

IT Training Handbook



Introduction to Microsoft Excel 2013

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Part 1: Introduction to Microsoft Excel 2013

About Microsoft Excel 2013

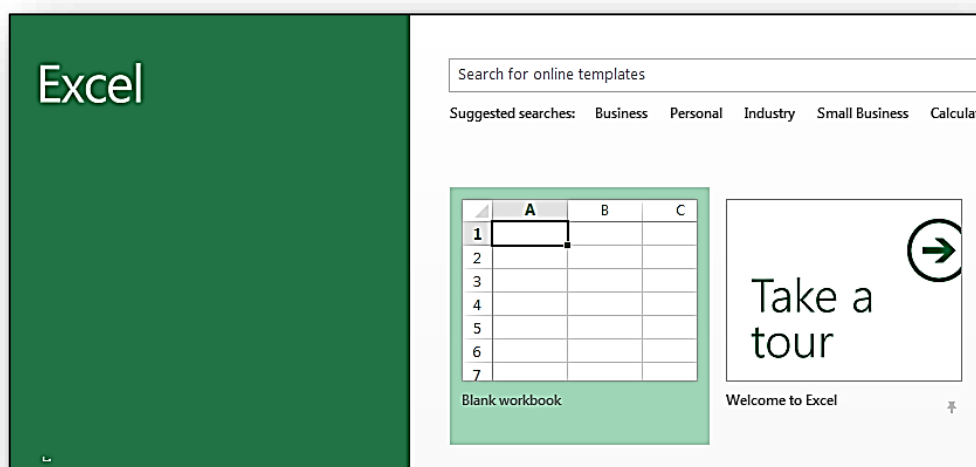
Microsoft Excel is a worksheet application software program. It was designed to create tables of values (*usually numeric*) arranged in rows and columns that can be manipulated mathematically using both basic and complex arithmetic operations and functions. Excel contains many robust tools to create and edit worksheets. You can customize Excel to fit your needs or just use Excel as it was originally designed. This handbook was written by the SDUSD IT Training Department expressly for use by the employees of the San Diego Unified School District. It is a general overview covering basic Excel features.

Note: The illustrations and step-by-step instructions in this handbook were created in **Word 2013** software on a PC computer using **Windows 7**.

Starting Excel

There are several ways to start Excel on your computer (*methods will vary depending on which operating system is in use*).

1. The **Start** Menu:
 - a. Click the **Start** button.
 - b. Click **All Programs**.
 - c. Click **Microsoft Office 2013**.
 - d. Click **Excel 2013**.
 - e. The **Excel Start** screen appears (*see illustration below*).



2. The Taskbar or Desktop:

- a. Locate the Excel icon on the Taskbar (*the horizontal bar across the bottom of the Windows desktop screen*). Click the Excel icon to launch Excel.
- b. Locate the Excel icon on the Desktop (*the main background screen on your computer monitor*). Double-click the Excel icon to launch Excel.

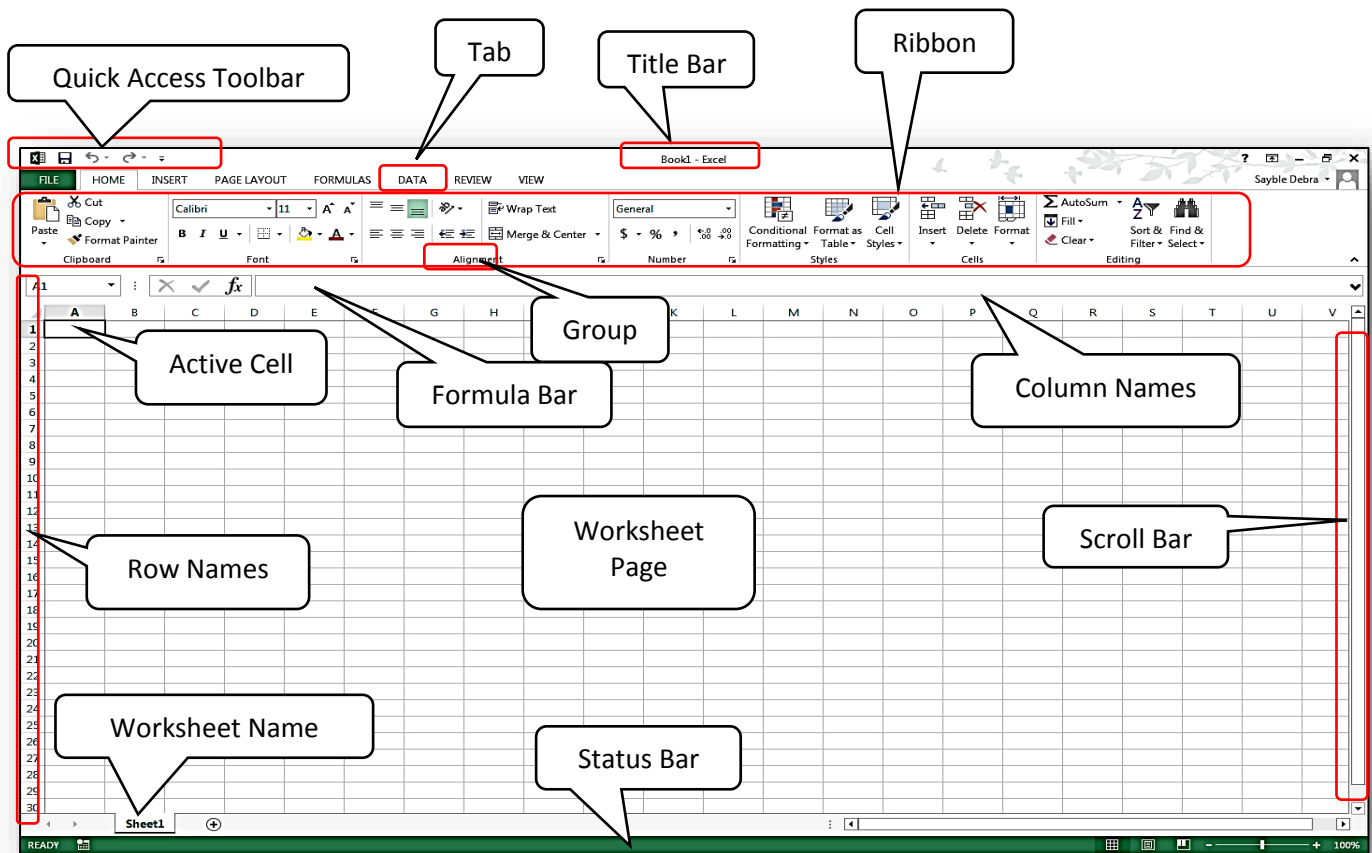


3. An Existing Excel File:

- a. Locate the existing Excel file on your computer desktop. Double-click that file icon. This will launch Excel and open that specific Workbook simultaneously.

Overview of the Excel User Interface

All Microsoft Office 2013 software programs share the same, basic user-interface. What you learn in one Microsoft Office program (*Word, Excel, PowerPoint, etc.*) can also be applied to the other Microsoft Office programs. Although Microsoft Office programs share some common tools and features, each has its own unique tabs, groups, menus, and abilities based on the function of that program.



Name	Description
Quick Access Toolbar	Displayed in the upper left corner. This toolbar contains frequently used commands. It can be customized and relocated to meet the user's needs.
Tabs	Labels of the various Ribbons. Only one Tab/Ribbon can be seen and used at a time.
Title	AKA "Title Bar". Displays name of Workbook and program in use.
Ribbon	Large rectangle or banner across the top of the interface (<i>beneath the tab names</i>) displaying Groups of related commands specific to each tab name.
Group	Each Tab/Ribbon has named groupings of related buttons and commands. For example, the Number Group has a collection of commands related to how numbers look on the worksheet.
Active Cell	The point at which a column and row intersect where you last clicked. If you type anything, it will appear in the active cell. Each cell has a name based on its intersecting column and row. The first active cell is named Cell A1.
Formula Bar	Field where cell contents are displayed. Whatever you type into a cell (formula, numbers, or text, etc.) will display here. When you want to edit the contents of a cell, do it here.
Column Names	Each vertical column is labeled with a letter (or letters) in alphabetical order beginning on the left of the Worksheet with an A and ending on the extreme right with XFD (a total of 16,384 columns).
Row Names	Each horizontal row is labeled by numbers beginning with 1 and extending all the way down to the last row at 1,048,576 (that's a grand total of 17,179,869,184 cells in all of the columns and rows available in each Worksheet).
Worksheet Page	The worksheet page (or Spreadsheet) is filled with cells organized in alphanumeric columns and rows.
Scroll Bar(s)	Displayed along the right (<i>and sometimes bottom</i>) edge of the window, used to navigate to various parts of the Worksheet.
Worksheet Name	<p>This is a tab at the bottom of each worksheet page with its name on it. The default name is always Sheet 1, 2, 3, etc. You can modify the name on the tab and color code it as well.</p> <p><i>Note: To rename it, simply double click on the tab to highlight it. Type the new name, then press Enter to lock it in. To change the tab color, simply right click on the tab and select Tab Color from the shortcut menu and make your choice.</i></p>
Status Bar	Located along the horizontal bottom edge of the window, it contains status information about the current worksheet, which View you are using to see the worksheet, and the Zoom tool to zoom in and out (<i>magnify</i>).

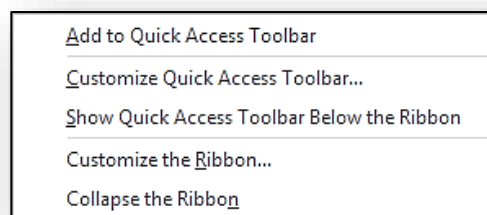
Quick Access Toolbar

Located in the upper left corner of the Excel user interface, the Quick Access Toolbar provides single-click access to common tools such as Save, Undo, and Open (*an existing file*). You can customize the Quick Access Toolbar to contain any number of commands/buttons you prefer. The Quick Access Toolbar can be positioned above or below the Ribbon.



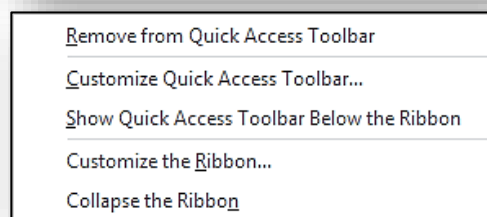
Add a Command to the Quick Access Toolbar:

1. On the Ribbon of your choice, right-click the command or button you want to add.
2. Left-click **Add to Quick Access Toolbar** on the shortcut menu that appears.



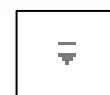
Remove a Command from the Quick Access Toolbar:

1. On the Quick Access Toolbar, right-click the command or button you want to remove.
2. Left-click **Remove from Quick Access Toolbar** on the shortcut menu that appears.



Additional Options:

Click the **More** button on the right side of the Quick Access Toolbar to display a menu with additional options and commands you can use to further customize the toolbar. Click on any item on the list to add that command to the **QAT** (*a check next to the command indicates that it is active*).



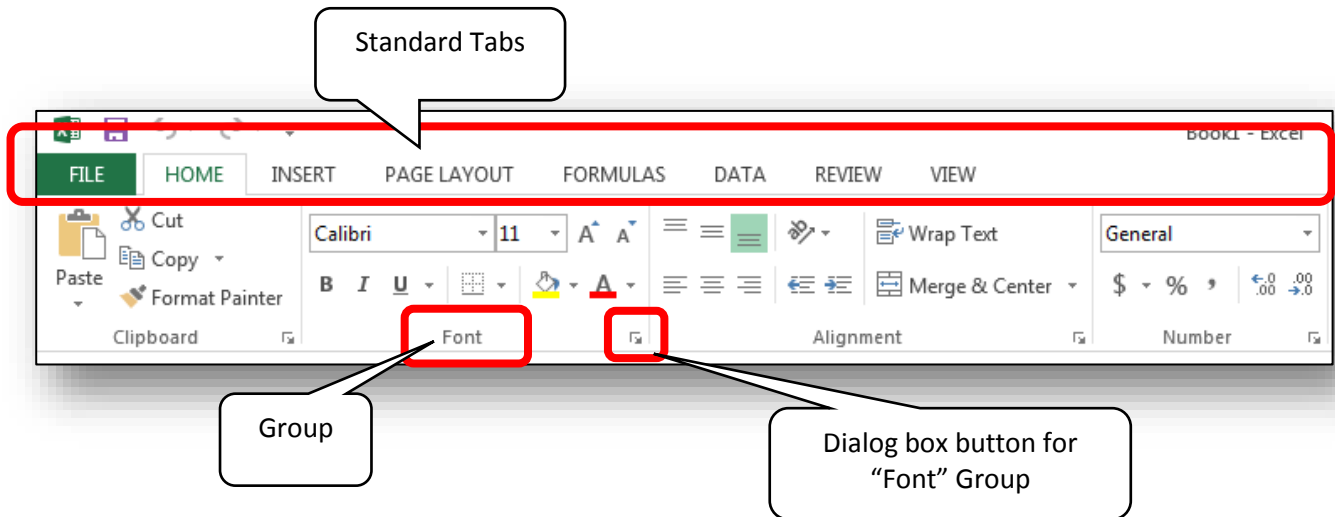
More

Note: The Quick Access Toolbar and the tab ribbons can also be customized from the **Excel Options** dialog box: **File tab** → **Options** → **Customize Ribbon** or **Quick Access Toolbar**.

Ribbon

The Ribbon is the large rectangular band going across the top of the Excel window with several groups of commands and dropdown menus. These groups help you quickly locate the tools you need. The Ribbon is comprised of a set of categorized Tabs (*see illustration on next page*). When you click a Tab it is brought forward as the current, active Tab in use. Each Tab contains sets of commands and features related to the theme of the Tab. These commands are organized into several Groups within each Tab. The Tab names (*labels*) are written in all capital letters and located along the top of the Ribbon. The Group names are located along the bottom edge of the Ribbon.

Commands in the Ribbon generally appear as buttons, drop-down lists, labeled icons, or galleries. In many of the groups (*at the bottom-right corner*), there is a dialog box button. When you click this button a dialog box is displayed containing a group of specialized commands. After selecting commands or making changes within the dialog box, it is necessary to click **OK** to activate the commands or make the changes and close the dialog box.



Ribbon Tab Name	Description
FILE	Displays the Backstage view with commands and options related to managing files and customizing Excel.
HOME	Contains the most frequently used, common commands and tools. It is the active Tab (in front) by default each time you open Excel.
INSERT	Contains commands related to things you can insert into a worksheet such as pictures, hyperlinks, tables, pivot tables, or charts.
PAGE LAYOUT	Contains commands related to changing the layout of a worksheet, such as margins, themes, or cell size.
FORMULAS	Contains commands related to creating, inserting, or modifying formulas, including calculations and functions.
DATA	Contains commands related to importing, filtering, and manipulating data from other sources, as well as, data you enter yourself.
REVIEW	Contains commands related to proofreading, adding comments, tracking other people's work on a worksheet, or protecting a worksheet.
VIEW	Contains commands related to changing how the worksheet is displayed on your computer screen, such as zooming in or out, seeing it as it will print out, or freezing a pane to stand still while others around it can move.

Standard Tabs

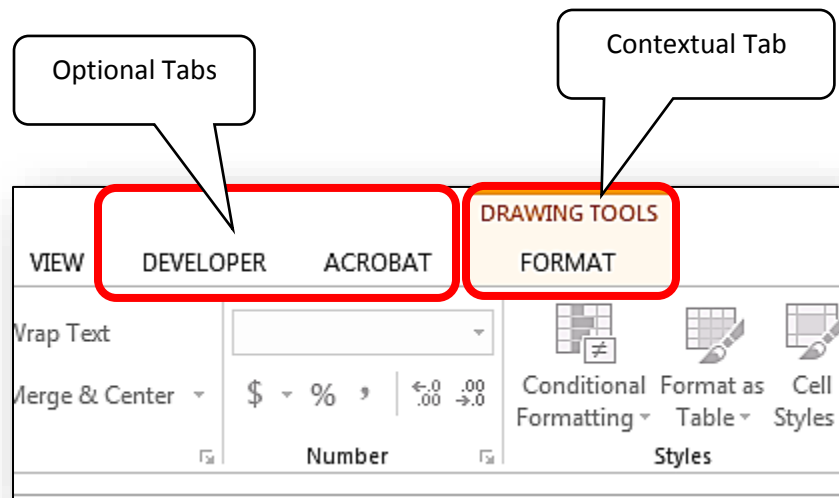
Excel's default setting always displays the standard (*default*) Tabs each time you launch and use Excel. Each Tab's label indicates the types of commands it has. For example, the **INSERT** Tab contains commands that have to do with inserting objects into a Workbook such as pictures, charts, worksheets, hyperlinks, or textboxes.

Contextual Tabs

Contextual Tabs are those Tabs that appear only when you create or select certain things in your Workbook, such as tables, charts, or pictures. Contextual Tabs contain commands that specifically affect only the object you are actively working on. If you click away from that object into another area of the Workbook, the contextual tab disappears. When you click on that same object again, the contextual tab returns. Contextual tabs appear just above the standard tabs, and are often colored differently to make them easier to identify.

Optional Tabs

Additional, optional Tabs are available for display on the ribbon. They can be accessed from the Backstage view of Excel by clicking on **FILE** → **OPTIONS** → **CUSTOMIZE RIBBON**. These optional Tabs have additional commands and buttons not found on the standard Tabs.

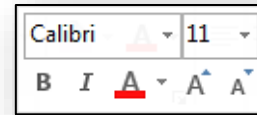


Custom Tabs

You can create your own customized Tabs and name them any way you wish. You can place any commands or buttons Excel has in customized groups according to your preference.

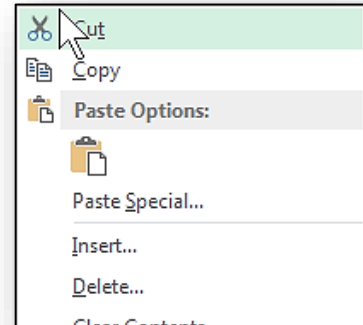
Mini Toolbar

Frequently confused with the Quick Access Toolbar, the Mini Toolbar displays right next to your cursor whenever you select (*highlight*) a cell or cells, or when you right-click an object. The Mini Toolbar has commands that will affect only the cell contents or object you selected—not the entire Worksheet.



Shortcut Menus

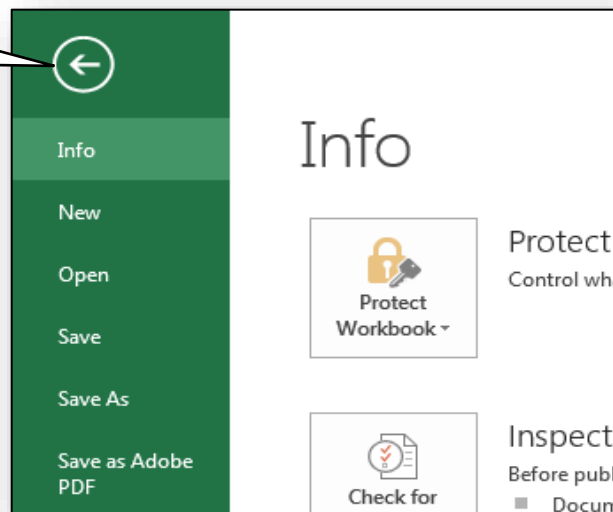
A Shortcut Menu will display next to most items you right-click on. These are content-sensitive menus designed to help you do things directly related to the item you selected. The Shortcut Menu will have different commands depending on which item you selected.



Backstage View

When you click the **FILE** tab, it displays the **Backstage** view. This is where you complete tasks related to managing your Excel Workbook files (*Spreadsheets*) and customizing Excel to suit your needs. Use the Backstage to create new Workbooks, open existing ones, save Workbook files, print your Worksheets or Workbooks, and many other tasks.

Click the Back button to return to the worksheet.



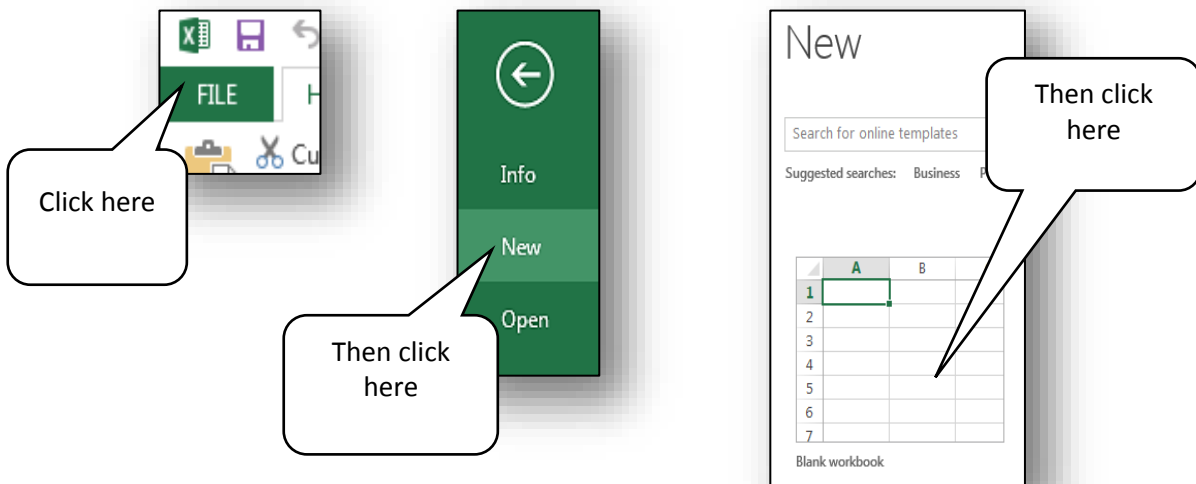
Create and Save a New Workbook

When you launch Excel 2013 you will see a Start screen with pictures (*icons*) of different Excel template styles to choose from. Until you are more familiar with Excel styles and themes, click the “**Blank Workbook**” template in the upper left corner and a new, blank Worksheet will appear. You can then begin entering data on your Worksheet.

The Title or Title Bar will default to a name like Book1, Book2, and so on, until you save the Workbook with a name/title of your own choice.

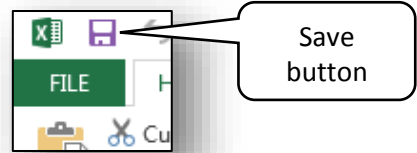
Exercise 1.0: Create a New Workbook

1. Click **FILE** → **New** → **Blank Workbook**.

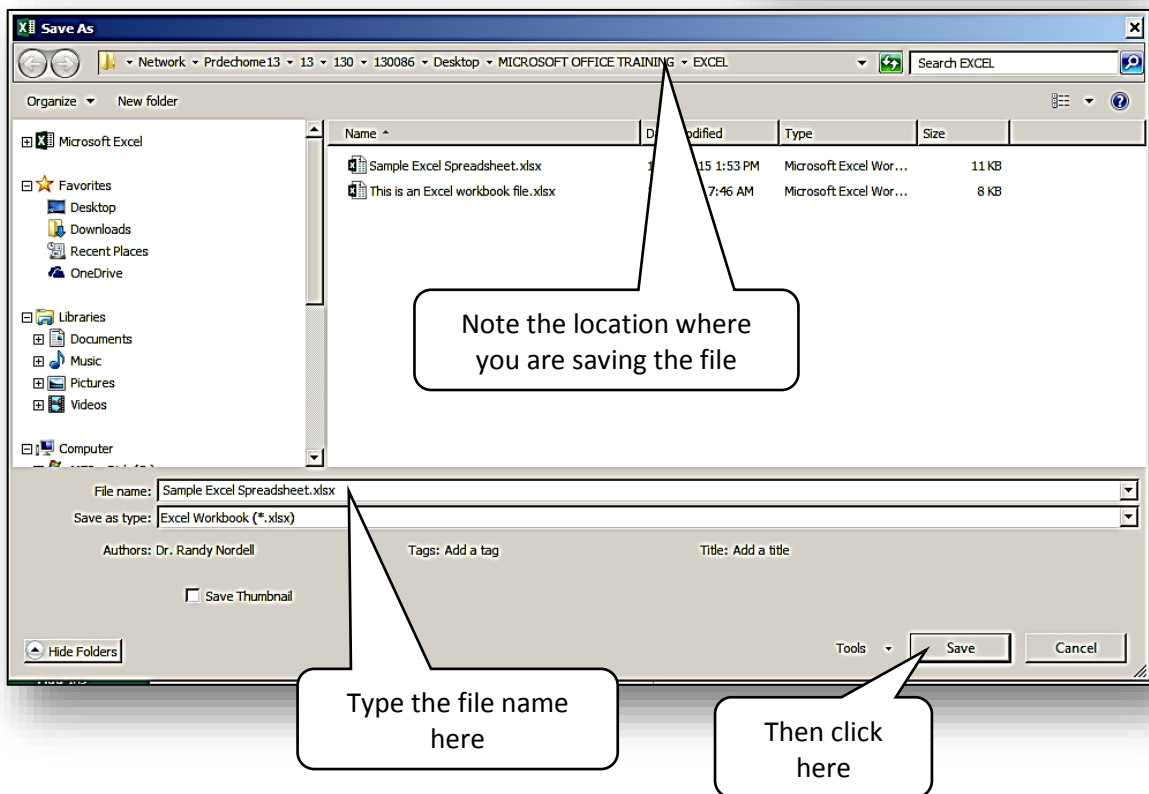
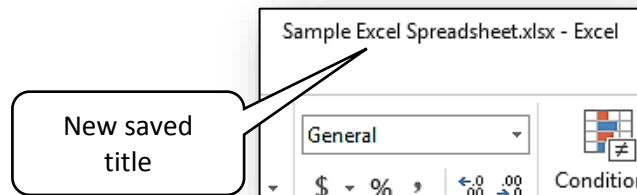


Exercise 1.1: Save a New Workbook

1. Click the **Save** button above the **FILE** tab (on the Quick Access Toolbar).



2. Navigate to the location where you want to save the Excel Workbook file.
3. You will see the **Save As** window appear. Type a name (*title*) for the Workbook into the **File Name** field (*at the bottom of the window*). Note that the default type of file the Workbook will be saved as is a regular Excel Workbook with a default file extension of **xlsx**. Click the **Save** button in the lower right corner.
4. The Title of your Workbook now displays the name you gave it.

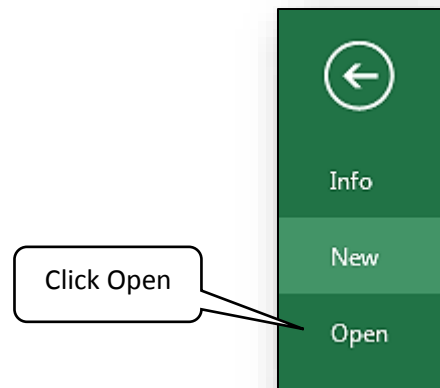
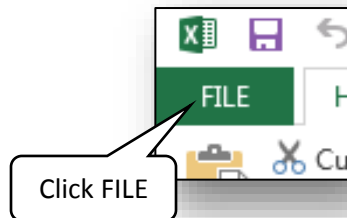


Open an Existing Workbook

To open a Workbook you created and saved previously, first launch Excel and then open the file from within the software. Another option is to navigate to the location of the saved file and open it directly from there.

Exercise 1.2: Open a Workbook from within Excel

1. Launch Excel from the **Start** menu (or from the Excel icons on the Taskbar or Desktop). Refer to the **Starting Excel** section of this handbook (*page 6*).
2. Click **FILE** → **Open**



3. Find your Workbook file in the list of Recent Workbooks and double click to open it. If it is not listed there click on "**Open**" then navigate to the location of the file to open it.

Part 2: Formatting & Editing

Formatting generally means changing the way text, numbers, or objects *look* in your workbook. An example would be adding bold or underlined text, or changing the color of something. An exception to this might be when someone refers to “how a Workbook is formatted... what format is it?” They might be referring to the kind of file it is. Is the Workbook formatted as a regular Excel Workbook? Or, is it formatted as an Adobe Reader PDF file, etc.?

Editing means changing the *content* itself, such as deleting or adding words or numbers, moving formulas around, etc.

