

Essential Skills for Spreadsheets

Created by the TR
Leger School, STEP
Program

Modified and Updated
by CESBA, 2021



Microsoft Excel

2016

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Introduction to Microsoft Excel 2016

Microsoft Excel 2016 is a program that lets the user add information to a spreadsheet/ worksheet. Each workbook starts with one worksheet, but you can add and delete sheets depending on what you need. Excel is a great tool for organizing your life or business.

Some of the benefits of using Excel include:

- Showing the results of a poll or chart
- Managing business expenses
- Recording tax information
- Making planners, checklists and schedules

Excel also allows you to create:

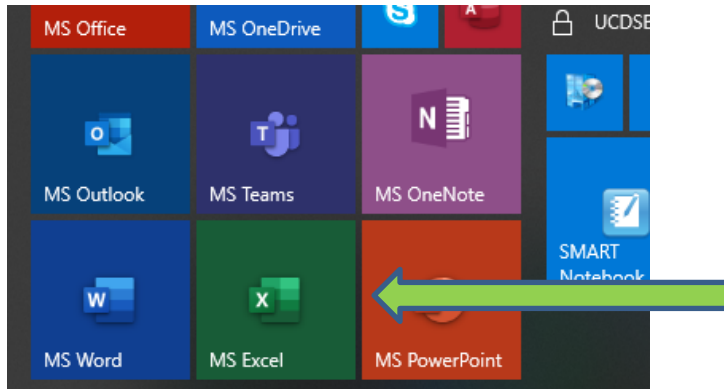
- Charts
- ClipArt
- Smart Art
- Shapes
- Worksheets/ Workbooks
- Graphs
- WordArt
- Formulas
- And much more

This manual was updated by CESBA using materials originally designed and created by the TR Leger School STEP Program. Preferred citation for distribution is: CESBA (2021) Adult Education Curriculum, Essential Skills for Spreadsheets Manual from <https://cesba.com>.

