗



Number: Format Cells Dialogue Box and Group

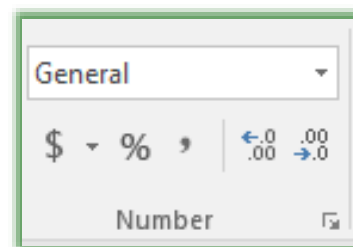
Time to Format the Numbers,

1. Click and Drag to Select cells B5 through D15 OR Click Cell B5, press the shift key and keep it pressed, and click cell D15 to select this area.

2. Let's use the Format Dialogue Box for numbers.

3. With the Format Cells Dialogue Box open, Click the Numbers Tab.

4. Click the Currency Category and then select the Negative Numbers to





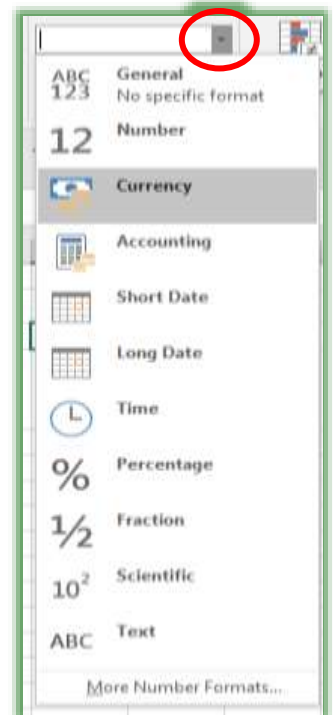
be in red and parentheses.

5. Click OK.

Our numbers format as Currency.

We will use the *Number Group* on the *Home Tab* and the *Mini Toolbar* for our Number formatting, too.

Reselect the cells B5 through D15 in the Budget Workbook and Click the General drop-down list on the Home Tab and choose another format, such as Accounting for your numbers. The menu for the General box and number formats is pictured here.



✍ Write your notes here: _____

Important Tips to make your Formatting Experience Easier

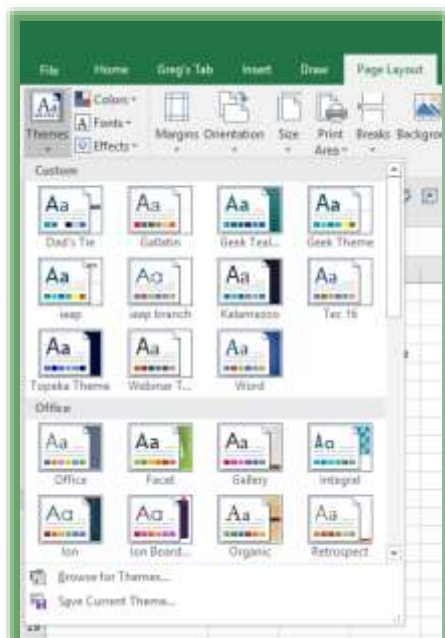
Here are some other important and productive tips and tricks in helping with formatting and creatively using Excel.

Themes

Themes across the Office Suite help with consistency and offer a variety of ways of changing your workbooks, documents, and presentations. The default **Theme** that **Excel** (and the Office Suite) uses is aptly entitled Office. **Themes** will change your fonts, chart, colors, fills, shadings, and other items in your workbook.

1. Open your Budget.xlsx file,
2. Click the Page Layout Tab,
3. Click the Themes button at the beginning of the Tab.
4. Scroll through the gallery and look at various themes. As you move your cursor over a theme, Excel displays your worksheet in that theme offering you a Live Preview.
5. Select a Theme for your workbook and notice you can create and save your own theme.
6. You may use different color schemes and fonts.
7. You should create your own theme for the organization and this theme may be used in all of the Office applications, including Word and PowerPoint.

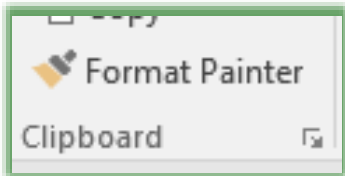
🔥 **Hot Tip! Themes change the colors for your fonts, charts, fills, and other items. If you use Standard or Custom colors, themes will not override your custom work. If you use Theme fonts and colors in your formatting, these will change based on your theme.** 🔥





Format Painter

We will use the **Format Painter** throughout this course. Let's format Cell A5 and then use the **Format Painter** to copy this formatting to the other cells.



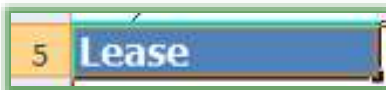
The **Format Painter** button: This time saving button is *in the Home Tab's Clipboard group or in the Mini Toolbar*.— use your Screen Tip to assist in locating the command button as pictured here. **Format Painter** button allows you to apply formats from selected cells to other cells. *Select the formatted cells, click the Format Painter button, and select the cells that you want to*

apply the formats.

Hot Tip! Format Painter - One click of the command button allows you to copy your formatting once. Double clicking the Format Painter keeps the Format Painter active and allows you to copy your formatting over multiple cells or areas; you must re-click the Format Painter button or press the Esc key to turn it off.

This only copies the formats nothing else.

1. In your budget workbook, Click Cell A5 which should have the word Lease in it.



2. Format your cell— I changed my font to Tahoma, added a blue shading, and bolded the cell. Now, we want to apply this formatting to cells A6 – A15.

3. Make sure you are in cell A5 by clicking it or looking at your name box.

4. Click the Format Painter once.

5. Your cursor turns into a paint brush.

6. Click and Drag the cells A6 through A15.

7. Your cells are formatted as cell A5.

	A	B	C	D
1				
2	January Budget and Expenses			
3				
4	Items	Budget	Expenses	Difference
5	Lease	\$1,200.00	\$1,050.00	
6	Salary	\$5,000.00	\$5,000.00	
7	Insurance	\$ 450.00	\$ 425.00	
8	Telecommunications	\$ 375.00	\$ 400.00	
9	Education/Training	\$ 350.00	\$ 425.00	
10	Supplies	\$ 525.00	\$ 500.00	
11	Technology	\$ 175.00	\$ 185.00	
12	Entertainment	\$ 350.00	\$ 350.00	
13	Mileage	\$ 200.00	\$ 225.00	
14	Total			
15	Average			

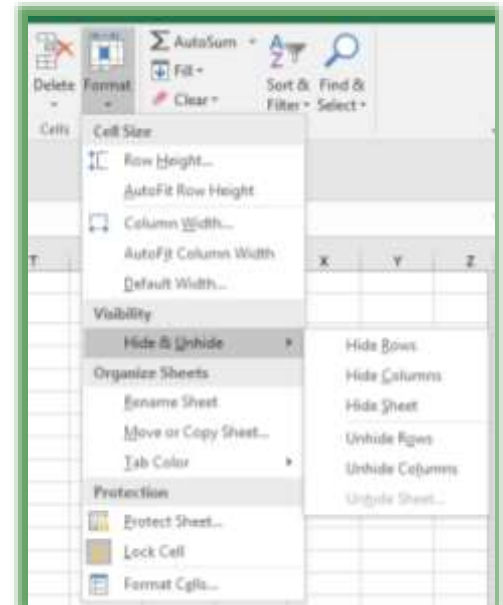
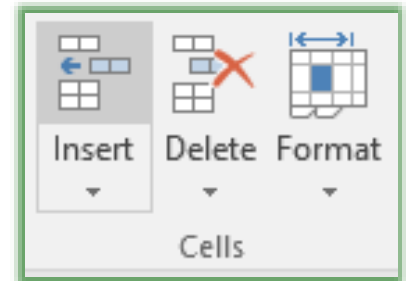
After I accomplished this, I decided the area had too many borders so I erased them and then I made Column

A wider so the words would be visible. My completed formatting appears here.

Cells Group

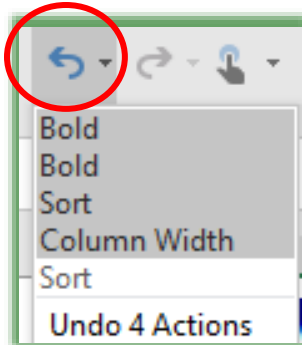
Depending on your screen resolution you may not be able to view the **Cells Group** on your Home tab, if you are then this can save time in quickly formatting your cells as the Format cascading menu appears here. My **Cells Group** is displayed here. Using this menu, you may insert or delete selected cells, rows, columns, or worksheets. You can change your sheet names and Hide and Unhide, too. This is a time saving little menu.

✍ Note: I use other methods such as right clicking and using shortcut menus for many of these options, such as I double click a Worksheet or Tab name to Rename the sheet rather than using the Rename Sheet as displayed here. I insert columns and rows using my Quick Access toolbar or right clicking on a column or row header and from the shortcut menu. BUT, you may prefer using this neat Cell Group for these items.





Undo



I love *Undo*; my favorite button in the Microsoft Office Suite! The most popular button in the entire Office suite is the *Undo* button that is included on your *Quick Access Toolbar*. The *Undo* button records your actions and you can undo your actions using this command button, including awful formatting. You can “undo” multiple items using the drop-down arrow next to the *Undo* icon and selecting the first item and dragging down the list to the item you want to undo. Excel will list the number of items you are undoing, click the last item you want undone and Excel will undo those multiple actions.

The *Keyboard shortcut* for undo is **CTRL + Z**. Thankfully there’s the *Repeat or Redo key*, too, or **CTRL + Y**.

Insert and Hiding Columns and Rows

You can always add new Columns and Rows to your existing worksheets. You may Right Click a *Column or Row Header* and choose *Insert* from the *Shortcut menu* or you may use the command buttons we added earlier to our *Quick Access Toolbar*. You may use the *Cells Group* in the *Home Tab*, too.

⊗ An Important Gotcha! If your Column or Row is used in a calculation, ALWAYS INSERT THE COLUMN OR ROW WITHIN YOUR LIST OF ITEMS NOT AT THE END. Excel may not use your new column or row in the calculation! ⊗

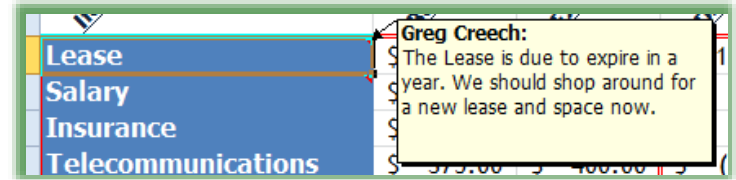
You can *hide column or rows* by right clicking the selected column(s) or row(s) and choosing hide. You unhide and can change the width in the same manner. *♪Note: If you hide columns or rows and print your worksheet, the printout will not display the hidden column or row, but if you print the column and row headers the letters and numbers will not be consecutive – so people will know you hid them or that something is afoot. We’ll learn how to protect our worksheets later so folks can’t unhide your column and rows, too. ♪*

We will be inserting Columns and Rows and practice hiding them later.

Comments

Comments are a great way to communicate with others and to remind you of items in your worksheet cells. A red triangle in the upper right corner of the cell will alert you that a comment exists for this cell.

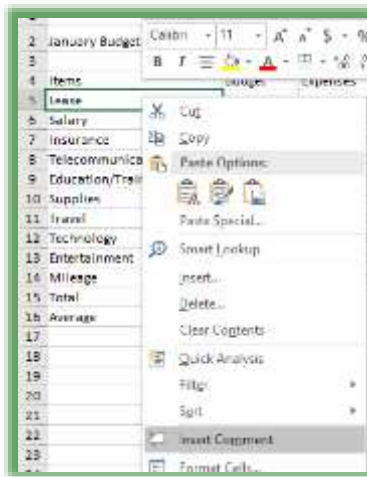
In the Budget.xlsm and the January tab, place your cursor over cell A5 for Lease and the comment appears.



Also, notice in Cell A6 of the spreadsheet a little red triangle in the upper right corner of the cell. Place your cursor over the cell and you see a *comment* from me.

The *Review Tab* in the Ribbon contains the *Comments Group* for creating new comments or inserting comments and after a comment is in a cell for you to edit, delete, and show your comments.

✍️ A Hot Tip! When I worked on a Sales Vice President's staff in Corporate America in the 1990's, I "controlled" millions and millions of dollars in revenue, compensation, budgets, and sales tracking items. I built tremendous Excel worksheets and workbooks. When I sent the Excel workbooks to the regions and branches each month, my phone rang off the hook from General Managers and Executives about what happened to the numbers. I learned comments and placed comments in cells that I knew would generate interest in what happened to the number from a previous month. Even Sales Vice Presidents and General Managers can put a cursor over a cell with a triangle (with a little training) and read! My call volume dropped dramatically. ✍️



1. Here's how to create a comment, activate your budget workbook.

2. Select a cell on your worksheet that you want to add a comment – I am using Cell A5 – the Lease cell,

3. Click the New Comment button the Review tab OR Right click the cell, receive the shortcut menu, and select Insert Comment to add a comment to a cell.

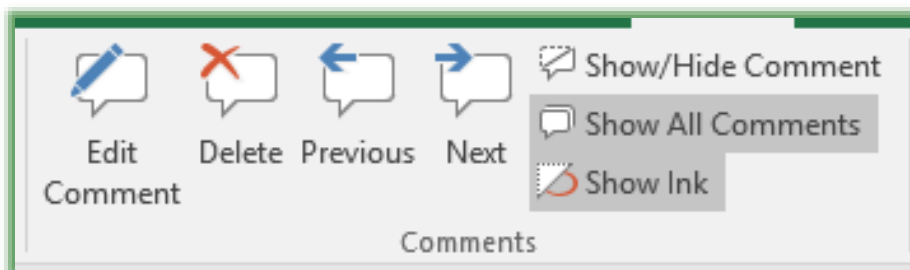
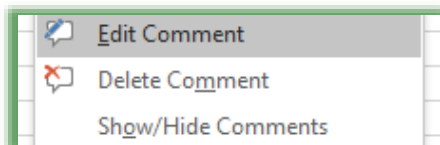
4. A Text box appears for you to type your comment – type in your comment.

5. When you click away from the cell, the red triangle will appear.

6. Place your cursor over the cell and your

comment appears.

Once you have the comment in a cell and right click it, you can edit or delete the comment; the Comment items in the shortcut menu is pictured here. Also, with the comment cell selected you may use your Comments Group in the Review tab to Edit, Delete, Show/Hide, and Navigate through your comments. The Comments Group is pictured here.



If you edit your comment you can resize your text box for the entire comment to display. You can select your text and use the format toolbar to change your font and use the other formatting items for you comment

If you click the **Show/Hide Comment** item, your **comment** will continually display. This can cover-up your data and adjacent cells. You can click and drag the comment box out of the way, but having the comment always active may “bother” you, so you can right click the cell again and choose **Hide Comment**.

✎ **Hot Tip! The Show All Comments button. In the Comments group of the Review tab, the Show All Comments button will display all of your comments in this worksheet and workbook AND all of your open workbooks. You'll want to quickly turn this off using this button; however, it is a quick and easy way to display all of your comments. The Show/Hide Comment button only hides your selected cell's comment.** ✎

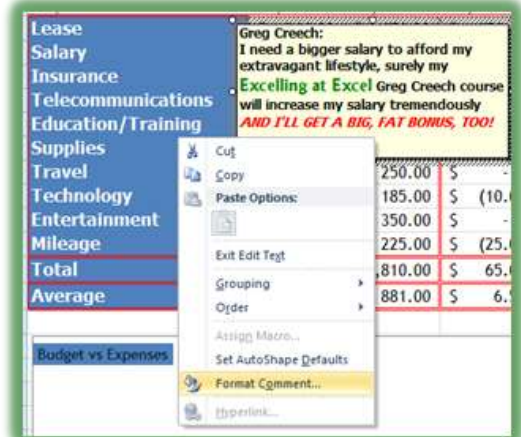
Practice by inserting comments, editing them, and Showing and Hiding your comments in your cells. Also, edit your comments with color. Here's my comments for Cell A6 – Salary.

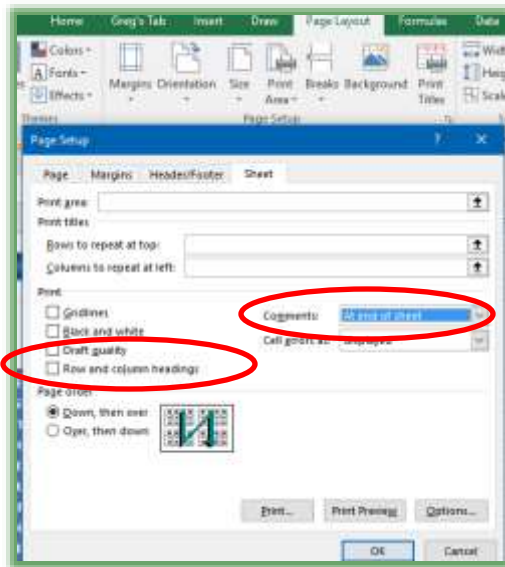
⊗ **An Important Gotcha! While you may use the Home Tab's formatting groups for some of the formatting in your comments, to change the color and other items, you'll have to right click selected text in your comment you want colored and from the cascading menu choose **Format Comments** and a **Format Comment** dialogue appears for you to format your font with color and other items.** ⊗

You can **Print your Comments**, too. We will examine **Print Preview, Page Set-up, and Printing** in detail later in the course, but here's a quick way to print your comments.

You may use your Budget.xlsx. Here's the steps to view your comments and have them printed.

✎ **Comments do not print nor display by default.** ✎





1. In your Budget.xlsx in the Sheet 1 tab with your budget and expenses, click in your budget area.

2. Click the Page Layout Tab and Click the Page Setup's Dialogue Box Launcher or use your Quick Access Toolbar's Page Setup Command button we added earlier.

3. In the Page Set-up Dialogue box, click the Sheet Tab,

4. As pictured here, in the Comments section and from the drop-down arrow choose At end of sheet (As displayed on sheet may force the comment to cover cells that you want displayed and your comments must be showing on your worksheet),

5. Click the Print Preview button,

6. Navigate to the last page using the scrolling arrows circled at right.

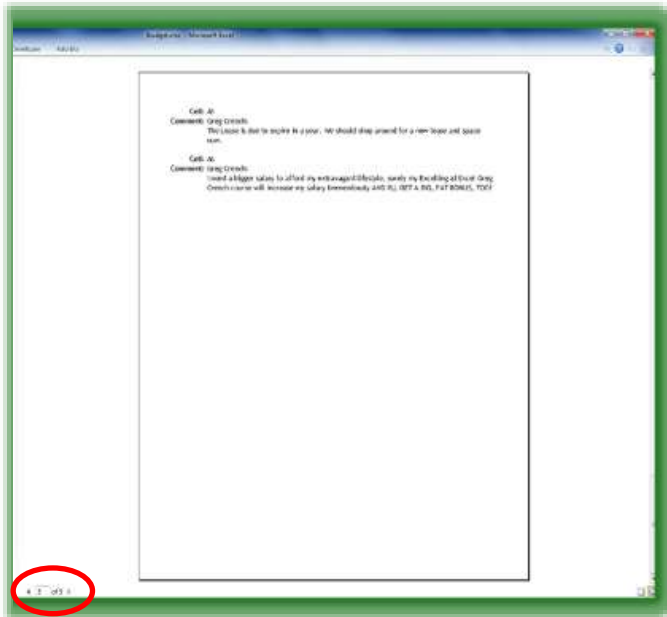
7. Your Comments page appears – A section of my print preview comments page appears here.

♫ If you needed the Column headers A, B, etc and the Row headers 1, 2, etc to print in order to know the cells containing comments, here's how --

From the Sheet Tab in the Page Setup Dialogue box you can check the Row and

Column headings option (this is pictured above for you). ♫

If your comments do not cover up data and your comments are showing on your worksheet, then you may use the As Displayed on Sheet item in printing your comments.



F2: Filler' up with the AutoFill Handle!

Perhaps you have heard of Phil Collins, Dr. Phil, or Phil Donahue, Excel has its own time saving Fill and efficient tool called the **Fill Handle**. *I call it the Dr. Fill of Excel. Fills* take our old, familiar copy and paste functions to a new level of data accuracy and efficiency. You use either the **Fill command button on the Home Tab** to fill your selection) or through your mouse operation. I'm a click and drag kind of guy and like the mouse method. So, I will concentrate on the mouse method.

Why use the **Fill** and **AutoFill**, and what does Dr. Fill of Excel accomplish? Here are some of the magical uses of **AutoFill**:

- ✓ *Copy Formula and Functions with or without Formatting to adjacent cells,*
- ✓ *Continue number patterns in adjacent cells, such as consecutive number (1, 2, 3, etc.) or multiples of numbers (3, 6, 9 etc) or even/odd numbers (2, 4, 6 etc.),*
- ✓ *Replicate Date Patterns, such as the first of every month or every other Friday,*
- ✓ *Making Schedules and Timesheets,*
- ✓ *Create Custom Lists,*
- ✓ *Activate and use stored Custom Lists, such as Months and Days of Weeks.*

As in formatting, we will use the **Fill Handle** throughout our course, especially for copying our formulas and functions and date series. Here are some exercises for us to use in getting to know Dr. Fill of Excel. Let's look at stored lists first and then we will customize our own list. We will look at using Fill for number lists and date series, too.

Fill with Months and Weekdays

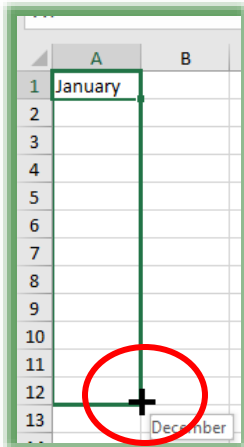
- 1. Open a blank workbook.**
- 2. Click cell A1.**

You will notice a little, tiny black box in the lower right corner of your cell border. This box appears on the corner of your cell(s) that you are working in or have selected. Move your cursor over this box and the cursor turns into a plus (+) sign. That is the AutoFill Handle.