Formatting Text/Data

Font Style

In Excel, the term “font” refers to what used to be called “typeface”, or the specific design or style of lettering. Excel has many different fonts to choose from, and they each have a unique name. The font used in this handbook is called **Calibri**. Here are several other commonly used fonts:

Times New Roman

Arial

Cambria

Tahoma

And here are several fonts generally used only for special effects or decoration:

Brush Script

ALGERIAN

Gigi

Old English

To change the font style of your text, first you select the text (*click-and-drag to highlight it*) and then choose the font style you want to apply from the font drop-down menu. The font menu is found on the Ribbon in the **HOME** tab, within the Font group (*see Figures 1 & 2*). You can also use the Mini Toolbar that appears when you first select the text (*see Figure 3*). Immediately after selecting the text, the Mini Toolbar appears. If you start to roll the mouse away from the text, the Mini Toolbar fades out.

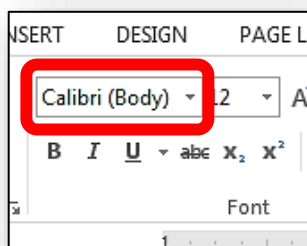


Figure 1 - Font Menu in Ribbon

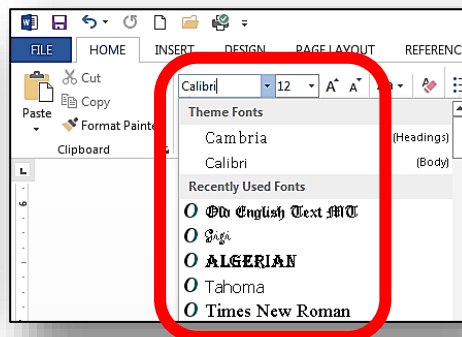


Figure 2 – Font Menu

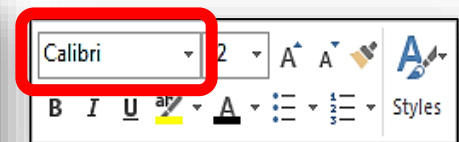


Figure 3 - Mini Toolbar

Font Size

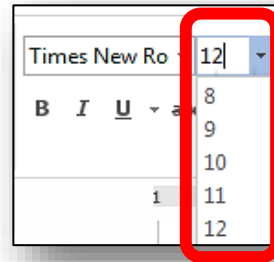
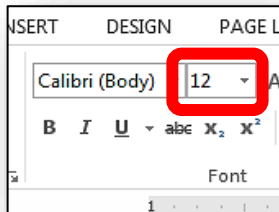
You can change the size of any font by selecting the text and choosing the size you want from the font size drop-down menu. A font is typically measured in a point (*pt*) size, which is the vertical measurement of the lettering. There are approximately 72 (72.272) points in one inch or 2.54 cm.

Common font point sizes for business Workbooks are 10, 11, or 12.

This is Times New Roman font style in size 10.

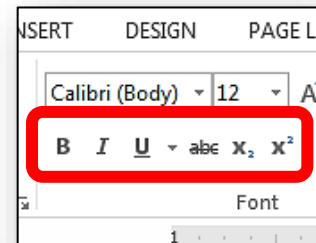
This is Times New Roman font style in size 12.

This is Times New Roman font style in size 14.



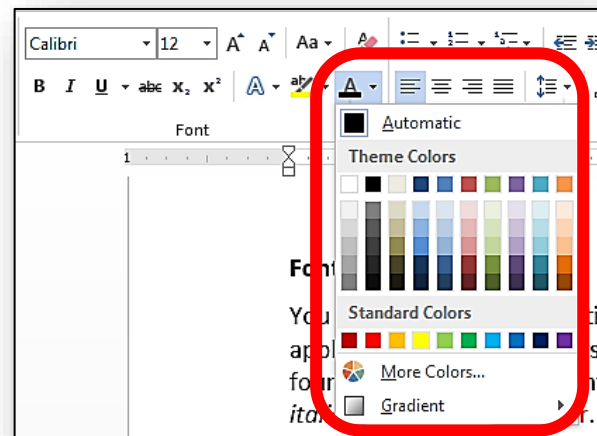
Font Effects

You can change the formatting (appearance) of your text by applying various font effects. Most of these commands are found on the **HOME** tab on the **Font** group. Typical effects are **bold**, *italics*, underlining, or **color**. Other effects that are sometimes used include SMALL CAPS, sub script, and super script.



The color of the font can be changed by clicking on the **Font Color** drop-down menu:

1. Select the text (*click-and-drag across it to highlight it*).
2. On the **HOME** tab ribbon in the Font group, click the **Font Color** drop-down menu.
3. Hover the mouse cursor over various colors to see a preview of that color on the selected text. Left click the desired color to change the text to the new color



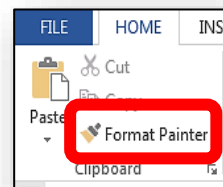
Exercise 2.0: Format Cell Content

1. Open an Excel Worksheet with data on it (*or create a new one*).
2. Select a cell, or a few cells (*click-and-drag across to select them*).
3. Apply the following formatting changes:
 - a. **Freestyle Script** font style, size 16
 - b. **Bold** and Underline
 - c. Change color to **Purple** (*last choice on the right underneath Standard Colors*)
4. Do not close this Worksheet. Keep it open for the next Exercise.

Format Painter

Format Painter is a great shortcut tool that copies all formatting of a selected piece of text, number, or symbol and then applies that same formatting to another piece of text, number, or symbol with a single click.

The **Format Painter** command is found on the HOME tab in the Clipboard group *on the far left side of the Ribbon*.

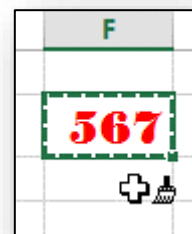


Format Painter will shut off after you apply it to text a single time unless it is turned on for multiple uses. To apply the copied formatting to several areas of text using Format Painter, simply select the cell by clicking the cursor into the cell with the formatted text to be copied (a green box will appear around the cell), then double click on the **Format Painter** command. This will turn on **Format Painter** and keep it on until you are finished using it—even if you skip around to different cells within the Worksheet. To turn it off, simply hit the **Esc** key or click one more time on the **Format Painter** command.

Exercise 2.1: Copy Formatting & Apply to a Different Cell

1. In the same Worksheet you used in the last Exercise, click to select any cell or cells containing text, numbers, or symbols with the special formatting effects applied before (Freestyle font, bold, underlined, purple, etc.).
2. Single-click the Format Painter command.

Note: Your mouse arrow now looks like a plus sign with a paintbrush.



3. Move the mouse (*do not click yet*) to another cell within the Workbook where you wish to apply the special formatting.



4. Single-click on the target cell so that the special formatting is then applied to the contents of that cell.



Exercise 2.2: Apply Format Painter to Non-Consecutive Cells

1. In the same Worksheet you used in the last exercise, click to select any cell with special formatting.
2. Double-click the **Format Painter** command button.
3. Then, click on individual cells within the Worksheet to apply the special formatting to each cell.

Note: The **Format Painter** icon will remain attached to the mouse arrow indicating that the **Format Painter** feature remains active.

4. To turn off the **Format Painter** feature, simply press the **Esc** key on your keyboard or re-click the **Format Painter** command button.

Editing Cells

There are different methods of selecting a cell or cells. You can select an individual cell, a group of cells, or an entire Worksheet. You can do this using the mouse or with the keyboard. Each is useful depending on what is to be selected.

Select a Single Cell

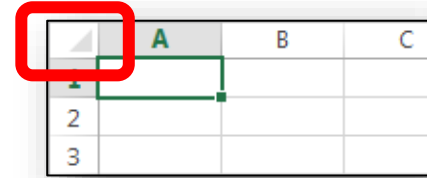
To select a single cell, simply click into the cell and add text, numbers, or symbols. Notice that the Formula bar will display an unformatted version of whatever you are adding to the cell. Regardless of however many formatting changes are made to the contents of a cell, the Formula bar will remain with the "Value" version of text, numbers, or symbols no matter how many changes in formatting have been made to the corresponding cell.

Select a Group of Cells

To select a group of cells, simply click and drag the mouse across the cells. They will become highlighted in gray when selected.

Select an Entire Worksheet

Perhaps the easiest method of selecting an entire Worksheet is to simply click on the gray triangle located just above, and to the left, of **Cell A1**. This will select the entire Worksheet (*highlighted in gray*) all the way to **Cell XFD-1,048,576**—the absolute limit of the columns and rows within an Excel Worksheet.



Replace Cell Contents

There are a couple of ways to replace the contents of a cell with other data.

To enter **new** data in place of existing data, simply select the cell (*highlighted with the green border*) and start entering data. The first keystroke will eliminate the original contents of the cell and replace it with whatever is then entered.

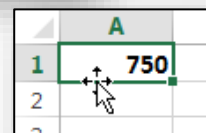
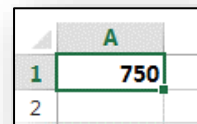
To replace the content of a cell with content from another cell, you can **Copy-&Paste**, or **Cut-&Paste**. Both of these methods are explained and illustrated on pages 23 - 23 of this handbook.

Move Content of Cell (or Cells)

To move the content of a cell (or cells) to another location within a Worksheet, simply select the cell(s), then click-on the green border and-drag the selection to the new area and let it go. If it is necessary to move the selected data to a different page, the **Cut-&Paste** method is recommended to relocate the selected content (*see page 23 of this handbook*).

Exercise 2.3: Move a Cell's Contents

1. Select a cell containing data by clicking on it (*the cell is selected when a **green** borderline appears around it*).
2. Place the mouse arrow directly over any one of the four green sides of the selected cell until the mouse arrow displays a thin, black, 4-headed arrow at its tip (*do **not** click on the bottom-right corner of the cell*).
3. Click, hold, and drag the selected cell to any other area or cell within the Worksheet and release. The cell's contents will then transfer from the original cell into the new cell.



Note: If you wish to **undo** the move, immediately click the **Undo** button command located on the **Quick Access Toolbar**.

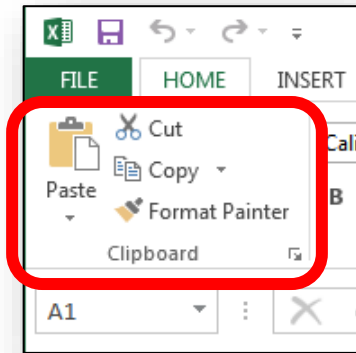


Copy-and-Paste Cell Contents

You can **Copy** the contents of a cell and **Paste** it in another location in the Worksheet. This can be done with a single cell, a selected section of a Worksheet (*made up of several cells*), or an entire Worksheet can be copied and pasted onto a new Worksheet.

Whenever you copy the contents of a cell or cells, the copied content is automatically stored in an area of Excel called the Clipboard. The Clipboard retains the copy until you are ready to paste it. The Clipboard is considered “volatile memory”. Any data held there is temporary, and will be erased when you close the Workbook.

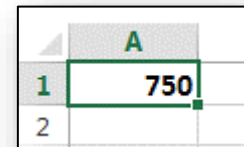
The Clipboard tools (*including Cut, Copy, Paste, and Format Painter*) are located on the HOME tab in the Clipboard group on the far left side of the Ribbon.



Note: The **Cut** and **Copy** commands are unavailable (*grayed-out, not clickable*) unless some data is selected.

Exercise 2.4: Copy-and-Paste Cell Contents

1. Select a cell containing data by clicking on it (*the cell is selected when a **green** borderline appears around it*).
2. Copy the selected cell using one of the following methods:
 - a. Click the **Copy** command button in the Clipboard group on the left side of the HOME tab ribbon.
 - b. Right-click the selected cell and choose **Copy** from the Shortcut Menu that appears.
 - c. Use the keyboard shortcut **Ctrl + C** (*press and hold down the **Ctrl** key, then press the **C** key*).
3. Select a new cell to receive the copied cell's content (*the cell is selected when a **green** borderline appears around it*).
4. **Paste** the copied cell's content using one of the following methods:
 - a. Select the cell to receive the copied content, then click the **Paste** command button.
 - b. Right-click on the cell to receive the copied content, then choose **Paste** from the Shortcut Menu that appears.
 - c. After selecting the cell to receive the copied content, use the keyboard shortcut **Ctrl + V** (*press and hold down the **Ctrl** key, then press the **V** key*).

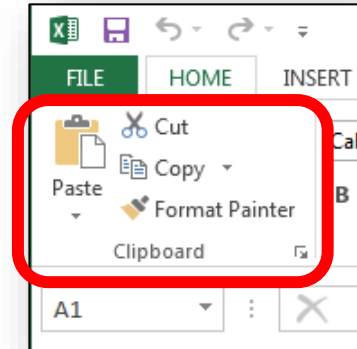


Cut-and-Paste Cell Contents

You can **Cut** the content out of a cell (remove it), then **Paste** it into another location within the Workbook. This can be done with a single cell, a selected section of a Worksheet (*made up of several cells*), or an entire Worksheet can be cut and pasted onto a new Worksheet.

Whenever you cut out the contents of a cell or cells, the content is copied (*stored*) automatically in an area of Excel called the Clipboard. The Clipboard retains the copy until you are ready to paste it. The Clipboard is considered “volatile memory”. Any data held there is temporary, and will be erased when you close the Workbook.

The Clipboard tools (including Cut, Copy, Paste, and Format Painter) are located on the HOME tab in the Clipboard group on the far left side of the Ribbon.

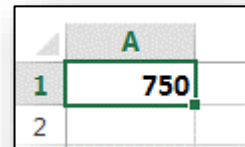


Note: The **Cut** and **Copy** commands are unavailable (grayed-out, not clickable) unless some data is selected (highlighted).

The keyboard shortcut to **Cut** text is **Ctrl + X** (*press and hold down the **Ctrl** key, then press the **X** key a single time*).

Exercise 2.5: Cut-and-Paste Cell Contents

1. Select a cell containing data by clicking on it (*the cell is selected when a **green** borderline appears around it*).
2. **Cut** out the selected cell's content using one of the following methods:
 - a. Click the **Cut** command button in the Clipboard group on the left side of the HOME tab ribbon.
 - b. Right-click the selected cell and choose **Cut** from the Shortcut Menu that appears.
 - c. Use the keyboard shortcut **Ctrl + X** (*press and hold down the **Ctrl** key, then press the **X** key*).
3. Select a new cell to receive the copied cell's content (*the cell is selected when a **green** borderline appears around it*).
4. **Paste** the copied cell's content using one of the following methods:
 - a. Select the cell to receive the copied content, then click the **Paste** command button.
 - b. Right-click on the cell to receive the copied content. Then choose **Paste** from the Shortcut Menu that appears.
 - c. After selecting the cell to receive the copied content, use the keyboard shortcut **Ctrl + V** (*press and hold down the **Ctrl** key, then press the **V** key*).



Undo / Redo

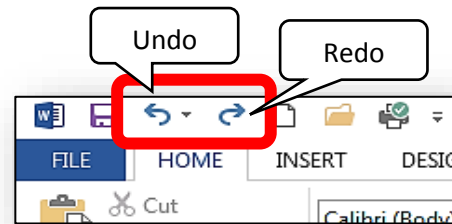
Most mistakes can be reversed in Excel by clicking the **Undo** button. It undoes the last action taken. If (after undoing something) you change your mind and decide you do want that undone action after all, just click the **Redo** button, and it will put it back.

The **Undo** and **Redo** commands are located in the Quick Access Toolbar (*the upper-left corner of the Excel screen*). The **Undo** command also has the option of going back several steps and undoing several actions at once.

Note: The keyboard shortcuts for these are:

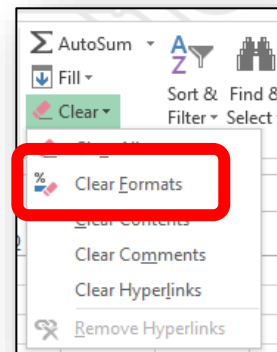
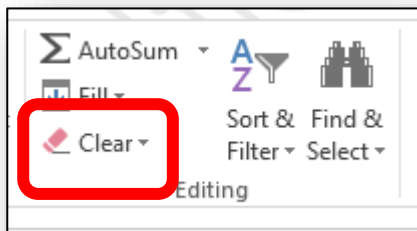
Ctrl + Z = Undo

Ctrl + Y = Redo



Clear All Formatting

To remove all formatting changes to a given cell returning it to its original format, use the **Clear Formats** command. This feature is located on the **HOME** tab Ribbon in the Editing group, and it looks like a pink pencil eraser with a more button (down arrow) next to it. Click on Clear Formats.



Exercise 2.6: Clear Formats from Selected Cells

1. In the same Worksheet you used in the last Exercise, select a cell that has special formatting (*different color, bold, font style, etc.*).
2. Click the **Clear Formats** command.
3. Note that the selected cell returns to its original format.

How to Tilt Text in a Header Cell

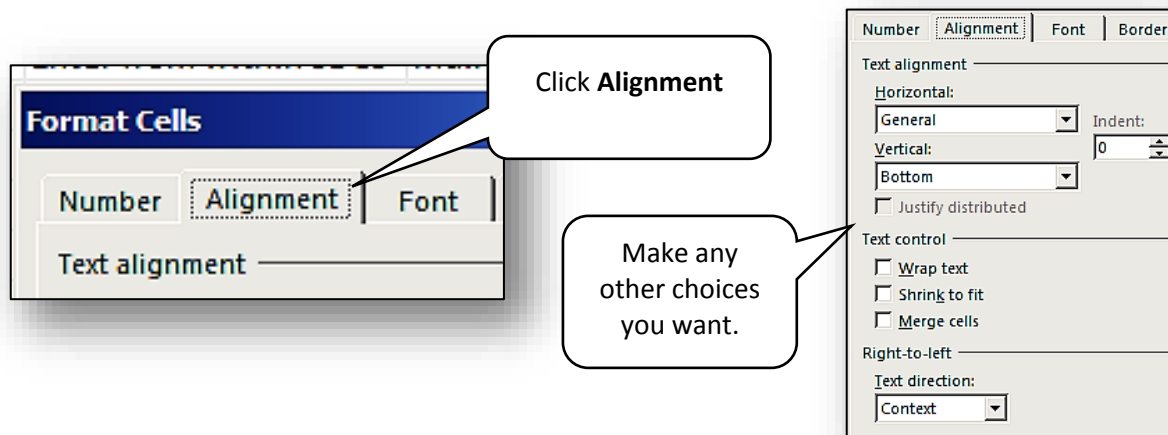
When typing text into any cell in Excel it appears horizontal by default. However, Excel provides a way to alter the angle of text within a cell. The following exercise demonstrates how to change the angle of text within a cell.

Exercise 2.7: Tilting Text within a Cell

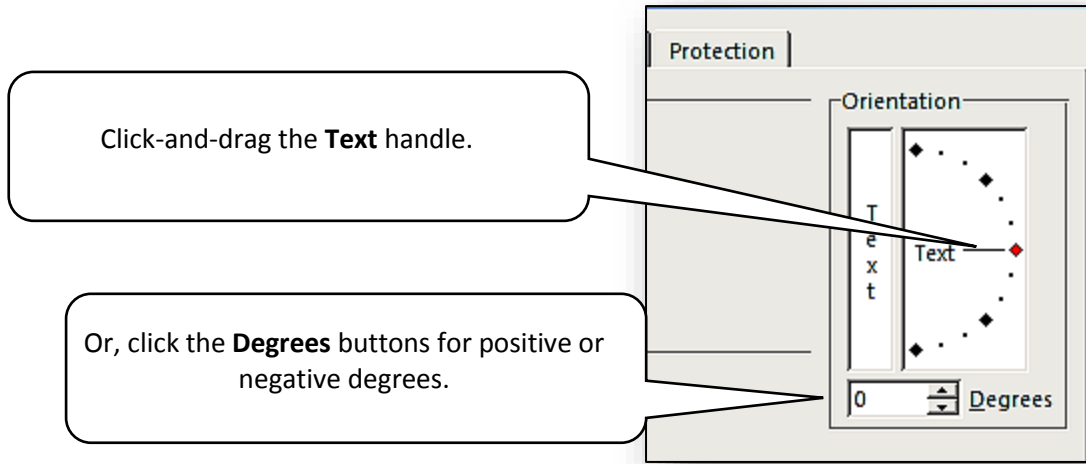
1. Select the cells you wish to change the text angle of. In this example we have selected (**D1, E1, and F1**).

	C	D	E	F	G	H
me	First Name	Grade Level	Birth Date	Gender	Entry Date	Entry Code
	Camila	1	8/4/2009	M	9/8/2015	RT
	Sabah	5	6/26/2005	F	9/8/2015	RT

2. Press **CTRL + 1** (keyboard shortcut) to open up the **Format Cells** dialog box. Or, navigate to the **Format Cells** dialog box by selecting the following: **HOME** → **CELLS** → **FORMAT** → **FORMAT CELLS**.
3. Click the **Alignment** tab in the **Format Cells** dialog box.



- Use the **Orientation** area to set the text angle. Then, click **OK**.



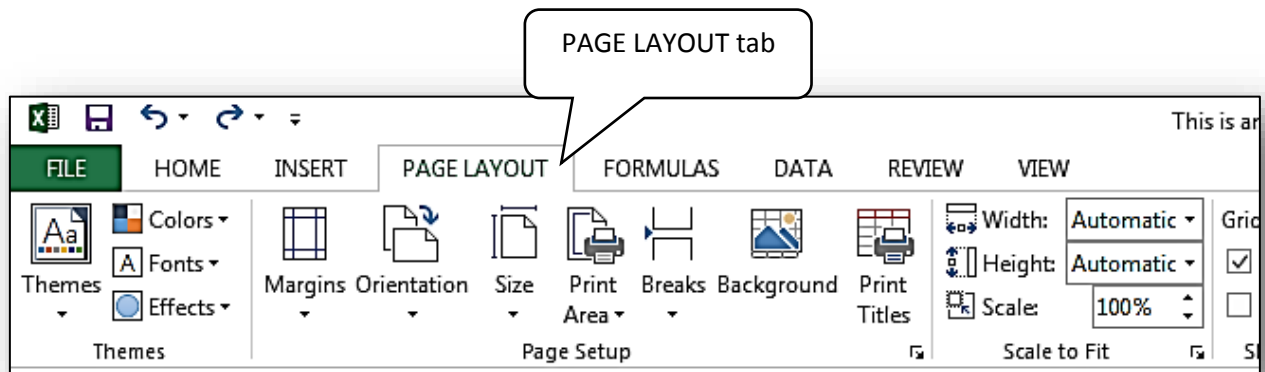
- The text in the selected cells now sit at the angle chosen previously in the **Format Cells** dialog box.

	C	D	E	F	G	
		Grade Level	Birth Date	Gender	Entry Date	En
First Name						
Amila		1	8/4/2009	M	9/8/2015	RT
Abah		5	6/26/2005	F	9/8/2015	RT

Part 3: Page Layout

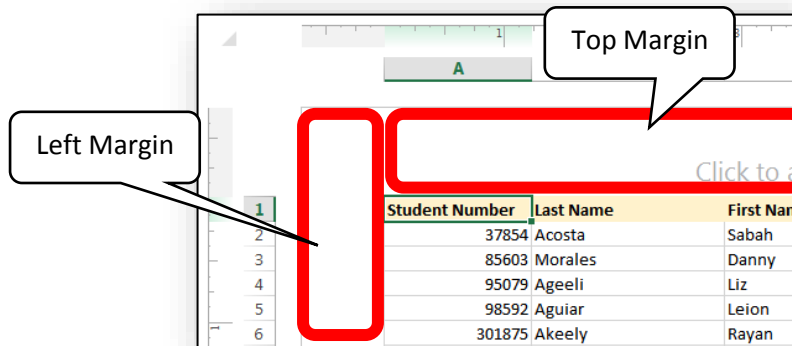
The PAGE LAYOUT Ribbon

The **PAGE LAYOUT** Ribbon contains commands related to how the Workbook is laid out and set up. This includes such things as margins, print area, and scaling to fit. The default margin setting for Excel is usually one inch all the way around (*top, bottom, left, and right margins*). You can design a layout you prefer for each Workbook.

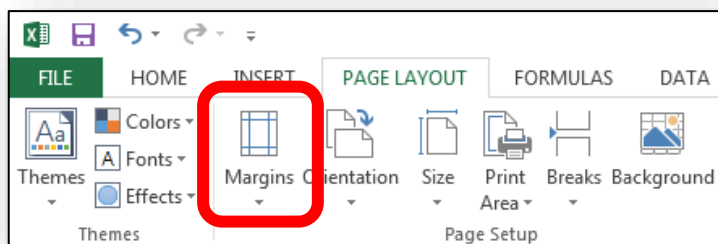


Margins

Margins are those blank areas between the edge of the paper itself and the edge of the cells that makeup the Worksheet.



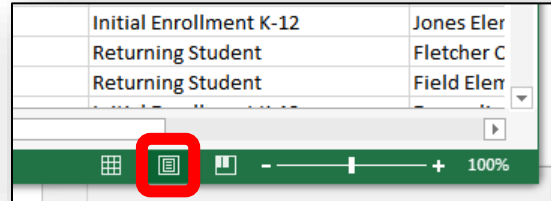
The Margins command is located on the **PAGE LAYOUT** tab in the Page Setup group.



There are three easy ways to work with margins in a Workbook. However, to see the margins you have to change the view from **Normal** view to **Page Layout** view. The view can be changed by clicking on the **Page Layout** icon located on the green Status Bar located at the bottom-right edge of the Excel user-interface. The view options are easily identified by hovering the mouse over each one on the Status bar.

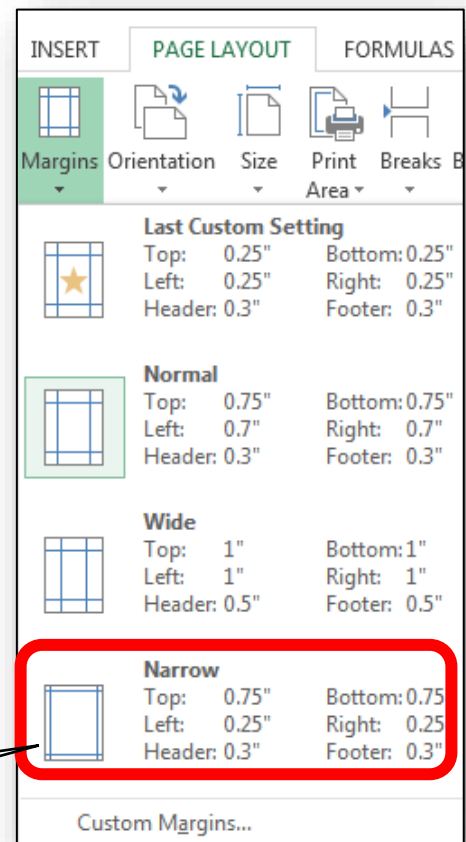
The three methods are:

1. The **Margins** command on the **PAGE LAYOUT** ribbon (which contains several preset margin settings)
2. The **Page Setup** dialog box
3. And, using the Ruler.



Exercise 3.0: Margins Command on the PAGE LAYOUT Ribbon

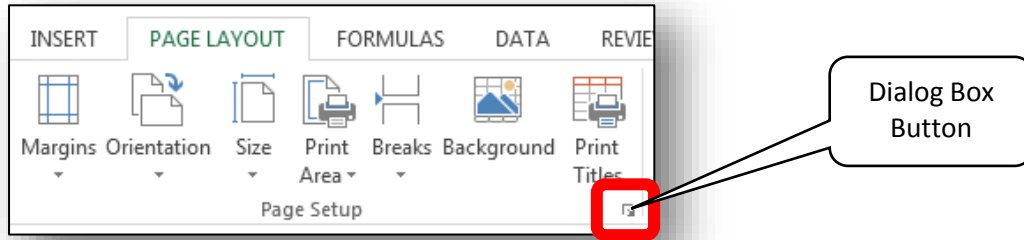
1. Open an Excel Worksheet that has several cells filled with data.
2. Click the **PAGE LAYOUT** tab, then click the **Margins** command.
3. Click to select the **Narrow** preset choice.
4. Observe that the change in margins was applied to the entire Workbook.
5. Click the **Undo** command to undo the margin change. Leave the Workbook open for the next Exercise.