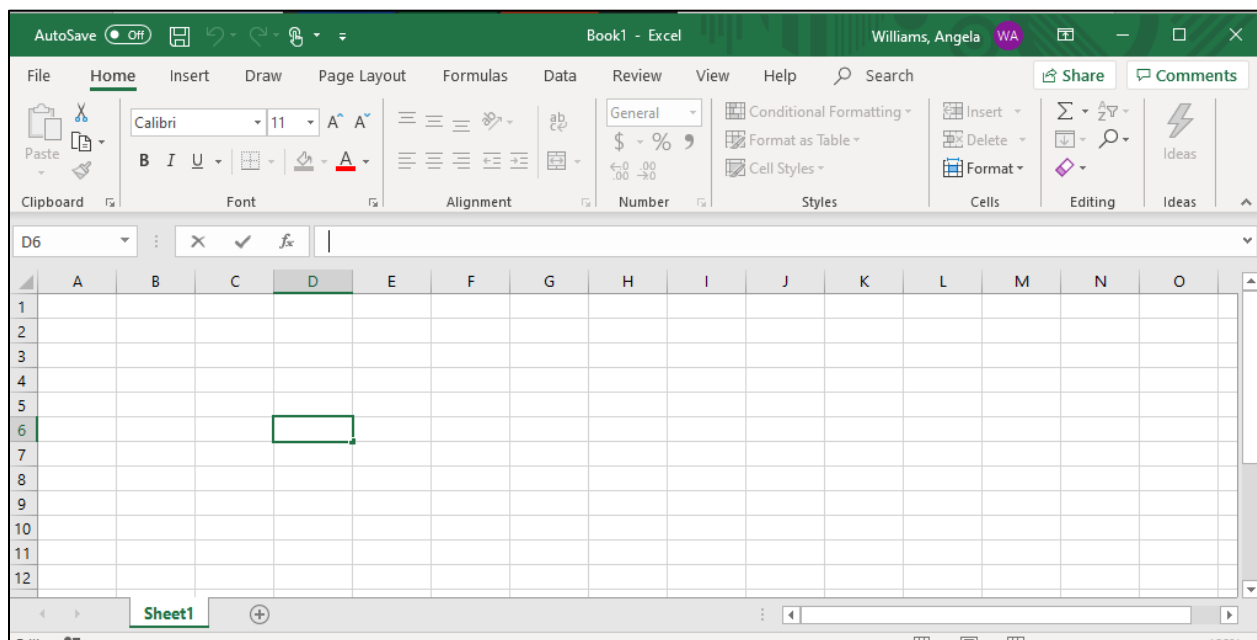
Opening Excel 2016



1. Click the Window icon in the bottom left corner
2. Find *MS Excel 2016* and click on it.

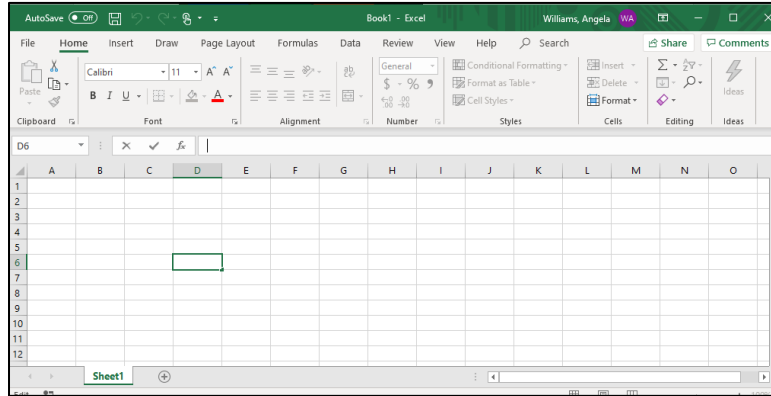


3. Look for MS Excel icon on your start screen.
4. Once you click on this Icon, select the Blank Workbook.
5. Excel will open into this screen.



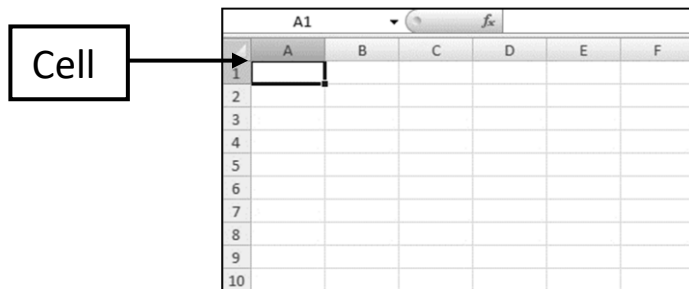
The Excel Screen

The Excel screen looks different from the Word screen.



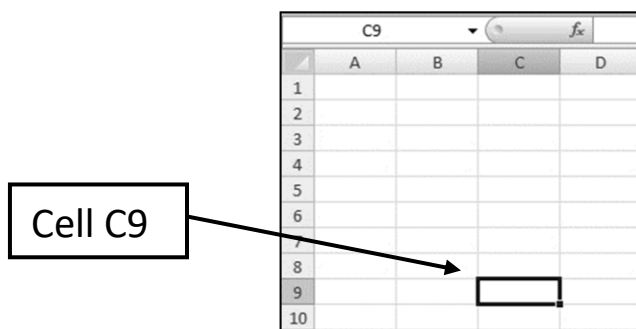
This is because the Excel screen is made up of rows and columns of **Cells**.

A **Cell** is a box where you can enter text or other information.



In Excel, each row has a number and each column has a letter. Cells are identified by their column letter and a row number.

For example, C9 is the Cell in column C and row 9.