Months



1. Type *January* then with the AutoFill Handle,
2. Click and Drag down slowly, as you drag notice a ScreenTip will display February, March, etc. as you drag down.
3. Click and Drag to December or cell A12. When you release your mouse button from dragging Fill, Excel will input the name of the months for you.
4. Wow, see the magic! Fill can type out the Month abbreviation, too, such as Jan, Feb, Mar. AutoFill can fill horizontally as well as vertically.

1. Click cell B1 and type SEP in uppercase – (You don't have to begin with Jan for this to work),
2. Get your Fill Handle (+) in the lower right border of cell B1,
3. Click and Drag across to the right to cell M1 or AUG,
4. Release your Mouse Button;
5. The abbreviation of the months display for you and AutoFill kept the uppercase formatting.

Days

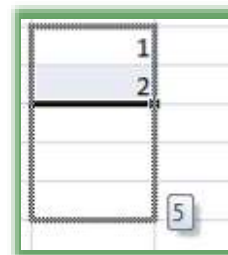
1. Fill knows the Days of the Week, too.
2. Click cell C2 and Type *Monday*. Get your Fill Handle, Click and Drag to cell C8 or Sunday
3. Release your Mouse Button – the full names of the days are displayed for you.
4. Now, in cell D2, type *Sat* and fill the abbreviation of the days to cell D8.

Filling in a series of Numbers

Wait! Fill gets better and more powerful.

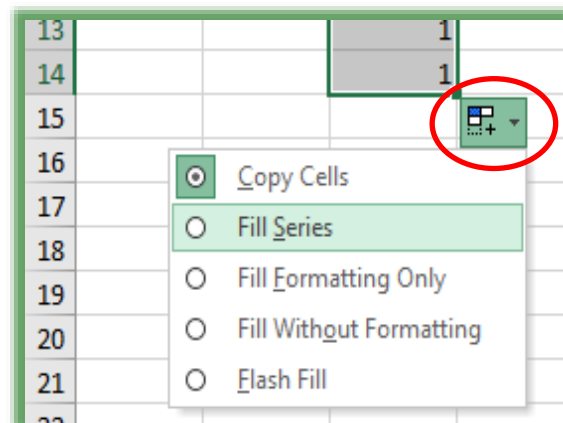
Consecutive Numbers

1. Click in a blank cell, and type the number 1.
2. Press your CTRL (Control) Key and place your cursor over the right hand lower part of the cell on the box for the AutoFill handle.
3. With your CTRL key pressed, Click and Drag down your AutoFill handle to accomplish consecutive number.
4. Excel does consecutive numbering for you and you don't have to begin at 1; you may start your consecutive numbering fill at any number.



If you click and drag a number using AutoFill, AutoFill copies the number, you may use the Fill Options menu to change the consecutive numbers with Fill Series. You may use the CTRL + Click and Drag AutoFill, as described above, to fill a list of consecutive numbers.

The AutoFill Options box is circled here. Clicking this box provides a helpful menu we will use with AutoFill.



Multiples of a Number

Now, let's accomplish a series of numbers or multiples of a number.

1. In Cell F2, Type 5 and in Cell F3 Type 10.
2. SELECT BOTH CELLS (This is an important step – Excel needs to “see” your pattern and examine it. Both cells of 5 and 10 need to be selected, so Excel will know that you want multiples of 5).
3. Get your Fill Handle



4. Click and drag down slowly – notice Fill will display 15, 20, 25, and so on.
5. Release your mouse button and you have a series of multiples of 5.

Text with a Number

1. In Cell E2, Type *Volume 1*,
2. Get the Fill Handle and Click and Drag down,
3. Notice the ScreenTip – Fill will display Volume 2, Volume 3, etc.
4. Drag down to Volume 20
5. Release your mouse button.
6. Fill Handle can be very smart and looks for patterns in your numbers and text.

If Dr. Fill can identify a pattern it will recreate it for you; otherwise, Fill will copy your data, functions, formulas, and text! This is an easy and great method of copying continuous information and data.

Filling in Dates

Consecutive Dates

1. In another blank cell, type in today's date, i.e. 03/18/2018,

2. Get the Fill Handle and click and drag down, notice that Excel provides consecutive dates for you as displayed at right. Also, notice I began in a year with Leap Year and Excel is so smart to recognize that 2020 is a Leap Year.

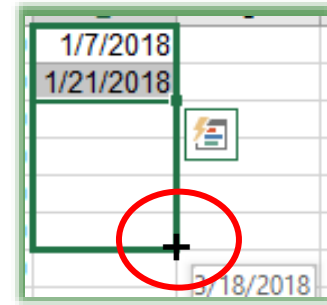
3. You can Fill up, too and fill will reverse the order.

4. In Cell F12 type today's date and get your Dr. Fill handle and click and drag UP. Notice that the dates will fill in reverse order.

Bi-Weekly or other Weekly Dates

2/24/2020
2/25/2020
2/26/2020
2/27/2020
2/28/2020
2/29/2020
3/1/2020

1. In another cell type in a date and then in the cell below it type a date two weeks from the date,
2. Select both cells,
3. Get your Fill Handle,
4. Drag down – Dr. Fill will provide dates that are two week apart!
5. Release your mouse and there are your bi-weekly dates.



Monthly Dates

You may use this for the first of every month or other monthly date,

1. In a blank cell, type in 01/01/2019 in one cell and 02/01/2019 in an adjacent cell,
2. Select both cells,
3. Using AutoFill, drag across to see fill adding 03/01/2019 and 04/01/2019, etc.
4. Release your mouse button after several dates.
5. This is great for billing dates, payment dates, etc.

♫ The trick is to remember to select BOTH cells so Excel can see the pattern you are creating, otherwise, Excel will fill in your dates sequentially. ♪

Excel allows you to use Fill with bi-monthly, quarterly and other dates.

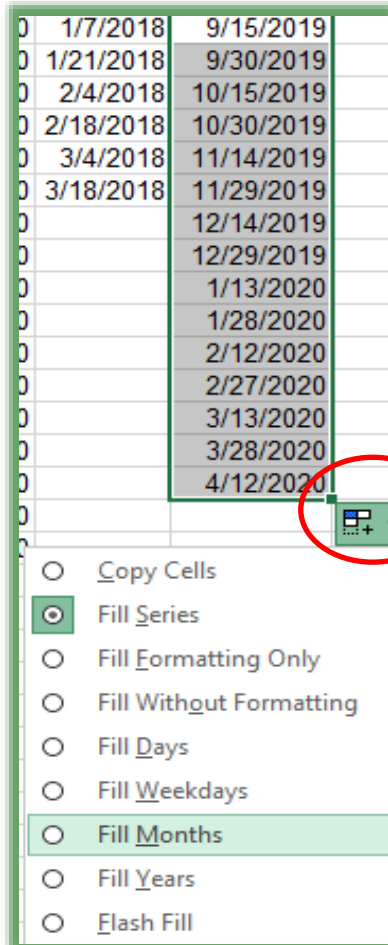
Relative Dates

We have used dates that are absolute – that is specific dates (and days) and exact time periods. There are dates that are relative such as the 1st and the 15th of every month. These dates change based upon the month or week. Let's look at how to use Relative Dates in Fill.

1. In a blank cell type 09/15/2019.
2. In an adjacent cell type 09/30/2019.
3. Get your fill handle and fill down for a year of the 15th and last day of the months.



4. **OOPS!** Excel messes up badly and can't figure out the 1st and 15th of the months. By default, Excel uses every 16th day or follows the series or pattern of selected dates.



5. Select 09/15/2019 and 09/30/2019 again,

6. Fill Down and this time notice the
Insert Fill Options box,

7. Click the drop-down arrow and a menu like the one here appears.

8. Click Fill Months and wow – Excel repairs itself with the correct dates for you.

This is a handy feature to know in using custom date series and other types of series.

Flash Fill

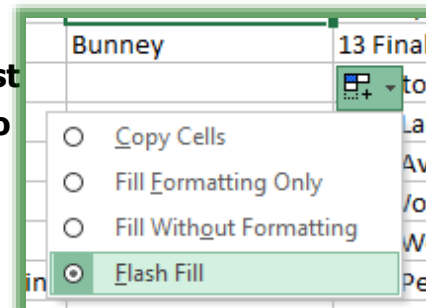
Excel 2013/2016 – New
Flash Fill.

A cool feature in Excel 2013 and 2016 is *Flash Fill*. This separates a series in a column for you; this is similar to using the *Text to Columns* feature of Excel, only easier. We will learn *Text to Columns* later, and *Flash Fill* is a terrific way to separate a series.

Here's how to use Flash Fill.

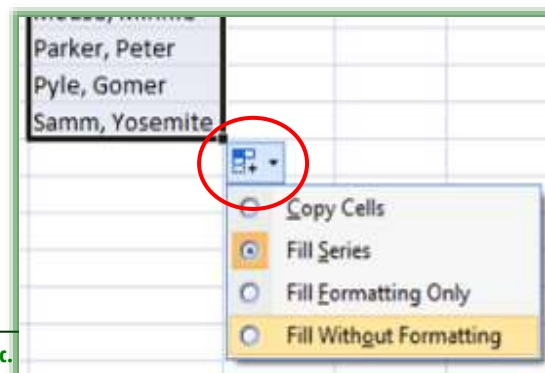
1. In my Flash Fill workbook, I insert a column and type the person's Last Name (in this case Frogg).
2. I press enter to go to the cell below and when I begin typing the next person's last name, Excel gives a list of the remaining names in gray.
3. When I press enter, Excel magically inserts all of the last names for me.
4. Next, I insert another column and type a person's first name (in this case Kermitt). After pressing enter, I go to the next cell below and beginning typing the next person's first name, Excel offers all first names in gray. I press enter and the first names populate the column.

C	D
Name	Last Name
Frogg, Kermitt	Frogg
Smith, Janis	Smith
Smith, Martha	Smith
Dewey, John	Dewey
Landing, Martin	Landing
Martin, Mary	Martin



Sometimes Flash Fill may not work for you. You may use your Fill options menu to use Flash Fill, too.

As we learned with the date fill, Excel has a *Fill Options button* that is pictured here. When you use Fill, this button will appear and provide shortcuts to select your formatting options and other options. The top item is *Copy Cells* – I use my Fill handle a lot to copy formulas and functions in Excel.





.....

Select a cell with your formula and click and drag the area to copy your formula too – this works when the areas you are copying are continuous. Using Fill in this manner is like using Copy and Paste but in one, visual step. As I wrote at the introduction one of the most powerful and productive tools of Dr. Fill is to *copying Formulas and Functions*. We will use *Dr. Fill* in our next sections of *Forming our Formulas* and *Putting the Fun back into Functions*. We use *Fill* a whole lot in future sections and exercises.

Time to learn the true power of Excel's number crunching machine and that is *Formulas and Functions*.

✍ Write your notes here: _____

F3: Forming our Formulas

*The third F of Excel is the heart and soul of Excel. Excel is Excel because of the powerful **Formulas** and **Functions** that the application uses or that you may produce. Excel is “Excel-lent” at providing very complex and very simple built-in functions for you to use or you may create your own formulas. We will build simple formulas first and then use some of the functions in our **Fourth F** of Excel. Now, we need to learn how to “form” our own formulas.*

In the beginning is the **cell**. As introduced at the start of this course, a **cell** is the intersection of a column and row, for example cell A1 is the intersection of Column A and Row 1. Generally, A1 is your “home” cell. If you are in another section of Excel and wish to return to the beginning of the worksheet press *the CTRL key and the Home key* simultaneously. We have entered text and numbers in cells and have formatted them. Now, we will insert formulas in cells and use the cells in calculations.

*Formulas and functions in cells begin with the **equal (=) sign**. A formula in a cell maybe **=2+2** or **=(8*2)+10**. However, in Excel rarely will you use a specific number in a formula. You will use various cell references for your formula to get the numeric value.*

Formulas in Excel follow the order of algebraic standards and the order of operations:

- ✓ *Items in parentheses are calculated first and work left to right,*
- ✓ *Exponents are calculated next,*
- ✓ *Multiplication and Division numbers/cells are then calculated,*
- ✓ *Finally, Addition and subtraction items are calculated.*

Excel uses common Mathematical operators. The mathematical operators are:

Mathematical Operators

Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponents	^



Symbols in Formulas and Functions

Below is a table of symbols and what they mean in formulas and functions. This will help explain and use the syntax that Excel needs in order to work properly for your formulas and functions.

<i>Symbol</i>	<i>What it means</i>
: (A Colon, such as A5:G5) =Sum(A5:G5)	Think the word "Through" or a range of contiguous cells, so the sample at left would be "A5 Through G5".
, (A Comma, such as A5, C10, D12) =Average(A5, C10, D12)	Think the word "And" or specific cells that are not contiguous, so at left would be "A5 and C10 and D12".
() Parenthesis – Cells used in the function or you may see a function without cells but have the () which is needed for the function to work, such as =TODAY() – which will put the date on the computer in your work sheet and update the date automatically for you.	Specifies the cells or range of cells needed for the Function or to separate items that need to be calculated in a specific order for your formula. All functions must have parentheses, even with no cell reference.
! (An Exclamation Point, =SUM(January:December!B5) This is a 3D reference.	Think the word Join, The Exclamation points joins or connects different workbooks, worksheets, and cells in Functions and Formulas.
= Equal Sign, =A5 + A6+B10 =Count(A5:G5)	Think "Excel I'm, giving you a formula or function." All Formulas and Functions must begin with an equal sign =.
\$ (A Dollar Sign, such as \$B\$5) Absolute and Mixed referencing. =\$B5*\$I\$5.	Think the word "Only". Only use this cell in a calculation even if the cell's formula is copied to other cells, the cell reference will not change. This is the Absolute Reference symbol.

Cell Referencing and Addressing

Aside from entering numbers for calculations, the primary power of Excel is Cell addressing and references: *Cells* have various types of *addresses and references*. I explain them below and demonstrate them in the coming pages. We will use these types of cell references throughout the course. As we build various types of formulas, we will refer back to this section.

Relative Address

Relative Address: A relative address changes the address of the cell relative to its location. If you enter a formula calculating cell B3 as follows **=B1+B2** then copy the cell to C3 the formula changes based upon the relative address **to =C1+C2**. You may quickly and easily copy formulas; we discussed this in our previous section *Excel F2 – Fills and will use this in the upcoming exercises*.

Absolute Address

Absolute Address: An absolute address of a cell does not change. The absolute address symbol is the dollar sign (\$). If you enter a formula in B3 as **=B\$1+B2** and then copy the formula to C3 the formula becomes **=B\$1+C2**. The absolute address allows you to specify your calculation using a specific cell for all calculations. As an example, if you want your expense items to increase by 3%, you would place 3% in a cell and reference this cell in your expense calculations using the \$ symbol. When you see a \$ in a formula, function, or cell reference think the word “only”, such as if you see **\$A\$1** think *“only use Cell A1 – do not change this reference even if I copy it.”* We will use this for our forecast, VLOOKUP, and other functions/formulas later

Mixed Address

Mixed Address: This uses both relative and absolute addresses. If you want the reference in a particular column or row *not to change* and another reference in a particular column or row *to change*, you would use **=\$A1+B1** in cell C1 (Column A would be used however the row would change). If you copy this cell to C2, the formula becomes **=\$A2+B2**.

3-D References

3-D References: This uses cells in other worksheets. The *exclamation point (!)* separates the worksheet name and actual cell. If you want to add January rent and February rent for a total in



March, you would enter a formula in the March worksheet as follows:

=January!B5+February!B5 (Note that your formula bar will guide you through the calculation and illustrate your position in accomplishing the formula or function.) We will use this for our summary worksheet later.

Confused? Dazed? Join the club! Plan your formulas, play around, and at the final straw (usually when you get the #VALUE, #REF, or another error for the 100th time) rely on **Help** by searching on Cell Reference by pressing the F1 key or pressing the Help button.

Since we have had an overview of formulas and cell referencing, we will begin “forming” our formulas in our *Budget*.

1. With your Budget workbook open, we will input a formula in Cell D5.
2. Click in Cell D5 and *Type (or you may click your cell reference) =B5-C5.*

5	Lease	\$1,200.00	\$ 1,050.00	=B5-C5
6	Salary	\$5,000.00	\$ 5,000.00	

This will calculate the difference between our budget and our expense.

Notice the information is in your formula bar and cell

3. Press the enter key.
4. Our calculation appears!

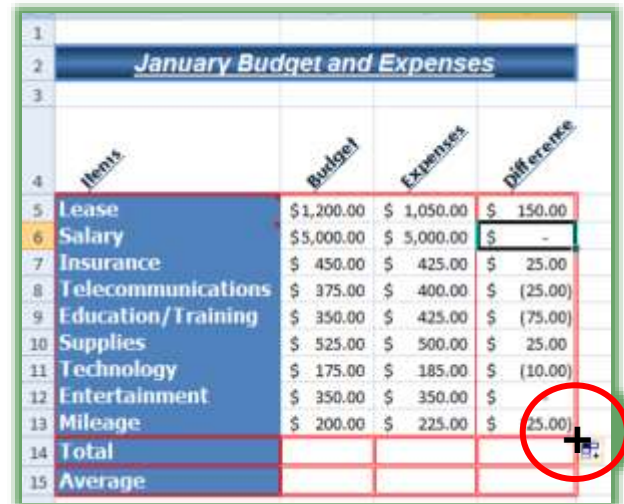
As you construct your formula, you can type your cell references instead of clicking them if you like. We could use our Fill Handle to copy this formula down through the column, but let's get practice manually inputting formulas. This time instead of typing the formula we will use the click method.

1. Click in Cell D6 and Type **=**,
2. Click Cell B6, Notice the Cell Reference of B6 appears in your D6 Cell and Formula bar,
3. Type a – dash or minus sign for subtraction,
4. Click Cell C6,
5. Press the Enter key,
6. Our calculation appears.

✍ **A Hot Tip!** Now, let's use the *Fill Handle* to copy the remaining cells.

1. Click cell D6,
2. Position your cursor over the right, bottom corner of Cell D6 when you see the plus (+) sign Click and Drag down to row 15 or if you double click Dr. Fill in cell D6 our formula will fill to Cell D15.

✍ **A Hot Tip!** Simply double click the (+) fill sign in Cell D6 and the formula will fill down automatically to the bottom of the worksheet area. Fill will go down as far as the longest list of data. We'll use this in some productive ways in the advanced part of your education. ✍



Items	Budget	Expenses	Difference
Lease	\$ 1,200.00	\$ 1,050.00	\$ 150.00
Salary	\$ 5,000.00	\$ 5,000.00	\$ -
Insurance	\$ 450.00	\$ 425.00	\$ 25.00
Telecommunications	\$ 375.00	\$ 400.00	\$ (25.00)
Education/Training	\$ 350.00	\$ 425.00	\$ (75.00)
Supplies	\$ 525.00	\$ 500.00	\$ 25.00
Technology	\$ 175.00	\$ 185.00	\$ (10.00)
Entertainment	\$ 350.00	\$ 350.00	\$ -
Mileage	\$ 200.00	\$ 225.00	\$ (25.00)
Total			
Average			

Fantastic! Excel and Dr. Fill have copied your formula and included the formatting, too.

We have calculated our differences between the budget and the expense items. We will be developing other formulas throughout the course. But we have our foundation for formulating our formulas. *Now, to put the Fun back into Functions!*

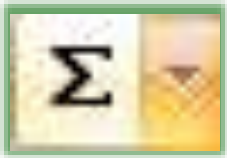
✍ Write your notes here: _____



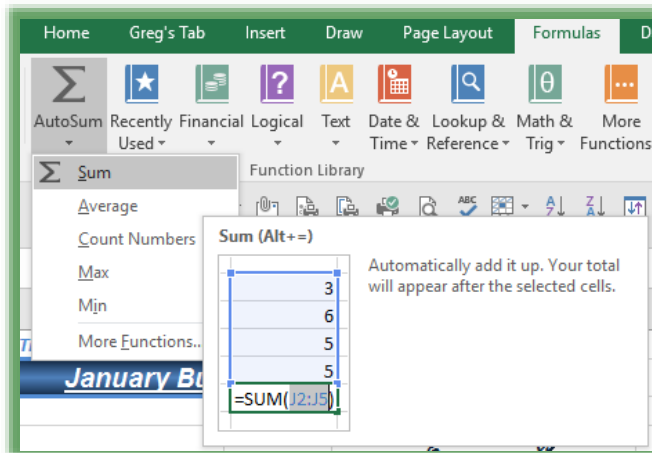
F4: Putting the Fun into “Fun”ctions

AutoSum

Now, that we can calculate cells based upon data in other cells - let's make life easy and powerful with built in functions. We will be using some of the most popular and easiest to use functions here and some of the more complex functions later in our course.



On your **Home Tab** you will see the **AutoSum** and a **Drop-down Arrow** next to it on your **Editing Group** and is pictured here. You may use the **Formulas Tab**, too picture here as well. Use the **AutoSum** key to summarize a cell range. Use the Drop-down arrow to select a common **function** and this offers you other functions that will provide assistance in creating other **functions**. If you are a Liberal Arts Major, don't freak out



by all of the functions! If you hate algebra, trigonometry, or other mathematical equations just the names of some of these functions will scare you. If you are an accountant, scientist, engineer, or numbers crunching financial analyst you will love these scientific, financial, and other mathematical wonders, you have found numbers heaven. For the numerical challenged or brave heart take a peek at the Statistical Function category and Function names. This intimidates me, but may thrill you! We will use several of the functions. First, let's use the

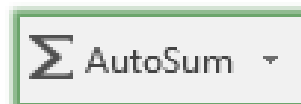
easy and powerful **AutoSum** key.