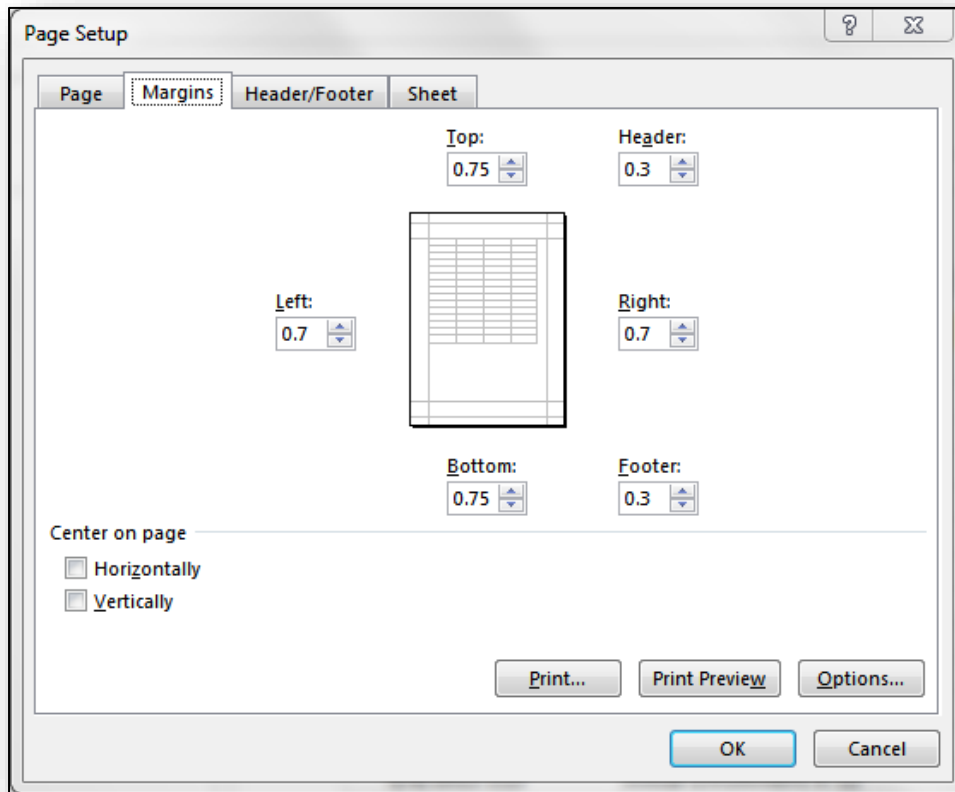
Narrow

Exercise 3.1: Page Setup Dialog Box

1. Open an Excel Worksheet that has several cells filled with data.
2. On the **PAGE LAYOUT** tab, click the dialog box button in the lower right corner of the **Page Setup** group.

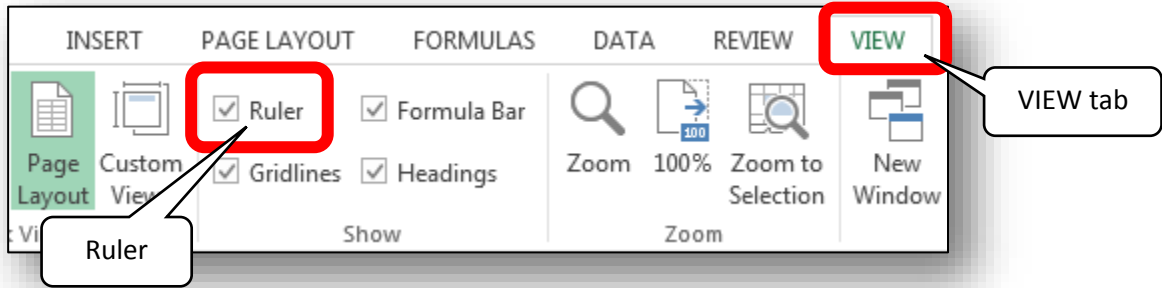


3. On the **Page Setup** dialog box ensure the Margins tab is active by clicking on it. In this dialog box you can make changes to the margins, paper orientation and size, and layout, among other things. When done making choices here, click **OK** to make the changes.

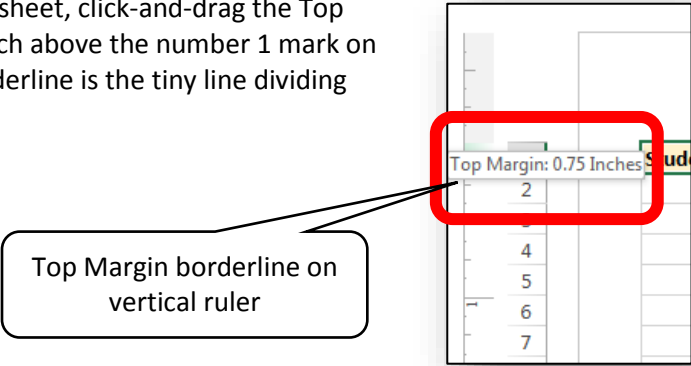


Exercise 3.2: Setting Margins on the Ruler

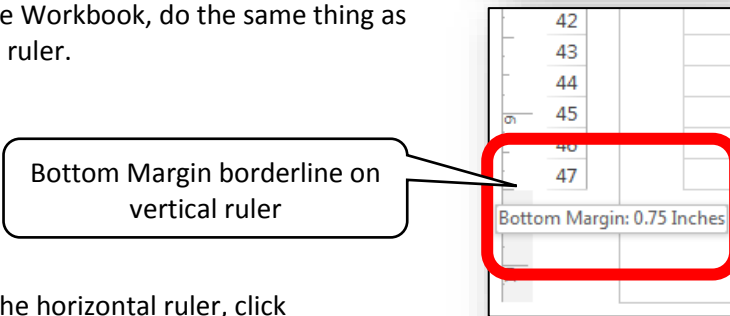
1. Open an Excel Worksheet that has several cells filled with data.
2. If the Ruler is not displayed, go to the Show group on the **VIEW** tab and check the Ruler box.



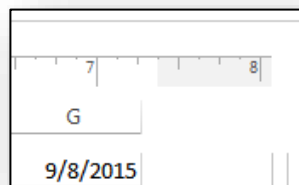
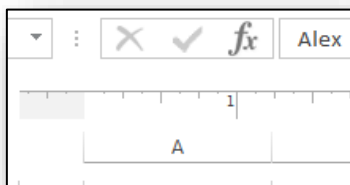
3. To change the top margin of the Worksheet, click-and-drag the Top Margin borderline located about an inch above the number 1 mark on the vertical ruler. The Top Margin borderline is the tiny line dividing the white and gray parts of the ruler.



4. To change the bottom margin of the Workbook, do the same thing as Step 3, except at the bottom of the ruler.

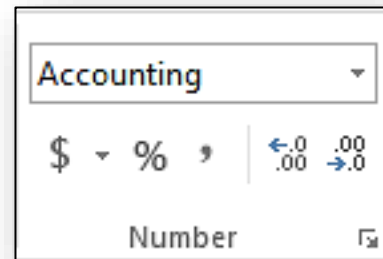


5. To change the left or right margins, locate the margin at either end of the horizontal ruler, click and drag to make margin wider or narrower.



Exercise 3.3: Format Cells for Currency, Accounting, etc.

1. Open (*or create*) a Worksheet with numbers arranged in columns.
2. Select (*highlight*) all the dollar amounts in one column.
3. On the **HOME** tab ribbon, in the **Number** Group, experiment with the various buttons and menu choices. Notice how the selected cells' contents change formatting according to your choices.
4. Try out the various **Currency**, **Number**, and **Accounting** format options.



Part 4: Insert or Delete Columns & Rows

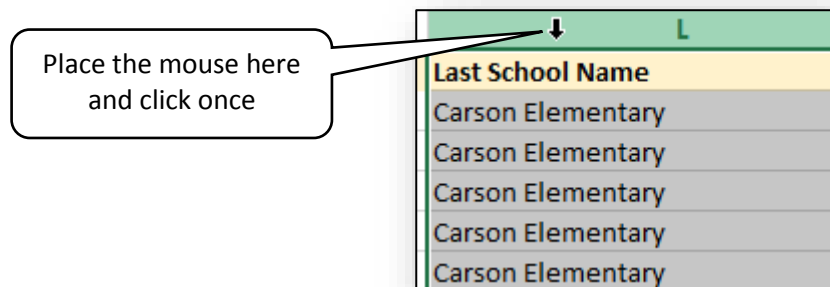
How to Insert or Delete Columns and Rows

When you Insert a new column it will appear just to the left of the active (*selected*) column your cursor was in at the time.

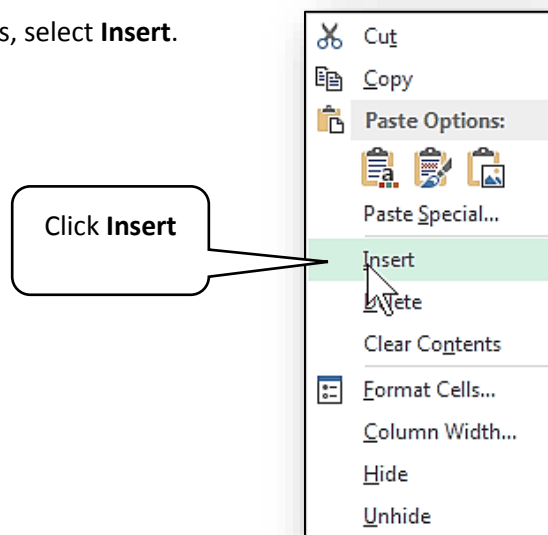
When you Insert a new row it will appear just above the active (*selected*) row your cursor was in at the time.

Exercise 4.0: Insert a New Column

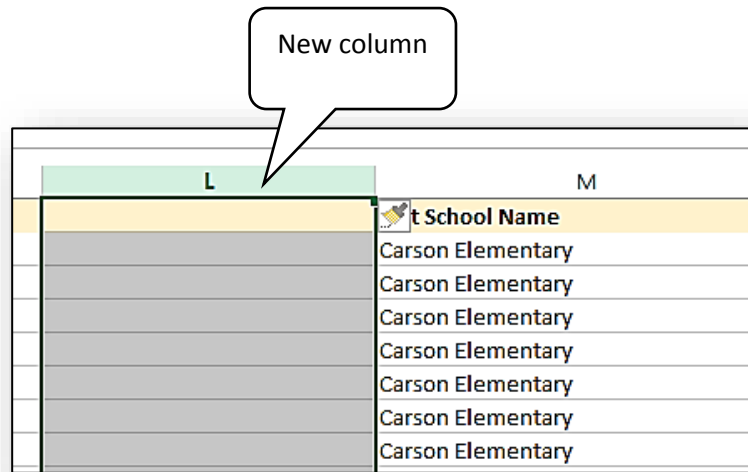
1. Have any Excel workbook open on your screen. Make sure it has content in some of the cells.
2. Place the mouse cursor inside the column name (*at the top of a column where its alphabet letter label is located*) for any column. The mouse cursor will change to a small down-pointing arrow. Click once. That should select the entire column.



3. With the mouse placed anywhere in the selected column, right-click once.
4. On the shortcut menu that appears, select **Insert**.

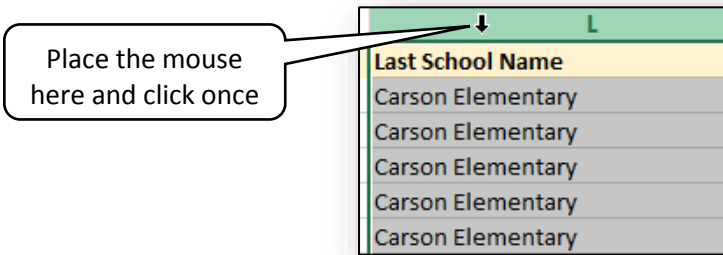


- A new, blank column is inserted immediately to the left. Note that the new column has taken the name of the previous one:

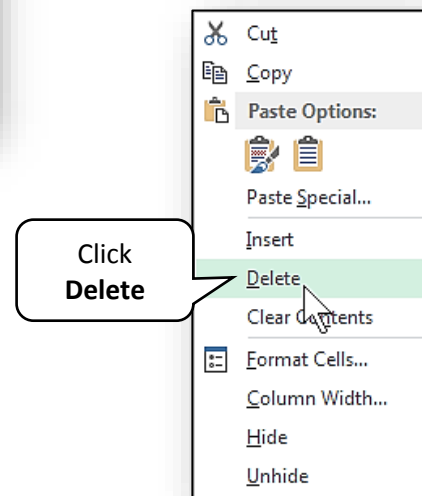


Exercise 4.1: Delete a Column

- To delete a column, place the mouse cursor inside the column name (*at the top of a column where its alphabet letter label is located*). The mouse cursor will change to a small down-pointing arrow. Click once. That should select the entire column.

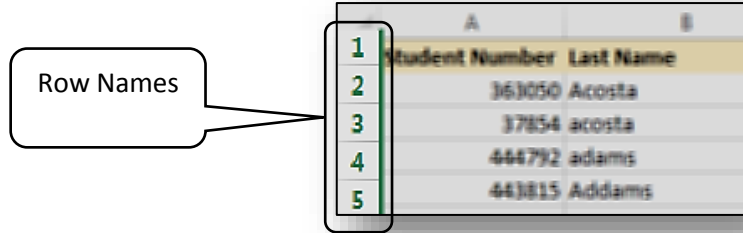


- With the mouse placed anywhere in the selected column, right-click once.



- On the shortcut menu, select **Delete**. The column will be deleted.

Note: You can repeat the same steps above with a row. The row names are numbers, and are located on the far left side of a worksheet.



	A	B
1	Student Number	Last Name
2	363050	Acosta
3	37854	acosta
4	444792	adams
5	443815	Addams

Hide or Unhide Columns or Rows

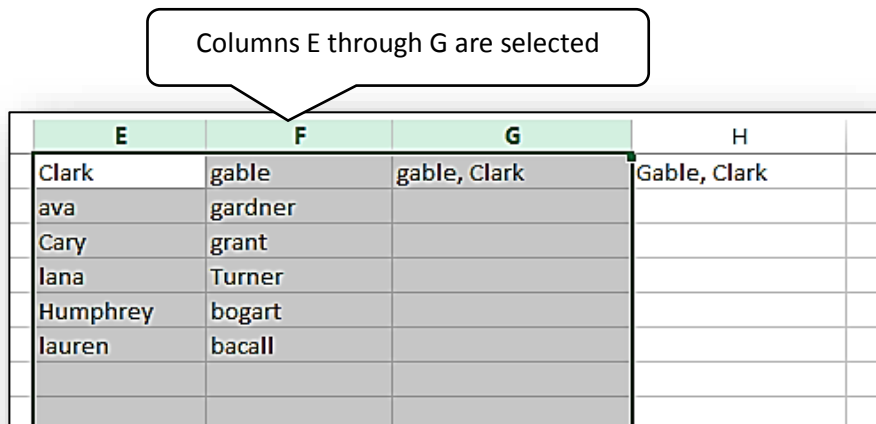
This procedure works the same with columns and rows. After the last exercise we are now left with several columns of data we don't want anymore (*the columns with the individual names and the one with the improperly capitalized names*), and one column we do want (*the column with the properly capitalized names*).

However, due to the formulas we have used, we can't just delete the columns we don't want. For example, if we deleted the G column (*the one with the concatenate formula*) it would invalidate the H column.

Instead of deleting columns we can hide them. Hidden columns are still in place and working; they are just hidden from view. We can unhide them anytime we want.

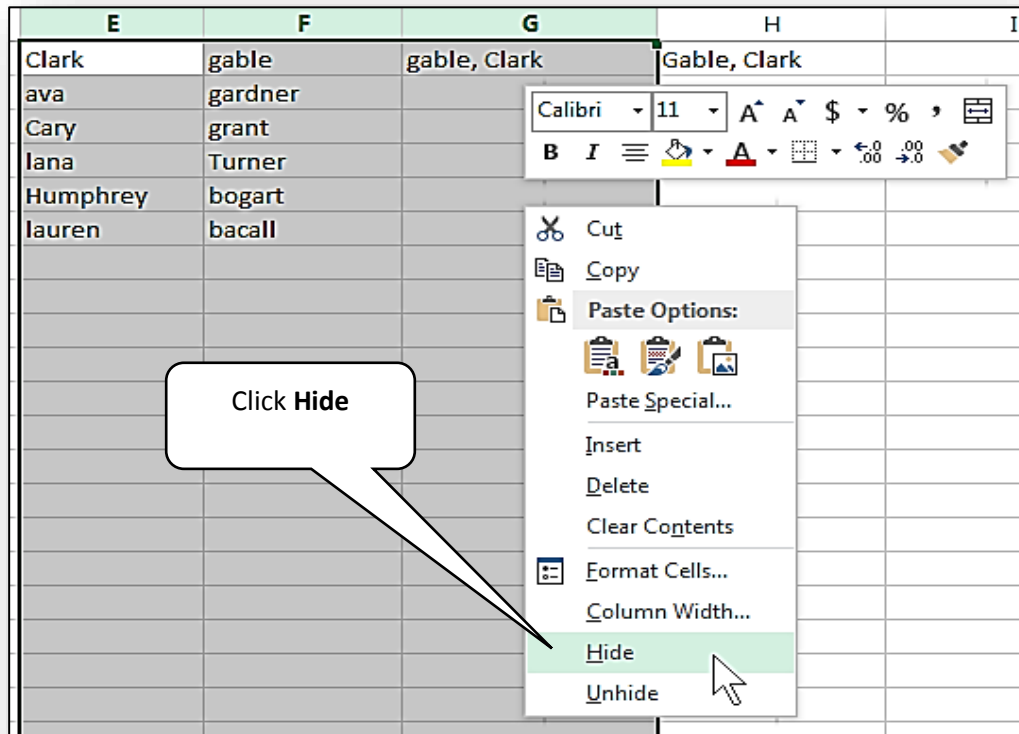
Exercise 4.2: Hide/Unhide Columns or Rows

1. Click-and-drag across the lettered column headers of the columns you want to hide, to select those entire columns:

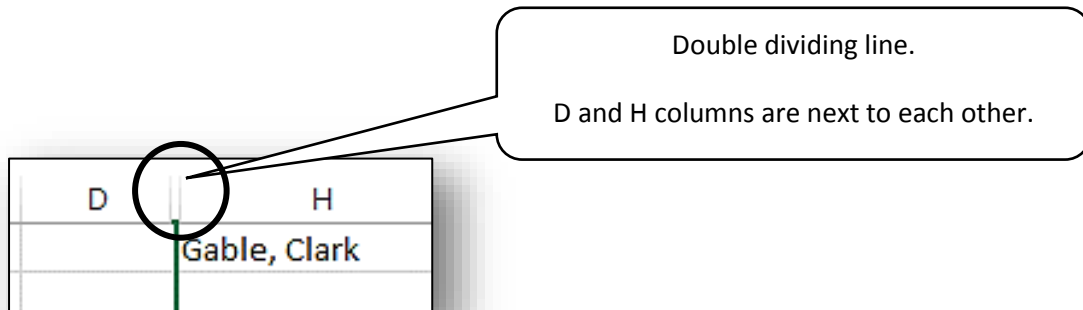


	E	F	G	H
	Clark	gable	gable, Clark	Gable, Clark
	ava	gardner		
	Cary	grant		
	lana	Turner		
	Humphrey	bogart		
	lauren	bacall		

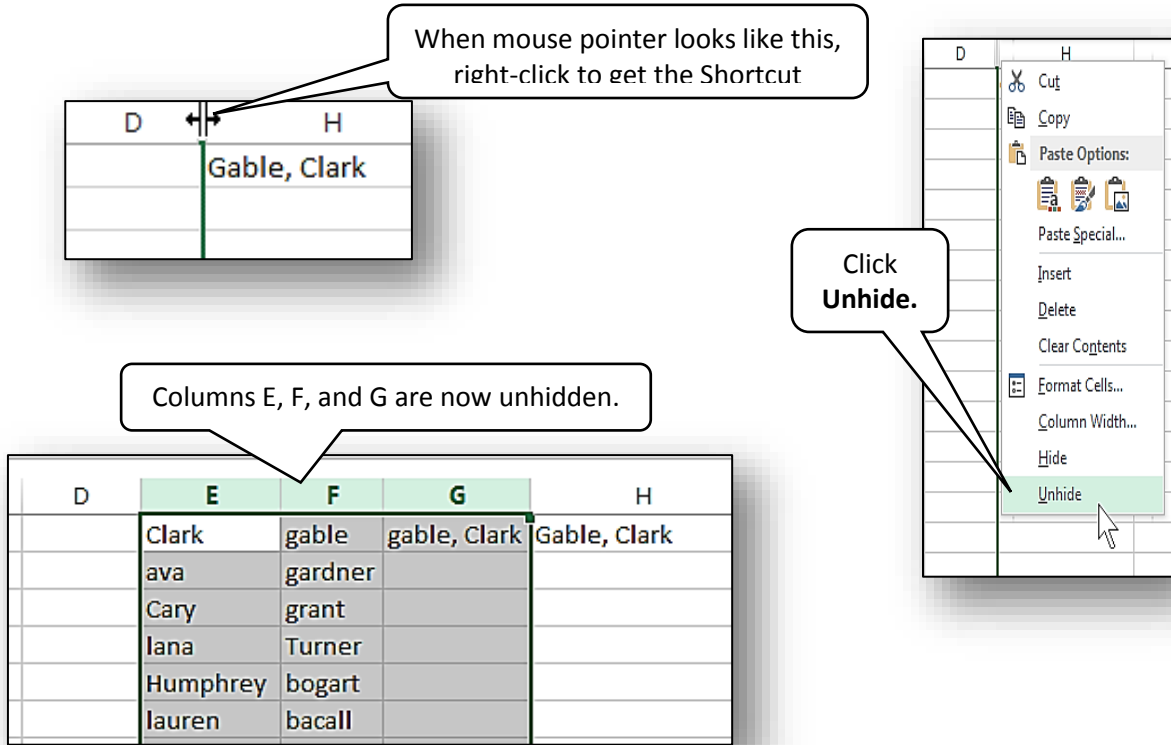
2. Point the mouse anywhere within the grey selected area and right-click to display the Shortcut Menu. Click on the **Hide** menu choice:



3. Note that the unwanted columns collapse and are hidden while the one column we do want remains displayed (*the column with the correctly capitalized names*). We know the columns are hidden and **not** deleted because:
 - a. The columns did not rename consecutively, and the columns E, F, and G are missing. Columns D and H are now sitting next to one another.
 - b. There is a double dividing line between columns D and H, instead of the usual single dividing line between column headers.



- To display the hidden columns again, place the mouse pointer on the double dividing lines until it becomes a black double arrow with parallel lines. Right-click to bring out the Shortcut menu again. Then click **Unhide**. The hidden columns should display.



When mouse pointer looks like this, right-click to get the Shortcut

Click **Unhide.**

Columns E, F, and G are now unhidden.

D	E	F	G	H
	Clark	gable	gable, Clark	Gable, Clark
	ava	gardner		
	Cary	grant		
	lana	Turner		
	Humphrey	bogart		
	lauren	bacall		

Note: If only one hidden column displays instead of all of them, keep the mouse positioned exactly where it is, and double click one or more times until all hidden columns are displayed. You will know they are all unhidden when the column header titles are in sequence again (*the missing column header letters are back, such as E, F, and G in the example above*).

Part 5: Sorting & Filtering

Sorting & Filtering

We usually sort or filter data to group information into chunks that are easier to read and interpret. The difference between sorting and filtering data in Excel is this:

SORTING is when you manipulate data into specific groups (*move it around within its boundaries, but don't hide or delete anything*).

Example of Sorting: Alphabetize an entire column of students' last names.

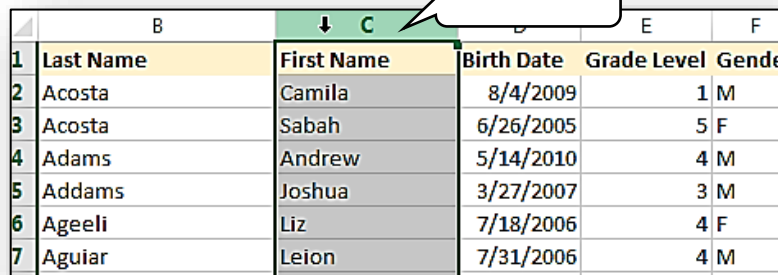
FILTERING is when you allow only certain parts of the data to be displayed while hiding the rest. (*You don't move data around or delete anything, but you might temporarily hide some of it*). This is so you only see the specific data you want to see.

Example of Filtering: In a column that has many different dates ranging from September through December, you display only the September dates, and hide all dates in October, November, and December.

Exercise 5.0: Sort Data

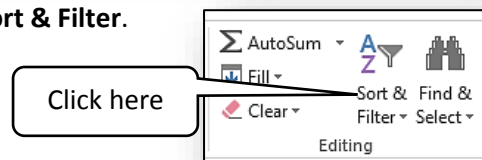
In this exercise we will sort the data in alphabetical order by students' first names.

1. Click the "Enrollment by Date" worksheet to bring it forward.
2. Place the mouse cursor over the column header **C**, and click once to select the entire column of first names.

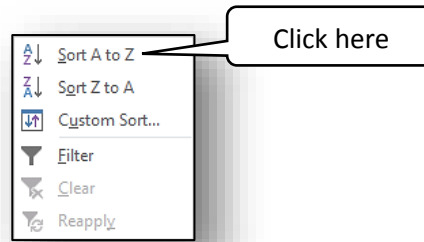


	B	↓ C	D	E	F
1	Last Name	First Name	Birth Date	Grade Level	Gender
2	Acosta	Camila	8/4/2009	1	M
3	Acosta	Sabah	6/26/2005	5	F
4	Adams	Andrew	5/14/2010	4	M
5	Addams	Joshua	3/27/2007	3	M
6	Ageeli	Liz	7/18/2006	4	F
7	Aguiar	Leion	7/31/2006	4	M

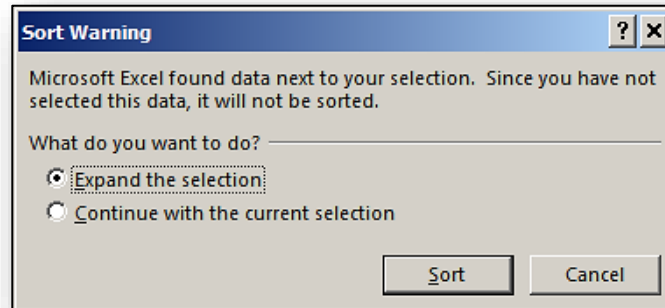
3. On the **Home** ribbon in the **Editing** group, click **Sort & Filter**.



4. Click Sort A to Z.



5. In the **Sort Warning** dialog box that appears, keep the default selection to **Expand the selection** and click the **Sort** button. This means that because the column you are about to sort into alphabetical order is directly related to other columns around it, you are agreeing to allow Excel to sort all the related data as well. Subsequently, when you sort the names, their respective other data will move along with each name, so nothing will be mixed up or lost. If you were to choose **Continue with the current selection**, only the selected column **C** would be sorted.



6. Column **C** is now sorted alphabetically. All related columns were carried along with the sort, so that each student's records remain with that student's name on the worksheet.

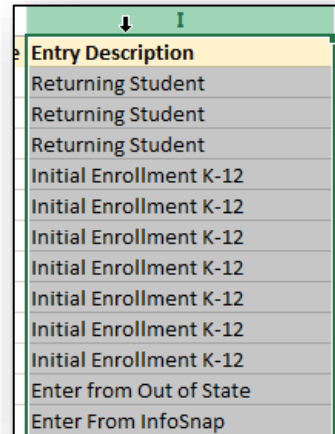
	B	C	D	E	F
1	Last Name	First Name	Birth Date	Grade Level	Gender
2	Nunez Tromsen	Abdiel	11/30/2010	2	M
3	Meckler	Abdullah	11/28/2010	0	M
4	Dogbo	Abdulmasowar	11/25/2010	1	M
5	Holly	Abiram	11/24/2010	2	M
6	Smothers	Abraham	11/20/2010	3	M
7	Hardwick	Adair	11/20/2010	3	M

7. Try one more sort. Select Column **E**, for **Grade Level**.
8. Click the same **Sort & Filter** command button. Note that the choices have changed to reflect the type of data in the column. Instead of "Sort A to Z", it now says "Sort Smallest to Largest". Select **Sort Smallest to Largest**.
9. When the **Sort Warning** dialog box appears, accept the default setting and click **Sort**.
10. Observe how the worksheet now looks.