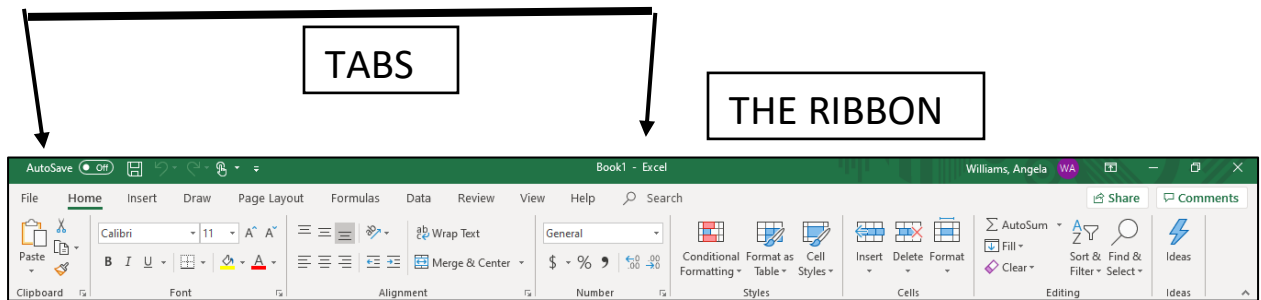


The Excel Ribbon

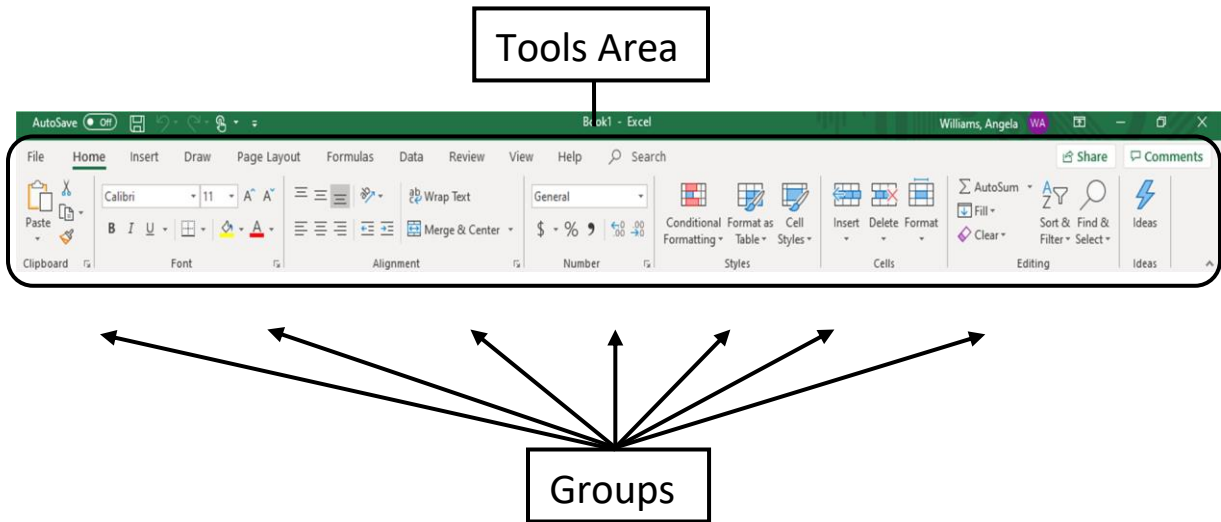
Microsoft Excel has a **Ribbon** just like Word and PowerPoint.

The **Ribbon** is divided into **Tabs** that each have a different **Groups** of **Tools**.

The Tabs are: Home, Insert, Page Layout, Formulas, Data, Review, and View.



Each tab has different **Groups** of **Tools**.

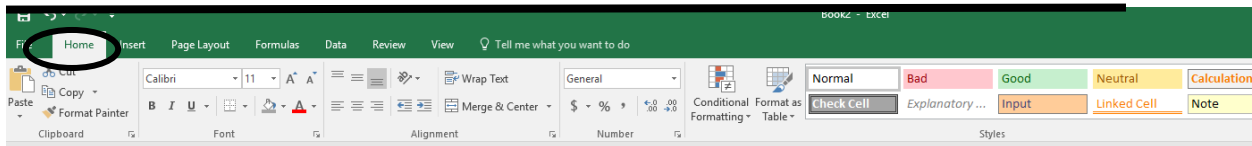


Tabs and Tools

In Microsoft Excel, each Tab lets you perform a different type of job. Each Tab has a different set of Tools.