♪ ♪ Ranges of cells may be selected by typing or selecting the first cell, typing a colon (:), and typing or selecting the final cell to include in your function. We can also select a cell and click and drag for Excel to select the range for us. ♪ ♪

Sum: You may type **Sum** after entering an equal (=) sign or select the cell in which you want to **Sum** and press the **AutoSum** icon. Like mathematical magic, Excel enters the **=SUM** formula and will provide the range in which you want to sum! If the cell range is not correct, use your mouse to click and drag the correct range to Sum and press the enter/return key. The result is displayed.

Let's use the Sum function by clicking the AutoSum icon.

Here are the steps:

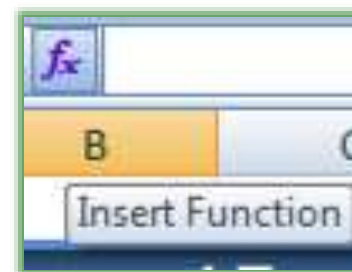


1. Click in Cell B14.
2. Click the AutoSum icon.
3. The formula: ***=SUM(B5:B13)*** should be displayed. If not, you may type the range here or click and drag to select the correct range.
4. Press Enter.
5. Your total appears for this range of cells.

Wow! Even a "Math Challenged" person like me can use this quick and easy button to perform totals and subtotals in columns or rows.

♪ You may also use the fx - Insert Function button by the Formula bar to activate the Insert Function dialogue box which we will use in a moment. The button is pictured at right. ♪

IF				
=SUM(B5:B13)				
	A	B	C	D
	Items	Budget	Expenses	Difference
4				
5	Lease	\$ 1,200.00	\$ 1,050.00	\$ 150.00
6	Salary	\$ 5,000.00	\$ 5,000.00	\$ -
7	Insurance	\$ 450.00	\$ 425.00	\$ 25.00
8	Telecommunications	\$ 375.00	\$ 400.00	\$ (25.00)
9	Education/Training	\$ 350.00	\$ 425.00	\$ (75.00)
10	Supplies	\$ 525.00	\$ 500.00	\$ 25.00
11	Travel	\$ 250.00	\$ 250.00	\$ -
12	Technology	\$ 175.00	\$ 185.00	\$ (10.00)
13	Entertainment	\$ 350.00	\$ 350.00	\$ -
14	Total	=SUM(B5:B13)		\$ 90.00



♪ Write your notes
 here: _____



Time to recall our friend the *Calculations in the status bar*. As described earlier, the status bar will quickly provide you results of **functions**, including **Average** and **Sum**.

1. **With your Budget.xlsx open,**
2. **Click Cell B5 and Drag to Cell B13;**
3. **The Calculations should show on your status bar based upon our selections earlier in the course.**

Average: \$963.89	Count: 9	Numerical Count: 9	Min: \$175.00	Max: \$5,000.00	Sum: \$8,675.00
-------------------	----------	--------------------	---------------	-----------------	-----------------

The syntax for our functions is very important. If proper syntax is not used, Excel will give you error messages or calculate incorrectly. Here are the important notes 🎵 🎵 to remember:

- ✓ *All formulas and functions begin with an equal sign =.*
- ✓ *Parentheses are used in functions to separate the function name from the range of cells or the specific cell(s) that is to be used in the calculation.*
- ✓ *The colon is used to specify a range.*
- ✓ *Other separators, such as commas, may be needed for a function, which we will use later with the PMT function.*

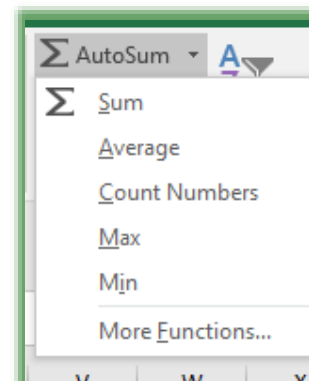
Let's enter the SUM function manually in Cell C20. Here are the steps.

1. **Click in Cell C14,**
2. **Type: =sum(c5:c13) (Notice I used lower case letters, Excel will convert the text properly for you.)**
3. **Press Enter.**
4. **Your result appears.**
5. **Click and Drag Cell C5 through C13 and verify the accuracy of the SUM function with the calculation box.**

Now, that we have mastered the AutoSum button and the SUM function, let's use the Average function. 🎵 🎵

Other Functions

Using the **Drop-down arrow** next to your **AutoSum** button will provide a list of popular functions as well as the ability to activate more complex functions using the **More Functions... item** on this menu. We will use **the More Functions. ..** later. Below are some of the other functions we will use. The **Average** and other functions use the same syntax, instead of **SUM** being in the function other text is substituted – the rest of the syntax is the same.



⊗ While I like for Excel to assume certain ranges, care must be given in examining Excel's assumption of ranges to ensure that the range is correct. Don't assume that Excel will be correct. Excel is smart, but not that smart. ⊗

Average: Provides the average of selected cells. Formatted as: **=Average(B5:B13) or =AVG(B5:B13).**

Max and Min: Provides the largest (maximum) number in a selected range of cells and the smallest (minimum) number in a selected range of cells. (Duh!)

Count Numbers: Will do just that: Count the numbers in your selected list of cells, for example, Cell B5 through B13 is 9 numbers. The function displays **as =Count(B5:B13)**

Let's use the Average Function in Cell B15 and C15. Here's how:

1. Click Cell B15,
2. Click Drop-down arrow next to the AutoSum icon,
3. Click Average,
4. Excel will "guess" B5:B14 – this is wrong!
5. Edit the function in the Formula Bar as pictured at right or in the Cell B15.

Items	Budget	Expenses	Difference
Lease	\$1,200.00	\$ 1,050.00	\$ 150.00
Salary	\$5,000.00	\$ 5,000.00	\$ -
Insurance	\$ 450.00	\$ 425.00	\$ 25.00
Telecommunications	\$ 375.00	\$ 400.00	\$ (25.00)
Education/Training	\$ 350.00	\$ 425.00	\$ (75.00)
Supplies	\$ 525.00	\$ 500.00	\$ 25.00
Technology	\$ 175.00	\$ 185.00	\$ (10.00)
Entertainment	\$ 350.00	\$ 350.00	\$ -
Mileage	\$ 200.00	\$ 225.00	\$ (25.00)
Total	\$8,625.00	\$ 8,560.00	
Average	=AVERAGE(B5:B13)		



6. Change the Cell reference from 14 to 13 – Select your number 14 and type over it with 13.
7. Excel provides a scrolling marquee around your function's cell reference and a blue border around your range for you to see the range you have entered. ☺ If you are under 50 years of age and have good eyesight you may use the blue boxes at the edges of the blue selected area to click and drag the cell range reference, too. I'm too old and too spastic with a mouse to use this method, but try it! ☺
8. Press enter.
9. Your Function is correct.
10. Using your fill handle in Cell B15, fill this Function over to Cell C15

and notice that Excel and Dr. Fill will change the reference from B5:B13 to C5:C13 – this is using Relative Cell Addressing or Referencing.

5	Lease	\$ 1,200.00	\$ 1,050.00	\$ 150.00
6	Salary	\$ 5,000.00	\$ 5,000.00	\$ -
7	Insurance	\$ 450.00	\$ 425.00	\$ 25.00
8	Telecommunications	\$ 375.00	\$ 400.00	\$ (25.00)
9	Education/Training	\$ 350.00	\$ 425.00	\$ (75.00)
10	Supplies	\$ 525.00	\$ 500.00	\$ 25.00
11	Travel	\$ 250.00	\$ 250.00	\$ -
12	Technology	\$ 175.00	\$ 185.00	\$ (10.00)
13	Entertainment	\$ 350.00	\$ 350.00	\$ -
14	Mileage	\$ 200.00	\$ 225.00	\$ (25.00)
15	Total	\$ 8,875.00	\$ 8,810.00	\$ 65.00
16	Average	\$ 887.50	\$ 881.00	\$ 6.50
17	Number of Items	=COUNT(B5:B14)		
18	Budget vs Expenses	COUNT(value1, [value2], ...)		

Now, create your own Count function by typing Number of Items in the cell below your Average Cell and then enter the function as displayed here. I have added a row for Travel which we will accomplish later so your cell range reference will be different.

=COUNTA(A5:A14)

Finally, in Cell A17 or A18 use the COUNTA function to count cells that are not empty or are not blank; this counts cells regardless of type of data in the

cells.

✂ Excel will guess your range of numbers for a Function in the following manner:

- ✓ If there are numbers to the Left of the function, Excel will assume all of the cells with numbers in them to the left.

-
- ✓ *If there are no numbers to the left, Excel will assume numbers above it. Excel will use all of the cells with numbers above the cell containing the function – much like the Average function included the wrong cell in its assumption.*
 - ✓ *Excel doesn't usually assume or guess a range if it doesn't "see" numbers to the left or above the function cell.*

So we have begun really **Excelling at Excel**. Great! We have our January budget and expenses completed! We will build February through December after we look at our final F - **Filters and Sorts**.

✍ *Write your notes here:* _____



F5: Filters and Sorts

Our *final F is Filters and Sorts*. We will learn *Filters and Sorts* using our *Track.xlsx* workbook file.

Quickly here are what filters and sorts are:

- ✓ *Filters provide a quick way of viewing certain information and can include criteria for displaying your information.*
- ✓ *Sorts allow you to order your data in various ways.*

Filter is a great way to view information or data based upon criteria and selecting items from a *drop-down list or pick list*. We will use several different types of *Filters*, such as *Text, Top 10* and *Custom* as well as using the powerful and easy drop-down list items.

Here are the ways to access Filter and Sort:

- ✓ *The Home Tab the Editing Group contain Filter and Sort Commands,*
- ✓ *The Data Tab includes a Sort & Filter Group,*
- ✓ *Use Command Buttons on your Quick Access Toolbar or your Custom Tab on the Ribbon,*
- ✓ *Right clicking and the Filter and Sort items are included in the Shortcut Menu.*

We'll use all these ways to Filter and to Sort.

- 1. First, let's open the Track.xlsx workbook,**
- 2. Click the Jan tab.**

Excel Database

This workbook and worksheets contain a *database* or *data table* of information that begins with the *Header Row* (or *Field Names*) of Order, Date, Customer, etc. The top area of the worksheet is for summary information and titles. Excel works very differently when used as a *database or table*, like this list of customers. This is *a tracking system* or *database* of information about our customer sales and orders. With your information organized in this fashion Excel works great with items such as *sorting, filtering, sub-totals, Pivot Tables*, and other items we will examine. An Excel database contains a row called *Column Headings*, I like to think of this as our *field names* for our "simple" database, all rows beneath this row contain only data or a calculation, but not sub-totals or blank rows.

🔥 **Hot Tip! Rules for a data table in Excel:**

- 1. One Row (and only one row) is your column headings/field names and should be text; rows underneath this top row are for your data.**
- 2. No blank rows or blank columns and avoid empty cells, especially in the first and last columns of your table.**
- 3. The table cannot be adjacent to other Excel rows, columns, or cells that have information or data; you should have blank rows and columns surrounding your table.**

These guidelines and rules are easy, but steadfast. 🔥

⊗ **An Important Gotcha! Remember your Excel table or database should not contain blank rows or columns; you may have blank cells but not blank rows or columns. Excel considers a blank row or column to be the end of your database or table. ⊗**

Click the Income Tab in the Track.xlsx file.

This worksheet is not a database and is not good with filtering and sorting. This worksheet is a typical type of Excel worksheet with items being totaled and sub-totaled in rows and columns. Many balance sheets, income statements, and other financial data uses this type of format. You could Sort a specific area, such as A7 – G11, but not a column or other area. Filtering would not be useful in this type of worksheet, either.

Filter through A List

🔥 *You should be in your data or table area and near your header row in order for Excel to know how to and what to filter. Otherwise, Excel will give you an error that it could not find a list; therefore, be in your table area. 🔥*

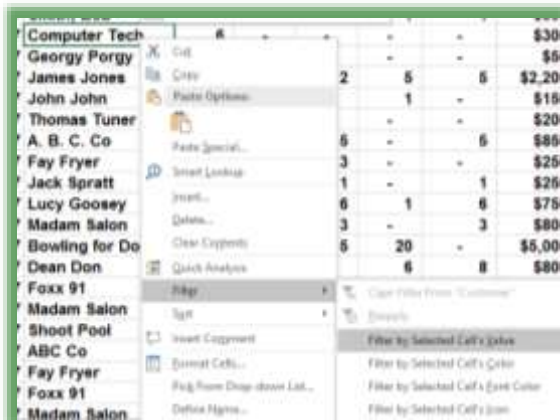
Let's get ready to Filter our database or table in many neat ways.

- 1. In your Track workbook,**
- 2. Click the JAN worksheet**
- 3. Click cell C8 – the first cell under your Customer Field name or column heading.**
- 4. Scroll to find Computer Tech and select a cell with Computer Tech.**



5. Click the AutoFilter button that we added to our Quick Access Toolbar. Quickly AND easily Excel displays only the orders for Computer Tech. The AutoFilter will filter for whatever you have selected and turn on

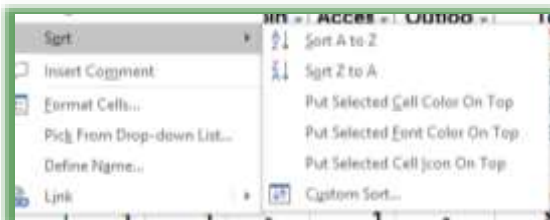
Techedutainment Services Inc.										
January, 2017										
	Revenue:	Total Service:	Word	Excel	Power Point	Access	Outlook			
	\$109,700	1,521	798	439	284	454	219			
Order	Date	Customer	Word	Excel	Power Point	Access	Outlook	Total	Paid	
11	104	1/3/2017	Computer Tech	6	-	-	-	-	\$300.00	Yes
36	129	1/10/2017	Computer Tech	2	-	1	-	1	\$200.00	No
47	140	1/17/2017	Computer Tech	2	1	-	1	-	\$200.00	No
53	146	1/20/2017	Computer Tech	2	-	1	-	1	\$200.00	Yes
63	156	1/24/2017	Computer Tech	-	10	5	10	5	\$1,500.00	Yes
76	169	1/29/2017	Computer Tech	-	-	5	-	5	\$500.00	Yes
78	171	1/30/2017	Computer Tech	-	-	1	-	1	\$100.00	Yes
81	174	1/31/2017	Computer Tech	13	8	-	8	-	\$1,450.00	Yes
86	179	1/11/2017	Computer Tech	6	-	-	-	-	\$300.00	Yes



your Filter (the arrows next to your field names or column headings), as displayed above.

Hot Tip: Filtering/Sort using the Short Cut menu. When you right click on a cell, the short cut menu contains Filter and Sort commands. Similar to AutoFilter, you may quickly filter for the data in a cell using the "Filter by

Selected Cell's Value" option. Using Sort, you may reorder your data in various ways based on the column you are in. Custom Sort allows you to sort by multiple columns, which we will learn, soon.

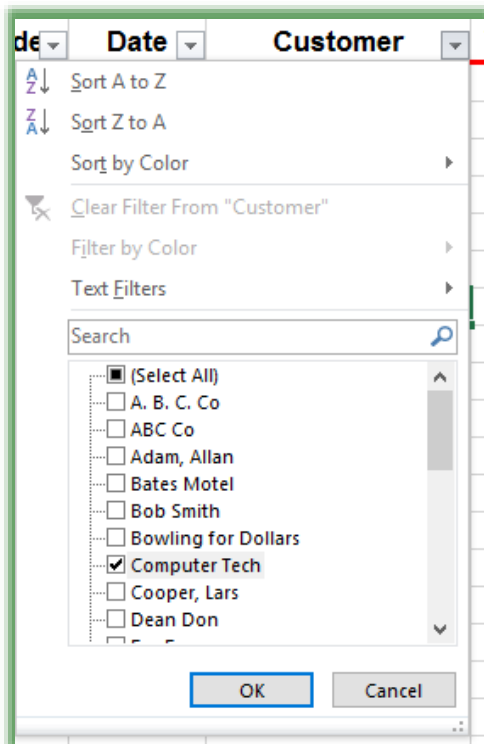
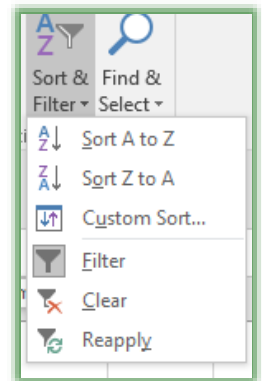


Without using the AutoFilter button or short cut menu, here is how to Filter for Computer Tech (or any other client).

1. If your filter arrows are not on, in the Home Tab,
2. Click the Sort & Filter command button,
3. Trace to Filter and Click it.

As pictured, small drop-down arrows appear in your column headers or fields.

1. In the Customer header,



2. Click the Drop-down arrow,
3. A menu of your Customer Names appears.
4. Click the Select All check mark item to deselect all of your items, next click the Computer Tech box,
5. Click OK,
6. Excel displays only Computer Tech.

Filters will display only certain information for you. The data is not deleted and when we remove the filter all rows will display again.

1. Notice the drop-down arrow has turned into a Filter button, this indicates that a filter is on for this field and a screen tip appears alerting you to the criteria for this filter.

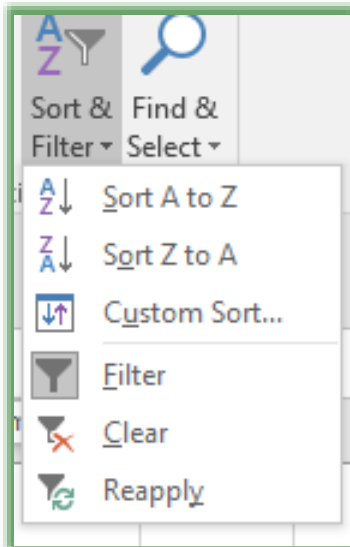
2. Click the drop-down arrow,
3. To view all of your data again without turning off the Filter, Click the Select All box – You may need to scroll up to see the All selection.

	Order	Date	Customer	Word	Excel
11	104	1/3/2008	Computer Tech	6	-
38	129	1/10/2008	Computer Tech		
41	179	1/11/2008	Computer Tech		
56	140	1/17/2008	Computer Tech	2	1

4. Click OK and all of your customers and their data appear again.
5. Click the Sort & Filter button and from the menu click the Filter item to turn off your filter.



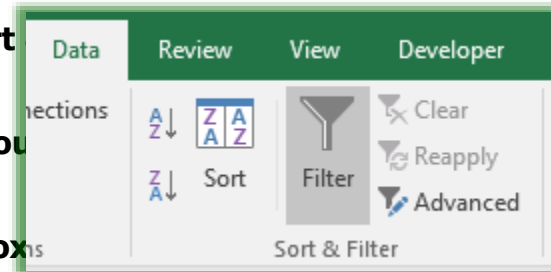
6. Notice that when you have your data filtered, the Sort & Filter button on the Home Tab activates Clear and Reapply for you. You may remove your filter by clicking the Clear button and then you are ready for additional filters. You may use the Clear button we added to your Quick Access Toolbar, too.



Write your notes here: _____

If you prefer, you could use the Data Tab to Filter, too.

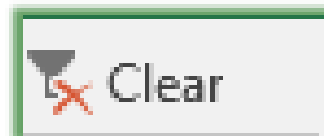
1. Click in your Customer list on the Jan tab,
2. Click Data Tab and click the Filter Button in the Sort & Filter Group,
3. Excel activates the Filter's drop-down arrows for you on the Column headers or Field Names.
4. Click the Customer arrow and click the Select All box to deactivate your selections,



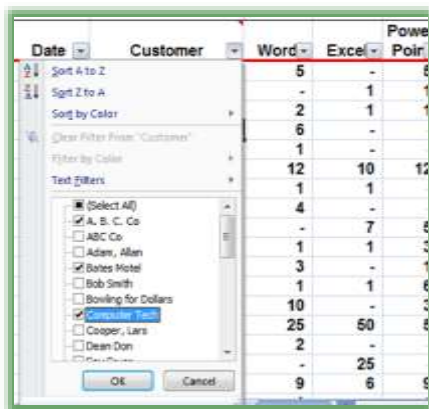
5. Click the check boxes of a few customers whose data you would like to view,

6. Click OK.

7. To view all of your data again, click the Clear button in the Sort & Filter Group of the Data tab. The Clear Filters button becomes active when you have a filter on.



8. Try several different selections for specific dates, amounts, and other filters based on your



selections.

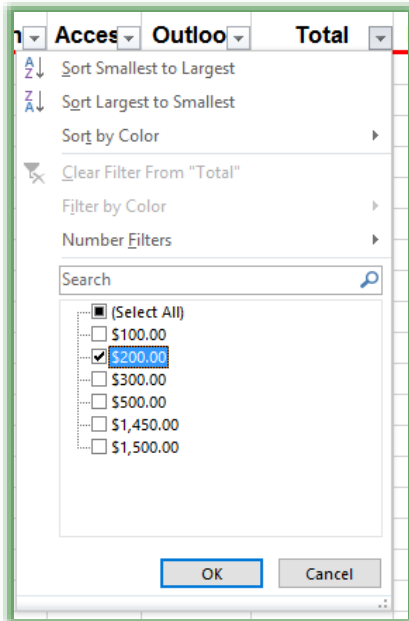
Ⓢ An Important Gotcha! Notice that you have two entries for ABC Co. Databases and data tables are very literal and must have consistency. Databases and Data tables/list won't make assumptions and spaces and periods count in names of items. Excel has a terrific feature entitled AutoComplete. (This item is found in the Excel Options and the Advanced section and the Editing Options has the AutoComplete enabled checked for you. We'll look at these options later.) If you begin typing a name that Excel can recognize from your list, Excel will display that for you to press enter to accept the entry automatically for you. For example, if you go to Cell C83 and type Com - Excel will display Computer Tech for you to accept or to continue typing your own name. Please use AutoComplete or be very consistent in your names and other items. Ⓢ



Multiple Filters

Let's filter the filter and then filter our filtered list!