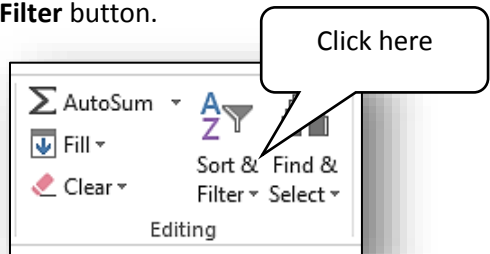
Exercise 5.1: Filter Data

In this exercise we will filter the data to display only returning students, while hiding the rest. Use the same “Enrollment by Date” worksheet.

1. Select the entire Column I, which contains the **Entry Descriptions**.



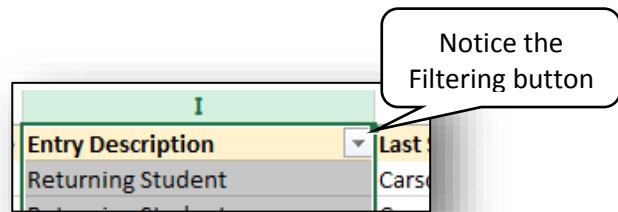
2. Click the **Sort & Filter** button.



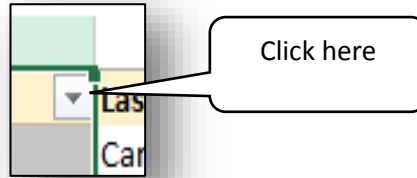
3. Click the **Filter** command.



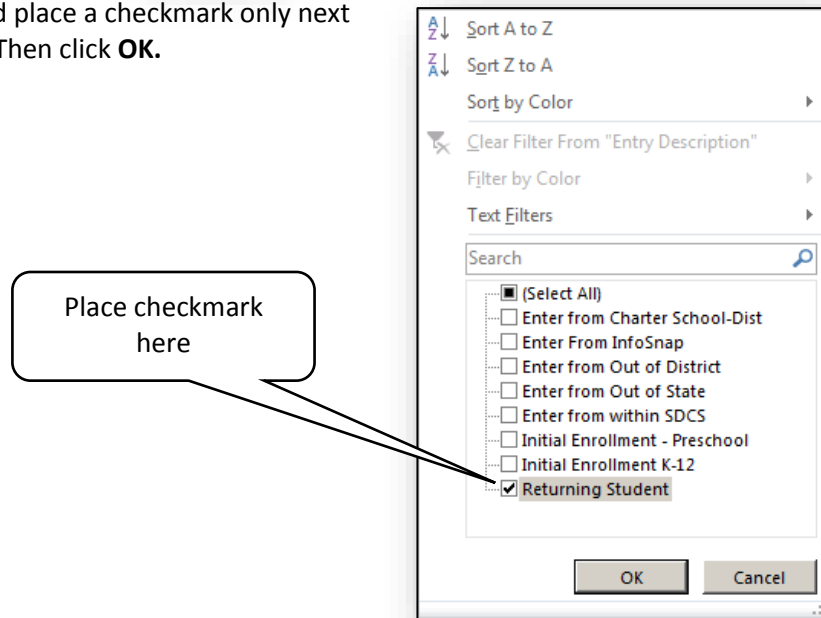
4. Observe that a filtering button is now visible in the upper right corner of the column.



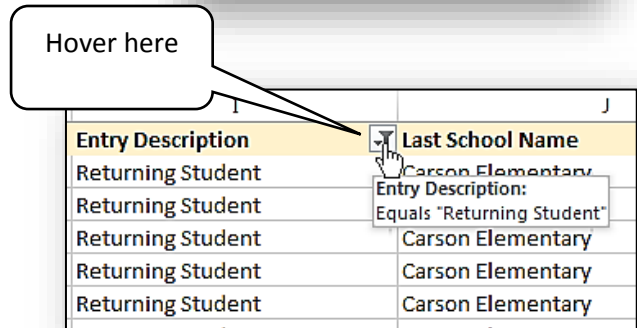
5. Click the **Filtering** button.



6. Uncheck everything, and place a checkmark only next to **Returning Students**. Then click **OK**.



7. The column is then filtered so the worksheet will display only those students who are Returning Students. Note that the Filtering button icon has changed to indicate that a filter is in place. Hover the mouse over the Filtering button to see its screen tip.



8. **To remove the filter**, click the **Sort & Filter** button again, and click **Filter** once more.

Part 6: Headers & Footers

Inserting Headers & Footers

A Header or Footer is found on each page or Worksheet of an Excel Workbook. The Header area is a thin section of the Excel page at the very top edge, above the main body of the Worksheet. A Footer is the exact same thing as a Header, only located at the “foot” of the Worksheet, along the very bottom edge.

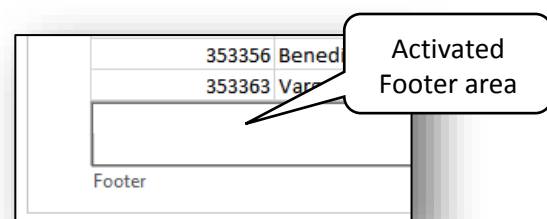
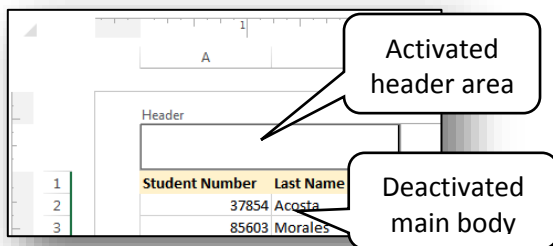
Examples of common Headers and Footers are such things as page numbers, or section titles. Notice the Header area of this handbook you’re reading. On the left, the Header reads “**March 2017**” and on the right side of the Header area it shows the San Diego Unified School District Logo. These repeat on every page of the book. Automatic page numbering is in the footer of this Workbook along with the title of this handbook. This is essentially the same as a Header or Footer in a Workbook.

Header and Footer commands are found on the **INSERT** ribbon in the Header & Footer group. When you activate the Header/Footer area, the rest of the Worksheet text turns gray. To change out of that area, place the mouse pointer anywhere in the main body of the Worksheet and click again. Then whatever you entered into the Header/Footer will appear gray and the main body of the Workbook page will become darker again as the active area.

Note: To see the Header/Footer area, you may have to change the view from Normal to Page Layout view on the bottom right portion the Status bar.

Exercise 6.0: Create a Header or Footer

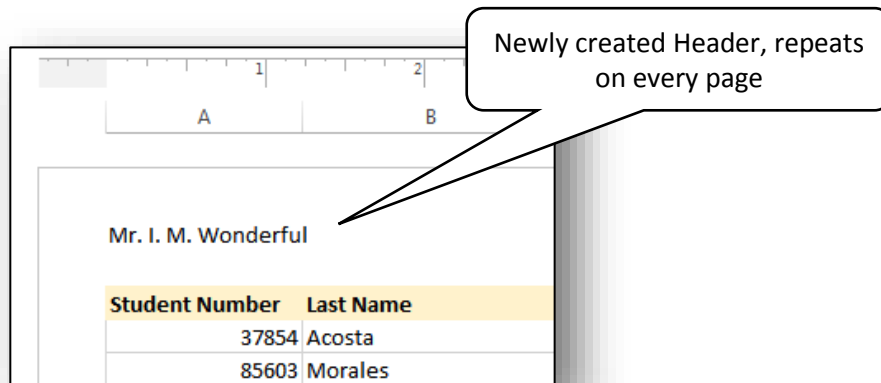
1. Have an Excel Worksheet with data open on the screen.
2. Scroll if necessary so that the top edge of the page is in view (*you may need to switch to **Page Layout** view on the Status bar*).
3. Place the mouse pointer at the very top edge of the page (*or bottom for a Footer*) into the Header or Footer area and single click to make it active.
4. The view will alter so that the Header/Footer area is now active and the main body is inactive.



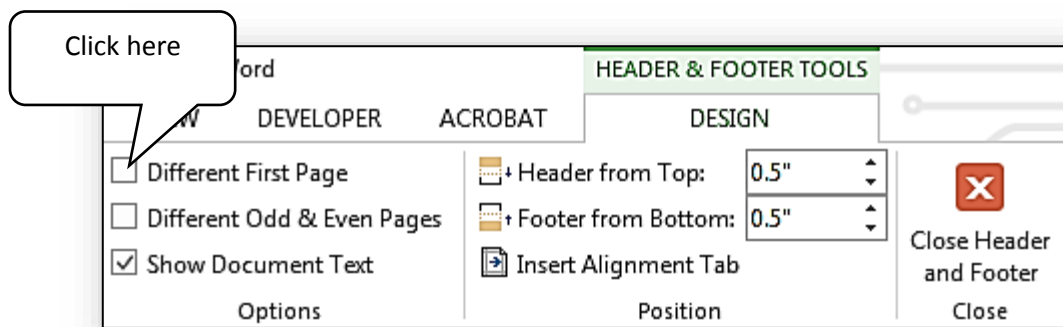
5. While the cursor is inside the Header/Footer area, type your name.
6. Place the mouse pointer down into the main body of the page and single-click. This will make the Header/Footer area inactive and the main body active again.

7. Note your name is now grayed-out. You cannot select it or edit it unless you first activate the Header/Footer area again.
8. If the Workbook you're working in has more than one page, scroll through to see the other pages. Look for your name to appear on each page. If the Workbook has only one page, create additional blank pages quickly by holding down the **CTRL** key and tapping the **Enter** key, multiple times. The header (your name) should appear on each page automatically.

Note: On your computer screen the inactive area appears grayed out. However, when you print the page, all text including the Header/Footer areas will print the same as the text in the main body.

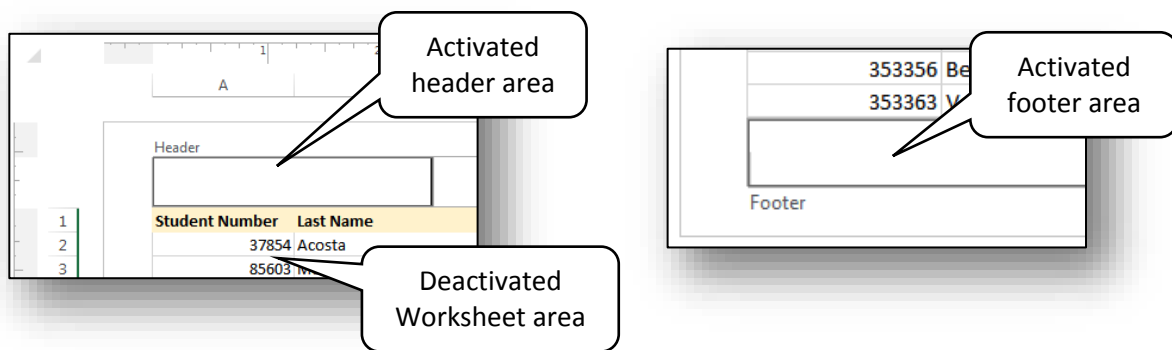


If you don't want a Header or Footer to appear on the very first page of a Workbook, then you can choose the "**Different First Page**" option. This option is only available when the Header and Footer Tools contextual ribbon appears. This ribbon only appears when your cursor is sitting inside an activated Header or Footer area.

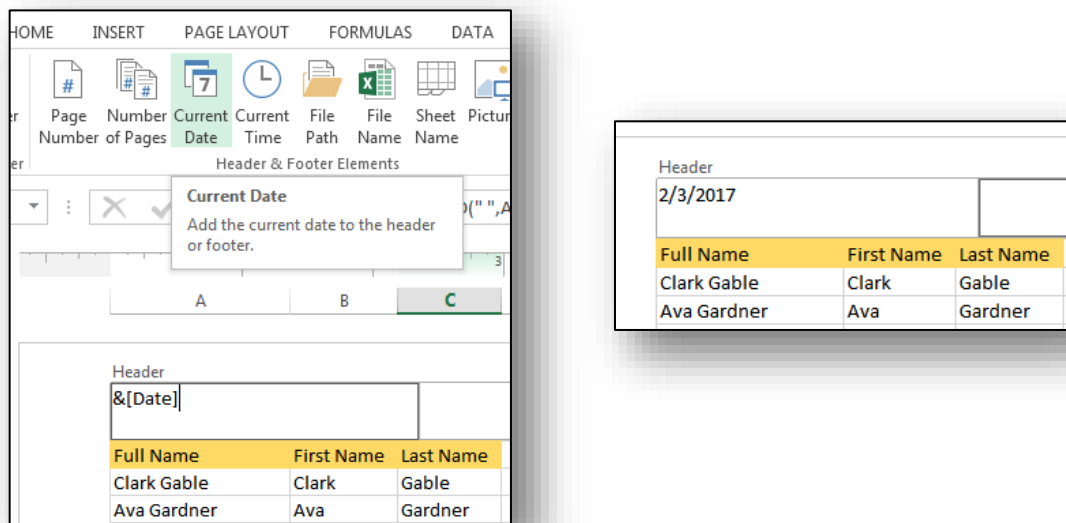


Exercise 6.1: Add a Date Stamp to a Header or Footer

1. Have an Excel Worksheet with data open on your screen.
2. Scroll if necessary so that the top edge of the page is in view (*you may need to switch to **Page Layout** view on the Status bar*).
3. Place the mouse pointer at the very top edge of the page (*or bottom for a Footer*) into the Header or Footer area and single click to make it active.
4. The view will alter so that the Header/Footer area is now active and the main body is inactive.

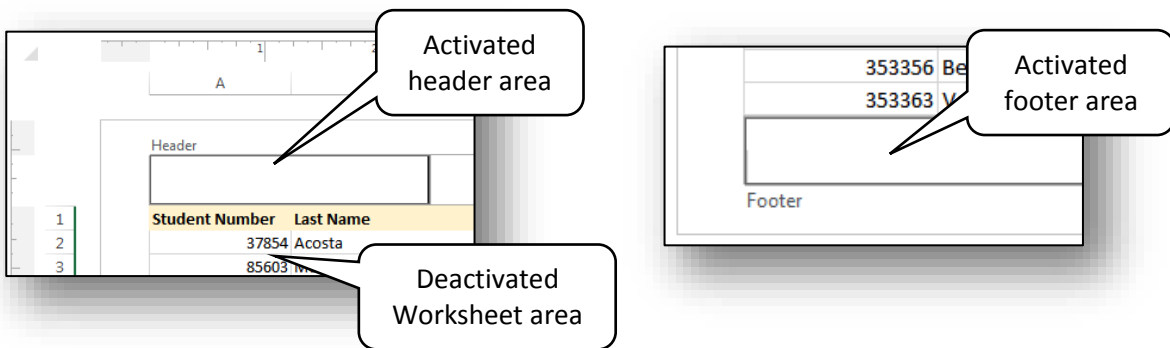


5. With the Header/Footer active and the **Header & Footer Tools** contextual tab selected, click on the Header or Footer area where you want to insert a Date Stamp. Then click on the **Current Date** command in the Header & Footer Elements group and the formula for the current date will appear. It will become active (*show the date*) when you click into another area.

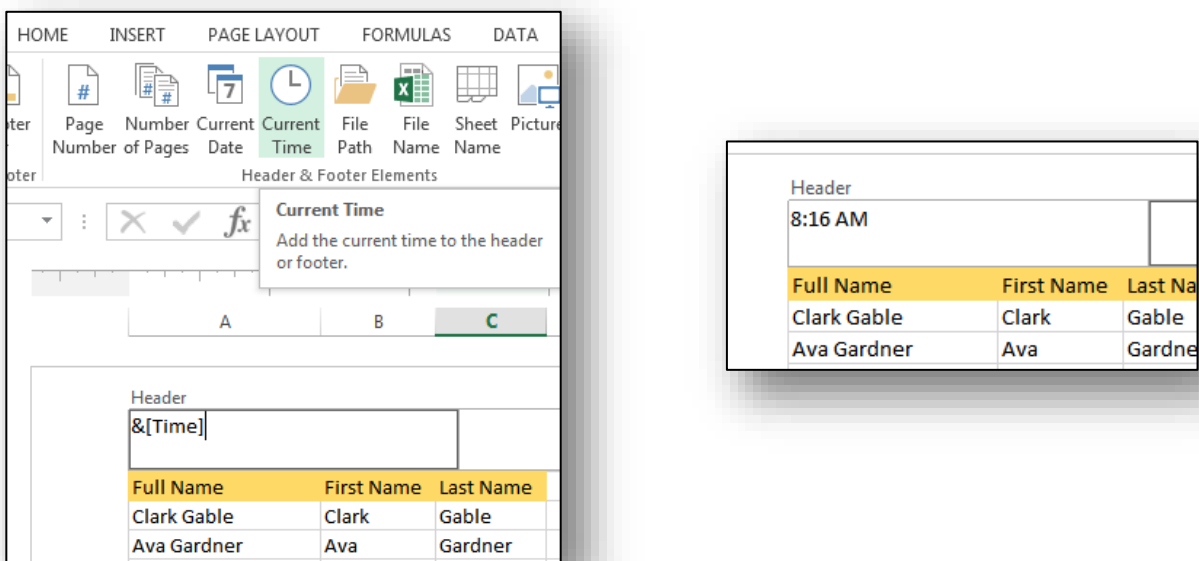


Exercise 6.2: Add a Time Stamp to a Header or Footer

1. Have an Excel Worksheet with data open on your screen.
2. Scroll if necessary so that the top edge of the page is in view (*you may need to switch to **Page Layout** view on the Status bar*).
3. Place the mouse pointer at the very top edge of the page (*or bottom for a Footer*) into the Header or Footer area and single click to make it active.
4. The view will alter so that the Header/Footer area is now active and the main body is inactive.

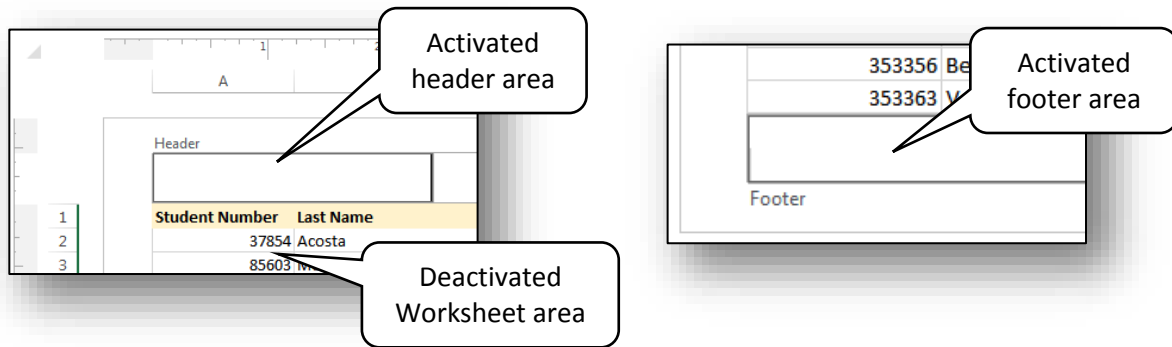


5. With the Header/Footer active and the **Header & Footer Tools** contextual tab selected, click on the Header or Footer area where you want to insert a Time Stamp. Then click on the **Current Time** command in the Header & Footer Elements group and the formula for the current time will appear. It will become active (*show the time*) when you click into another area.

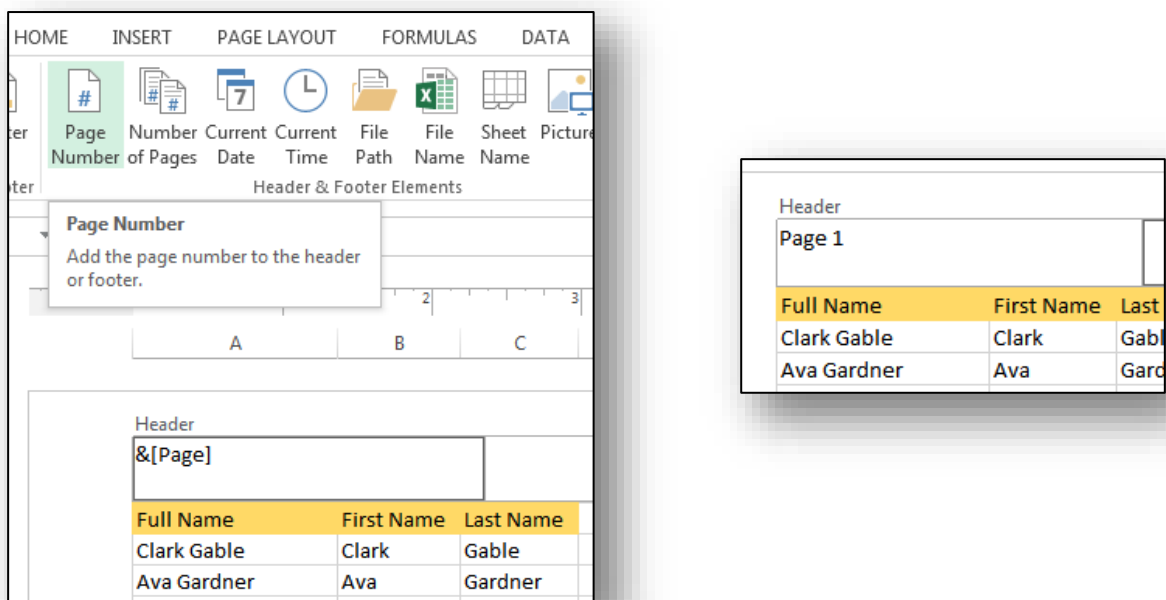


Exercise 6.3: Add Page Numbers to a Header or Footer

1. Have an Excel Worksheet with data open on your screen.
2. Scroll if necessary so that the top edge of the page is in view (*you may need to switch to **Page Layout** view on the Status bar*).
3. Place the mouse pointer at the very top edge of the page (*or bottom for a Footer*) into the Header or Footer area and single click to make it active.
4. The view will alter so that the Header/Footer area is now active and the main body is inactive.



5. With the Header/Footer active and the **Header & Footer Tools** contextual tab selected, click on the Header or Footer area where you want to insert a Page Number. Then click on the **Page Number** command in the Header & Footer Elements group and the formula for the current page will appear. It will become active (*show the Page Number*) when you click into another area.



Part 7: Bookmarks & Hyperlinks

Inserting Bookmarks & Hyperlinks

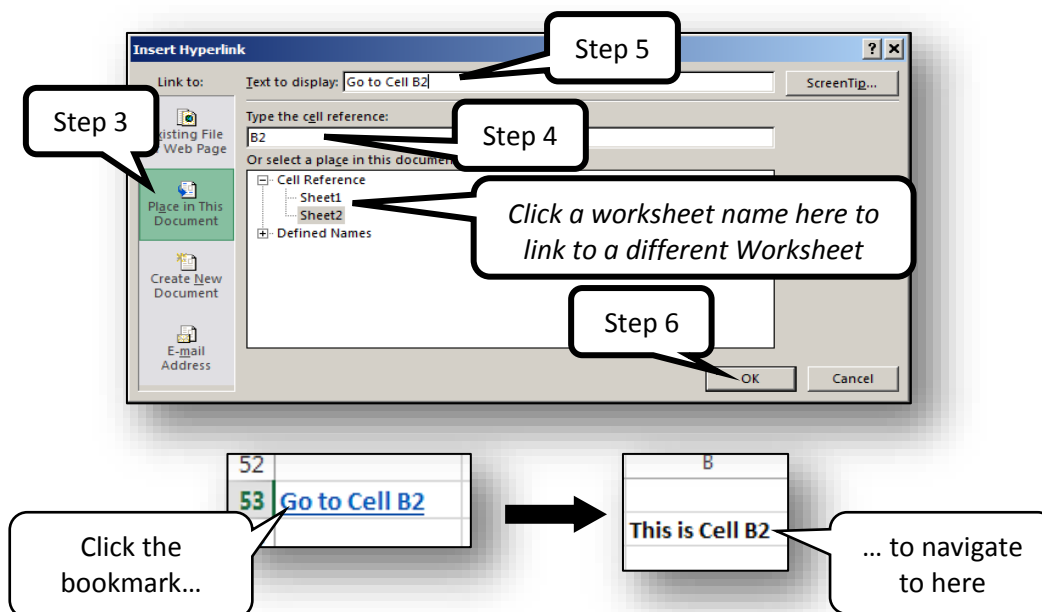
A link in an Excel Workbook that transfers the user to a specific location within that same Workbook is called a **Bookmark**. A link that transfers the user to a location outside the Workbook (*such as a specific webpage*) is called a **Hyperlink**. Bookmarks and Hyperlinks are useful tools that make it easy to navigate between pages of a Workbook or to specific webpages.

How to Link to Another Cell in Any Worksheet:

You can create a bookmark that navigates to any location within an Excel workbook by simply choosing the location or target of the Bookmark (*the cell and Worksheet name to navigate to*), and then creating the Bookmark link that you will click on to jump to that target cell.

Exercise 7.0: Insert a Bookmark Link

1. Right click on the cell where the Bookmark link is to be placed (to open the **Shortcut Menu**).
2. Click on the **Hyperlink** command near the bottom of the **Shortcut Menu** to open the **Insert Hyperlink** dialog box.
3. On the left side of the **Insert Hyperlink** dialog box, select **Place in this Document**.
4. In the **Type the cell reference** field, enter the name of the cell that you will link to.
5. In the **Text to display** field, type the words that will appear on the Bookmark itself.
6. Click **OK**. Test the link by clicking on it to see if it navigates to the target (*Bookmarked*) cell.



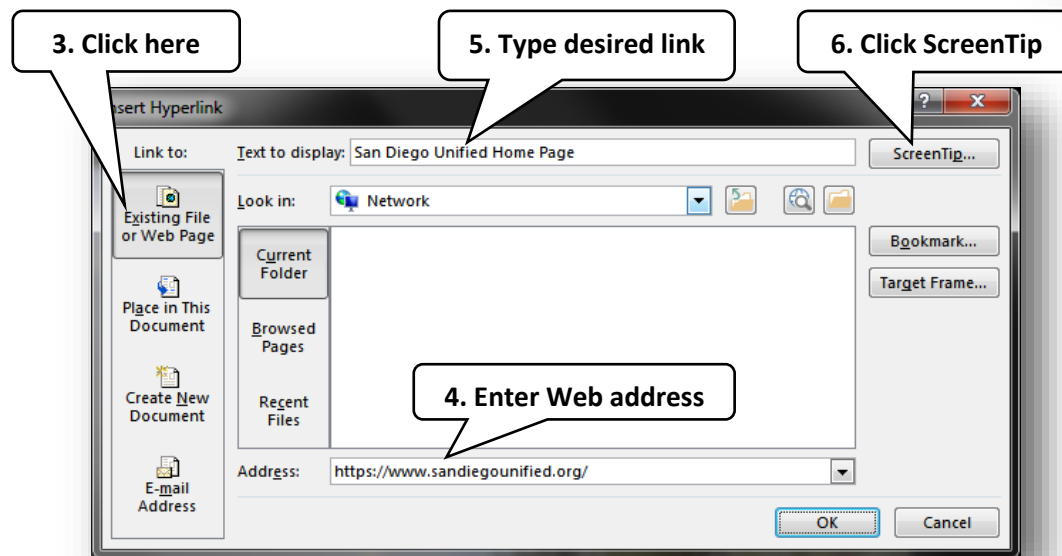
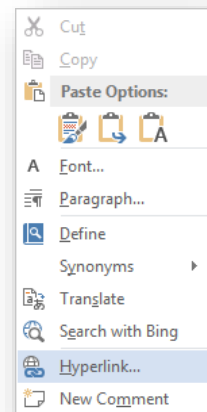
How to Create a Hyperlink to a Specific Website

A Hyperlink can be placed anywhere within an Excel Workbook that will automatically link to any website or webpage you choose. This process can be repeated as many times as necessary. All that is needed is the URL address of the website or web page that the hyperlink will link to.