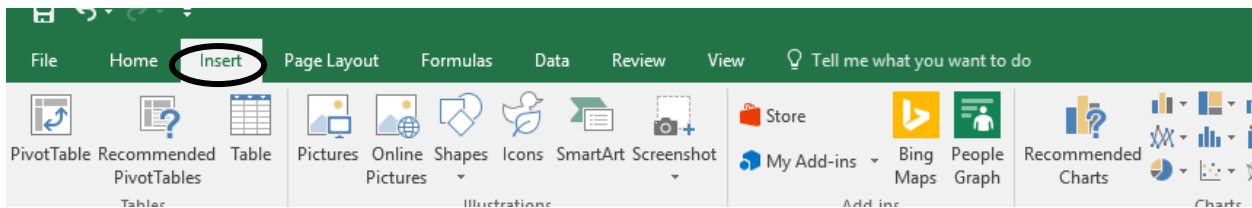
These are the basic Tabs and Tools that Excel offers:

The Home Tab



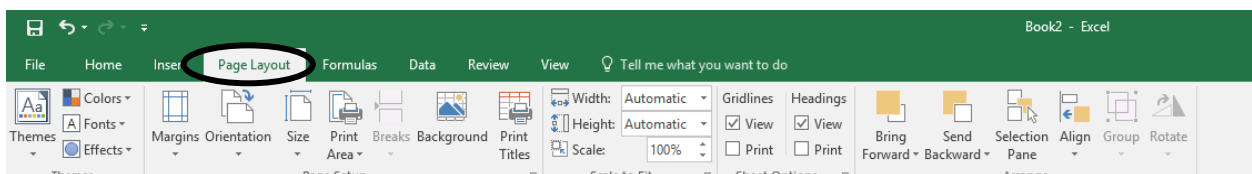
Home Tab Tools

The Insert Tab



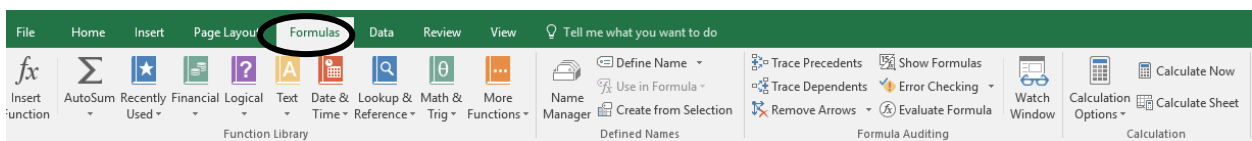
Insert Tab Tools

The Page Layout Tab



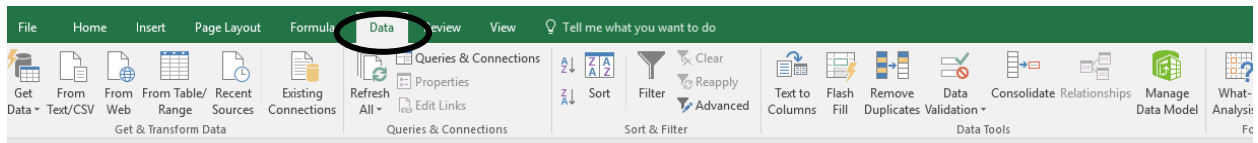
Page Layout Tab Tools

The Formulas Tab



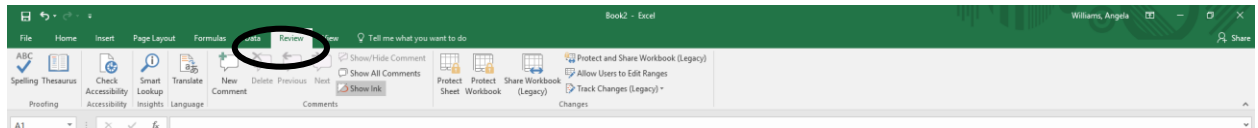
Formulas Tab Tools

The Data Tab



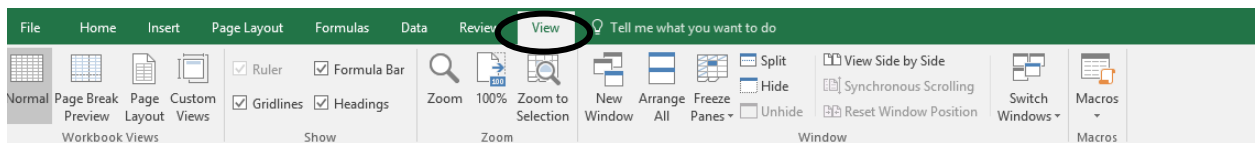
← Data Tab Tools →

The Review Tab



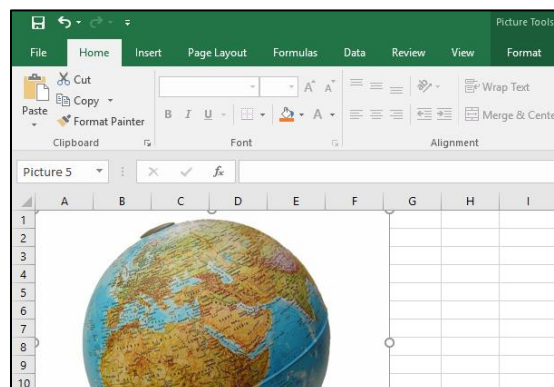
← Review Tab Tools →

The View Tab



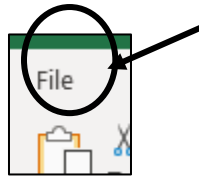
← View Tab Tools →