1. Have **Track.xlsx** open and the **Jan** Worksheet is active,
2. Turn on your **Filters**, if you need to,
3. Click the drop-down arrow for **Customer** and from the cascading menu click the **Select All** box to deselect everything. Next, click the **Computer Tech** box to display only **Computer Tech's** information,

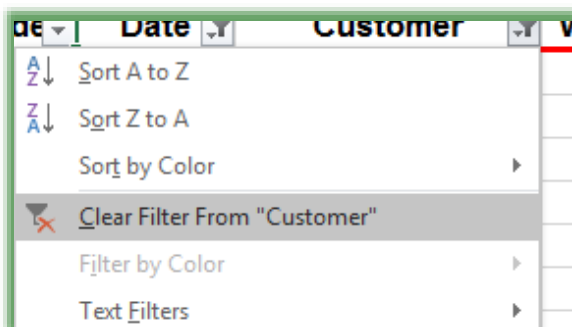


4. Next, Click the Drop-down arrow for **Total** and deselect all of the items and Click **\$200**.

5. Only **Computer Tech** totals for **\$200** appear. We have two criteria, now, for our filter.

6. Click the Drop-down arrow for **Date** and from the list choose **January 20**.

7. You now only see one row that meets the criteria of **Computer Tech**, **\$200**, and **January**. With the date notice the ways you may filter by year, month, and date.



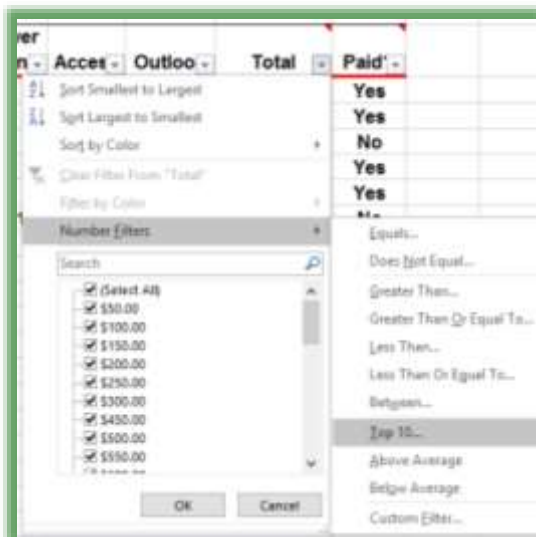
🔥 **Hot Tip! Clear a specific filter -** When you have multiple filters on you can remove specific filters easily through the drop-down arrow on a field that is filtered. The short cut menu here appears – notice the **Clear Filter From "Customer"** – Excel would remove this filter but keep the other filters for you. 🔥

Top 10

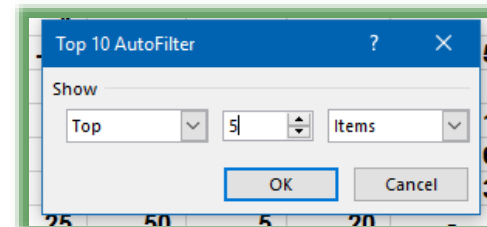
Excel's **Filter** can make **Top** and **Bottom** number lists easy. You can specify whether you want **items** or **percentages**. While the name says 10, you can specify the number you wish. For example, if wanted the top 12 revenue producing clients you could specify a total column to show only the top 12 items. If multiple numbers meet the criteria or a tie, Excel will not stop at the number you specified. For Example, if your top 12 list include 3 clients with the same billing in the 12th spot – Excel would display your top 14 instead of 12. Excel won't make the assumption about which client you would prefer to see given a duplicate.

Let's filter for our top 6 billing days for our orders.

1. With Filter active on your Jan tab of the Track.xlsx workbook,
2. Click the drop-down arrow for Total,
3. Trace to the Number Filters item,



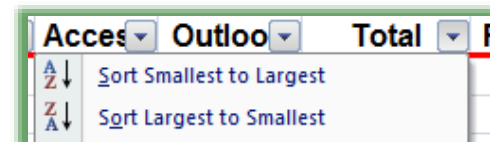
4. Click the Top 10 item from the list,
5. The Top 10 AutoFilter Dialogue box appears,
6. Ensure Top is displaying – you may also look at the Bottom or lowest items – in our case here, we could look at the 5 lowest billing accounts (losers!).



7. Next, from the number area change the 10 to a 5 using the spinner control or typing in 5,
8. Next, keep the Items displayed as pictured above you may also Show by Percent,
9. Click OK.

Great! Now let's sort the list From Largest to Smallest.

1. Using the Filter Drop-down arrow for Total and clicking Sort Largest to Smallest – Excel sorts this for us from the greatest amount to the least amount.





2. Notice that your list has more than 5 – there are multiple \$5,000 at the 5th mark so the list expands. Filters continue your list when you have duplicates.

Order	Date	Customer	Won	Exce	Power	Acces	Outbo	Total	Paid
132	1/12/2017	Lucy Goosey	30	50	-	50	-	\$5,000.00	Yes
126	1/9/2017	Bates Motel	48	30	30	2	-	\$5,950.00	No
101	1/2/2017	A. B. C. Co	100	-	5	-	5	\$5,500.00	Yes
172	1/30/2017	Foxx 91	-	5	-	100	-	\$6,250.00	Yes
114	1/6/2017	Bowling for Dollars	25	50	5	20	-	\$5,000.00	No
128	1/9/2017	Jones James	100	-	-	-	-	\$5,000.00	Yes
130	1/10/2017	Fay Fryer	-	25	-	25	25	\$5,000.00	Yes
147	1/20/2017	Moma Mia	100	-	-	-	-	\$5,000.00	Yes

✍ **Hot Tip! Filter information and AutoCalculate - Remember the Calculations in your status bar? Select your list in the Total column and notice your Sum, Average, and Count functions in the status bar, if you have these items activated. Also, with a Filter active you should notice the information at the left of the status bar displaying 8 of 88 records illustrating the number of items that meet your filter criteria and are displayed. These items will aid in further analyzing your filter information.** ✍

3. Remove your filter by clicking the Clear button on your Data Tab or Quick Access Toolbar.

✍ Write your notes here: _____

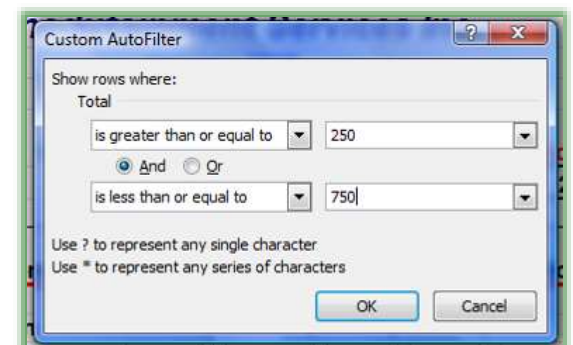
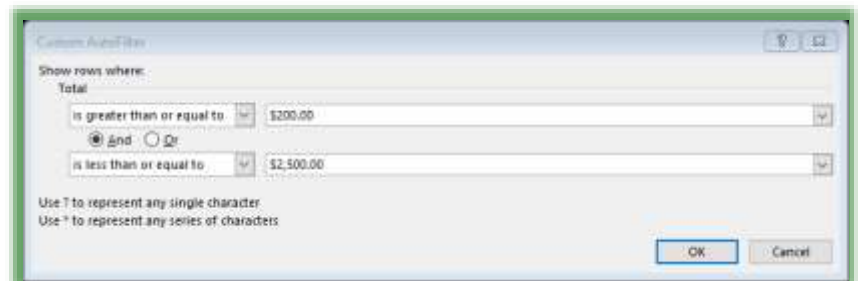
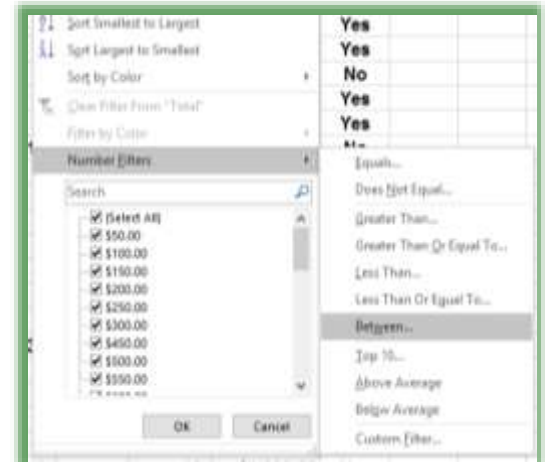
Custom Filters

You can specify a range of items for the filter to apply. You can have dates, numbers, and other items filtered with a range. We will create a filter that will display our mid-range billing clients. Depending upon the type of data that exists in a column Excel provides different type of filters. We'll look at different filters for different types of data such as Text, Numbers, and Dates.

Number Custom Filters

Let's filter for a range using the Total column.

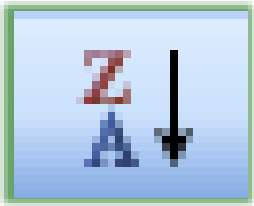
1. The *Track.xlsx* file is open and *Filter* is active,
2. Click on the drop-down arrow for *Total* notice all of the number filters such as Great than and so on.
3. Click Between. . . ,
4. The *Custom AutoFilter* dialogue box at right appears.
5. Using the dialogue box as a guide, ensure Excel provides is greater than or equal to, then press *Tab* Key or *Click* the second box,
6. Enter *250* or use the pick list from the arrow to select 250,
7. Ensure the *And* radio button is on,
8. Press the *Tab* key or *Click* in the next box,
9. Ensure "*is less than or equal to*" appears and *Tab* to or *click* the next box,
10. Enter *2500* or use your pick list by clicking the arrow,



**11. Click *OK*.**

Your range of customers appears.

Sort Descend this column using the *sort descend button* on the Data Tab or the Filter drop-down arrow for the Total Column.



Text Custom Filter

Let's use Filter for Text characters.

1. If there are any filters on your Jan tab, click the Clear Filters button in the Data Tab or on your Quick Access Toolbar to remove all filtered data.
2. Click the Filter drop-down arrow for Customer,
3. Trace to Text Filters and from the cascading menu, notice the different type of text criteria you may provide.
4. Click the Custom Filter. . . item.

5. The Custom AutoFilter Dialogue box opens.**6. We want to view two different letters for our customer names. We**

want all customer's whose name begins with an A or contains oo.

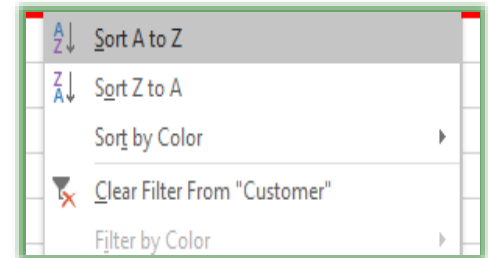
7. Using the screenshot as a guide make your choices and make sure you change the And selection to Or – the Or allows two different criteria for the same filter.

8. Click *OK*.

9. Only customer's whose name begins with an A or have "oo" somewhere in the name appears. So, we have A.B.C. Co, Adam, Allen and Lucy Goosey, Shoot Pool, and so on. Contains is a terrific filter because no matter where the character resides in the name Excel displays the name.



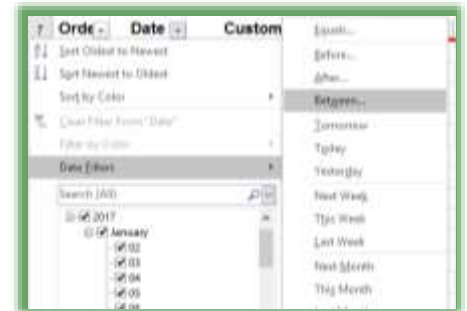
10. Click the Sort Ascending button on the Data Tab or using the Filter button by Customer and from the menu selecting Sort A to Z.
11. You may clear your filter from here or Click the Clear button on the Data Tab. Clear your filter.



Date Custom Filters

Excel has great built in Date Filters for you. Using the Date filter menu, you may filter for relative dates, such as Yesterday, Last Month, etc. or absolute dates using the check boxes for year, month, and day or using the Before, After, and Custom Filter, which we will accomplish now.

1. With your Track.xlsm workbook open and at the Jan tab ensure you have no filters on your data but do have filter active.
2. Click the Filter arrow for date and trace to Date Filters. Notice ALL of the ways to filter your date lists.
3. Click the Between. . . item and the Custom AutoFilter Dialogue Box opens.
4. Ensure that the Show rows where: Date item is set to *is after or equal to* and type or use the calendar pick list to enter **01/10/2017**,
5. Keep the *And* button selected,
6. In the second set of boxes, ensure Date item is set to *is before or equal to* and type or use the calendar button to enter **01/20/2017**,
7. Click OK.
8. Your data filters for that range of dates.
9. Click your Filter arrow for Date and from the Menu Sort Oldest to Newest.





10. Click your Clear Filters button to remove all filters.

Yes/No Filter

I like to have a yes/no column for many of my worksheets that I use for tracking items. One way I use yes/no is if a customer has paid me or not. This is a very quick and easy way to follow-up on payments. I filter for Yes to send a thank you note and I filter for No to place a follow-up e-mail or phone call.

Let's filter our list for who has not paid us, yet.

1. Click inside our data table in the *Jan* Tab of the *Track.xlsx* file,
2. With all of your records showing, *click* the drop-down arrow on the *Yes/No Column* and uncheck the *Select All* item,
3. Click the box to check *No*, or select a cell with *No* in it and click your *AutoFilter* button,
4. Click *OK*.

Now, we know who to phone or e-mail a follow-up to collect our money.

Let's determine our outstanding collections.

1. Sort your Total filtered list from Largest to Smallest.
2. Click and Drag the Items in the filtered Total Column to select them,
3. Notice your Calculation area in the status bar (I obviously need to make some collection calls!),
4. I have all of my functions on and see the results for No payment.

Order	Date	Customer	Won	Exce	Power Point	Acces	Outloo	Total	Paid
103	1/2/2017	Smith, Bob	2	1	1	1	1	\$300.00	No
106	1/3/2017	James Jones	12	10	12	5	5	\$2,200.00	No
108	1/3/2017	Thomas Tuner	4	-	-	-	-	\$200.00	No
110	1/5/2017	Fay Fryer	1	1	3	-	-	\$250.00	No
126	1/9/2017	Bates Motel	48	30	39	2	-	\$5,950.00	No
117	1/6/2017	Madam Salon	9	6	9	6	9	\$1,950.00	No
122	1/7/2017	Madam Salon	32	33	15	2	2	\$4,200.00	No
124	1/8/2017	Infomania	8	2	4	2	4	\$1,000.00	No
125	1/8/2017	Jones James	-	1	-	1	-	\$100.00	No
127	1/9/2017	Hard Hat	1	1	-	1	-	\$150.00	No
129	1/10/2017	Computer Tech	2	-	1	-	1	\$200.00	No
114	1/6/2017	Bowling for Dollars	25	50	5	20	-	\$5,000.00	No
135	1/14/2017	Foxx 91	-	2	-	2	-	\$200.00	No
138	1/16/2017	Peter Pumpkin	32	52	1	12	-	\$4,850.00	No
139	1/16/2017	USA Inc	-	1	-	1	-	\$100.00	No
140	1/17/2017	Computer Tech	2	1	-	1	-	\$200.00	No
178	1/10/2017	Smith, Bob	2	1	1	1	1	\$300.00	No
181	1/13/2017	James Jones	12	10	12	10	12	\$2,800.00	No
183	1/15/2017	Thomas Tuner	4	-	-	-	-	\$200.00	No
185	1/17/2017	Fay Fryer	1	1	3	1	3	\$450.00	No

Sorting

☹ **An Important Gotcha!** Always have a backup copy of your Excel file before performing sorting! You can use the Save As feature from your File Tab or pressing the F12 key activates the Save As dialogue box for you, too. While sorting is powerful and easy in Excel, many a new user and us old-timers are frustrated because sometimes you may need to select your entire area of data to sort; otherwise, Excel will sort only your selected information, such as a single column, and the information will be misplaced in your original data worksheet! Excel 2010 through 2016 handles this better than previous versions of Excel. If your worksheet is a database or table then you will not have to select the entire area in order to sort— simply be in the column of the field you want sorted. If your worksheet is not in a database or table format, such as a balance sheet or income statement with multiple subtotals, you will need to select an area to sort prior to sorting the data area. For example, you may not want a total or sub-total row included in a sort because your information will be distorted. In our worksheet, the Customer data listing is in a continuous list without sub-totals and totals and all rows and columns are together and have data in most cells, so our sorting will be easy. ☹

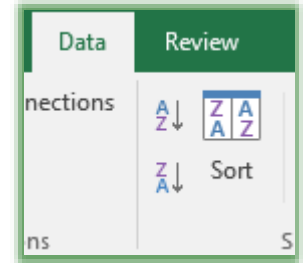
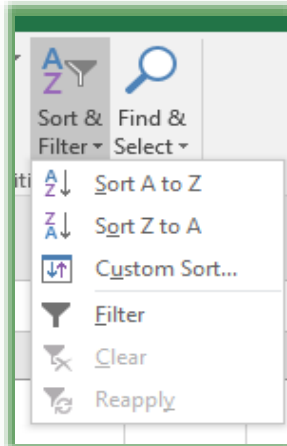
Our first step is to ensure that we have a backup file. You could sort your worksheet incorrectly and click the save button and you may never be able to return to your original sort unless there is a column that you can sort on and retain. For example, I had a customer that used Excel for tracking invoices, the customer wanted to keep the order of the spreadsheet in order of input – there was no column or field that kept track of the order of input. The client performed a sort on client name, the client accidentally saved the workbook, closed it, and when she reopened the file, the customer could not get back to the original order of input. OOPS! Now, the client uses a number field to keep the order of input and to allow a sort on this field.

Unless your worksheet contains a table with no totals or subtotals or other calculated row and no blank rows or columns, you will need to select or highlight the entire area of data on your worksheet leaving no columns or rows unselected or highlighted in our data area. We will sort two ways: First, we will use the *Sorting buttons on the Home Tab and Data Tab* as we accomplished with our filtering exercises. Then, we will use the *Custom Sort* method in order to sort by more than one field or row header. We will sort a database/table that we will not need to select the area for sorting and then we will sort an income sheet that we will need to select an area in order to sort.



Sorting Command Buttons: A Single Sort

Here are the steps for sorting using the Command buttons on the Home Tab and Data Tab. You may use your sorting buttons that we added to our Quick Access Toolbar and you may use the Shortcut menu by right clicking, too.



1. First, in our *Track.xlsx* file and *Jan* Tab,
2. Click cell C8 or any cell with a name under the Customer heading,
3. Click the Sort & Filter button and Click the Sort A to Z item.
4. You may use the Data Tab and the Sort Ascending button in the Sort & Filter Group.
5. Excel sorts your table by customer name in alphabetical order.

✍ A Hot Tip! Notice that Excel changes your sort to A to Z and Z to A for Text data, Newest to Oldest and Oldest to Newest for Date data, and Largest to Smallest and Smallest to Largest for Numerical data! So, this is Sorting for "Dummies" and Liberal Arts people like me. ✍

✍ This worked well because the area we are using is a tracking system type of worksheet. As I related earlier, there will be times when you will need to select the area you want sorted and we will accomplish this in our next section. ✍

Click the Undo button on your Quick Access Toolbar to remove the sort.

Here's one of my favorite buttons in the Office suite the *Undo* icon. It should be called the Greg Creech key because I make so many mistakes and say Oops! a lot. Clicking this key can get you out of a mess. Since we clicked it, our sort is removed.

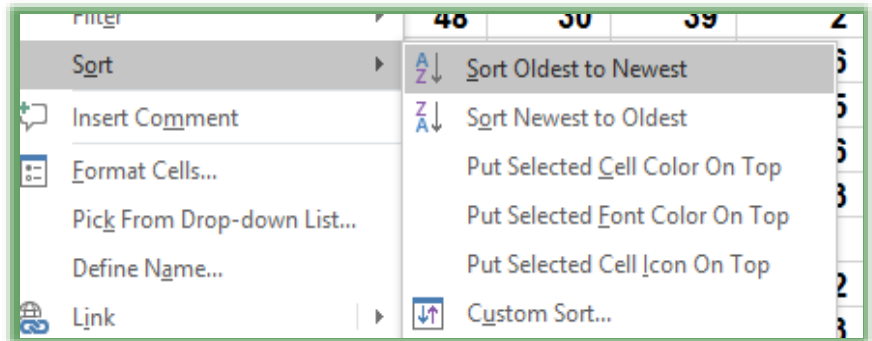
.....

Let's sort in Descending order or from Greatest to Least as we have previously accomplished.

1. Click in Cell G8 we want to view our Totals from Largest to Smallest.
2. Click the Z-A button on the Data Tab or the Largest to Smallest button. Excel sorts our information for the largest to the smallest amounts.

Let's sort in Date order or from Oldest to Newest using the right click method.