Exercise 7.1: Insert a Hyperlink

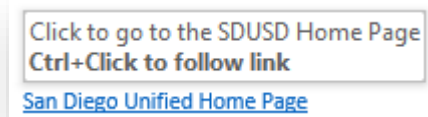
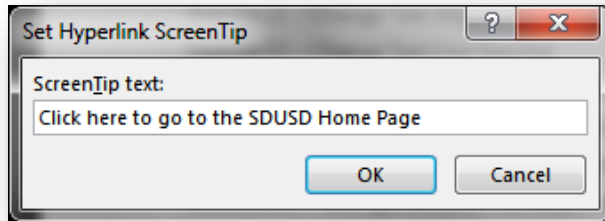
1. Right click on the cell where the Bookmark link is to be placed (*to open the **Shortcut Menu***).
2. Click on the Hyperlink command near the bottom of the menu to open the **Insert Hyperlink** dialog box.
3. On the left side of the **Insert Hyperlink** dialog box, beneath the “**Link to**” header, select the first choice: **Existing File or Web Page**.
4. Next, click to place the cursor in the “**Address**” field. Enter the URL address of the website or web page you want to link to.

Note: A quick and easy way to get the URL address of a specific website or web page is to simply copy the address from the address bar of your web browser displaying the web page or website you want to link to. Then paste it into the **Address** field on the **Insert Hyperlink** dialog box.



5. At the top of the **Insert Hyperlink** dialog box (*to the right of the “**Text to display**” header*), type in the words you want to display on your hyperlink. In our example we have written, “**San Diego Unified Home Page.**”

6. Just as with the Bookmark (in **Exercise 7.0**), you can add a **Screen Tip** to the new hyperlink that will display when you mouse over it. Click on the **Screen Tip** button in the upper-right corner of the **Insert Hyperlink** dialog box.



7. Type the screen tip message you want to display. Then, click the **OK** button to return to the **Insert Hyperlink** dialog box.
8. With all the steps above complete, click on the **OK** button to set the hyperlink. The new hyperlink will appear where you first inserted your cursor to begin this process.

[San Diego Unified Home Page](#)

Note: The new hyperlink is active when the text appears in **blue and is underlined**. The hyperlink can be modified or removed by right clicking and selecting the appropriate choice from the **Shortcut Menu**.

Part 8: Formulas & Functions

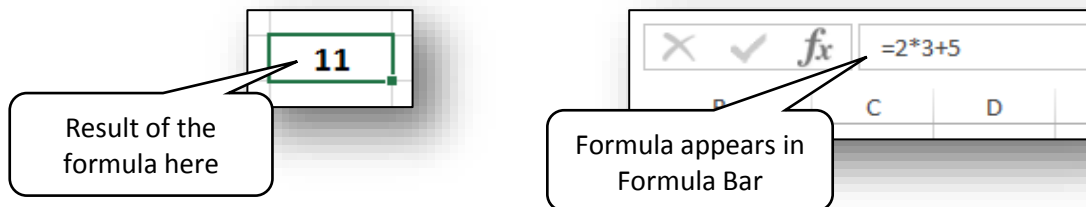
Formulas & Functions

A Formula in Excel performs mathematical, statistical, and logical operations with the data in the cells of a worksheet. A Formula always starts with an equal sign (=), which can be followed by numbers, math operators (*such as a plus or minus sign*), and Functions. You can create your own Formula or use the preset Formulas in Excel called Functions. These Functions are arranged by category in a Functions Library. The following are several examples of various Formulas—some with Functions and some without.

The following formula multiplies 2 by 3, and then adds 5 to come up with the answer, 11.

$$=2*3+5$$

If you were to type the above formula into a cell and press the **Enter** key, the formula itself would become hidden and only the answer would display in the cell (*the number 11*). The formula doesn't disappear, though. It can still be seen (*and edited*) in the **Formula Bar** when that cell is selected.



Excel is a powerful software program used by professionals around the world from science to medicine, and from engineers to financial institutions. The following is an example one of countless Formulas used every day by professionals in banking. This formula uses the **PMT** (*payment*) Function to calculate a mortgage payment based on a 5 percent interest rate (*5% divided by 12 months equals the monthly interest rate*) over a 30-year period (*360 months*) for a \$200,000 loan:

=PMT(0.05/12,360,200000)

The answer to this Formula is: **\$1,073.64**. That is, **360** monthly payments of **\$1,073.64**.

Here are some additional examples of formulas that you can enter in an Excel worksheet.

NOTE: To make the formulas work, you must be sure there are no spaces after the end of the formula and that you press the Enter key to activate them.

=A1+A2+A3 Adds the values in cells A1, A2, and A3.

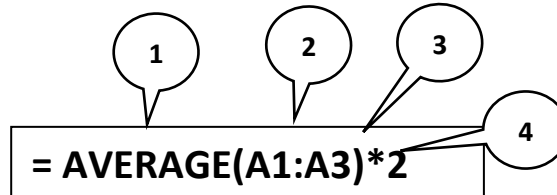
=SQRT(A1) Uses the SQRT (*Square Root*) Function to return the square root of the value in A1.

=TODAY() Returns the current date.

=UPPER("hello") Converts the text "hello" to "HELLO" by using the UPPER function.

Parts of a Formula

The formula below shows what the average is of all the numbers entered into cells A1 through A3, multiplied by 2.



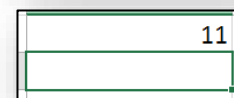
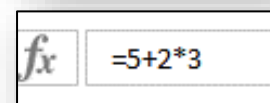
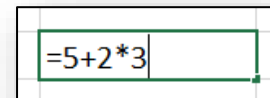
A formula cannot have any spaces between the letters, characters, or punctuation unless it is framed by quotation marks (“ ”).

1. **Functions:** The AVERAGE function returns the average value of a series of numbers.
2. **References:** (`A1:A3`) refers to all numbers in cells A1 through A3. To refer to ONLY cells **A1** and **A3**, but NOT **A2**, the colon would be replaced by a comma: (`A1,A2`).
3. **Operators:** The * (*asterisk*) operator multiplies numbers.
4. **Constants:** Numbers or text entered directly into a formula, such as the number 2.

Note: You create formulas by entering them into a cell, or by putting them together using the **Insert Function** tool. The following two exercises demonstrate both methods.

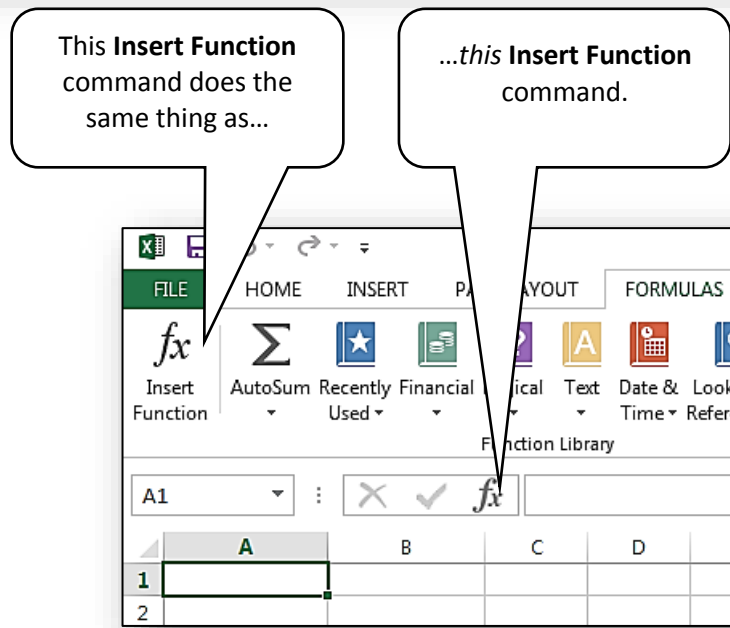
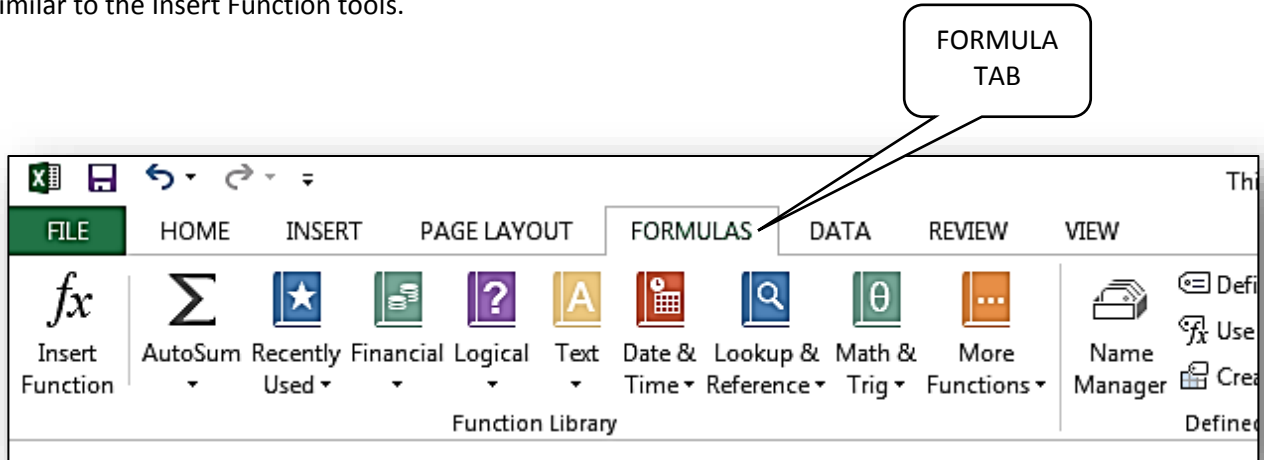
Exercise 8.0: Build a Formula by Entering it

1. Click to place the cursor inside any blank cell of a worksheet.
2. Always begin a formula with the equal sign. Type: `=`
Enter a formula that will add the number 5 to the product of 2 multiplied by 3: `=5+2*3`
(Following the standard order of mathematical operations, multiplication is performed before addition.)
3. Note that as you type the formula into the cell, it also appears at the same time on the **Formula Bar**.
4. With the cursor still inside the cell on the right edge of the formula you just typed, press the **Enter** key on the keyboard. The number **11** will now appear in that cell.



Formula Tab

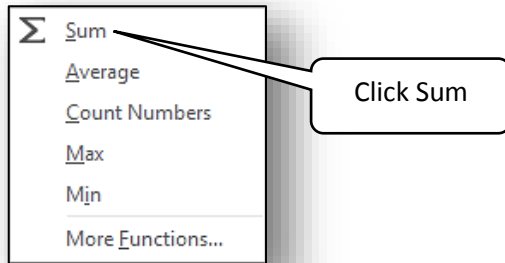
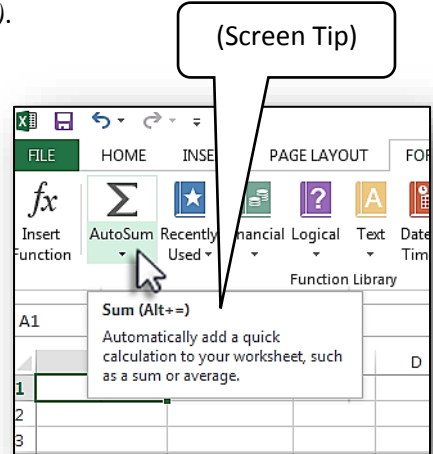
The FORMULA TAB has a wide variety of functions and other tools and commands to help you with formulas. A good thing to use is the **Function Library** group. This is another way of building formulas, similar to the Insert Function tools.



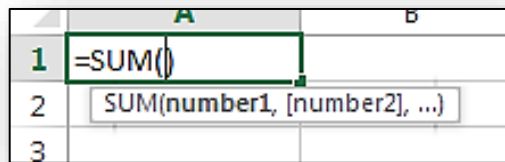
Exercise 8.1: Build a Formula with the Function Library; AutoSum

The AutoSum function is a little different from the other functions, in that it can be used two ways.

- A. Use AutoSum to Enter Numbers to Total:
 1. Make sure the **FORMULA** tab is active (*in front of other tabs*).
 2. Click to place the cursor inside any blank cell of a worksheet.
 3. Hover the mouse over the bottom part of the AutoSum command, just underneath the AutoSum label, until you see the screen tip pop up. The screen tip briefly explains what the function does.
 4. Click the command button (*lower half*).
 5. On the menu that pops up, choose **Sum**.



- 6. The function is created in the cell, ready for you to enter the numbers you want to add.



7. Type several numbers with a comma in between each one (*no spaces*). Type: **7,10,4**

	A
1	=SUM(7,10,4)
2	

8. Press the Enter key. The results of the formula are displayed in the cell (*21*).

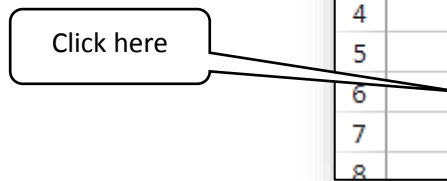
	A
1	21
2	
3	

B. Use AutoSum to Display the Sum of an Existing Column/Row of Numbers:

1. Enter random numbers into several cells in the same column.

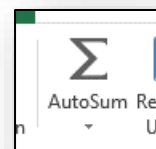
	A
1	10
2	27
3	273
4	9854
5	

2. Click to activate any other cell in that same column where you want the total sum to be displayed.

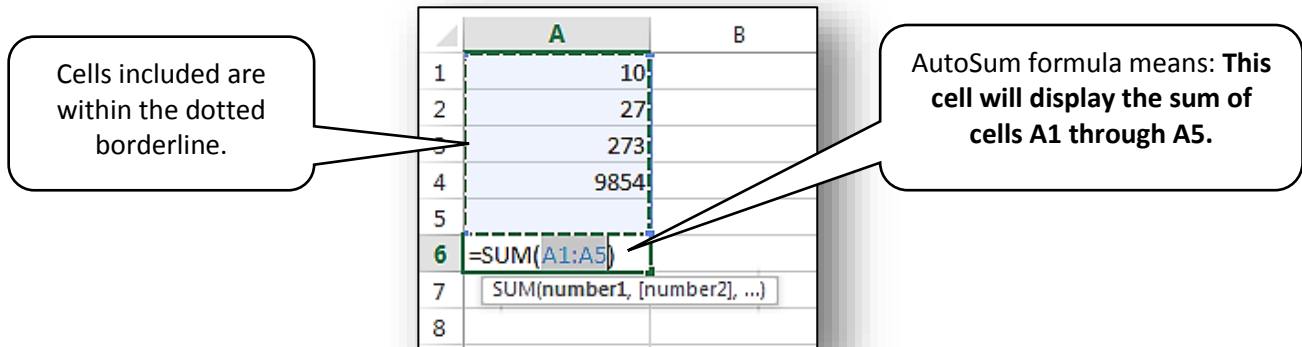


	A
1	10
2	27
3	273
4	9854
5	
6	
7	
8	

3. Click the **AutoSum** command button (*click the Greek Sigma Σ symbol*):



- Excel shows a preview of the range of cells it intends to include in the auto summation. It displays the formula within the cell where you placed the AutoSum function until you click **Enter** or click into another cell. In this example, the formula with the SUM function is **=SUM(A1:A5)** :

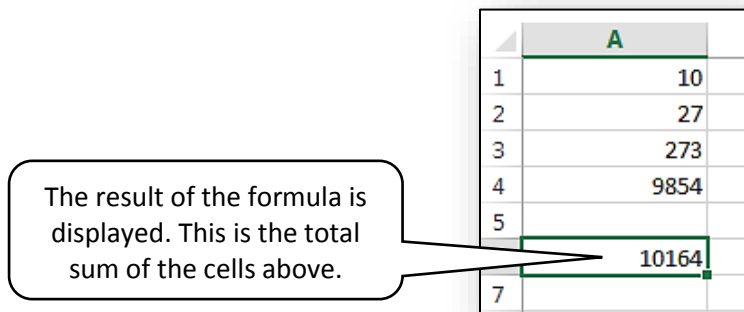


Cells included are within the dotted borderline.

AutoSum formula means: **This cell will display the sum of cells A1 through A5.**

	A	B
1	10	
2	27	
3	273	
4	9854	
5		
6	=SUM(A1:A5)	
7	SUM(number1, [number2], ...)	
8		

- You can adjust which cells are to be included in the formula by clicking-and-dragging the tiny blue squares in any corner surrounding the selected cells.
- Press the **Enter** key to accept the formula.



The result of the formula is displayed. This is the total sum of the cells above.

	A
1	10
2	27
3	273
4	9854
5	
6	10164
7	

Exercise 8.2: Build a Formula using the CONCATENATE Function

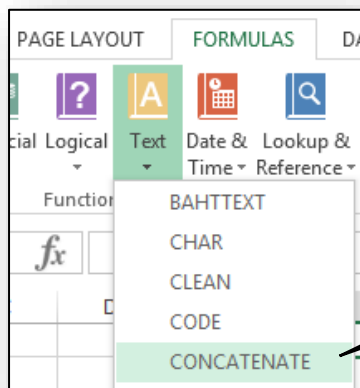
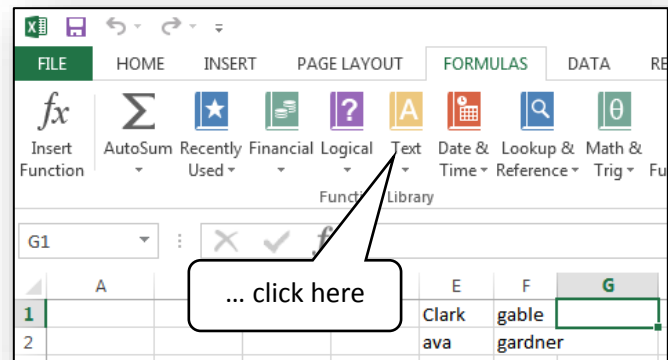
The **CONCATENATE** function takes two separate values (*text*) from two separate cells and puts them together into a third cell in whichever order you set. For example, if the name Clark is in cell **E1**, and the name Gable is in cell **F2**, you can use the **CONCATENATE** function to place both names together into cell **G1**, in the Last-Name, first order: **Gable, Clark**.

1. Select the worksheet labeled "First & Last Names":
2. Click into the blank cell immediately to the right of the last name at the top. In this example, we clicked into cell G1:

E	F	G
Clark	gable	
ava	gardner	
Cary	grant	
iana	Turner	
Humphr	bogart	
lauren	bacall	
Roy	clark	
jimmy	page	

E	F	G
Clark	gable	

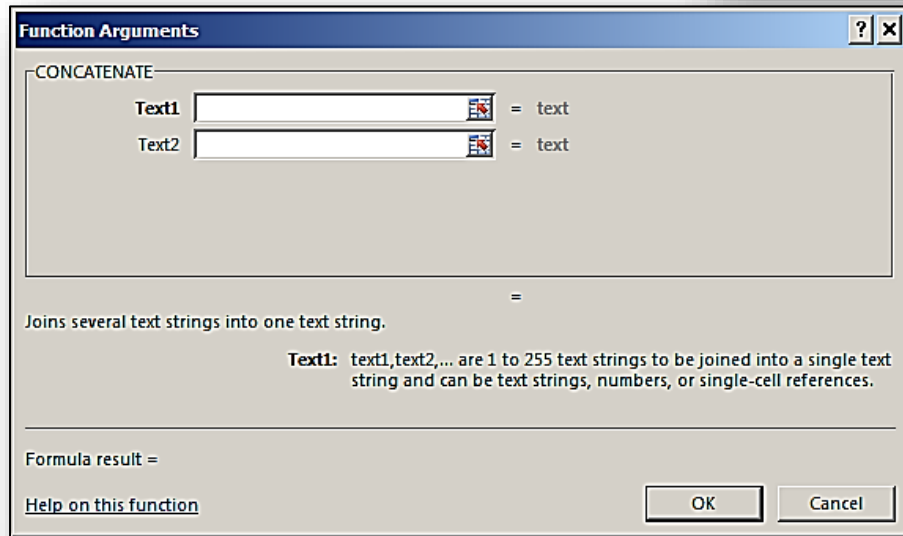
3. On the FORMULAS tab, select the Text category. Then select **CONCATENATE** from the list.



... click here

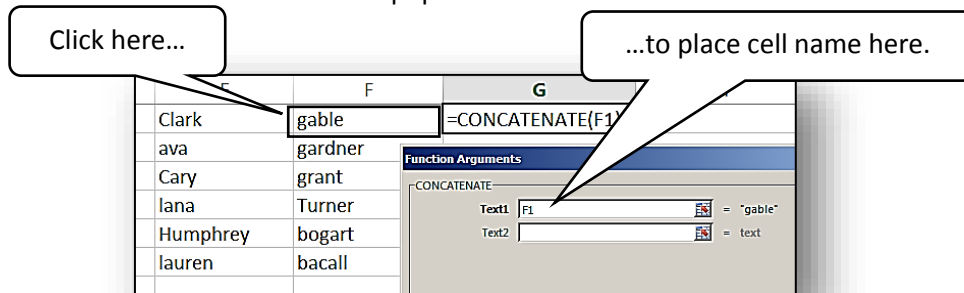
4. The **CONCATENATE** function begins to display in the cell, and the **Function Arguments** dialog box appears:

=CONCATENATE()

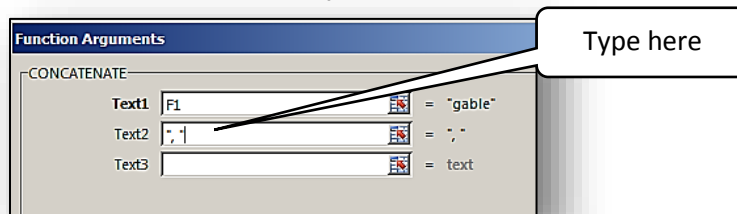


Note: The **Function Arguments** dialog box determines how the texts will be concatenated. In this exercise we want the last name to display first, followed by a comma with a space, and then the first name (Gable, Clark).

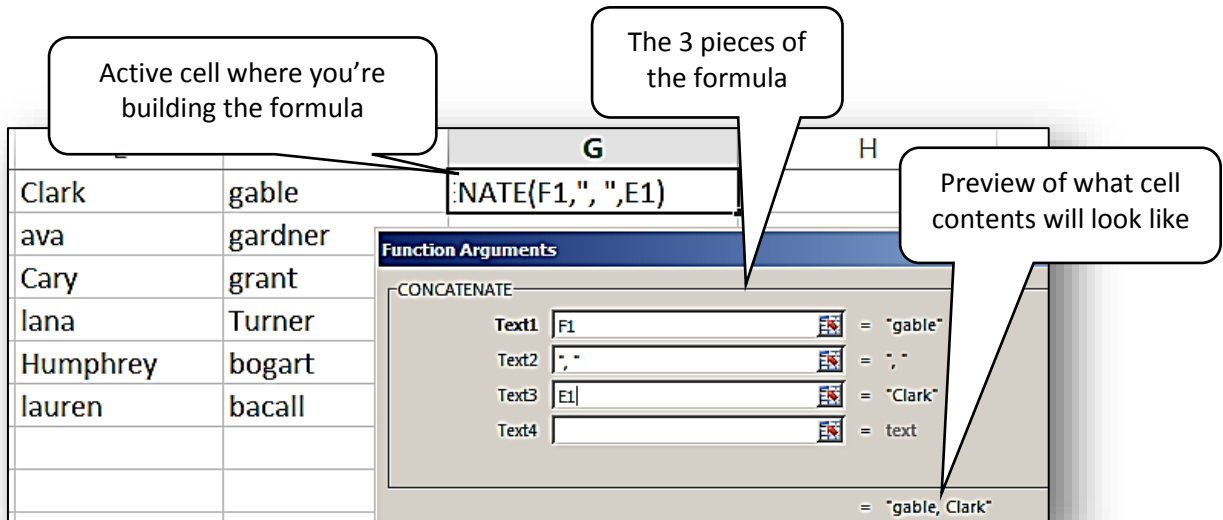
5. On the **Function Arguments** dialog box, click into the **Text1** field (*the cursor will blink in that field when inserted*). You can either type the cell name (**F2**) into that field or simply click onto cell **F2** and the **Text1** field will autopopulate with that cell name.



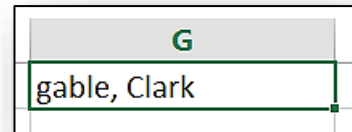
6. Now click directly into the **Text2** field, and type a Quotation Mark, a Comma, a Space, and another Quotation Mark. It should look like this: **“ , ”**



7. Finally, click inside the **Text3** field. Then click into the cell that has the first name to auto populate **Text3** with the cell name. The **Function Arguments** dialog box will show a preview of what the results will look like.



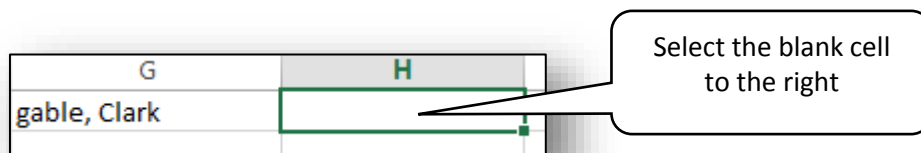
8. Click **OK** in the bottom right corner of the **Function Arguments** dialog box. Observe the cell with the finished **CONCATENATE** formula. It should now display the last name, comma, space, and first name.
9. Use the Copy Formula trick by double-clicking the small green box at the bottom-right corner of the cell containing the formula. The **CONCATENATE** formula will now be copied to every cell next to the names in the previous column.



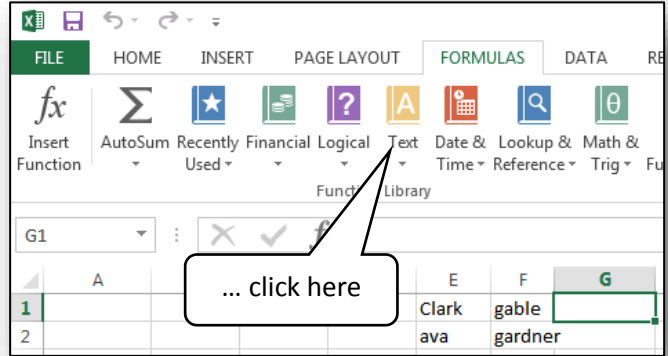
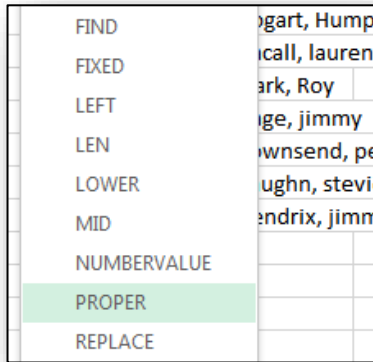
Exercise 8.3: Build a Formula using the PROPER Function

In the exercise above, only some of the names are capitalized. The **PROPER** function (*found in the Text category*) can be used in a formula to automatically capitalize each name in a given cell. In this exercise we will change each of the (*incorrect*) lowercase, proper names to begin with a capital letter.

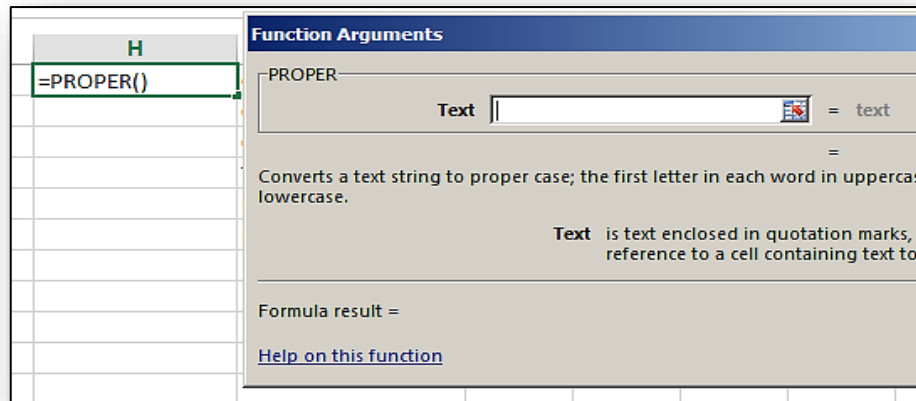
1. Select the blank cell immediately to the right of the concatenated names.