If you click on a certain object that you have inserted into your document, for example a picture or a table, you will see a new, special tab appear on the ribbon. This tab will only appear if you have selected the object. It disappears once you have deselected the object.



Basic Options in Excel 2016

1. This is the File Button.



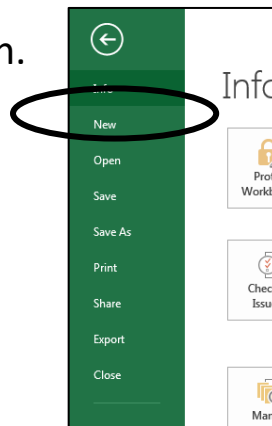
The **File Button** is always in the top left corner of the screen.

Opening a New Workbook

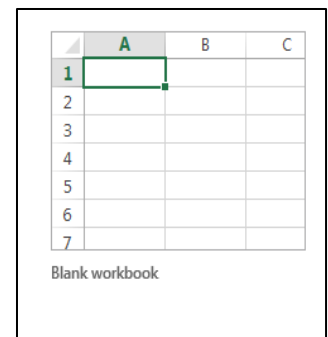
To open a New Workbook:

1. Click on the File Button.


2. Click on the New option.

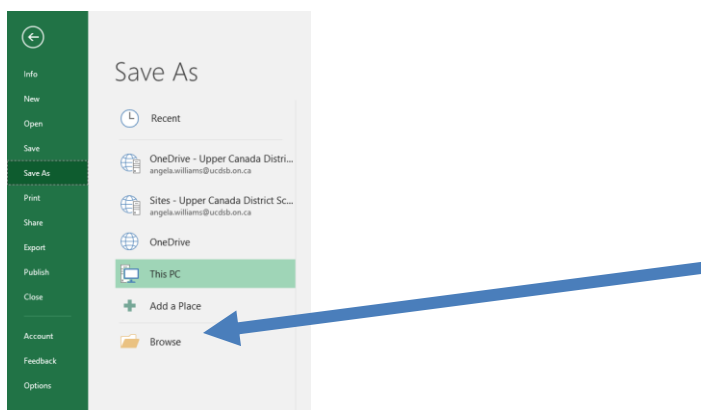


3. Once you click on the New option, then select Blank Workbook a new blank document. A new workbook will open.

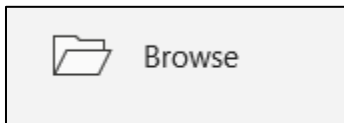


Saving to USB (Memory Stick/Removable Disk)