1. Right click in the Date column,
2. From the shortcut menu, trace to Sort and from the Cascading menu choose Oldest to Newest as displayed here. Excel sorts your date in chronological order.



✍ Write your notes here: _____



Custom Sort: Sorting by Multiple Items

Let's use the Custom Sort method of sorting to sort by more than one column. Although the Sorting Command buttons are quicker, they are designed for sorting by only one item. The *Custom Sort* method of sorting allows you to have a primary sort and other sorts.

Here are the steps to sort using the Custom Sorting:

1. First, be in our *Track.xlsx* file and *Jan* Tab,

2. Click inside your data table,

3. Click on your Data Tab and Click the Sort button and your Sort Pane opens. You may use the Custom Sort button on your Quick Access Toolbar that we added earlier, too.

4. Click the Drop-down arrow for our first sort. Notice you can select different areas to sort by such as Order, Date, etc. Also, the "My data has headers" is checked. The Header row is important in the ease of sorting; if there were no header row Excel would have Column A, Column B, etc. for you choose – Descriptive names are

easier for me to relate rather than Column A, Column B. I think of these column headers as field names of my database.

5. Click Total,

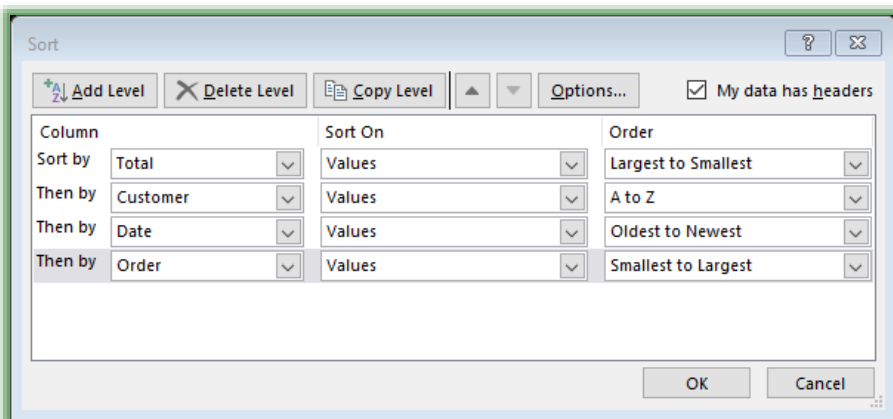
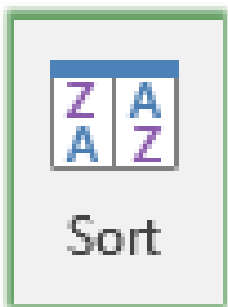
6. Ensure Sort On has values in it. Notice that you may sort by color and icons, too.

7. Order should be Largest to Smallest.

8. Click the Add Level Button,

9. In the Then by box select Customer, keep sort on Values, and Order should be A to Z.

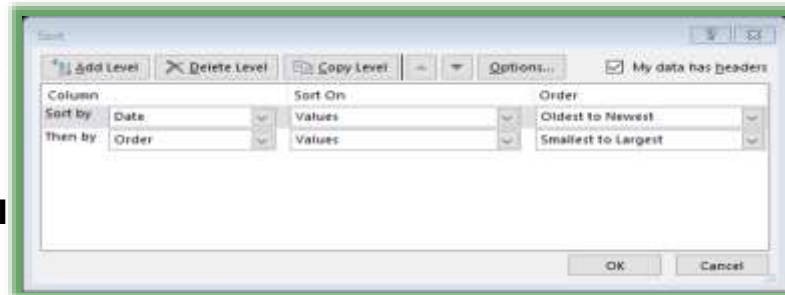
10. Use the screen above to add sorts for Date and Order.



11. When complete, click Ok.

Scroll through and notice how your sort works when you see duplicates in the total field. There are records or rows that meet all of the criteria. Let's Sort the worksheet by Order and then by Date.

- 1. Activate your Sort Dialogue box by clicking the Sort command button on the Data Tab,**
- 2. Click in the Sort by box for Total and then click the Delete Level button to remove the primary sort,**
- 3. Next, click the Delete Level button to delete the Sort by for Customer,**
- 4. Click OK.**



Now, let's select an area to sort.

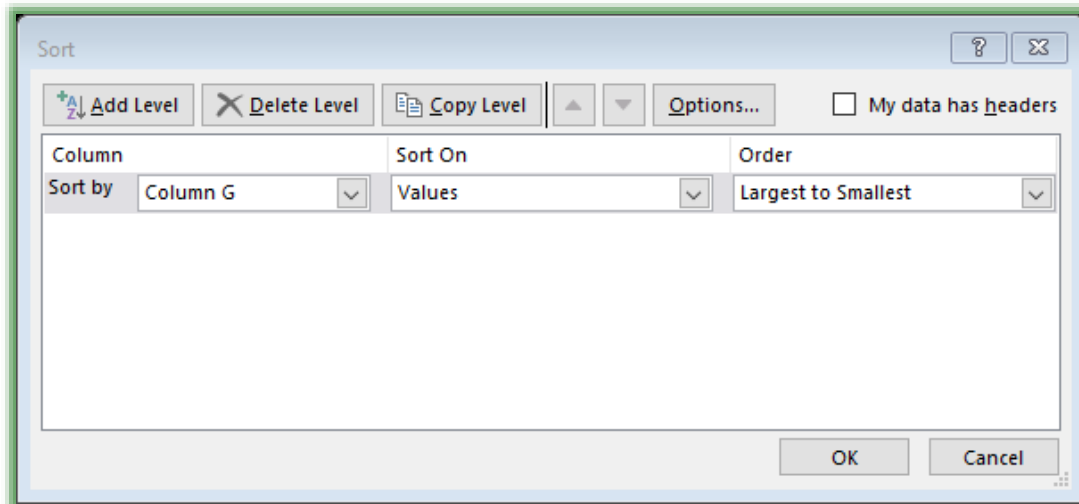
- 1. In the Track.xlsx workbook, click the Income Tab,**
- 2. This worksheet would not be good to sort without selecting the correct area first. There are no headers or field names and there are breaks in the data for calculations – so this is not a database, and we must select areas to sort. We have blank columns B and F.**
- 3. Select the Expenses area A7 through G12.**
- 4. Click the Sort Ascending button and Excel sorts your information by the Expense name, since our focus or cursor was in this column. Excel will sort based on the "white" cell as pictured here. You may press tab and the focus leaves this cell and then you can sort by the next column using the buttons, but having the area A7 through G12 is the important part of this.**

	January	February	March	Year to Date
Revenue	\$109,700.00	\$101,100.00	\$106,150.00	\$316,950.00
Cost	\$21,262.00	\$19,671.00	\$20,071.00	\$60,994.00
Net Revenue	\$88,438.00	\$81,429.00	\$86,079.00	\$256,056.00
Utilities	\$322.00	\$387.00	\$293.00	\$1,002.00
Marketing	\$590.00	\$1,200.00	\$900.00	\$2,690.00
Auto/Travel Expense	\$894.00	\$1,315.00	\$634.00	\$2,843.00
Rent	\$1,280.00	\$1,250.00	\$1,250.00	\$3,780.00
Insurance	\$2,750.00	\$2,750.00	\$2,750.00	\$8,250.00
Salary	\$25,000.00	\$25,305.00	\$26,000.00	\$76,305.00
Total Expenses	\$30,806.00	\$30,107.00	\$31,827.00	\$92,740.00
Net Income	\$57,632.00	\$51,322.00	\$54,252.00	\$163,206.00



5. Tab to Column G,

6. Click the Custom Sort button and from the Sort Pane Sort by Column G on Values and Order from Largest to Smallest.



Excel sorts your Year-to-Date expenses in descending order or Largest to Smallest for you.

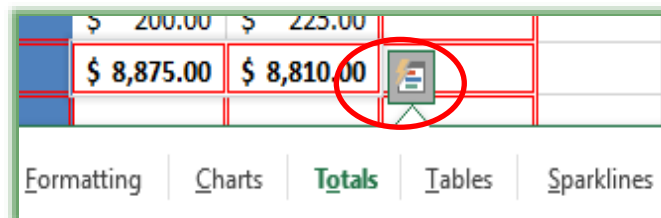
Congratulations! You have survived and thrived through the Five F's of Excel: Formatting, Fills, Formulas, Functions, and Filters/Sorts. We will continue using these Five F's throughout our course and expand on all of our 5Fs. Now, let's turn our attention to some Excel efficiencies and to creating a multiple worksheet file.

Write your notes here: _____

Quick Analysis

Excel 2013/2016 – New
Quick Analysis Button

When you select an area in Excel, Excel 2013 and 2016 provide the *Quick Analysis* button. From this button and the menu, you may use tabs for *Formatting*, *Charts*, *Totals*, *Tables*, *Sparklines*,



Tables and Sparklines.

Hot Tip! Always select the area of your worksheet first and then use the Quick Analysis menu for your choice.

1. Using my Budget workbook, I select cells B5 through C14 and the Quick Analysis button displays.
2. I click the button and from the menu click the Totals Tab and then the Sum function. Excel inserts the function for me in cells B15 and C15.
3. If I try to use another function, Excel warns me that I may overwrite existing information. With my area selected, I'm using Sparklines for my Difference column.

You may use these tabs and buttons to create Conditional Formatting, Charts, and Tables using this neat, new Excel Button. We will learn Charts, Conditional Formatting, and Format as Table later and we will use the Quick Analysis button.





Worksheet Organization

Worksheet Efficiencies and Navigation

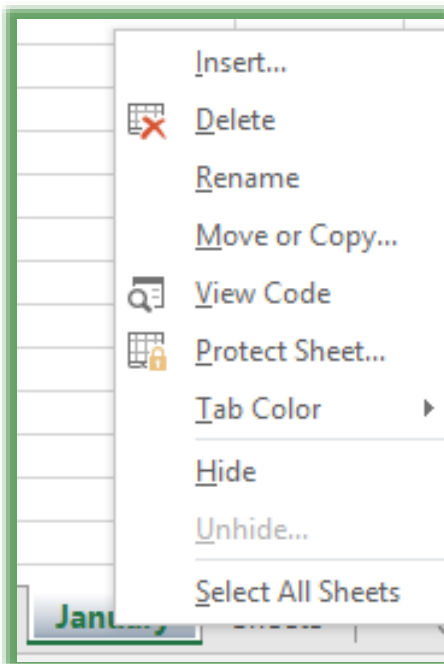
Worksheet Tabs and Shortcuts

Open or return to your **Budget workbook**. January is complete. Now, we need February, March and so on. Are we going to build each month separately? And we want an Annual spreadsheet that we can sum each month for each Budget and Expense item for the year. Are we going to build an Annual worksheet and input all of these figures? **No way!**



➤ **First, to Insert A New Worksheet you can click the New Worksheet tab at the end of your worksheets and Excel promptly creates a new sheet for you.** ➤

We will use the efficient and handy method of right clicking or secondary mouse clicking on a worksheet tab at the bottom of the screen. ***When you Right Click or use your secondary mouse button to click a worksheet name a shortcut menu appears.*** Here is a synopsis of each item on the menu.



Insert: Will insert an object. A dialogue box will appear with a worksheet selected as the default, but you may insert a chart or other object. If you select worksheet, a new, blank worksheet appears with the next worksheet number.

Delete: Will delete the worksheet or selected worksheets in which you are working and the one in which you right clicked to get the shortcut menu. You can select multiple worksheets to delete. Excel prompts you to make sure that you want to delete this worksheet. BE CAREFUL! When the dialogue box says permanently, it means permanent, as in forever, AND THE UNDO WON'T WORK.

Rename: Will allow you to rename your worksheet from Sheet 1 or Sheet 2 to a more meaningful name for your data. As we have accomplished, I simply double click the tab I want to rename to give the worksheet a new name.

⊗ **Important Gotcha! Worksheets cannot use special characters and the same name cannot be used twice, so no duplicate worksheet names. Excel limits you to 31 characters in a worksheet name.** ⊗

Move or Copy: Will move or copy your sheets. (Although clicking and dragging your sheet(s) to move them is easier with only a few sheets visible) or to create a duplicate of your selected worksheet(s) through pressing the CTRL key as you click and drag the sheet(s). We will copy our worksheet(s) using the menu method and the CTRL + Click and drag method. This menu allows you to copy worksheets within the same workbook or to copy worksheets to another open workbook or to a new workbook.

View Code: Will take you to the Visual Basic programming area and allow you to program in Visual Basic for your worksheet. WE WILL NOT BE TOUCHING THIS ITEM; this is beyond the scope of this section – we will look at this with Macros .

Protect Sheet: Will activate the Protect Sheet box for you to set a password and decide what users may or may not accomplish with a protected worksheet. We will use this later in our course.

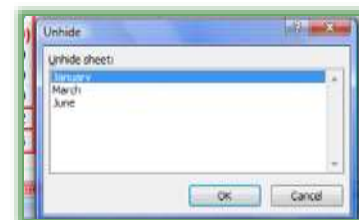
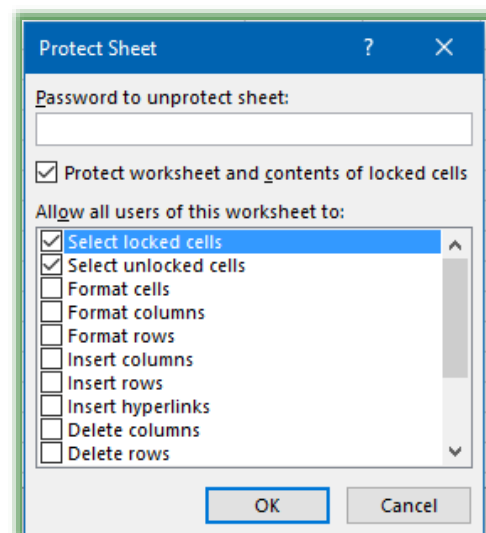
Tab Color: Allows you to receive a color palette and select a color for your worksheets. This permits you to color code your sheets.

Hide/Unhide Worksheet You may hide a worksheet by right clicking on the worksheet name and choose hide from the shortcut menu. You may unhide a worksheet by right clicking on a sheet and choose Unhide and the box at right appears for you to choose the Worksheet to Unhide. I had previously hidden January, March, and June.

Select All Sheets: Will select all sheets for you to format, change, and make other GLOBAL edits to your worksheets with one action. Use this with care.

We will use the Shift Click method to select contiguous worksheets in which we want to work or make a global change on all of our worksheets. We will use CTRL + Click to select noncontiguous worksheets that we may want to change or to print.

✍ **Write your notes here:** _____





✂ ✂ Important helpful tips for worksheet organization. ✂ ✂

- ✓ *You can click and drag a worksheet to move it. Click the worksheet tab and a piece of paper will appear and a dark arrow will illustrate where you are moving your worksheet.*
- ✓ *✂ **A Hot Tip!** You can copy a worksheet and move it at the same time by pressing your CTRL key, Click and Dragging the worksheet tab you want to move (with your CTRL key continually pressed) – A sheet with a plus sign will appear and a dark arrow will illustrate where you are copying your worksheet. Release the mouse button and CTRL key and a new copied worksheet appears ready for you to rename. If you select a group of sheets to copy, ALWAYS CLICK THE SELECTED OR ACTIVE WORKSHEET TO CLICK AND DRAG TO COPY, otherwise Excel won't give you the copy button nor will it copy your sheets.*
- ✓ *You may rename a sheet by double clicking directly on the Sheet name; this will highlight the sheet name ready for you to type a new name.*
- ✓ *You may select continuous sheets by clicking one sheet, pressing the Shift key and keeping it pressed, click another sheet and the sheets in between select for you.*
- ✓ *Selected sheets appear in gradient white. Non-selected sheets appear in blue, grey (depending upon your Windows color scheme) or a color of your choice. When you have sheets selected the word Group appears on your title bar with your Excel file name.*
- ✓ *You may select sheets that are not continuous using the same method as above, EXCEPT Press the CTRL key and Click the Sheets you want to select.*

We will use many of the methods described above. We have our first month completed and will copy this sheet to produce our budgets and expenses through December.

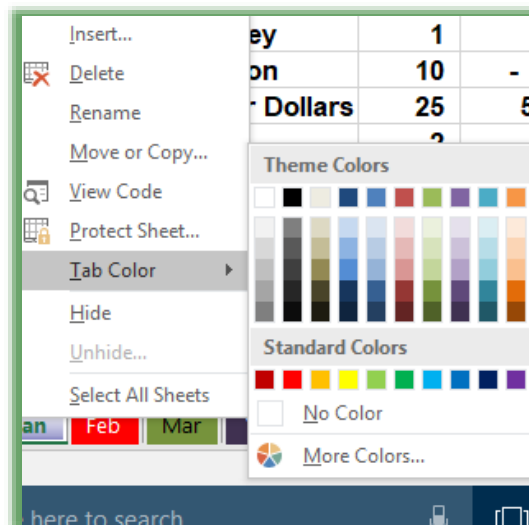
Here are the steps to copy your worksheets and create a budget/expense worksheet for each month. If you haven't, let's rename Sheet 1 to January.

- 1. Have your Budget workbook file open on your budget/expense tab for January.**
- 2. First, if we haven't already, we need to rename Sheet 1 to January.**

3. Double click Sheet 1's name and the name will highlight for you to type over it – type – January. Or, you may rename Sheet 1 to January by right clicking the Sheet1 tab and selecting the Rename option on the shortcut menu– Type January.

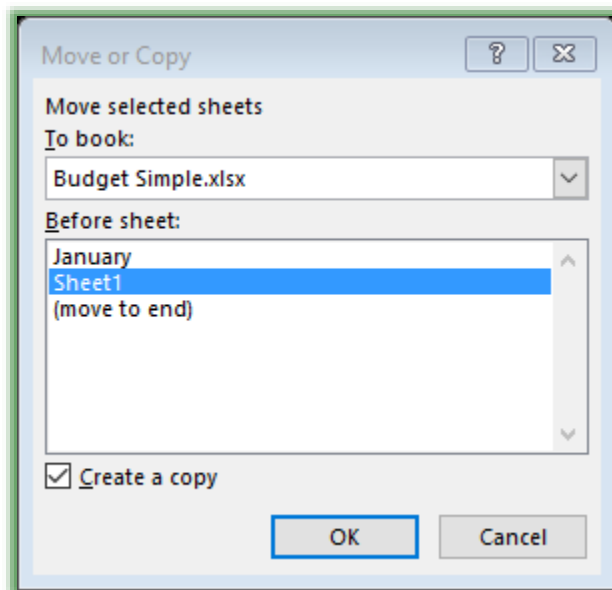
Let's change the Tab Color for January.

1. Right Click on the January Worksheet tab and from the short cut menu trace to Tab Color and from the cascading menu select a color for January.



Let's copy January.

1. Right click on the January tab, the short cut menu appears, and click Move or Copy.
2. The Move or Copy dialog box appears as shown here. Notice the To Book section where you may use the arrow to choose open books or a new book to move or copy your active and/or selected worksheet(s). I find this very helpful.
3. Don't change the To book box – keep this copy in your Budget workbook. Select Sheet1 (or you may have another Sheet number) in the Before sheet box and click/select the Create a copy option. **Very Important: There are times I wish that Microsoft had made the Create a Copy dialogue box checked by default. But, alas, we must check it.**





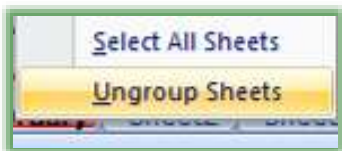
4. Click OK and Excel creates a duplicate of January and names the worksheet January (2)
5. Now, rename the January (2) worksheet to February by Double clicking the January (2) tab and typing February.

Let's change the Title in our worksheet in Cell A2 from January to February.

Click Cell A2 in your February sheet and using the Formula Bar or within the cell, select the word January and edit it to February.

Let's copy more than one worksheet, we will copy January and February to make March and April at one time.

1. Click the January tab, press the shift key and keep it pressed as you click the February tab. These sheets will turn gradient color alerting you that they are grouped and the word group will appear by your Excel workbook name on the title bar. You may release your Shift key and release your left mouse button; the worksheets remain grouped.
2. With your January and February worksheets selected, right click on your January worksheet tab and choose the Move or Copy item; the Move or Copy dialog box appears,
3. Select Sheet1 in the Before sheet section and ensure Create a copy is selected with a check mark,
4. Click OK.
5. Now, you have a January (2) and February (2) worksheet.
6. If you need to ungroup your sheets, right Click on any sheet tab and your shortcut menu will have Ungroup Sheets as your bottom item, now. The Ungroup Sheets item will not appear unless you have 2 or more sheets grouped.
7. Rename them to March and April by double clicking them or using the Shortcut menu method – whichever you prefer.
8. Change your headings in Cell A2 to the correct month.

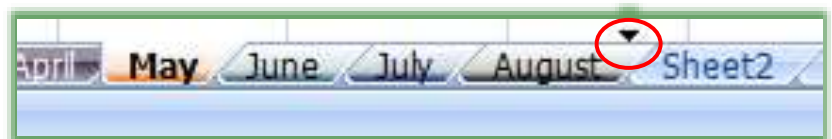


Now let's create May – August.

1. Select January through April worksheets by clicking January – pressing your shift key and clicking the April worksheet. Your worksheets' tabs should turn gradient colored and are selected for you. Release your shift key and left mouse button. Your January through April sheets select for you.
2. Next, right click on the January worksheet tab, click the Move or Copy item, and the Move or Copy dialog box appears. Select Sheet2 in the Before sheet section and ensure Create a copy is selected with a check mark,
3. Click OK.
4. You should have January (2), February (2), March (2) and April (2) worksheets. Rename these worksheets to May, June, July, and August. Don't forget to change your headings in Cell A2.