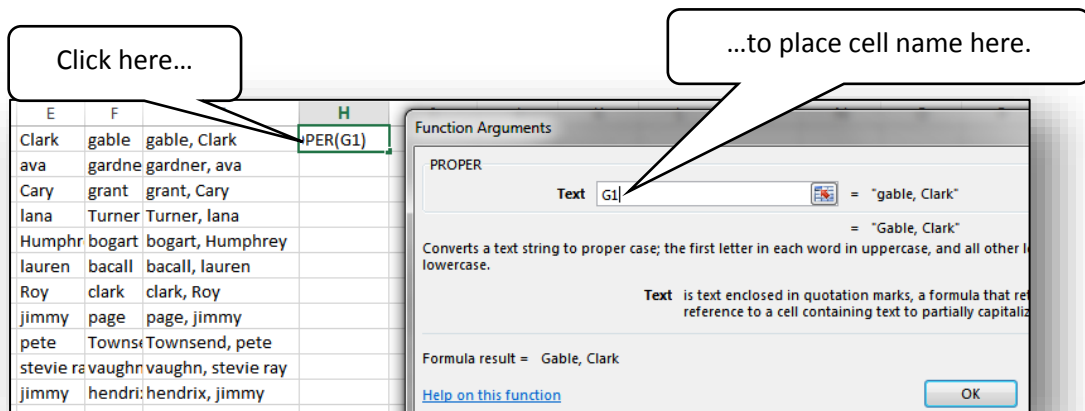
- On the FORMULAS tab, select the Text category. Then select **PROPER** from the list.



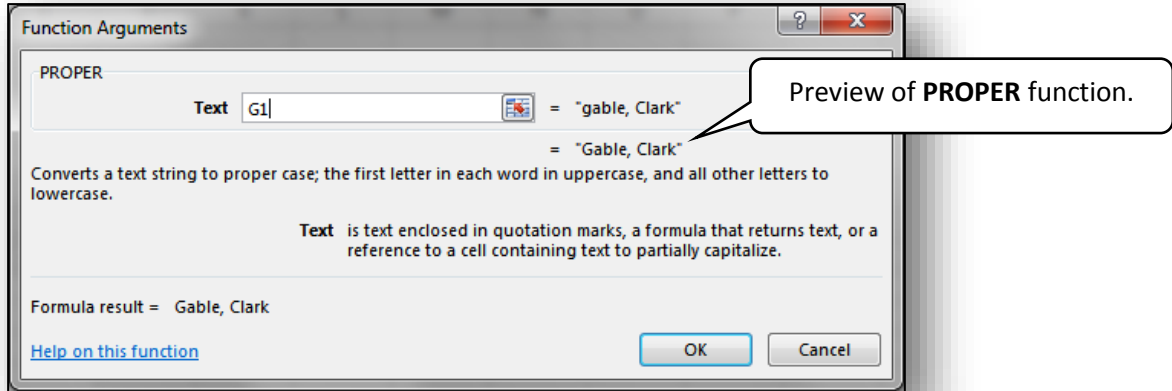
- The **Function Arguments** dialog box appears, and the **PROPER** function is displayed in the cell.



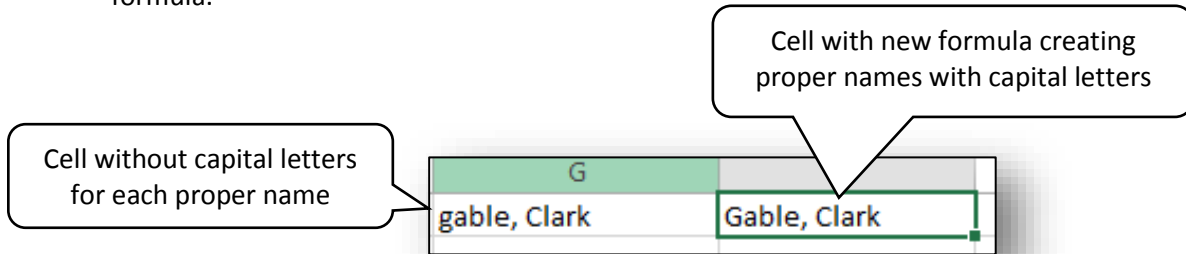
- On the **Function Arguments** dialog box, click into the **Text1** field (*the cursor will blink in that field when inserted*). You can either type the cell name (**F2**) into that field or simply click onto cell **F2** and the **Text1** field will autopopulate with that cell name.



- The formula in the new cell is now complete, and the **Function Arguments** dialog box shows a preview of what that new cell will look like when you click **OK**. This formula will take the contents of cell **G1**, and display those contents in cell **H1** but properly capitalized.



- Click **OK** at the bottom of the dialog box and the results will display in the cell with the **PROPER** formula.



How to Split a Cell with Full Names into Two Cells

There are a few ways to take a single cell with a Full Name (*First & Last*) and divide that Full Name from one cell into two different cells (*First Name & Last Name*). The least difficult method involves using the Functions available within Excel to create a specific Formula to accomplish this task. The following steps below describe this process.

Important: *It is imperative that when copying the Formula below, it is written exactly as it appears. Take care to not allow any spaces in the Formula where there should not be any.*

Note: *These instructions assume that the Full Names are in column A and that these Names are then split into cells B & C. If the column that you are attempting to split is a column other than column A, be sure to change the A in both Formulas to the column name (B, C, D, E, or F, etc.) that you have your Full Names in.*

Exercise 8.4: How to Split a Full Name into Two Cells

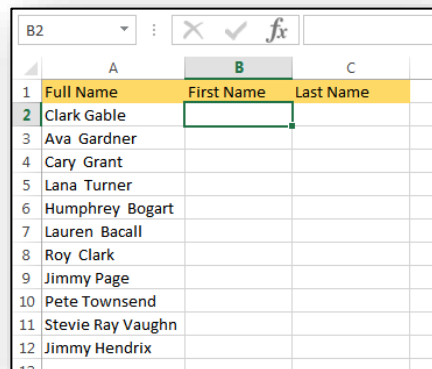
Follow the Steps below to create the Formulas (*made up of several Functions*) to Split the *text* content of a given cell into two cells.

Step 1: Taking the first name out of a single cell (with the full name) and placing it into a new cell.

1. If additional, empty columns are needed for the First Names and Last Names, simply right-click the column header immediately to the right of the column containing the Full Names (*click on the top of column B*). Then, select *Insert* from the *Shortcut Menu* that appears. Repeat as many times as is necessary to create the needed, empty columns.
2. Next, create the headers needed in those new columns (**First Name** [column B] & **Last Name** [column C]).
3. Select the first open cell to the right of the first Full Name. In our example, **B2** is the cell where the Formula to separate the First Names will be written.
4. After selecting **B2**, enter the Formula exactly as shown below on the Formula Bar.

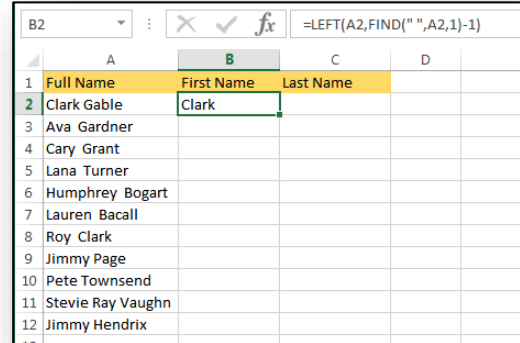
=LEFT(A2,FIND(" ",A2,1)-1)

Note: If necessary, change the **A** in the Formula to the letter of the column that contains the Full Names if it is different than **A**.

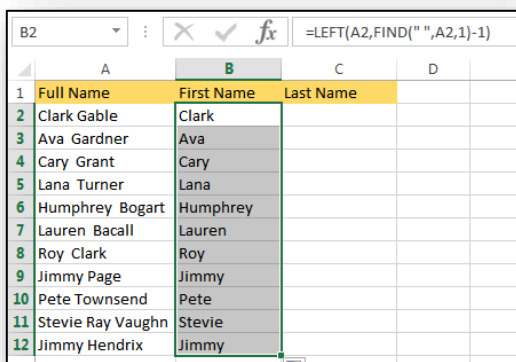


	A	B	C
1	Full Name	First Name	Last Name
2	Clark Gable		
3	Ava Gardner		
4	Cary Grant		
5	Lana Turner		
6	Humphrey Bogart		
7	Lauren Bacall		
8	Roy Clark		
9	Jimmy Page		
10	Pete Townsend		
11	Stevie Ray Vaughn		
12	Jimmy Hendrix		
13			

- Make sure the Formula on the Formula Bar is accurate, then hit the **Enter** key and the First Name found in **A2** should now appear in **B2**. When you re-select the cell **B2**, the Formula will then be displayed again on the Formula Bar.



	A	B	C	D
1	Full Name	First Name	Last Name	
2	Clark Gable	Clark		
3	Ava Gardner			
4	Cary Grant			
5	Lana Turner			
6	Humphrey Bogart			
7	Lauren Bacall			
8	Roy Clark			
9	Jimmy Page			
10	Pete Townsend			
11	Stevie Ray Vaughn			
12	Jimmy Hendrix			



	A	B	C	D
1	Full Name	First Name	Last Name	
2	Clark Gable	Clark		
3	Ava Gardner	Ava		
4	Cary Grant	Cary		
5	Lana Turner	Lana		
6	Humphrey Bogart	Humphrey		
7	Lauren Bacall	Lauren		
8	Roy Clark	Roy		
9	Jimmy Page	Jimmy		
10	Pete Townsend	Pete		
11	Stevie Ray Vaughn	Stevie		
12	Jimmy Hendrix	Jimmy		

- This Formula must be copied from **B2** into all of the cells in **Column B**. The quickest way is to simply double click on the small green box at the bottom-right corner of the selected cell, **B2**. This action will automatically copy the Formula all the way down to the last cell next to the last Full Name on the left. You should then see only the First Names of every student in **Column B**.

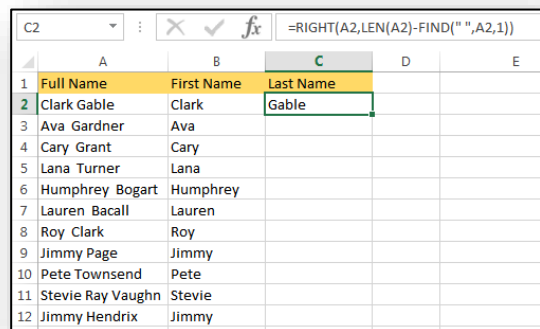
Step 2: Taking the last name out of a single cell (with the full name) and placing it into a new cell.

- Select the cell, **C2**. Enter the Formula exactly as shown below on the Formula Bar.

=RIGHT(A2,LEN(A2)-FIND(" ",A2,1))

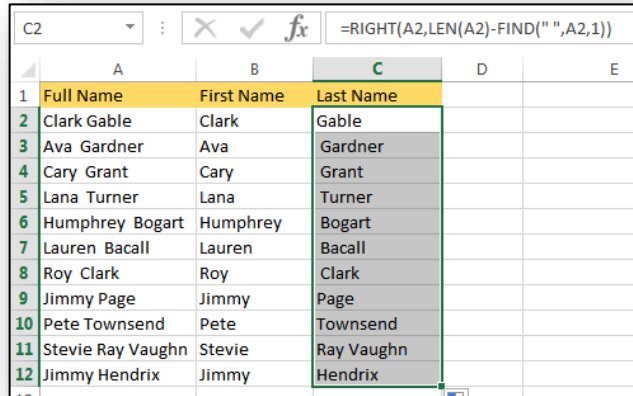
Note: If necessary, change the **A** in the Formula to the letter of the column that contains the Full Names if it is different than **A**.

- Make sure the Formula on the Formula Bar is accurate, then hit the **Enter** key and the Last Name found in **A2** should now appear in **C2**. When you re-select the cell **C2**, the Formula will then be displayed again on the Formula Bar.



	A	B	C	D	E
1	Full Name	First Name	Last Name		
2	Clark Gable	Clark	Gable		
3	Ava Gardner	Ava			
4	Cary Grant	Cary			
5	Lana Turner	Lana			
6	Humphrey Bogart	Humphrey			
7	Lauren Bacall	Lauren			
8	Roy Clark	Roy			
9	Jimmy Page	Jimmy			
10	Pete Townsend	Pete			
11	Stevie Ray Vaughn	Stevie			
12	Jimmy Hendrix	Jimmy			

3. This Formula must be copied from **C2** into all of the cells in **Column C**. The quickest way is to simply double click on the small green box at the bottom-right corner of the selected cell, **C2**. This action will automatically copy the Formula all the way down to the last cell next to the last Full Name on the left. You should then see only the Last Names of every student in **Column C**.



	A	B	C	D	E
1	Full Name	First Name	Last Name		
2	Clark Gable	Clark	Gable		
3	Ava Gardner	Ava	Gardner		
4	Cary Grant	Cary	Grant		
5	Lana Turner	Lana	Turner		
6	Humphrey Bogart	Humphrey	Bogart		
7	Lauren Bacall	Lauren	Bacall		
8	Roy Clark	Roy	Clark		
9	Jimmy Page	Jimmy	Page		
10	Pete Townsend	Pete	Townsend		
11	Stevie Ray Vaughn	Stevie	Ray Vaughn		
12	Jimmy Hendrix	Jimmy	Hendrix		

Important: At this point, both columns **B** and **C** contain Formulas in each cell of both columns. This means that column **A** cannot be erased without causing an “**Error**” in columns **B** and **C** because of the Formulas that each column has referring to cells within column **A**. To remove the Formula from either column **B** or **C**, simply **Copy** the entire column and **Paste** it back into the same column using the **Paste Option: Value (V)**. This will keep the names in the column, but will eliminate the Formulas that originally made them. When the formula has been removed, then the column with the Full Names can be safely erased as needed.

Note: Now that you have two columns (First Names & Last Names), you may want to use the **CONCATENATE** Function to arrange those two columns into another column (Smith, John). Please refer to **Exercise 8.2** in this handbook which explains this process. In short, a column with First Names can be combined with a column of Last Names to create a list of students that can be alphabetized (Last Name, First—or; Smith, John).

Part 9: Insert & Modify Charts

Insert and Modify a Chart

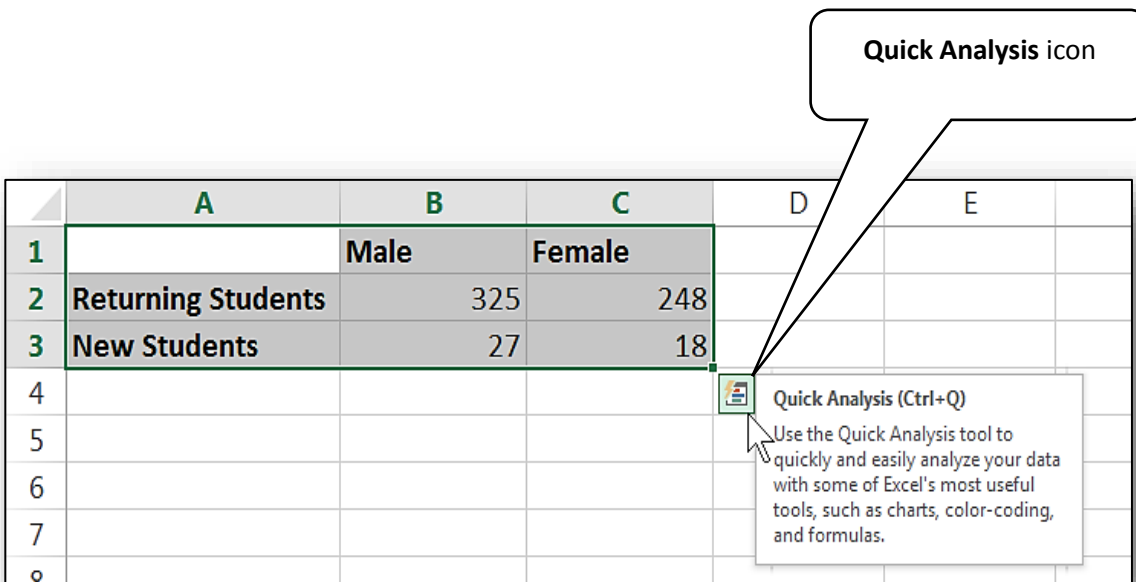
Excel Charts

The usual purpose of an Excel chart is to graphically illustrate data in a meaningful way. There are many different styles of charts. Which chart style you choose depends on the type of data you want to illustrate. Some chart styles are better for certain data than others.

Once your data is entered into an Excel worksheet and formatted the way you want it, you can then build a chart from that data.

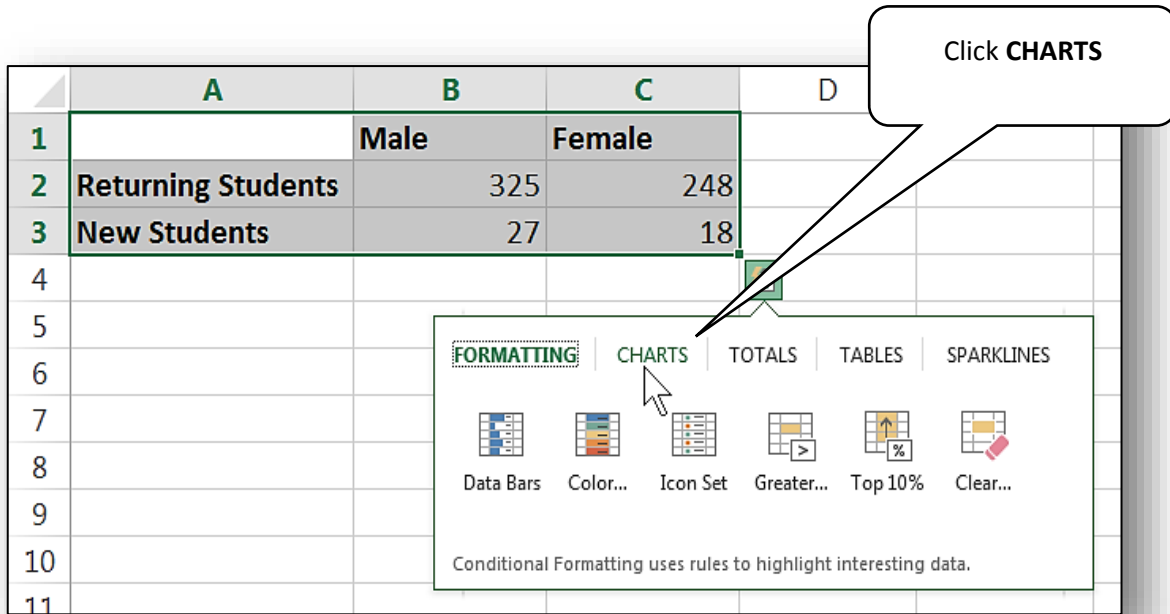
Exercise 9.0: Insert and Modify a Bar Chart

1. Click to the “Bar Chart To Be” worksheet. There is already some data there.
2. Place the mouse cursor in cell A1, and click-and-drag to select cells A1 through C3.
3. In the lower right corner of the selected area, click on the **Quick Analysis** icon.



	A	B	C	D	E
1		Male	Female		
2	Returning Students	325	248		
3	New Students	27	18		
4					
5					
6					
7					
8					

4. In the gallery that appears, click **CHARTS**.



	A	B	C	D
1		Male	Female	
2	Returning Students	325	248	
3	New Students	27	18	
4				
5				
6				
7				
8				
9				
10				
11				

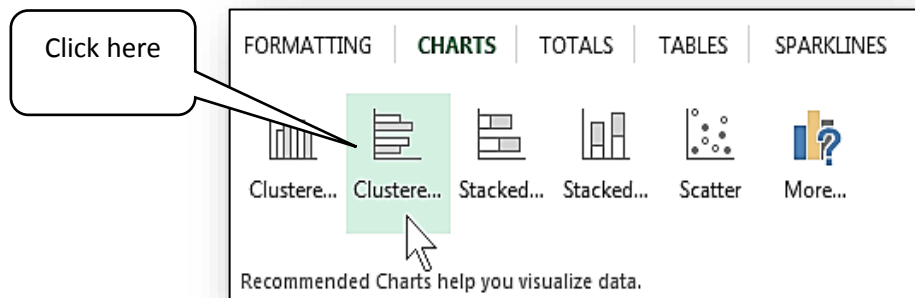
Click **CHARTS**

FORMATTING | **CHARTS** | TOTALS | TABLES | SPARKLINES

Data Bars | Color... | Icon Set | Greater... | Top 10% | Clear...

Conditional Formatting uses rules to highlight interesting data.

5. Select the second choice from the left, the **Clustered Bar** Chart Style.



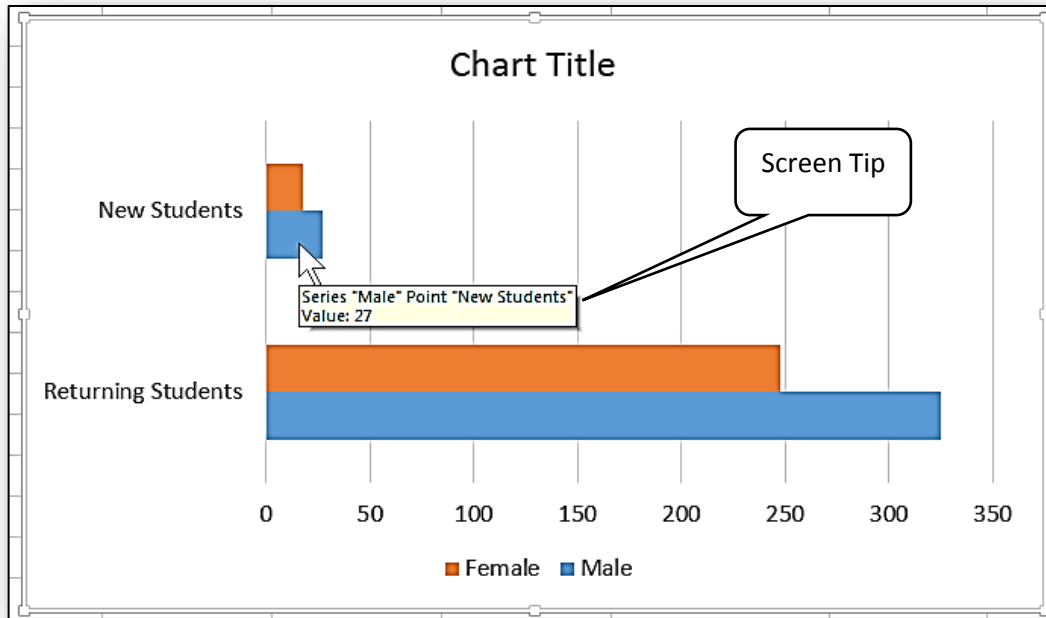
Click here

FORMATTING | **CHARTS** | TOTALS | TABLES | SPARKLINES

Clustere... | Clustere... | Stacked... | Stacked... | Scatter | More...

Recommended Charts help you visualize data.

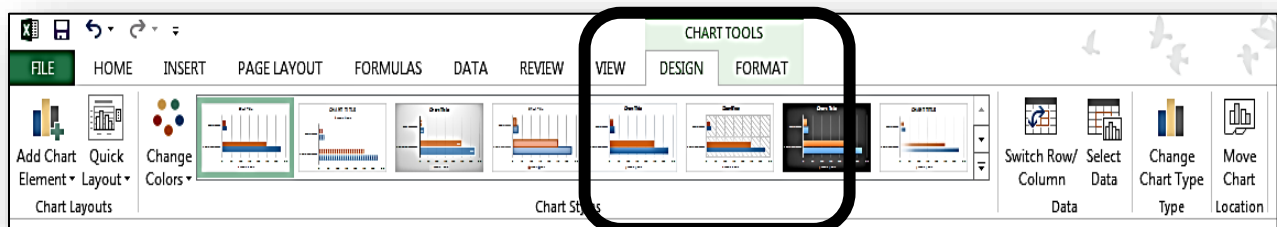
- The chart is created and displayed nearby on the worksheet. Observe that when you hover the mouse over various parts of the chart, a screen tip reveals data regarding that part of the chart.



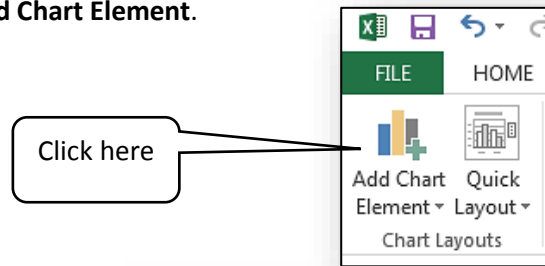
- Place the mouse cursor anywhere in the **Chart Area** (the blank space just inside the chart, but not on any colored parts), and click-and-drag to move the chart anywhere you want on the worksheet.



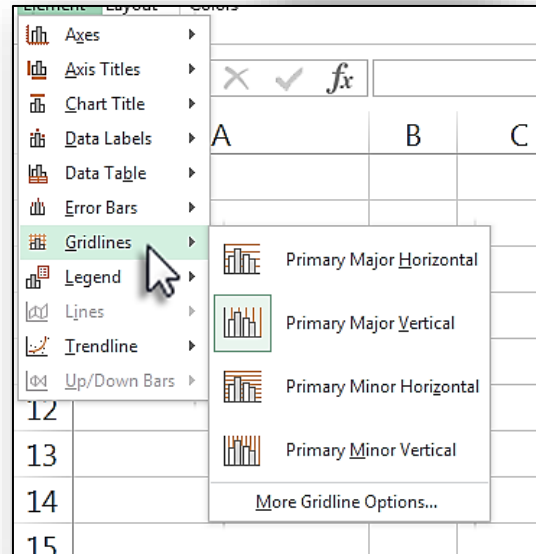
- The contextual **CHART TOOLS** ribbon becomes available at the top of the window. Click on the contextual tab, **CHART TOOLS** to reveal the ribbon. You can use the features of this ribbon to change the content or design of the chart.



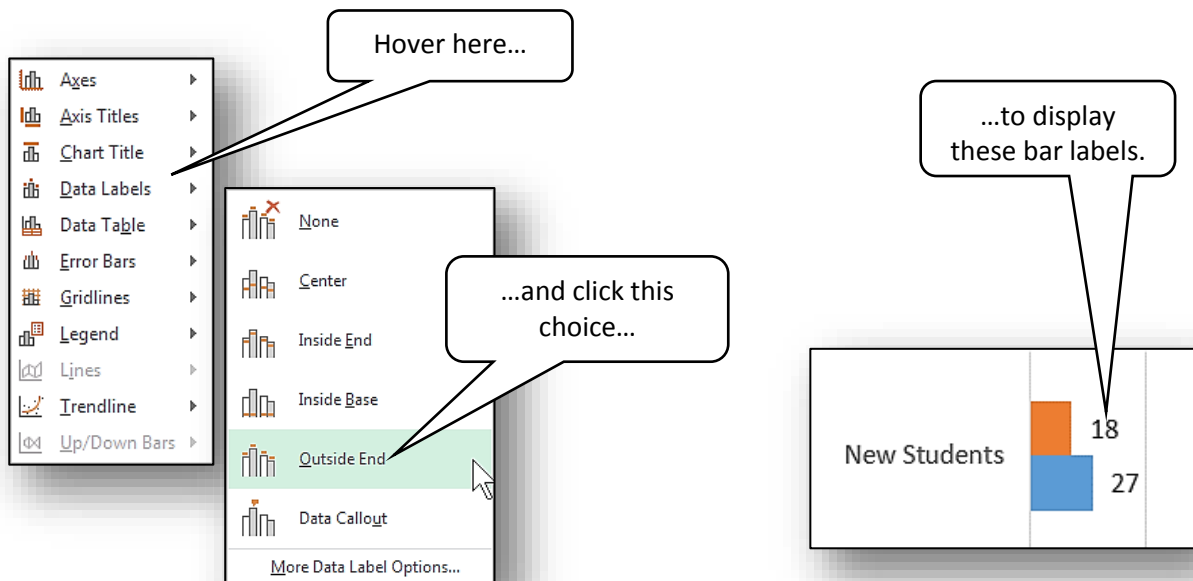
9. On the far left side of the ribbon, click **Add Chart Element**.