Let's use the CTRL Key and Click and Drag method of copying worksheets. This requires good mouse skills and is a great time saver for quickly copying worksheets.

1. Click the May Worksheet,
2. Press your shift button and with your shift button pressed click the August worksheet,
3. The May through August worksheets should appear in white and are grouped. Release your Shift button and your mouse button – the sheets remain selected and grouped.
4. Press your CTRL (Control Key) button on your keyboard and keep it pressed,
5. Click May or whichever sheet is selected and active,
6. Your cursor changes to sheets of paper with a plus (+) sign. Keep your finger pressing the CTRL Key and one finger pressing your left mouse button.
7. Now, move your cursor/mouse over to the right – as you move, notice a dark arrow that displays where you are copying the sheets.





.....

You are continually keeping your Control key pressed with your left mouse button.

8. When your cursor displayed as the sheets of paper with a plus sign are between the August and Sheet 2 tabs, release your mouse button and then release your CTRL key.

☹ An Important Gotcha! Release your Mouse button first to copy your sheets, if you release the CTRL key before your mouse button, your sheets will move not copy! ☹

1. You should have May (2), June (2), July (2), and August (2) worksheets.
2. Rename them to September, October, November, and December.
3. Also, Change cell A2, your heading cell, on each worksheet to the appropriate month.
4. Make sure you have the same data except for the month and worksheet name on each worksheet.
5. Save your workbook.

🔥 A Few Hot Tips - Reminders!

1. You can scroll through your multiple worksheets quickly by using the CTRL (Control) Key and pressing the PGUP and PGDN keys.
2. You can right click on your Navigation buttons and view your sheet names January through December to quickly go to or activate a sheet.
3. Before you copy your worksheets and use a worksheet to sum the data. All worksheets must be identical! The following work that we will do will not be accurate if Lease expense and budget are not in the same cells on every worksheet. Consistency is necessary in creating a worksheet that sums multiple worksheets.

So, we have January through December's budget. Time for our annual budget.

✍ Write your notes here: _____



Isn't that Special? The Copy Cat, Clear, Paste Preview and Paste Special

In our last exercise, we copied a part of a worksheet and we have copied worksheets individually and through grouping. There are four ways to cut (move) and to copy (duplicate) a cell or range of cells. Here are the ways of moving or duplicating information in the Office Suite, including Excel. The first step is to select the range of cells, rows, columns, etc. that you want to move or to copy. We have already copied worksheets and a range of cells, so we will review and perhaps give you new ways in which to use copy/move and paste. We will examine the

Paste Preview feature that provides a live preview of your paste before you click to paste.

♪ No matter the method of moving or copying information that you prefer the procedure ***always begins with selecting or highlighting your cells, rows, columns, objects, worksheets, etc.*** Then using the method you want to use to move or copy information. Indicating with your cursor where you want the information moved or copied to. Finally, you choose your paste method to move or copy the information. ♪

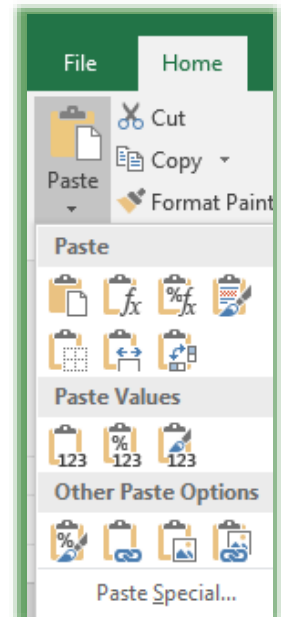
The four methods of cut (move) or copy are:

- ✓ ***Home Tab Command Buttons (or Cut/Copy buttons you may have added to your Quick Access Toolbar or custom tab),***
- ✓ ***Keyboard Shortcut (CTRL + C to copy, CTRL + X to cut, and CTRL + V to paste),***
- ✓ ***Shortcut Menu (Secondary Mouse Button or Right Clicking),***
- ✓ ***Click and Drag to move or CTRL + Click and Drag to copy.***



Home Tab Command Buttons

1. Select or Highlight your item(s) or cells,
2. Click the Cut (Scissors to move) OR the Copy (Pieces of paper to copy) button,
3. Click your cursor or insertion point where you want the item(s) placed,
4. Click the Paste (Clipboard) button. You receive the Paste Preview options to select the type of paste you wish. Excel provides a live preview of your paste as you hover over the items for pasting. We will examine these in more detail in our next section.

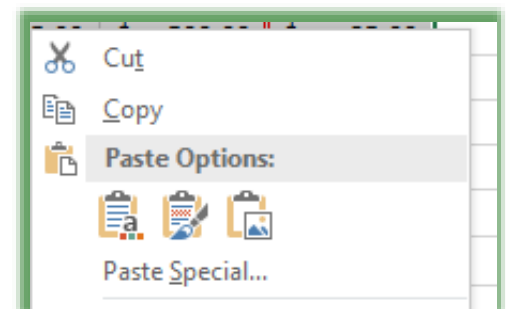


Keyboard Shortcut

1. Select or Highlight your item(s), rows, columns, and/or cells,
2. Press your CTRL key and X key on your keyboard to Cut (Move) or your CTRL key and C key on your keyboard to Copy,
3. Click your cursor or insertion point in the cell where you want the item(s) to begin,
4. Press your CTRL key and V key on your keyboard to Paste the item(s) or text.

Right Click or Shortcut Menu

1. Select or Highlight your item(s) or cells,
2. Within the selected item(s) area you want to Move or Copy – Right Click (or Secondary Mouse Click),
3. Click Cut OR Copy on the Shortcut Menu,
4. Right or Secondary Mouse Click where you want the item(s) placed,
5. Click one of your Paste Options as displayed here.



Click and Drag

(Best for small amounts of data that will not be moved or copied to another worksheet or distant locations)

- 1. Select or Highlight your item(s).**
- 2. Click the selected text, and position your cursor on the border of your selection and a four-headed arrow appears for you to click drag it where you want to move it and release the mouse button – the text or item(s) is moved.**
- 3. To Copy the Selected Text or Item(s), press the CTRL key on your keyboard as you drag the text or Items to the location. Release your mouse button and then release the CTRL key.**

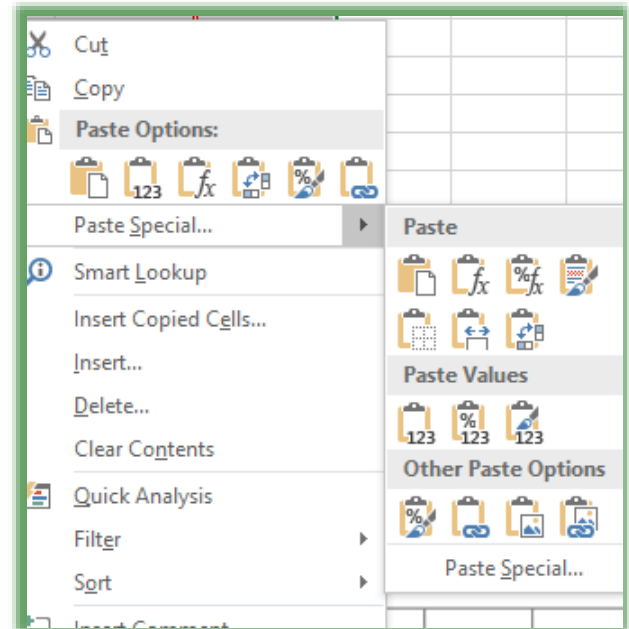
♪ Care should be taken in click and drag – many a worksheet and cells have been changed erroneously because we click and drag without knowing it at times. But, this is the quick and easiest way to move small amounts of data in close proximity of where you want the data moved or copied. ♪

♪ Write your notes here: _____



Paste Preview and Paste Special

Trivia – According to Microsoft studies, the number one reason people used the ever popular Undo button was due to an improper paste. So, Microsoft's Office 2010/2013/2016 now provides **Paste Preview**, we may view the paste effects before we actual paste. I have noticed that while I still rely upon the Undo button for many reasons, I don't use it as much for pasting. **Excel's Paste button on the Home Tab** contains a nifty drop-down arrow with the ability to paste only certain items you may want moved or copied, such a values, formulas, or transpose. You can activate the **Paste Special dialogue box** from the **Paste button** or you can right click and from the short cut menu choose **Paste special**. The screen that

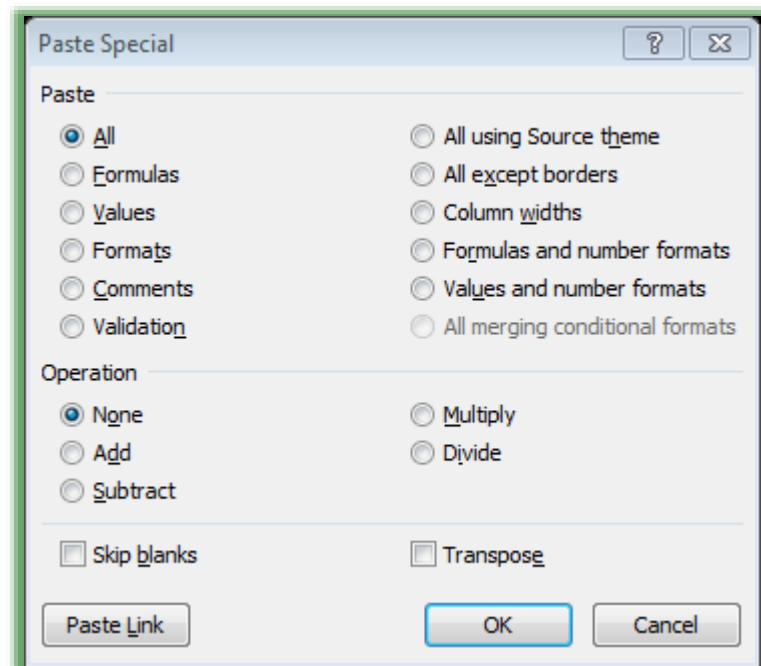


will appear if you **click Paste Special** is pictured here.

The default is **All** under Paste section; however, you may only want to paste the **Formulas**, **Values**, or **Formats**. **Paste Formats** is similar to using the **Format Painter**.

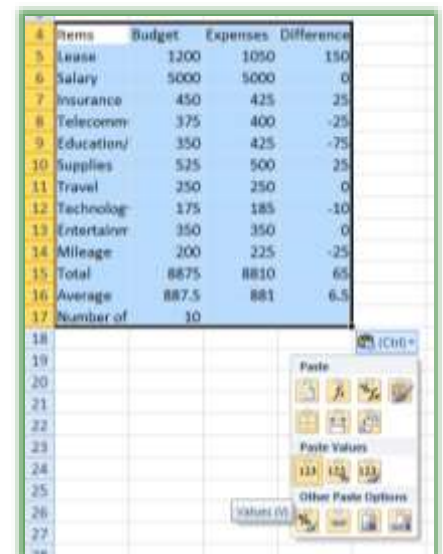
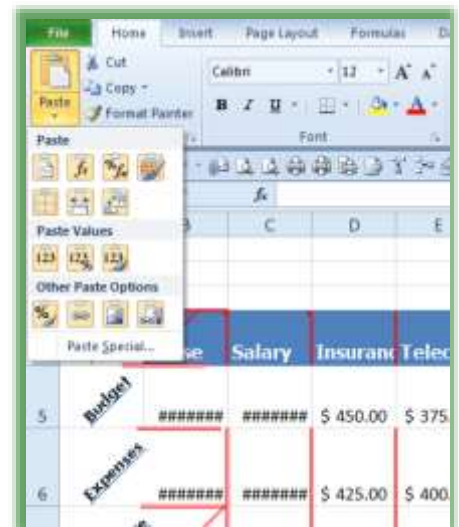
Notice you can paste mathematical operations as well.

Transpose is another widely used item. This will take selected rows or Horizontal cells and paste them into columns. Or transpose will take columns and will paste them as rows. This is great if you decide your worksheet is better suited for horizontal layouts if you are using columns or vertical cells. Or if you decide to turn your worksheet from a vertical layout to a horizontal layout transpose makes it easy.



Let's use Paste Preview with Paste Options and Paste Special to change columns to rows and to paste only Values of a formula.

1. In your Budget workbook, click the January worksheet,
2. Select cells A4 through D17,
3. Click your Copy button,
4. Click your New Workbook button or CTRL+N keys,
5. In your new workbook, click Cell A4,
6. Click your Paste Command button's drop-down arrow,
7. From the drop-down list, hover over the items to view your changes as Excel will use Live Preview to provide a sneak peek of your various Paste Options. Click Transpose.
8. Your Rows are now Columns and your Columns are now Rows
9. Click Sheet 2,
10. Click Cell A4,
11. Click your Paste Icon's drop-down arrow,
12. From the drop-down list, view the Value options and click Values,
13. Notice that your formatting disappears and notice the Paste Options button at the end of your copied area. You may re-paste after you pasted!
14. Click the drop-down arrow on the Paste button here and notice your paste options – I clicked the Values and Number Formatting item.
15. The Paste Options button will change depending what you are pasting and where you are placing your information.





- 16. From your Paste button, choose whether you want to keep your Formatting.**
- 17. Click in your Difference column, notice the formula is not present (such as =B5-C5) only the Value.**
- 18. Your Total and Average functions are not present in this worksheet, either.**

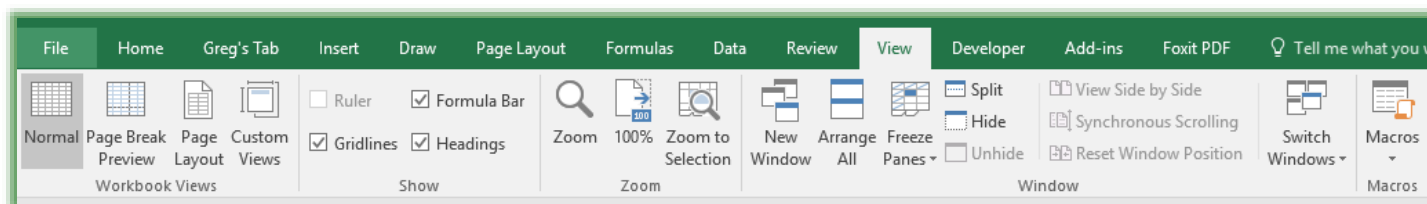
You may close this workbook without saving it.

Write your notes here: _____



It's A Setup! Views, Page Layout and Printing

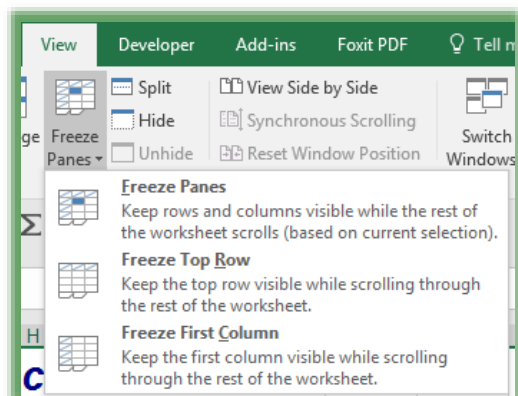
As you work on your worksheets and especially after your worksheets and workbooks are complete, you'll want to view them in different ways and to print them. Excel has a new view, the **Page Layout View**, and an accompanying **Page Layout Tab**. Excel has a **View tab** as well to help with looking at certain parts of a worksheet or switching between workbooks. The **View tab** displays below and is particularly helpful for large worksheets. You can quickly turn on and off important items on your Excel worksheets, such as **gridlines**, the **formula bar**, and **headings**. Your **Zoom** is here too.



First, let's look at the **Window Group** and **Freezing** and **Splitting** worksheets.

Freeze those panes Or I have a Splitting Pane

If you need to continually view your headings, titles, or other data, as you scroll through your worksheet, you can **Freeze** your panes. If you need to view different sections of your worksheet, you can **split** your panes. **Splitting** your rows or columns into panes is similar to having your worksheet presented in two or four windows. **Freeze** keeps the columns or rows in view at all times. The **Freeze Pane Command Button on the View Tab and the Window Group** turns the



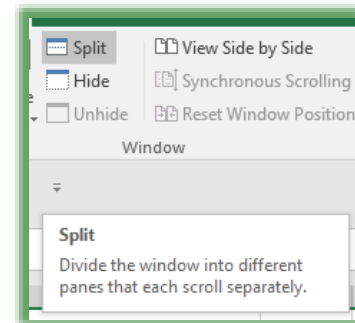
Freeze on or off where your cursor is or which cell, row, or column you have selected. The **Freeze Pane, Split, and other command buttons in the Window Group** are pictured *here*.

♫ *The first step in Freezing and Splitting your worksheet is to select the cell, row or column where you want split or freeze to occur.* ♫



☹ **An Important Gotcha! You cannot split and freeze your panes simultaneously.**
You can either freeze your panes or split them, but not both. ☹

1. With the Track workbook open and in the Jan worksheet, select row 13 (this is where we want our split),
2. Click the View Tab,
3. Click Split button to activate the Split.
4. Now, you may scroll through two different areas of the same worksheet. You can compare information at the top with information at the bottom of your worksheet.
5. Click the Split button to remove your split screen.

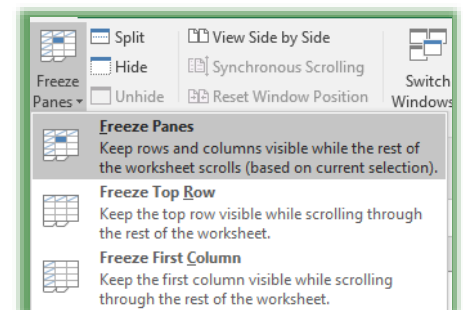


For practice, click any cell and then activate split. Excel splits your worksheet into four panes. Selecting only a row or column provides a horizontal or vertical split in two panes.

With our Splits removed, let's use our Freeze Panes.

👉 **A Hot Tip! You can freeze a cell so that as you scroll your left column(s) remain in view AND your top row(s) remain in view. You may split your worksheet into four areas by selecting a cell and clicking the Split button. Always select the cell beneath the row where you want your freeze/split and the column to the right of where you want your freeze/split. If you select an entire row or column, Excel provides a two pane view for your split and freezes only the column or row.** 👉

1. Click Cell D8 in your Jan Tab of the Track workbook,
2. Click your View Tab,
3. Click the Freeze Panes button and from the menu click the Freeze Panes option.





-
4. **Scroll to the right notice that the Order, Date, and Customer columns remain in view no matter how far you scroll to the right.**
 5. **Scroll down and notice the your headings remain visible no matter how far you scroll down.**
 6. **To Remove your Frozen Panes, click your Freeze Panes button and from the cascading menu, click Unfreeze Panes.**

You can freeze specific columns and rows, too. Click the Column header to the right of where you want your columns frozen. To Freeze a Row click the Row header below where you want your frozen row.

Let's freeze our row headings, so the headings of Order, Date, Customer, etc. remain visible as we scroll down.

1. **Click Row Header 8 to select the entire Row 8,**
2. **Click Freeze Panes and Freeze your panes again,**
3. **Scroll down and your headings above Row 8 continue to display no matter how far you scroll down.**
4. **Scroll to the right, notice that your columns are not frozen.**
5. **To remove the Frozen Row, click Unfreeze panes.**

♪ You may freeze your top row and your left most column using the Freeze Panes menu, but these would not help us in this worksheet because our headings are on row 7 and our dates and customer names are in the second and third column. ♪

♪ Write your notes here: _____

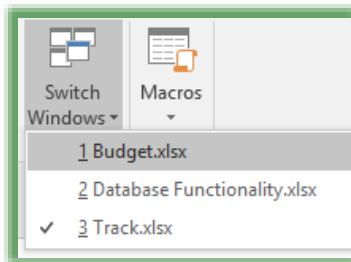


Whose Zoomin' who? And other view options

We have looked at some of the commands on the **View tab**; here are a few more worth noting, especially if you are working on multiple workbooks at once.

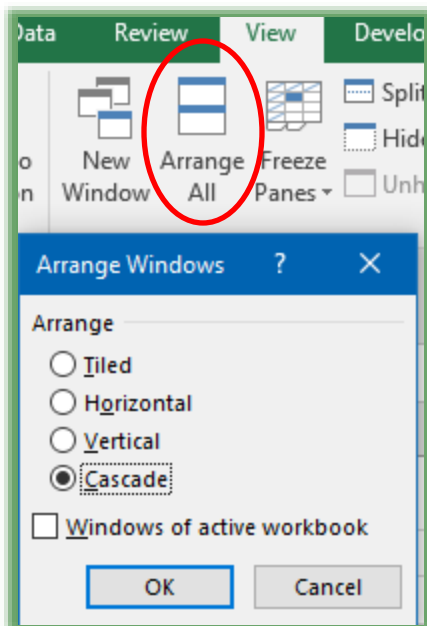
Switching and Arranging

1. Open several workbook files; I'm opening Budget, Database Functionality, and Track.



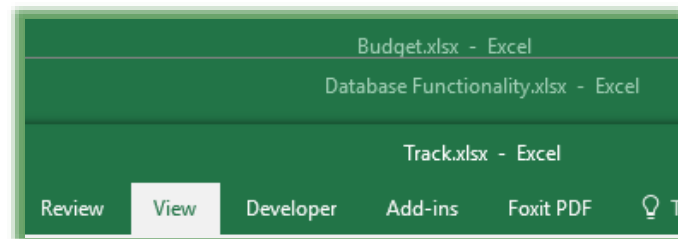
2. Click in the Track workbook,
3. You may quickly activate a workbook by using the Switch Windows button on the View tab.
4. The cascading menu displays your open workbooks. From this list you can quickly activate a workbook.

You can quickly arrange your workbooks in various panes by clicking in the Arrange All button. Let's use this next.



1. With your multiple workbooks open, click the Arrange All button on the View tab.
2. From the menu, choose your arrangement, I am choosing Cascade.

My workbooks arrange in cascading order. Try the other arrangements to view your workbooks. Use your maximize button to remove your arrangement.

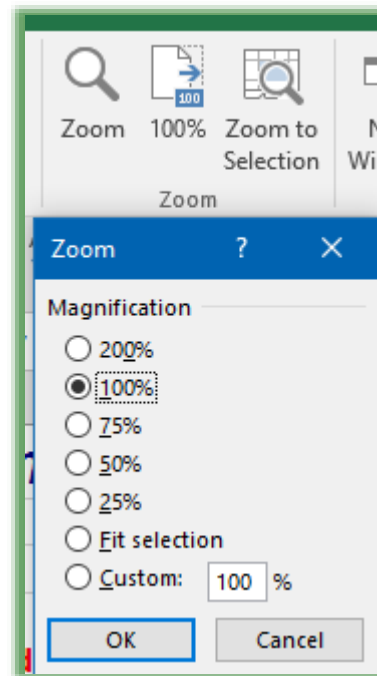


➤ Hot Tip! Using the cascade and other views, you may arrange your worksheets in order to compare two different workbooks. You may use the New Window button, too. ➤

Zooms

We have looked at the Scrolling zoom lever at the bottom right of the status bar, but the View tab has quick ways to Zoom, too.

1. With the Track workbook open and in the Jan Worksheet select B4 through H5 our bottom line results area.
2. With this area selected, click the Zoom to Selection button on the View Tab and the Zoom Group.
3. Wow! Now, you can see your results.
4. Click the 100% button on the Zoom Group in the View Tab.
5. Clicking the Zoom button allows you to change your view by percentages.



New Window and Hide

The **New Window** button opens a second occurrence of your workbook, so you may compare or work with two different worksheets in the same workbook. You'll need to rearrange your panes and worksheets to view them separately. Excel provides a number behind your file name on the Title bar. When you close one of the files, you return to one open file without the number in the name.



☹ **Avoid the Hide button! The Hide button hides your workbook (Excel file), not the worksheet. OOPS!** ☹

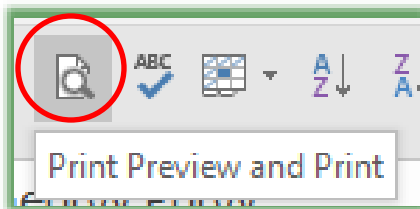
Write your notes here: _____



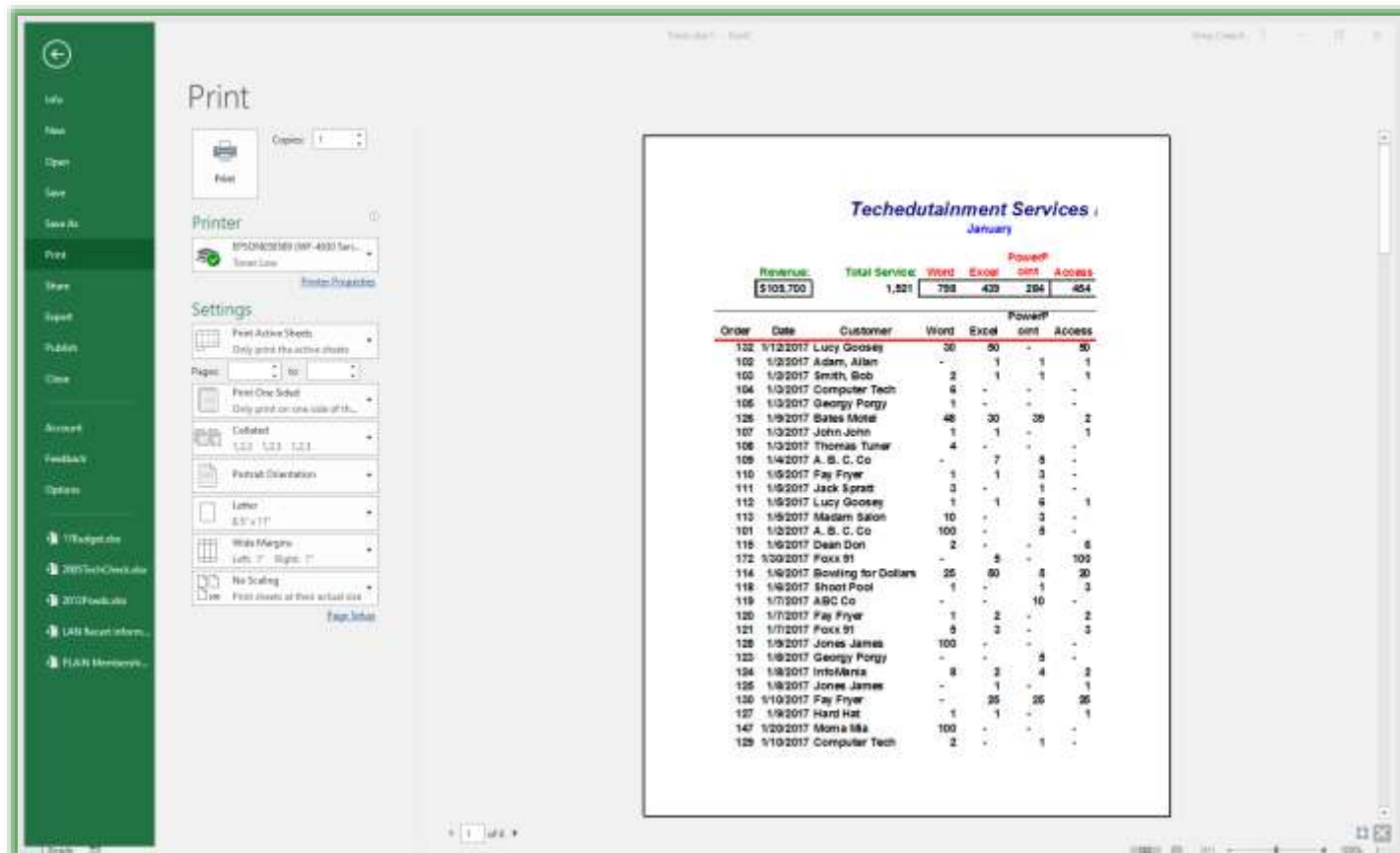
Print Preview and Print

Since Office 2010, Printing, Print Preview, and Page Set-up are easier than ever with the great new tri-pane view. In the past, we had to toggle through Print, Print Preview and Page Set-up to customize our printing needs; now, we can accomplish many tasks in one pane – I call this my one-stop-shopping for printing. Printing in *Excel* can be tricky and cumbersome; I encourage you to always **Print Preview** your worksheet prior to printing them; you never know what you'll

get. With large worksheets you are likely to get blank pages and only pieces of information on one page. You may preview your worksheets through the **Print Preview and Print button** on the **Quick Access Toolbar** or through the **File Tab and the Print pane as displayed below**.



Open Track.xlsm file and click the Jan tab. Click the File Tab and trace to Print. Here is the new fantastic Print, Page Setup, and Print Preview.

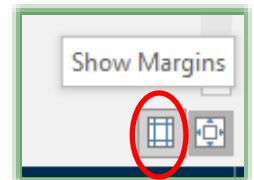


What a mess this is; you certainly wouldn't want to print this in its current state! We can fix some of the mess in Print Preview.

Here are the items we want to change using Print Preview and Print, the Page Layout Tab, and Page Set-up.

- ✓ *Keep the column headers of Order, Date, Customer on each page,*
- ✓ *Have all of the columns fit on one page,*
- ✓ *Change our margins,*
- ✓ *Create new Headers and Footers to display our name, date printed, Page numbers, etc.,*
- ✓ *Change where our Page Breaks are,*
- ✓ *Set our Print Area so the blank rows do not print,*
- ✓ *Reduce the number of pages from 6 or so to 2 or 3 (which the above changes will accomplish and save our printer ink and toner and save a couple of trees!)*

I like changing my Margins and column widths in Print Preview. Let's change our margins and columns widths using the Margins button on your Print Preview toolbar.



1. In Print Preview, click the Show Margins box at the lower right corner of your pane,
2. Your screen will look similar to the one below. You can resize your margins and columns by clicking on the black boxes at the top of the screen and moving your double headed arrow to resize the margins and columns. You can also change your Top and Bottom margins, too, by clicking the lines at the top and bottom of your worksheet and with the double headed arrow click and drag up or down to increase or

Techedutainment Services						
January						
Revenue:		Total Service:	Word	Excel	PowerP	Access
\$109,700		1,521	798	439	284	454
Order	Date	Customer	Word	Excel	PowerP	Access
132	1/12/2017	Lucy Goosey	30	50	-	50
102	1/2/2017	Adam, Allan	-	1	1	1
103	1/2/2017	Smith, Bob	2	1	1	1
104	1/3/2017	Computer Tech	6	-	-	-
105	1/3/2017	Georgy Porgy	1	-	-	-



.....

decrease your margins.

3. Click on the far left line or box, and when you see the double headed arrow, click and drag it over to the left. Do the same for the right margin. Click the square box at the top of the Customer header and drag in and out to see how your columns can resize using the double-headed arrow. Resize your margins and columns, until all of your columns should fit, now. When the Paid Column is in view, you have fit all the needed information.
4. Notice on your status bar that the number of your pages will decrease. Great! We have already reduced our number of pages by half.

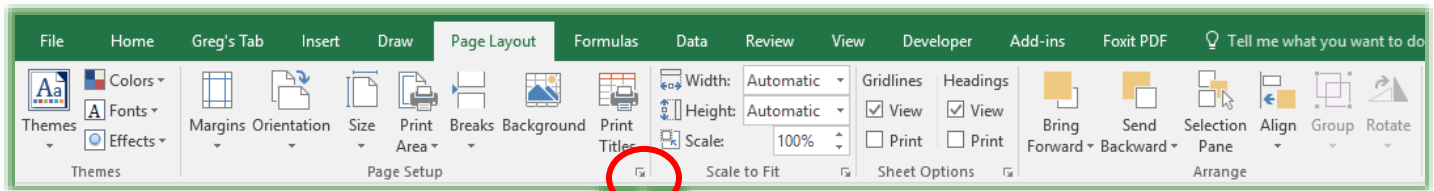
✍ **A Hot Tip!** You can make some of these changes using Print Preview and you can click the Page Setup hyperlink on the Print Preview pane, but not all of the items that we will need, such as Rows to repeat at top and Set Print Area, will be active for us. Using the Page Set-up dialogue box item through the Page Layout Tab or the Command buttons on the Page Layout Tab are best, so all of the features are available for us. We will use the Print Preview and Print pane from the File Tab as well to make adjustments. Pressing the CTRL + P keys on your keyboard activates the Print Preview and Print pane in the File Tab. ✍

5. Close Print Preview.

✍ Write your notes here: _____

Page Layout and Page Setup

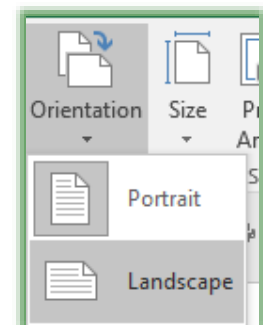
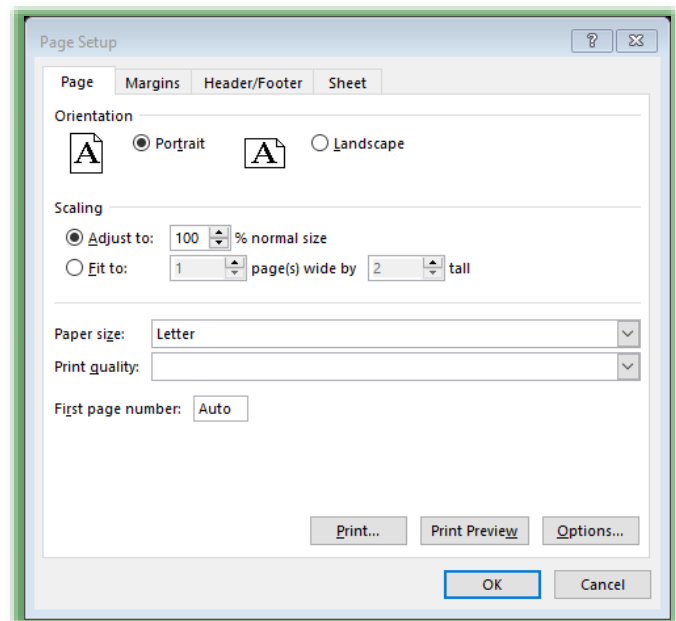
Page Layout Tab



Go to **Page Layout tab** on your **Track** and the **Jan** sheet; this tab is pictured above. You can make many changes to your views and prepare your worksheet for printing using the **Page Layout tab** or you may use the **Page Setup Dialogue box**.

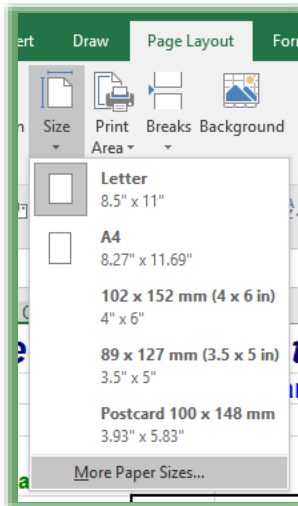
These four tabs deserve highlighting. I will mention the most commonly used functions and features that will make your Excel viewing and printing experience less painful and more productive. We will use both the Page Layout Tab and the Page Setup box. We'll also use the new Page Layout View in Excel.

The **Page Setup, Scale to Fit, and Sheet Options Groups** in the **Page Layout tab** have the **Dialogue Box launcher** as circled and displayed above. In the **Page** tab, you may change from **Portrait** to **Landscape** if your spreadsheet is more wide than it is tall or you may use the **Orientation button** in your **Page Setup Group** on the **Page Layout tab**. You may also reduce or enlarge your worksheet(s) using the **Scaling** feature in the **Page Tab** of your **Page Setup dialogue box** or use the **Scale to Fit Group** on your **View tab**.





The **Paper size** appears in your **Page tab** of the **Page Setup dialogue box** and on your **Page Layout Tab** on the Ribbon which displays here. The **More Paper Sizes** item at the bottom of the menu opens the **Page Setup dialogue box** at the **Page tab** for you.



In the **Page tab** of the **Page Setup dialogue box**, you can force your information **to fit on a number of pages** (be careful **Excel** can force too much information on too little space and no one over 40 will be able to read your worksheet due to the small size of the font!). I use the **Scaling** feature (on the **Page Setup dialogue box** or from the **View Tab** and **scale to fit group**) frequently for large worksheets and the **Fit to feature** for smaller worksheets (1 or 3 pages). You may use scaling in your **Print Preview and Print pane**, too.

Also, on the **Page tab** of the **Page Setup dialogue box** notice that you can **Print** your worksheet directly from here using the **Print button**. You can activate your **Print Preview** from these screens as well through **Print Preview button**. The **Print** and **Print Preview** button activates the **Print Preview and Print pane** in the **File Tab**. Finally, the **Options button** will active your Printer's custom settings. These buttons appear on all of the tabs for you.

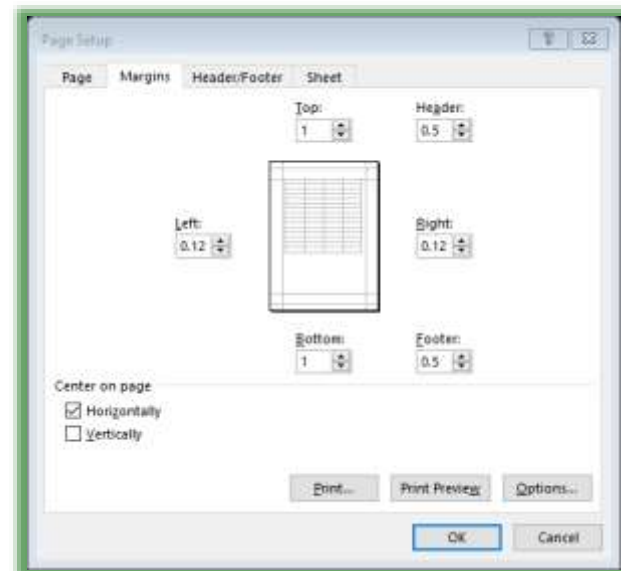
✍ Write your notes here: _____

Margins

Using the **Print Preview** and the **Margins** button is my favorite way of managing my custom margins in Excel; however, you can use the Margins command button on the Page Layout tab or you may use the Page Setup Dialogue Box and the Margins tab to change your margins. Using the Margins Tab as displayed below allows you to change your **Margins** and **Header/Footer** print settings here. As I wrote earlier, I prefer using the visual change of settings in print preview; however, I definitely like to use the **Center on Page** feature, especially for small spreadsheets that do not cover a whole page horizontally. This can be helpful.



We changed our margins in **Print Preview** which the numbers are reflected here in our **Left** and **Right** settings. We don't need to change these settings.



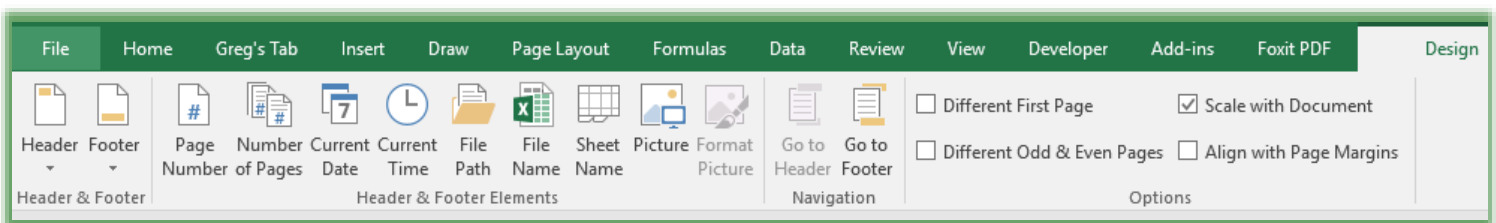
✍ Write your notes here: _____



Header/Footer

Headers and Footers are popular in Excel and there are several ways to work with *Headers and Footers* in Excel. While you may use the *Page Setup Dialogue box* and the *Header/Footer Tab*, I think you'll prefer using the new *Insert tab's Header and Footer* command button and setting your *Header and Footer* in the new *Page Layout View*. Your header and footer information appears immediately using the *Page Layout View*; the *Page Setup Dialogue box* will provide a sample but not your actual worksheet and your header/footer information may "run" into each other and you wouldn't know until you go to *Print Preview*.

I always include custom headers and footers on my worksheets. You can use the drop-down arrows on the *Header and Footer* boxes to select preformatted and standard items. Or choose



the *Custom box* to create your own titles and organization of page numbers, dates, file names, etc. The *Header and Footer Design tab* that we will use for our header and footer displays here.

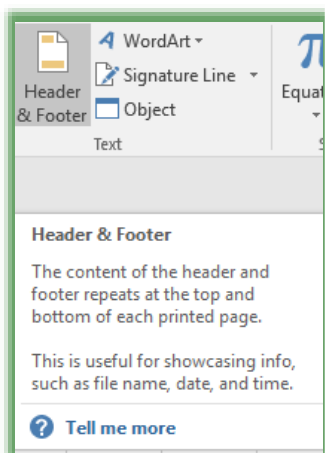
Let's create a Custom Header/Footer and use the Insert Tab's Header and Footer Command button and work with the Header and Footer contextual tab of in the Page Layout View.

1. With your Track workbook open and in the Jan worksheet, click the Insert Tab,

2. Click the Header & Footer button in the Text group,

3. Excel's uses the Page Layout view and activates the Header and Footer's Design tab,

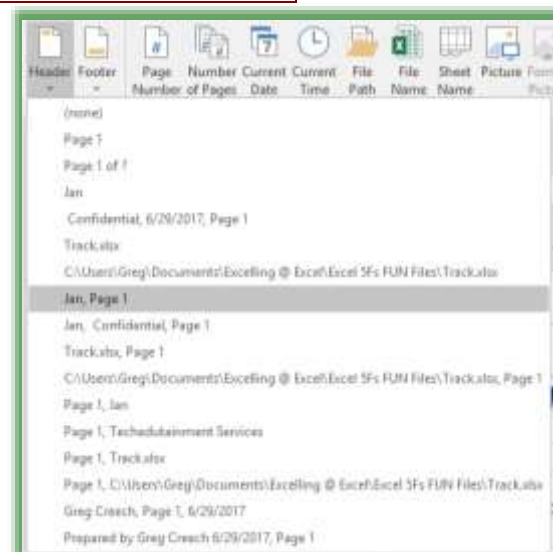
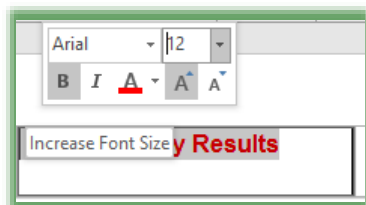
4. Click in the left section of the Header and then click the Current Date button and then press space and click the Current time to display the date and time that you print this worksheet. Excel puts in the codes of &[Date] &[Time]. When you click out of that section, your actual date and time appears.