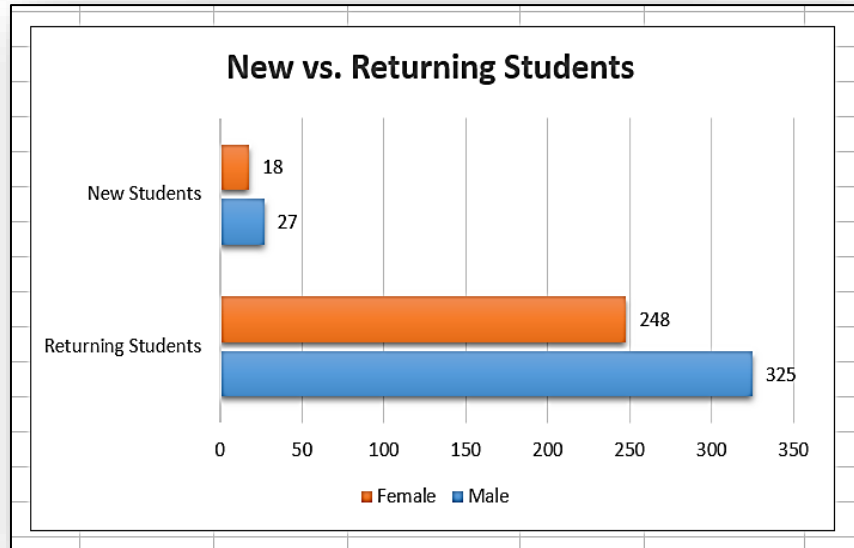
10. Hover over the different menu choices and their pop-out mini-menus to view what they can do. When you hover over one, the Chart changes to show a preview of what it will look like.



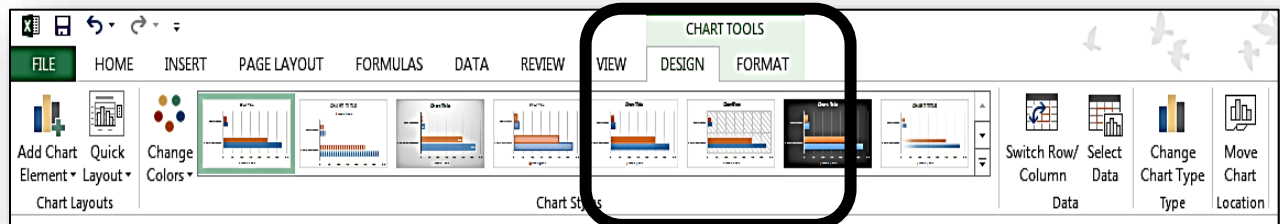
11. In the **Data Labels** menu, select one of the choices. In this example, we chose **Outside End**. This creates labels on the chart, identifying the number of students represented by the bars.



12. Select the **Chart Title** and type a new title.



13. Click anywhere in the blank **Chart Area** to select the entire chart. Use the **DESIGN** and **FORMAT** ribbon tabs to enhance the look of the chart. In our example, we chose **Style 12** on the Design tab, and we added a black **Shape Outline** on the Format tab. This helps to differentiate the chart from the worksheet, to make it easier to see.



Exercise 9.1: Insert and Modify a Pie Chart

1. Click to the “Pie Chart to Be” worksheet. There is already some data there.
 In this chart, we want to illustrate a comparison of the total costs of Field Trips, Supplies, and Services. Thus, we don’t want all the data in the chart, but only certain parts of it.
2. Select cells **B1 through D1**.

	A	B	C	D
1		Field Trips	Supplies	Services
2	2010	\$ 3,024.38	\$ 5,879.25	\$ 1,067.20
3	2011	\$ 3,489.27	\$ 6,843.21	\$ 805.49
4	2012	\$ 2,419.46	\$ 5,902.47	\$ 1,249.37
5	2013	\$ 2,759.18	\$ 6,428.37	\$ 982.57
6	2014	\$ 3,167.29	\$ 6,074.38	\$ 992.15
7	2015	\$ 2,375.79	\$ 5,135.64	\$ 1,087.14
8	TOTALS	\$ 17,235.37	\$ 36,263.32	\$ 6,183.92

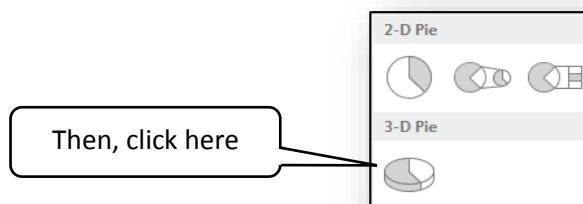
3. Press and hold down the **CTRL** key on your keyboard, and while holding it down, click-and-drag to select cells **B8 through D8**. The circled areas in this illustration show the cells to be selected.

Note: Be sure NOT to select any other cells in between.

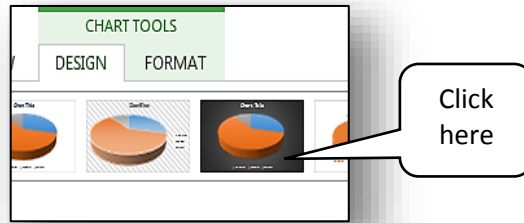
4. Click the **Insert** tab, and in the **Charts** group click the **Insert Pie** command button.



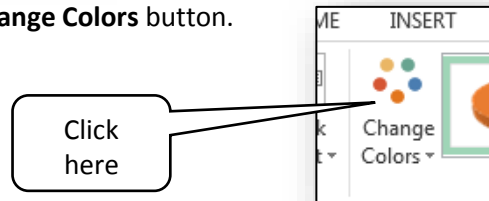
5. Then, click the **3-D** style.



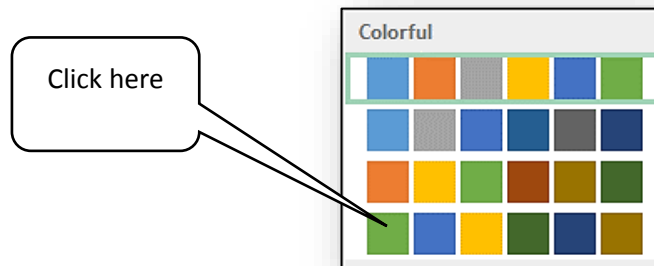
6. In the **CHART TOOLS DESIGN** ribbon, choose **Style 7** from the gallery (*the one with the dark background*).



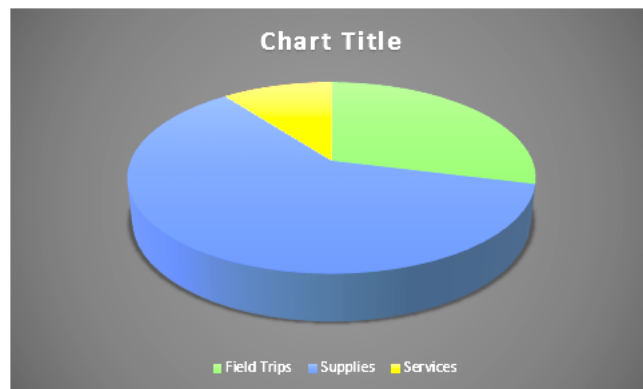
7. To the left of the gallery, click the **Change Colors** button.



8. Choose the 4th set of colors down from the top: **Color 4**.



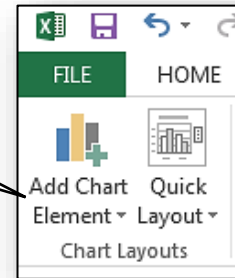
9. The chart should now look like this illustration:



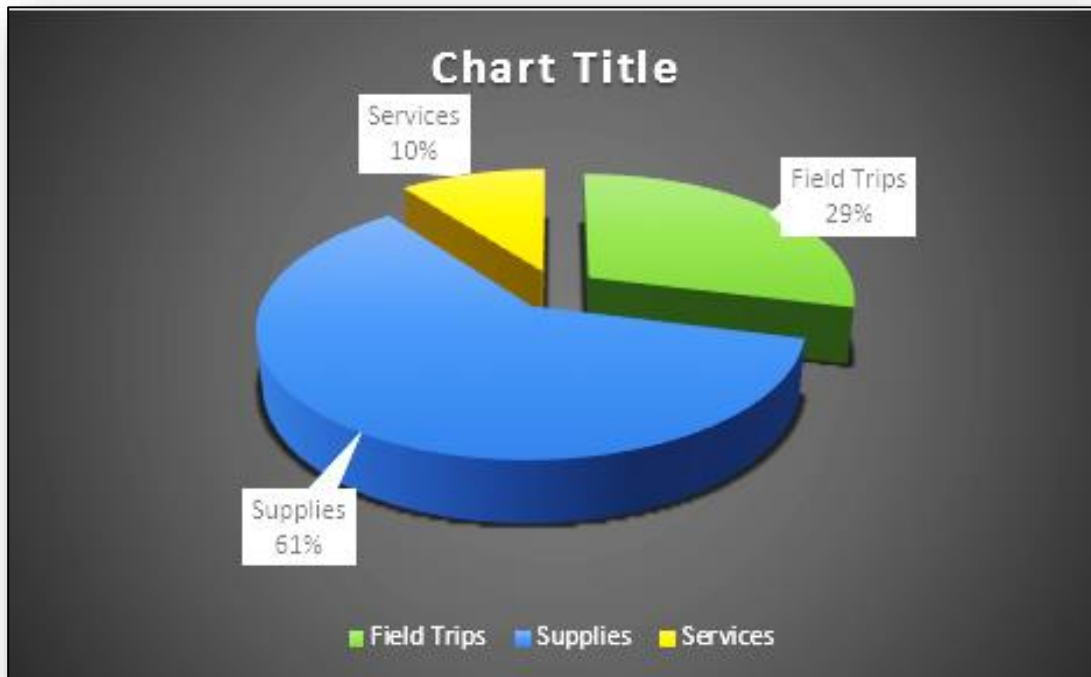
10. Make sure the chart is still selected. On the CHART TOOLS DESIGN ribbon, on the far left side, click **Add Chart Element**.

11. Select Data Labels and then Data Callout.

Click here



12. As a final enhancement, click on one piece of the pie to drag it slightly out and then let it go. This is called “**exploding the pie**”. It separates the various pie pieces. Your chart should now look like the illustration below.



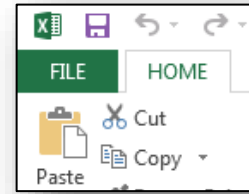
Note: Step 12 will only work if no part of the pie is active (*with manipulation points*). It may be necessary to first click into a section of the chart (*with no interactive parts*) to clear the manipulation points from the pie pieces. When the pie pieces are clear of manipulation points, try step 12, again.

Also, try changing or deleting some of the dollar amounts in the data, and observe how it changes the chart automatically.

Part 10: Tips & Tricks

Previewing & Printing Excel Worksheets

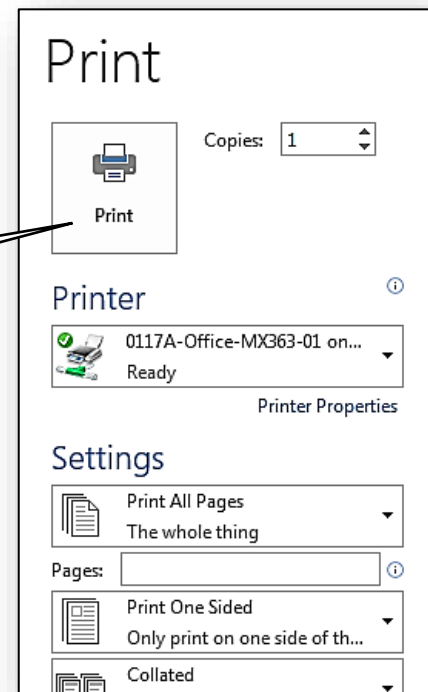
When you are ready to print a Worksheet, select the **FILE** tab (upper left corner of the ribbon). This brings up the **Backstage** view.



1. Select the **Print** command on the green, left panel.

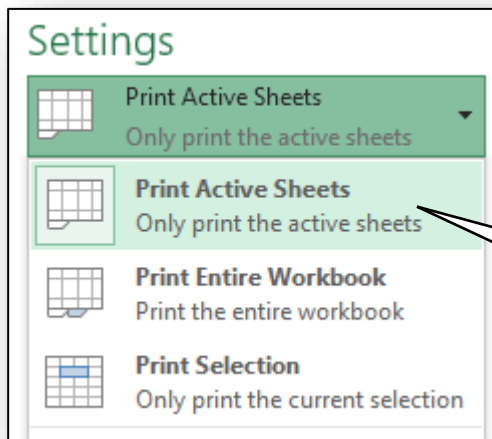


2. On the right side of the screen, a preview of what will print is displayed. On the left, the Print panel of tools is displayed. Make your choices as to which printer you want to use, how many copies you want printed, etc., and click the **Print** button to initiate printing.



Click to print

Note: Before you print, check the **Settings** section to make sure that the correct printing parameters are set before you click on the **Print** command. If, for example, you accidentally select the **Print Entire Workbook** option, you may end up printing hundreds of extra, unnecessary pages...



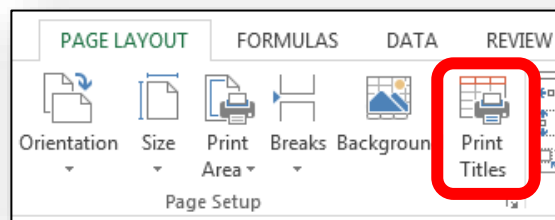
This is the most common printing choice.

How to Print the Worksheet Header

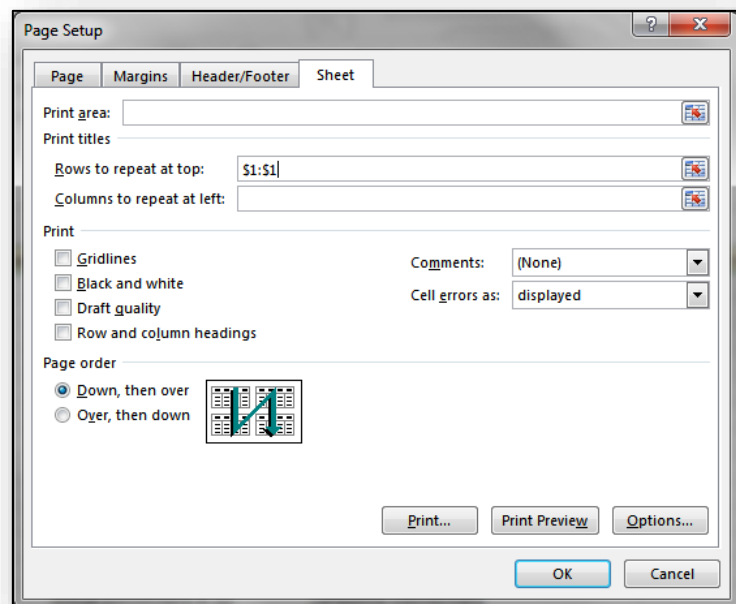
When printing large Worksheets it is helpful to have the **Header** row (usually **Row 1**) print out on each page so that you do not have to constantly flip the pages back to page one to see the Header information. This can be easily set up so that the Headers of the Worksheet will repeat on each printed page. Follow the steps below to include the header on each printed page.

Exercise 10.0: How to Print the Worksheet Header on each page

1. On the **PAGE LAYOUT** tab, in the Page Setup group, select the **Print Titles** command.



2. The **Sheet** tab of the **Page Setup** dialog box will display. Click into the **Rows to repeat at top:** field and type **\$1:\$1** to lock the row 1 header for the purpose of printing. At this point you can preview the printing or simply select **Print**.



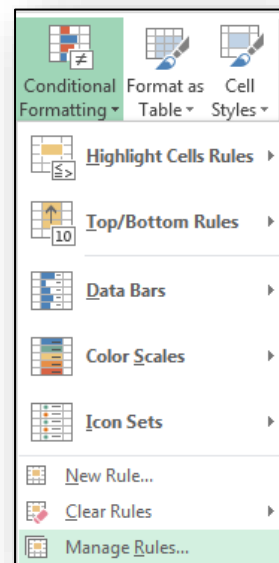
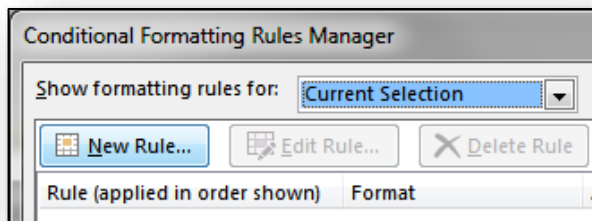
Note: Instead of typing the formula for which rows to repeat, you can simply click on the Row 1 name on the far left side of the Worksheet and the formula will auto populate in the **Rows to repeat at top** field.

How to Shade Every Other Row in Excel 2013

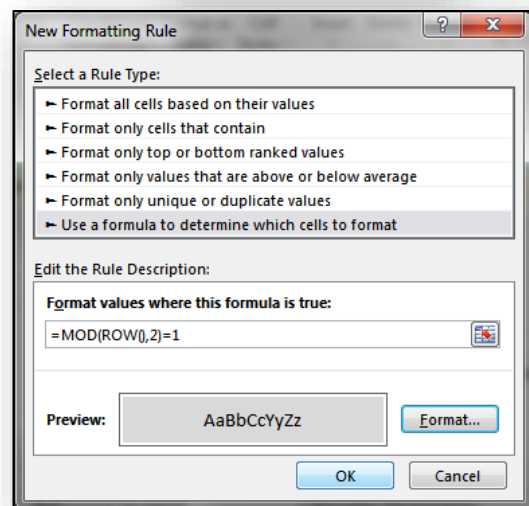
The best way to shade every other row on a worksheet is to use the **Conditional Formatting** option. Formatting your worksheet to display this way will make it much easier to track data across large worksheets.

Exercise 10.1: How to Shade Every Other Row in Excel

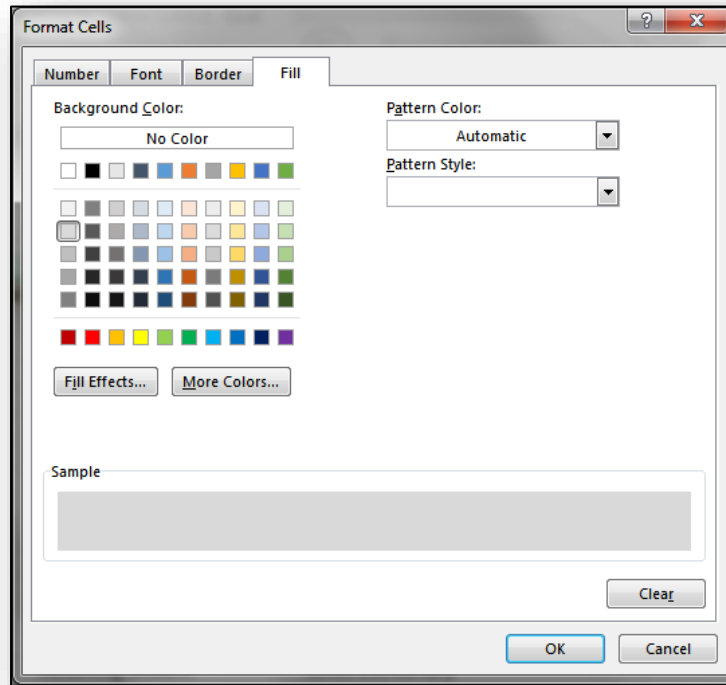
1. Open the worksheet.
2. Select the cell range that you want to shade, or press **Ctrl+A** to select the whole worksheet.
3. On the **HOME** tab, navigate to the **Styles** group, select **Conditional Formatting**, and then click **Manage Rules**.
4. Select **New rule**.



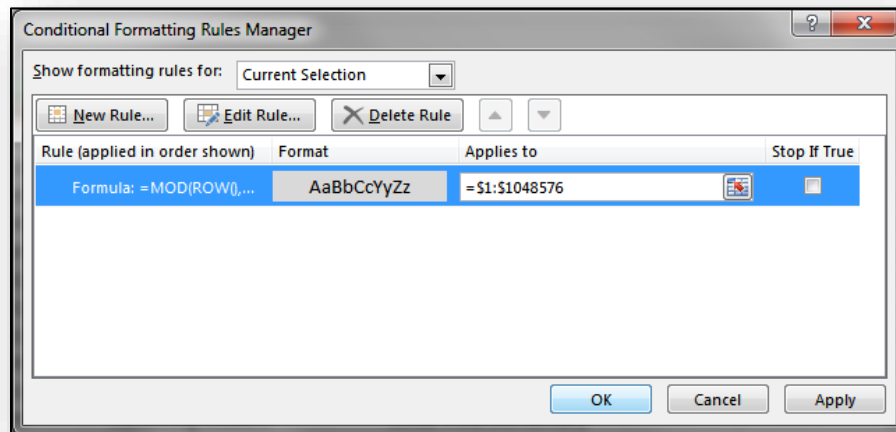
5. Select **Use a formula to determine which cells to format**.
6. In the **Format values where this formula is true** box, type `=MOD(ROW(),2)=1`, and then select **Format**.



- On the **Fill** tab, click the color that you want to use to shade every other row, and then click **OK**.



- Click **OK** to close the **New Formatting Rule** dialog box.
- Select **Apply**, then click **OK** to close the **Conditional Formatting Rules Manager** dialog box.



10. Your Worksheet should now look similar to the example below. Every other line will have the shading color that you chose in step 8 above. This makes it easier to tract data across long rows.

	A	B	C	D	E	F	G	H	I
1	Student Number	Last Name	First Name	Birth Date	Grade Level	Gender	Entry Date	Entry Code	Entry Description
2	37854	Acosta	Sabah	6/26/2005	5	F	9/8/2015	RT	Returning Student
3	85603	Morales	Danny	1/28/2009	1	M	9/8/2015	RT	Returning Student
4	95079	Ageeli	Liz	7/18/2006	4	F	9/8/2015	RT	Returning Student
5	98592	Aguiar	Leion	7/31/2006	4	M	9/8/2015	RT	Returning Student
6	301875	Akeely	Rayan	9/5/2005	5	F	9/8/2015	RT	Returning Student
7	304928	Al Amer	Digna	9/29/2008	0	M	9/8/2015	E11	Enter from within SDCS
8	306683	Alaee	Karen	12/21/2006	5	F	11/2/2015	E14	Enter from Out of State
9	314438	Lowder	Ethan	4/16/2008	2	M	11/2/2015	E14	Enter from Out of State
10	316516	Audeo	Sebastian	5/25/2005	5	M	9/8/2015	RT	Returning Student
11	317018	Aleid	Aidan	10/17/2010	0	M	9/23/2015	E15	Initial Enrollment K-12
12	325466	Aljaifi	Daraly	1/6/2009	1	M	9/8/2015	RT	Returning Student
13	325476	Allahyani	Estefany	4/17/2008	2	M	9/8/2015	RT	Returning Student
14	326585	Carson	Angel	5/1/2010	0	M	9/8/2015	E15	Initial Enrollment K-12
15	326680	Allahyani	Madison	7/7/2006	4	M	9/8/2015	RT	Returning Student
16	328911	Smith	Brian	9/12/2009	0	M	9/8/2015	E15	Initial Enrollment K-12

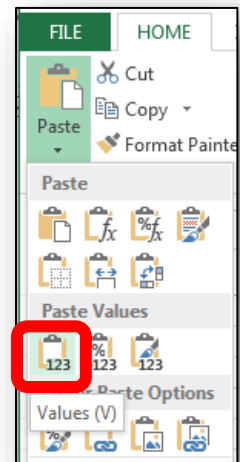
Using Paste Special Values to Remove Formulas

Copying a column with a formula (such as column G, below) and then pasting it back into the same column using the **Paste Special Values (V)**, is a clever way to remove the formula in that column replacing it with just the Value (the names). In the example below, cell G1 has the **Concatenate** formula operating to combine the contents of columns E and F.

	D	E	F	G	H
		Clark	gable	=CONCATENATE(F1,"",E1)	
		Ava	Gardner	gable, Clark	Gable, Clark
		cary	Grant	Gardner, Ava	Gardner, Ava
		iana	turner	Grant, cary	Grant, Cary
		Humphrey	bogart	turner, iana	Turner, Lana
				bogart, Humphrey	Bogart, Humphrey

Columns E and F (in the example above) cannot be erased because the formula in column G is dependent on their content. As such, any column that has a formula that references other columns must be reconfigured such that it is no longer dependent on those columns. This can easily be done with the **Paste Special Values (V)** command.

To remove the Formula from column G, simply **Copy** the entire column and **Paste** it back into the same column using the **Paste Special Value (V)** option. This will keep the names in the column (the Value), but will eliminate the formula that created the original content. When the formula has been removed, then columns E and F can safely be deleted.

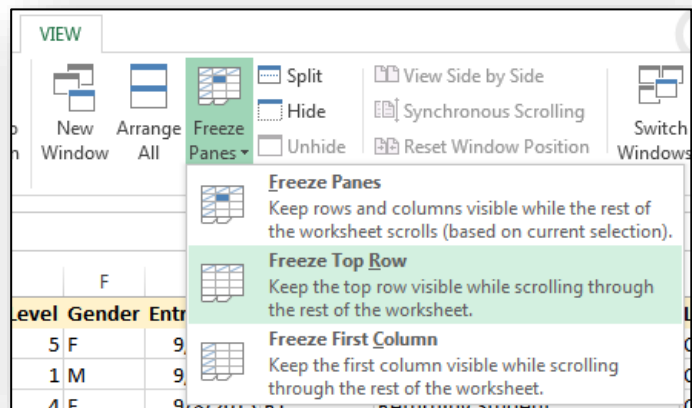


How to Freeze the Top Row of a Worksheet

When working with a large worksheet (*such as the one in the previous exercise*) it becomes difficult to remember all of the Header names of each column as you scroll down the page. Excel has a feature that will allow you to lock, or freeze, the first row (*the Header row*) so that you can easily keep track of the column names as you scroll down the Worksheet.

Exercise 10.2: How to Freeze the Top Row

1. On the **VIEW** tab, go to the **Windows** group and select the **Freeze Panes** command. Click on the middle option—Freeze Top Row.



2. The first row is now locked in place and no matter how far you scroll down the Worksheet the Header will always remain at the top of the Worksheet window. In the example below, the Worksheet is displaying rows well into the 300's and the Header remains at the top.

1	Student Number	Last Name	First Name	Birth Date	Grade Level	Gender	Entry Date	Entry Code	Entry Description
356	536462	Ramos	William	11/27/2004	4	M	9/8/2015	RT	Returning Student
357	536489	Lagrand	Gabriel	2/28/2008	2	M	9/8/2015	RT	Returning Student
358	537377	Lindsay	Jalton	8/22/2007	0	M	9/8/2015	RT	Returning Student
359	538025	Lincoln	Derick	10/18/2008	1	M	9/8/2015	RT	Returning Student
360	538993	Ramses	Lorenzo	7/16/2006	4	M	9/8/2015	RT	Returning Student
361	539333	Stamp	Yensi	10/4/2004	5	M	9/8/2015	RT	Returning Student
362	539445	Stemper	Joshua	3/23/2007	3	M	9/8/2015	RT	Returning Student
363	540910	Kemper	Anthony	1/24/2010	3	M	9/8/2015	E14	Enter from Out of State
364	542154	Craft	Anthony	1/21/2010	0	M	9/8/2015	E15	Initial Enrollment K-12

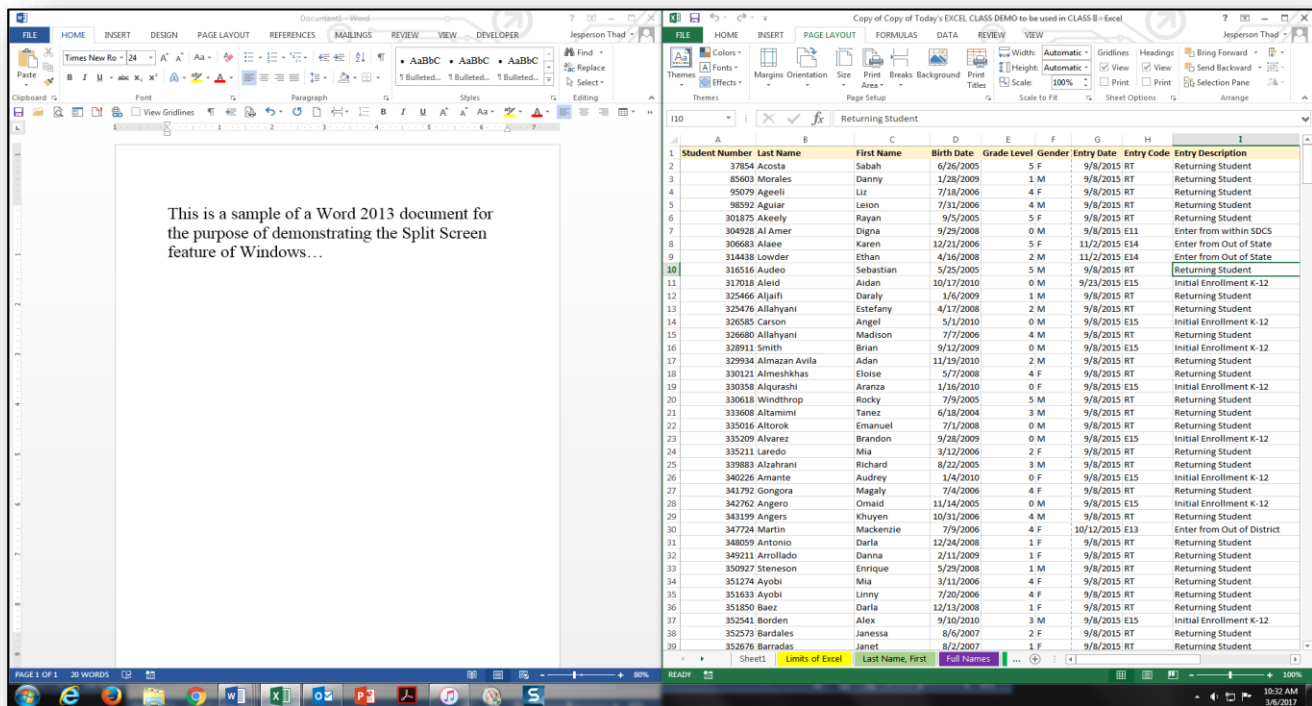
Note: To lock the top row for the purpose of printing, see the **Printing** section at the beginning of this this section—**How to Print the Worksheet Header** (page 85). The Freeze pane method described above does not lock the first row onto each page when printing.