✍ **A Hot Tip! You may go to your Page Layout View using the view buttons at the right section of your status bar or using the View Tab and the Page Layout button. Once you are in the Page Layout view, you can just start typing in the Header or Footer sections and the Header & Footer Tools Design tab activates for you. You may use your Mini Toolbar for your formatting, too; simply select your text or items for formatting and the Mini Toolbar appears.** ✍

Like the Page Setup dialogue box, you can use built in Header and Footers by clicking the command button for Header or Footer and Excel provides a list from which to choose your header or footer. The Header list appears at right. You will want to know how to edit and to create your own headers and footers.

1. Click in the center section of your header and type: **January Results**. Click and drag to select your text and using the floating mini-toolbar that appears format your text.



2. Click in the right section of your header and type the word **Page** and press your Space Bar once,
3. Click the Page Number command button and Excel enters **&[Page]** for you,
4. Press your space bar once and type the word **of** and press your Space Bar once,
5. Click the Number of Pages button and Excel enters **&[Pages]** for you.
6. Click away from left section and Excel displays (as an example) **Page 1 of 3**.

Click outside of your headers and the Header & Footer Tools Design tab disappears. Now, you may view your information in Page Layout View.

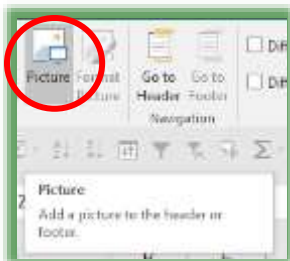


7. Click in your Footer section or in the Header & Footer Tools Design tab click the Go to Footer button.
8. Click the Left Section of your Footer, click the File Name button and press space and then click the Sheet Name button, Excel enters &[amp;File]&[Tab]. Click away from this section and Excel displays the workbook name and the worksheet name. The File Path button lists the directories and servers that store the file.

🔥 A Hot Tip! Remember when we selected our worksheets to group them? If you have multiple worksheets and want to give them similar Headers and Footers, you could group them using the Shift Click method, we studied earlier, and you use the Page Layout View and Header and Footers contextual tab OR the Setup Dialogue Box and Header/Footer tab to give them similar headers and footers. You do not want to give multiple worksheets headers and footers one at a time. If you have split or frozen panes, Excel will alert you that it will remove these in order to accomplish your Header and Footer group. 🔥

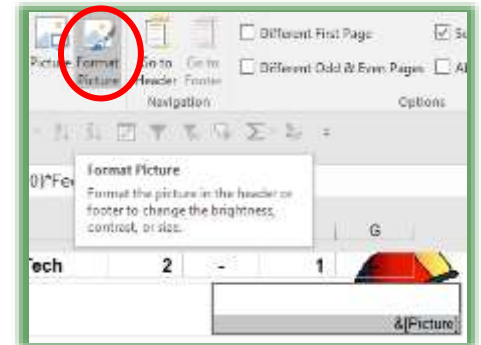
Now, in the center section of your Footer enter a disclaimer statement, such as Private and Confidential – Proprietary information.

Let's add a logo or picture to the Footer's right section.

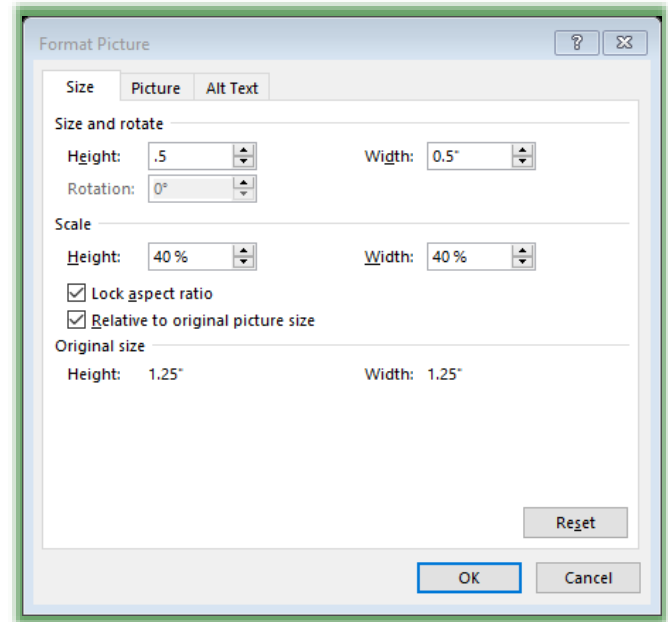


1. Click in the right section of the footer,
2. Click the Picture command button, Excel activates your Windows Explorer at your pictures for you to select your logo or photo. Navigate to your photo and select it. After selecting your photo, Click the Insert button at the bottom of the pane. Excel inserts your picture.
3. Click away from your footer and Excel displays the logo or photo. **OOPS! Your picture is probably too big for the area. We'll format our picture next.**

4. Click back into your lower right section of the Footer where your picture is and Excel selects the code `&[Picture]` for you. Click the Format Picture button circled at right and the Format Picture dialogue box appears. I am changing my scaling so the photo will fit in the right section of the footer for me. Depending upon the size of



your photo, you will need to change the Height and Width or use the percentages for scaling; the default size of headers and footers is .5. Notice, the Picture tab in this dialogue box – this tab allows you to change the brightness, contrast, and color scheme. After adjusting your size, click OK. Next click away from your footer and notice the change.



Those are the six items people usually like in headers and footers, where you place these is up to you. Here are the items we added:

- ✓ *Page and Page Numbers,*
- ✓ *A Title,*
- ✓ *Date and Time,*
- ✓ *File and Sheet Names,*
- ✓ *Disclaimer,*
- ✓ *Logo.*

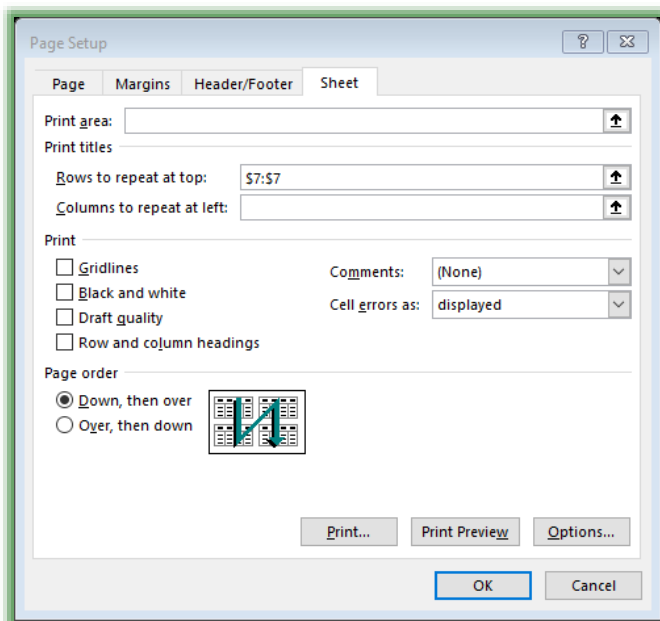
✍ Write your notes here: _____



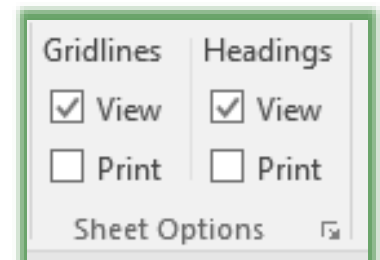
Sheet Options and Print Areas

*As with other parts of our preparing our worksheets for printing and viewing, we will use the **Sheet tab** in the **Page Setup** box as well as the **Page Layout Tab** on the **Ribbon** to change some of the items below.*

Using the **Sheet Tab** in the **Page Setup Dialogue box** or the **Page Layout tab's Page Setup Group** and the **Sheet Option Group's command buttons**, you can *set your print area* and the **Rows to Repeat at the top** of each page. The **Page Setup Dialogue box** as pictured below, you can use the expand button if you know your print area and rows to repeat you may type them. We will make these changes together and notice that Excel will be using absolute reference.



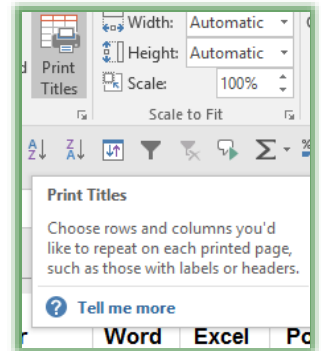
I like for my headings to appear on every page; otherwise, when viewing other pages, I will forget what a column signifies and will have to flip back to the first page to view my titles. Many people like the **Print** section to print the **Gridlines** or the **Row and Column Headings** (these are the number for rows and the alphabet letters for columns) in the **Page Setup Dialogue box** or you may use the check boxes on the **Sheet options** to *view and print Gridlines and Headings*. We learned how to print our **Comments** earlier in this course. Also, if you



have wide worksheets you would want to change the **Page order to Over, then down**.

Let's make these changes.

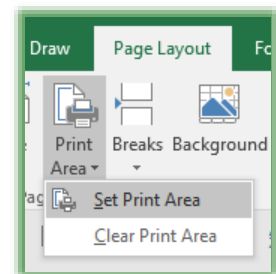
1. Click the **Print Titles** button on your **Page Layout Tab** of the **Ribbon**. The **Page Setup Dialogue** box opens at the **Sheet Tab**.
2. Click in the **Rows to repeat at top** section,
3. Click the **Row Header 7**. Excel puts **\$7:\$7** in your **Rows to Repeat at top** section,
4. Click **Ok**.



☹ The **Page Layout View** disables **Freeze Panes**, so you will need to use the **Rows to Repeat at top** in your **Sheet options** tab. The **Page Layout View** will keep your column headings visible as you scroll through your pages. ☹

Now, let's set our Print Area.

1. Select the area **A1** through **J95**,
2. Click your **Print Area** command button on the **Page Layout** tab and from the cascading menu, click **Set Print Area**.

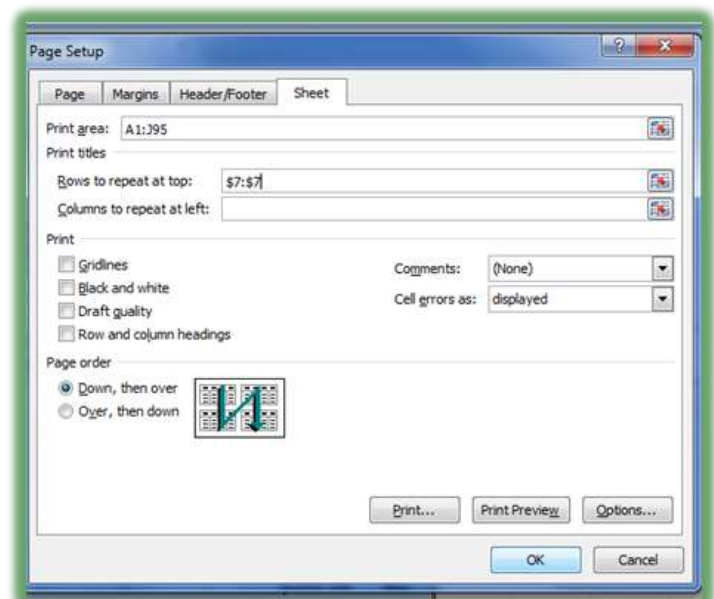


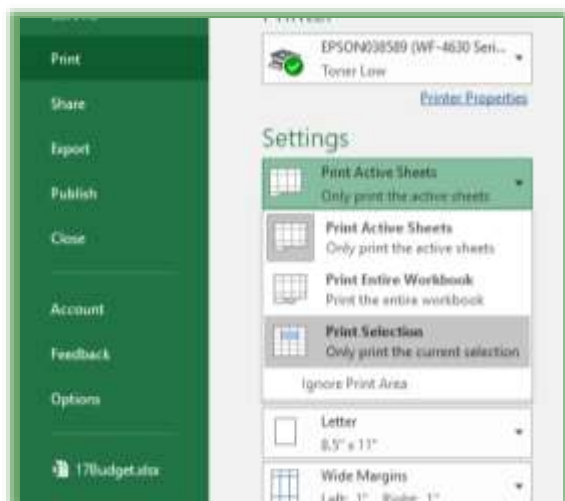
My completed **Page Setup Sheet Tab** displays at right.

1. Click the **Print Preview Button**.
2. Scroll through your pages.

OOPS! We still have some issues to resolve, especially with **Page 2**. We need to change the page break; let's make these final changes.

Save your Workbook.



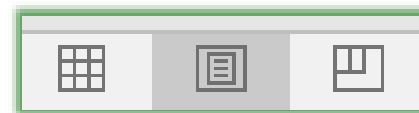


🔥 **A Hot Tip!** Also, you can print your selected area by having the area you want printed selected or highlighted and then through the File Tab tracing to **Print** and in the **Settings** section choosing **Print selection** from the pick list. 🔥

📝 *Write your notes here:* _____

Gimme a Break - Page Breaks

Excel offers a nice Page Break Preview view. There are three views in Excel using your View Tab or Buttons at the right section of your status bar – Normal, Page Layout, and Page Break Preview.



When you choose **Page Break Preview**, Excel may give the Message box displayed at right. As the dialogue box suggests, we can click and drag a dotted line to change the position of your page break (another nice Excel feature)! We'll do this in a moment.



🔥 A Hot Tip! If you are in Page Break view, don't forget to go to View Tab or use the View buttons on your status bar and click the Normal view. 🔥

1. In the view tab, click the **Page Break Preview** button on the toolbar or use the **Page Break View** button on your Status Bar,
2. You may receive the **Welcome to Page Break Preview Message box**, as pictured above,
3. Click **OK**, and you are in **Page Break View**.
4. Scroll down and click on the blue Line that separates **Page 1** and **Page 2**,
5. With the double headed arrow, click and drag down a few rows,
6. Scroll down and click on the blue line that separates **Page 2** and **Page 3**,
7. With the double headed arrow, click and drag down a few more rows,
8. Do the same for columns, if you want all of your columns to fit on one page,
9. Click your **Print Preview** button,
10. Click the **Next** button to view your pages.

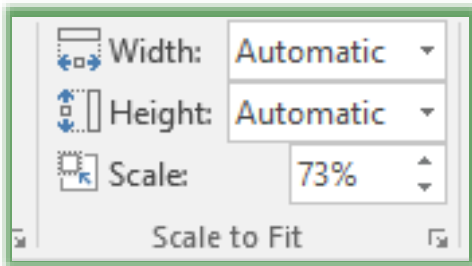
The image shows an Excel spreadsheet in 'Page Break Preview' view. The spreadsheet contains a table with columns for dates, names, and various numerical values. A blue line is visible, separating the first page from the second page. The text 'Page 1' is visible in the background of the spreadsheet.



.....

If all is well, click the Normal view button. It should be ready for printing, now.

When you change your *Page Breaks* in Excel, Excel changes your scaling to accomplish your breaks. My *Scale box* displays 73% after I changed my *Page Breaks*.



You may use your *Print Preview and Print* screen for scaling, too.

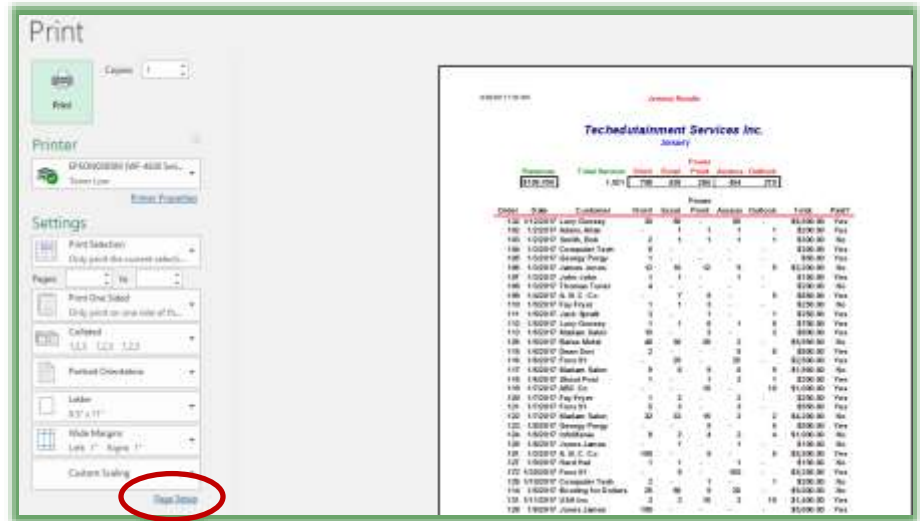
You may adjust your pages using the *Width and Height* selections to change the number of pages you wish.

✍ Write your notes here: _____

Print Preview and Printing

After using **Page Setup's Dialogue box**, **Page Layout Tab** and the **View Tab**, your worksheet(s) should be ready to print. You should check your printing one last time using the **Print Preview and Print pane**. We have used this for our **Margins** and scrolling through our pages. You can use the **Zoom button** in the lower right corner of your pane to **Zoom In** and **Zoom Out** of our worksheet. Notice your scrolling zoom at the bottom of the status bar is grayed out and cannot be used in **Print Preview**.

You can quickly access the **Page Setup Dialogue box** from here using the **Page Setup button**. You can activate your **Print Dialogue box** by clicking **Print button** here or use the new and improve **Print** pane.



Ⓢ An Important Gotcha! If you click the Page Setup button in Print Preview, your Sheet tab will have several areas grayed out, such as Rows to Repeat at Top and Print Area. You cannot make all of your changes if you are in Print Preview using the Page Setup dialogue box while your worksheet(s) is in Print Preview Ⓢ

You can click the **Print Button** on the **Quick Access Toolbar** to print your worksheet quickly. You can press the **CTRL** key and the **P** key simultaneously or click the **Print Item** under the **File Tab** for more options to activate the **Print Preview and Print** screen. Notice you can set the number of copies, select your printer, and other items that we have previously learned, such as scaling, margins, and orientation.



An Excellent Excel Index

=	D
=AVG, 71	Database, 74
=Count, 71	Database, 74
=SUM, 68	Date Custom Filters, 85
	Days, 56
3	Dialogue Box Launcher, 29
3-D References, 65	Dr. Fill, 55
A	E
Absolute Address, 65	Esc, 19
Alignment, 44	Escape Key, 19
Arrange All, 110	Excel Shortcuts, 15
Autofilter, 24	
Autosum, 68	F
Autosum Key, 68	Fill Command Button, 55
Average, 71	Fill Handle, 55
	Fill Options, 61
B	Fill With Months And Weekdays, 55
Bi-Weekly, 58	Filling In A Series Of Numbers, 57
	Fills, 55
C	Filter, 79
Calculation Box, 17	Filter Through A List, 75
Cell, 12	Filters And Sorts, 74
Cell Referencing, 65	Flash Fill, 61
Cells Group, 49	Font, 43
Center On Page, 117	Font Color, 43
Clear Button, 79	Font Formatting Group, 43
Column Headers, 11	Format Cells Dialogue Box, 43
Comments, 51	Format Painter, 48
Comments Group, 51	Formatting, 39
Common Tasks And Commands, 36	Formatting Toolbar, 41
Consecutive Numbers, 57	Formula Bar, 11
Copy, 101	Formulas, 63, 64
Copy Our Worksheet, 95	Freeze, 107
Count, 71	Freeze Panes, 108
COUNTA, 72	Functions, 68
Currency, 46	Functions Keys, 34
Custom Filters, 83	
Custom Headers And Footers, 118	G
Custom Sort, 90	Gridlines, 122
Cut, 101	
	H
	Header/Footer, 117, 118



Headings, 122
 Hide Column Or Rows, 50
 Hide Comment, 53
 Hide/Unhide Worksheet, 95

I

Insert, 94
 Insert A New Worksheet, 94
 Insert And Hiding Columns And Rows, 50
 Insert Fill Options Box, 60

K

Key Tips, 32

L

Landscape, 115

M

Margins, 113, 117
 Mathematical Operators, 63
 Merge And Center Icon, 42
 Microsoft Office Button, 9
 Mini Toolbar, 41
 Minimize The Ribbon, 28
 Mixed Address, 65
 Monthly Dates, 59
 Months, 56
 More Functions, 71
 Move Or Copy, 95
 Move Or Copy Your Sheets, 95
 Multiple Filters, 80
 Multiples Of A Number, 57

N

Name Box, 11
 New Window, 111
 New Workbook, 39
 Number Custom Filters, 83
 Numbers, 45

O

Orientation Button, 115

P

Page Break, 125
 Page Break Preview, 125
 Page Layout Tab, 107, 115
 Page Layout View, 107

Paper Size, 116
 Paste Formats, 104
 Paste Options, 104
 Paste Preview, 104
 Portrait, 115
 Print, 127
 Print Preview, 112
 Print Your Comments, 53
 Protect Sheet, 95

R

Relative Address:, 65
 Relative Date, 59
 Rename, 94
 Rename A Worksheet, 16
 Resizing Columns And Rows, 16
 Review Tab, 51
 Row And Column Headings, 122
 Row Headers, 12
 Rows To Repeat At The Top, 122
 Rows To Repeat At Top, 123

S

Scale Box, 126
 Screentip, 19
 Scroll Bars, 18
 Scrolling Zoom, 18
 Select All Button, 11
 Select All Sheets, 95
 Sheet Options, 122
 Show/Hide Comment, 53
 Sort & Filter Group, 79
 Sorting, 87
 Sorting By Multiple Items, 90
 Sorting Command Buttons, 88
 Splitting, 107
 Status Bar, 17
 Switch Windows Button, 110

T

Tab Color, 95
 Text Custom Filter, 84
 Text With A Number, 58
 The Mini Toolbar, 41
 The Ribbon, 10
 Themes, 47
 Toolbar Options, 20
 Top 10, 81
 Transpose, 104



U

Undo, 50, 88

Y

Yes/No Filter, 86

V

View Tab, 107

Z

Zooms, 111

W

Worksheet Navigation Buttons, 13

Worksheet Tabs, 94