How to Split a Screen to Display two Programs

Sometimes it is helpful to divide up your screen so that two programs can be seen at the same time—one on the left side of your screen and the other on the right side of your screen. There are many ways to do this. The exercise below describes the easiest way if you are using a PC.

Exercise 10.3: How to display Two Programs at the same time

1. With the cursor clicked into the program you wish to split the screen with, simply hold down the **Windows** key (*between Ctrl and Alt*) and tap either the **left** or **right** arrow on the keyboard. If you tap the left arrow, the selected program will jump to the left half of the screen. Conversely, if you tap the right arrow, then the selected program will jump to the right half of the screen. To undo the move, simply select the program, hold down the **Windows** key and hit the opposite arrow and the program will return to its original position on the desktop.



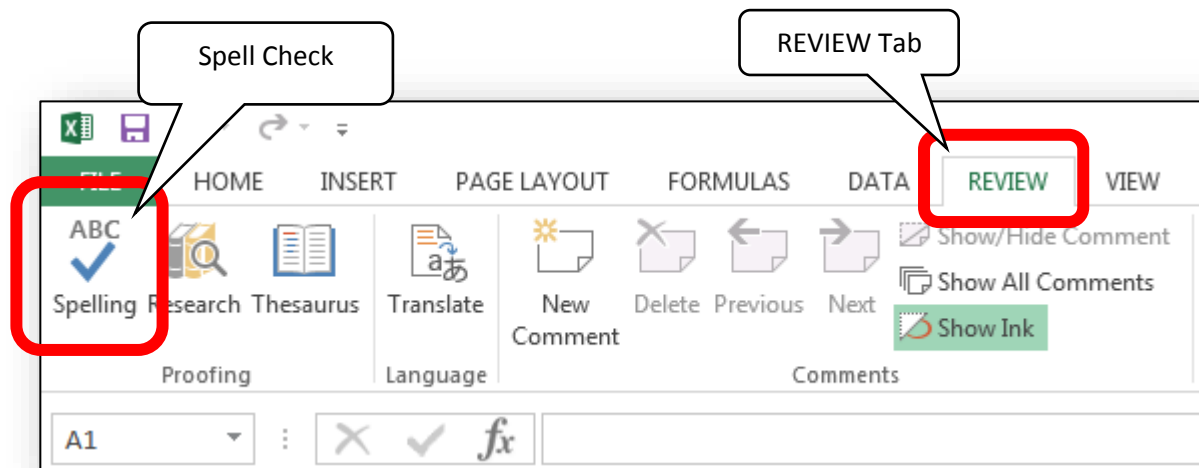
Note: This is a screenshot of the desktop of a computer (*the entire monitor screen*).

Proofreading: The Excel Spell Check Command

Limitations of the Excel Spelling Check Feature

It is always a good idea to proofread the sections of your Workbook that have text yourself, because Excel's Spell Check tool is less than perfect. It doesn't always catch certain nuances of the English language, or make it very easy to see the words that are misspelled. That said, Excel does have a Spelling Check tool that checks your Workbook for any spelling errors.

The Spelling Check command is located on the **REVIEW** tab, in the **Proofing** group on the far left side of the Ribbon.

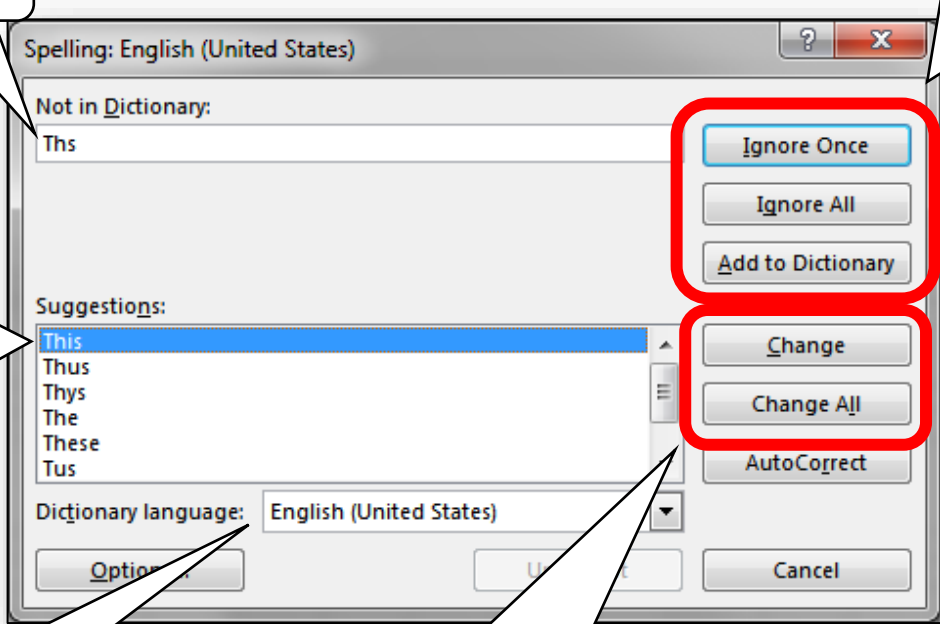


To check your Worksheet for spelling errors, use one of the following methods:

1. Click the **Spelling** check command on the REVIEW tab. A Spelling check dialog box will open on your screen. Excel will begin checking your entire Worksheet (*beginning with the last cell selected*) and display its findings in the **Spelling** check dialog box. It will offer you choices regarding each instance of an incorrectly spelled word.
2. Press the **F7** key on your keyboard to open the same **Spelling** Check dialog box described above.

Note: If you have multiple cells within your Workbook containing substantial amounts of text, it is highly recommended (*because of the awkwardness or obvious limitations of Excel's Spelling check feature*) that you create the textual content of each cell in **Word**, Spell Check it there, then Copy and Paste that text into the corresponding cell within the Excel Worksheet. This will assure you that your Workbook will display correctly spelled textual content.

(Please see illustration of the **Spelling** check dialog box on the next page)



Misspelled word.

Excel's offering of how it thinks the word should be spelled.

Offers various language translations of the word.

Replace the misspelled word with the highlighted correct spelling choice displayed above, or replace all instances of the misspelled word with this choice.

Choose to ignore this one single occurrence of the misspelled word, or all occurrences in the Workbook, or add the word as it is to the custom dictionary.

The screenshot shows the 'Spelling: English (United States)' dialog box. The 'Not in Dictionary' list contains the word 'Ths'. The 'Suggestions' list includes 'This', 'Thus', 'Thys', 'The', 'These', and 'Tus', with 'This' selected. The 'Dictionary language' is set to 'English (United States)'. On the right side, buttons for 'Ignore Once', 'Ignore All', 'Add to Dictionary', 'Change', 'Change All', and 'AutoCorrect' are visible. The 'Ignore Once', 'Change', and 'Change All' buttons are highlighted with red boxes.

The Find & Replace Feature

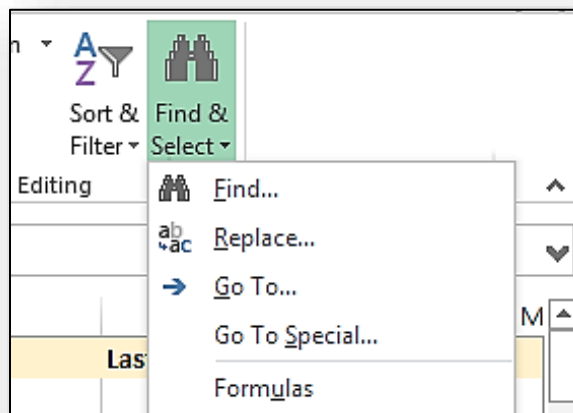
Excel has a “Find” tool that can quickly locate and display all the instances of a given piece of text (*words, phrase, numbers, symbols, etc.*). On the same tool, you can choose to “Replace” one or all instances of what it found with whatever you wish to replace it with. For example you can tell Excel to find all instances of the word “Student” and replace it with the word “Pupil”.

The same thing can be done to replace text written in lower case with uppercase text.

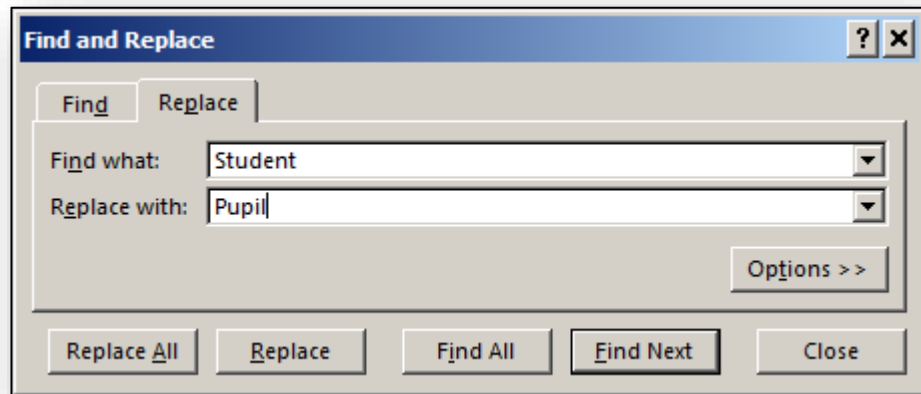
Exercise 10.4: Find “Student” and Replace it with “Pupil”

1. Open an Excel workbook with data in it. (*Use the one the instructor asks you to open*).
2. On the Home tab ribbon, on the far right side, click the **Find & Select** command.

3. Click **Replace**.

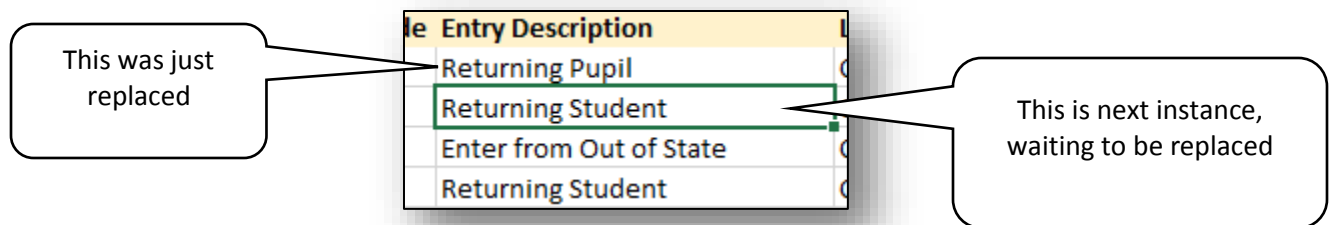


4. Enter the word **Student** in the **Find what** field, and enter the word **Pupil** in the **Replace with** field. Then click **Find Next**.

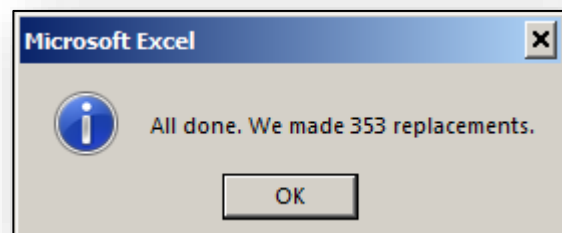


5. You might need to click-and-drag the Find and Replace box out of the way to see what it found. It will locate the “next” instance of the word Student, starting from the cell that happened to be the last active cell your cursor was in. Look for a cell with a green border around it. That’s the “found” instance.

6. Click **Replace** and it will replace the next single instance, and move to the next instance.



7. Click **Replace All** and it will replace all instances in the worksheet, telling you how many it replaced.



The New Flash Fill Feature (in Excel 2013)

The **2013** version of **Excel** came with a new feature that is by far the best new feature in years. Simply put, this new feature has the potential to eliminate the need for many, basic formulas and functions. In **Part 8** of this handbook (**Formulas & Functions**), many pages are dedicated to several, detailed formulas that manipulate text and text strings within an Excel Worksheet. Specifically, **Part 8** describes how to use the **Concatenate** function to build a formula that rearranges text data from two, existing columns into a new, third column. Then, that section demonstrates how to change that new text data into the proper case using the **Proper** function. Although these formulas are not difficult to use, they are very detailed and require absolute accuracy to set them up correctly. The new **Flash Fill** feature bypasses the need for these cumbersome functions and formulas by recognizing repeating data-entry patterns in columns adjacent to existing data.

Exercise 10.5 How to Reorder Text Data Using Flash Fill

The following exercise can be completed using the “**Last Name, First**” worksheet within the **Excel** practice workbook provided by the instructor.

1. Insert the cursor into cell “**G1**” and enter “**Gable, Clark.**” (In this example, the text of columns **E** and **F** have been rearranged into column **G** in the “last name, first” order.) After typing in “**Gable, Clark**” in the new column (**G**), press the **Enter** key to activate the cell directly below it. The **Flash Fill** feature will attempt to recognize a pattern to repeat.
2. By entering a “**G**” in this new cell (the first letter in the name, **Gardner**), Flash Fill will incorrectly guess that you are attempting to repeat the name “**Gable, Clark.**” (If that is what was wanted, then by pressing the **Enter** key it would be inserted.) Continue to enter each letter of the next name on the list (**Gardner, Eva**).

E	F	G	H
Clark	gable	Gable, Clark	
Ava	Gardner		
cary	Grant		
lana	turner		
Humphrey	bogart		
lauren	bacall		
Roy	Clark		
Jimmy	Page		
Pete	townsend		
Stevie Ray	Vaughn		
Jimmy	hendrix		

E	F	G	H
Clark	gable	Gable, Clark	
Ava	Gardner	Gable, Clark	
cary	Grant		
lana	turner		
Humphrey	bogart		

- As soon as the letter “r” is entered (see below), the **Flash Fill** feature recognizes the “list” pattern based on the text data in the preceding columns and auto-populates the remaining cells within column **G**.

E	F	G	H
Clark	gable	Gable, Clark	
Ava	Gardner	Gardner, Ava	
cary	Grant	Grant, cary	
iana	turner	Turner, lana	
Humphrey bogart		Bogart, Hu	
lauren	bacall	Bacall, lauren	
Roy	Clark	Clark, Roy	
Jimmy	Page	Page, Jimn	
Pete	townsend	Townsend	
Stevie Ray	Vaughn	Vaughn, St	
Jimmy	hendrix	Hendrix, Ji	

Note: When the name, “**Gable, Clark**” was entered into cell **G1**, care was taken to put the proper name **Gable** in the Proper case. The **Flash Fill** feature picked up that pattern and applied it to all of the last names in the new column (even though the source column **F** has several of the names listed in lowercase).

- Select the first letter of the name “**cary**” (that auto-populated in cell **G3**) and replace it with an uppercase letter “**C.**” Then press the **Enter** key. The remaining lowercase names will automatically become uppercase because of the **Flash Fill** feature (see screenshot below).

G	H
Gable, Clark	
Gardner, Ava	
Grant, cary	
Turner, lana	
Bogart, Humphrey	

E	F	G	H
Clark	gable	Gable, Clark	
Ava	Gardner	Gardner, Ava	
cary	Grant	Grant, Cary	
iana	turner	Turner, Lana	
Humphrey bogart		Bogart, Humphrey	
lauren	bacall	Bacall, Lauren	
Roy	Clark	Clark, Roy	
Jimmy	Page	Page, Jimmy	
Pete	townsend	Townsend, Pete	
Stevie Ray	Vaughn	Vaughn, Stevie Ray	
Jimmy	hendrix	Hendrix, Jimmy	

Note: The **Flash Fill** feature required only a few easy steps to reorder the text data in columns **E** & **F**. Prior to the **2013** release, this same reordering would require the use of multiple formulas involving numerous, detailed steps.

Exercise 10.6 How to Combine Multiple Columns Using Flash Fill

The following exercise can be completed using the “MAIL MERGE DATA SOURCE” worksheet.

	A	B	C	D	E	F	G	H	I
1	First Name	Last Name	Street Address	City	State	Zip	Contact Person		
2	Camila	Acosta	12345 First Street	San Diego	CA	92001	Mary Doe		
3	Sabah	Acosta	849 James Ave., Apt. 5	San Diego	CA	92011	Alex Doe		
4	Andrew	Adams	84209 Beverly Rd., Apt. 201	San Diego	CA	92123	Bo Doe		
5	Joshua	Addams	5723 Third Ave.	San Diego	CA	92065	Chris Doe		
6	Liz	Ageeli	11076 Meadowlark Lane	San Diego	CA	92012	Billie Doe		
7	Leion	Aguiar	3742 Main St., Apt. 321	San Diego	CA	92014	John Doe		
8	Rayan	Akeely	2781 Beaver St.	San Diego	CA	92001	Terry Doe		
9	Digna	Al Amer	10674 Povner Rd.	San Diego	CA	92011	Mary Doe		
10	Karen	Alaee	12345 First Street	San Diego	CA	92123	Alex Doe		
11	Aidan	Aleid	849 James Ave., Apt. 5	San Diego	CA	92065	Bo Doe		
12	Daraly	Aljaifi	84209 Beverly Rd., Apt. 201	San Diego	CA	92012	Chris Doe		
13	Estefany	Allahyani	5723 Third Ave.	San Diego	CA	92014	Billie Doe		

In this exercise, the address data contained in columns C, D, E, and F will be combined in a new column (H), using the **Flash Fill** feature.

1. Insert the cursor into cell H2, and carefully combine the address data from columns C, D, E, and F. (If punctuation is needed, it may be added.) Review the data entered to be sure that it is accurate. The **Flash Fill** feature may not work if data is incorrectly entered into the target cell. It must match exactly the data in the source cell (or cells).

C	D	E	F	G	H	I	J	K
Street Address	City	State	Zip	Contact Person				
12345 First Street	San Diego	CA	92001	Mary Doe	12345 First Street, San Diego CA 92001			
849 James Ave., Apt. 5	San Diego	CA	92011	Alex Doe				
84209 Beverly Rd., Apt. 201	San Diego	CA	92123	Bo Doe				
5723 Third Ave.	San Diego	CA	92065	Chris Doe				

2. Press the **Enter** key to activate the next cell in the column. As soon as the first character of the next address is entered into this cell (in this case, the number “8”), the **Flash Fill** feature will recognize the new pattern and auto-populate every address on this worksheet (no matter how many addresses there are).

B	C	D	E	F	G	H	I	J	K
Last Name	Street Address	City	State	Zip	Contact Person				
Acosta	12345 First Street	San Diego	CA	92001	Mary Doe	12345 First Street, San Diego CA 92001			
Acosta	849 James Ave., Apt. 5	San Diego	CA	92011	Alex Doe	849 James Ave., Apt. 5, San Diego CA 92011			
Adams	84209 Beverly Rd., Apt. 201	San Diego	CA	92123	Bo Doe	84209 Beverly Rd., Apt. 201, San Diego CA 92123			
Addams	5723 Third Ave.	San Diego	CA	92065	Chris Doe	5723 Third Ave., San Diego CA 92065			
Ageeli	11076 Meadowlark Lane	San Diego	CA	92012	Billie Doe	11076 Meadowlark Lane, San Diego CA 92012			

3. Pressing the **Enter** key again, locks the **Flash Fill** suggestions (*the remaining addresses*) in place.

fx 5723 Third Ave., San Diego CA 92065							H	I	J	K	L
B	C	D	E	F	G						
Last Name	Street Address	City	State	Zip	Contact Person						
Acosta	12345 First Street	San Diego	CA	92001	Mary Doe	12345 First Street, San Diego CA 92001					
Acosta	849 James Ave., Apt. 5	San Diego	CA	92011	Alex Doe	849 James Ave., Apt. 5, San Diego CA 92011					
Adams	84209 Beverly Rd., Apt. 201	San Diego	CA	92123	Bo Doe	84209 Beverly Rd., Apt. 201, San Diego CA 92123					
Addams	5723 Third Ave.	San Diego	CA	92065	Chris Doe	5723 Third Ave., San Diego CA 92065					
Ageeli	11076 Meadowlark Lane	San Diego	CA	92012	Billie Doe	11076 Meadowlark Lane, San Diego CA 92012					
Aguiar	3742 Main St., Apt. 321	San Diego	CA	92014	John Doe	3742 Main St., Apt. 321, San Diego CA 92014					
Akeely	2781 Beaver St.	San Diego	CA	92001	Terry Doe	2781 Beaver St., San Diego CA 92001					
Al Amer	10674 Povner Rd.	San Diego	CA	92011	Mary Doe	10674 Povner Rd., San Diego CA 92011					

Note: There is a **Flash Fill Options** drop-down menu that will appear next to data that was auto-populated using the **Flash Fill** feature. Clicking on the down-arrow will reveal additional options related to this feature.

12345 First Street, San Diego CA 92001
849 James Ave., Apt. 5, San Diego CA 92011
84209 Beverly Rd., Apt. 201, San Diego CA 92123
5723 Third Ave., San Diego CA 92065
11076 Meadowlark Lane, San Diego CA 92012
3742 Main St., Apt. 321, San Diego CA 92014
2781 Beaver St., San Diego CA 92001
10674 Povner Rd., San Diego CA 92011

12345 First Street, San Diego CA 92001
849 James Ave., Apt. 5, San Diego CA 92011
84209 Beverly Rd., Apt. 201, San Diego CA 92123
5723 Third Ave., San Diego CA 92065
11076 Meadowlark Lane, San Diego CA 92012
3742 Main St., Apt. 321, San Diego CA 92014
2781 Beaver St., San Diego CA 92001
10674 Povner Rd., San Diego CA 92011

Basic Keyboard Shortcuts

Note that in key combinations the first key (Ctrl, Shift, Alt, etc.) should be pressed and held down while tapping the second key:

Keys to Use	What They Do
Ctrl + N	Creates a new, blank Workbook
Ctrl + O	Opens an existing Workbook
Ctrl + W	Closes the current Workbook
Ctrl + S	Saves the current Workbook and keeps it open
F1	Opens the Help Pane
F5	Opens the Find & Replace dialog box
F7	Opens the Spelling & Grammar Pane
F12	Opens the "Save As" window to save a copy of the Workbook under a different name
Ctrl + P	Prints the Workbook
Ctrl + scroll the mouse wheel	Zooms the Workbook in or out (magnifies/shrinks it)
Ctrl + the plus sign (+)	Zooms in (magnifies it)
Ctrl + the minus sign (-)	Zooms out (shrinks it)
End	Jump to the end of a line (right side)
Home	Jump to the beginning of a line (left side)
Ctrl + End	Jump to the end of the entire Workbook
Ctrl + Home	Jump to the beginning of the entire Workbook
Ctrl + Z	Undo the last action
Ctrl + Y	Redo the last action
Shift + Arrow Key Right	Select (highlight) one single character to the right
Shift + Arrow Key Left	Select (highlight) one single character to the left
Ctrl + Shift + Arrow Right or Left	Extend selection one Excel to the right or left
Ctrl + A	Select (highlight) entire Workbook
Ctrl + C	Copies whatever is selected (highlighted)
Ctrl + V	Pastes whatever was copied
Ctrl + X	Cuts out whatever was selected (highlighted)

Ctrl + B	Bolds the selected text
Ctrl + I	Italicizes the selected text
Ctrl + U	Underlines the selected text
Shift + F1	Opens the Reveal Formatting Pane
Ctrl + ' + a	á
Ctrl + ' + e	é
Ctrl + ' + o	ó
Ctrl + ~ + n	ñ
Alt + Ctrl + c	©
Alt + Ctrl + r	®
Alt + Ctrl + t	™
(+ c +)	©
(+ r +)	®
(+ tm +)	™

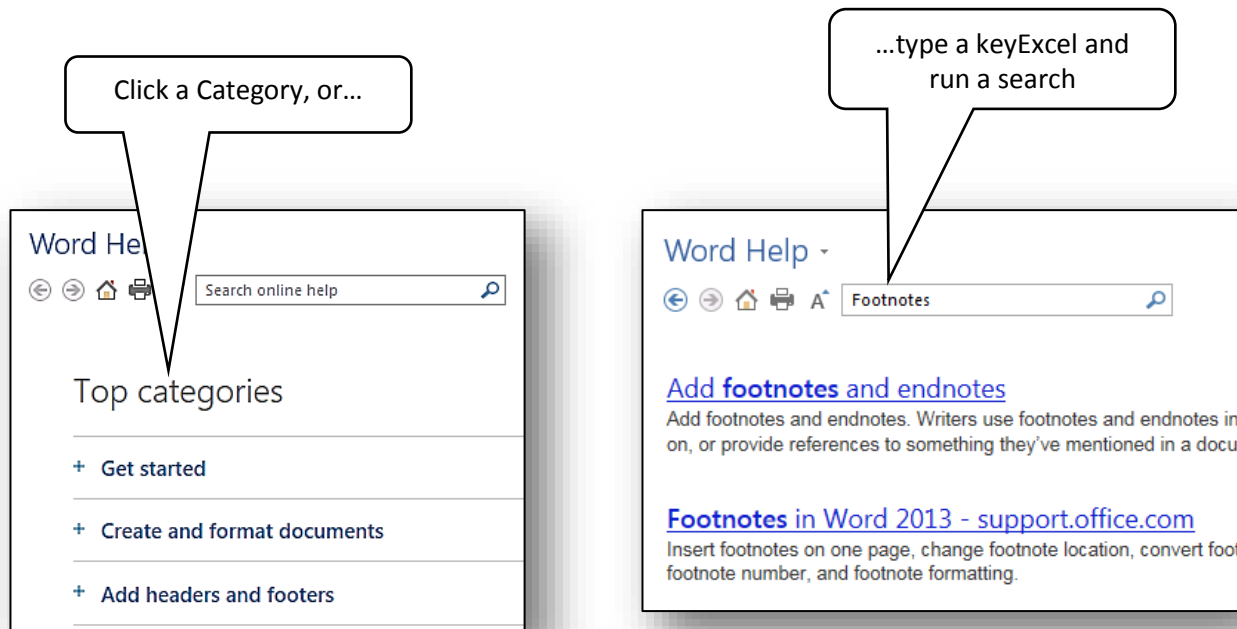
Help

Click the **Help** button in the upper right corner of any Excel Workbook window to access Microsoft's resources for help with Excel. The Help button looks like a question mark.



*(The Help dialog box can also be opened quickly by simply pressing the **F1** key.)*

In the Help window you can either click to open any of the Top Categories, or type a keyExcel for the topic you want and click the Search button (magnifying glass icon). Excel will search for answers and display its findings for you to explore.



The district also has a web page on its site which contains additional resources for help with Microsoft Office Suite applications like Excel or Excel. To find this web page, use this navigation:

1. Start by clicking to the Employee Portal on the main SDUSD home page. Login.
2. On the Inside Unified page in the lower left area, underneath **Shortcuts**, click **Technical Support**.
3. Scroll if necessary and click the link: **Microsoft Office**.

Note: You can use **Google** as a very effective tool to search for specific answers to specific questions about Excel. Remember to always include the version of Excel you are using in the question. For example; *"How do I select an entire page in Excel 2013?"* This will ensure that the instructions that **Google** is offering will work with the version of Excel that you are using.