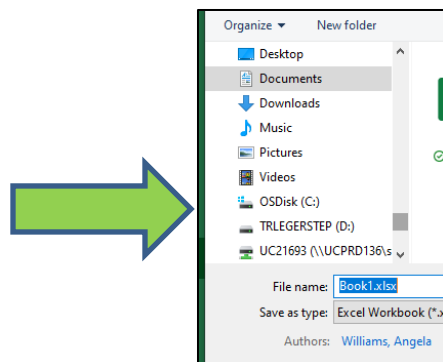
1. With a Workbook open, put your memory stick into the USB port.
2. Click on  above and to the right of the File Button. Or click on the **Save As** option from the Options button.
3. You will see this screen.



4. Click on the Browse button, which appears beside it.

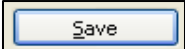


5. Choose the USB option (Removable Disk) to save to your USB.

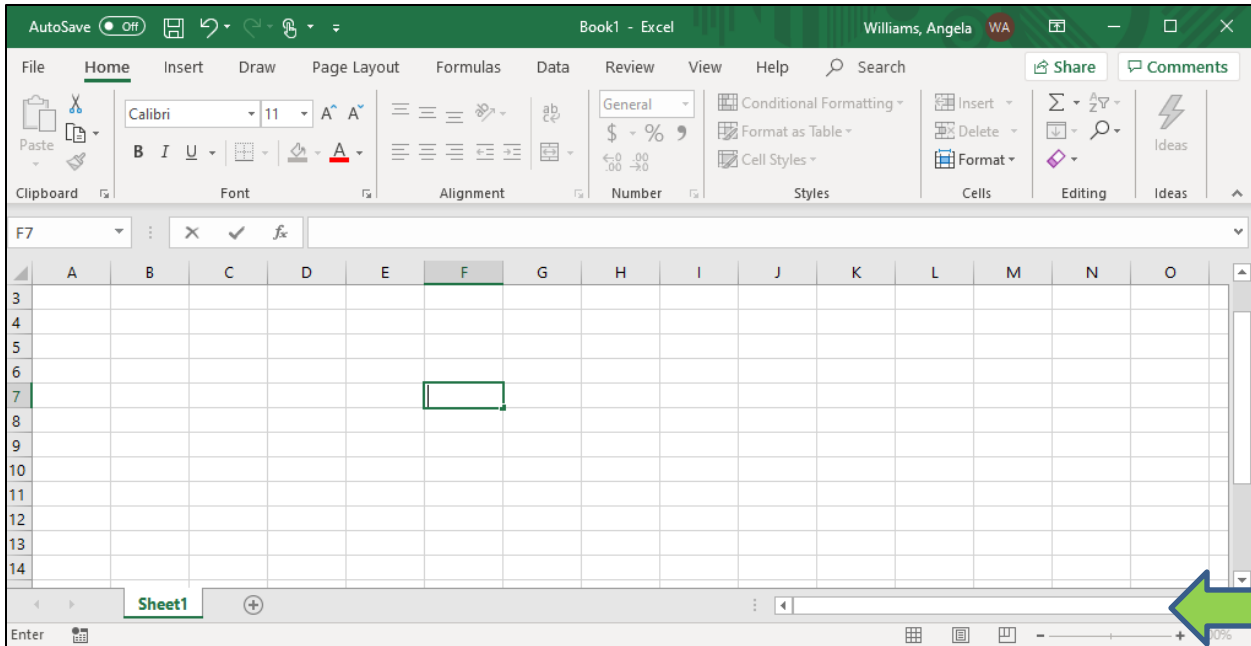


Note: The USB drive name may change. If using a USB from a certain company, the USB might show that company's name instead of the term 'Removable Disk'. The USB drive will always

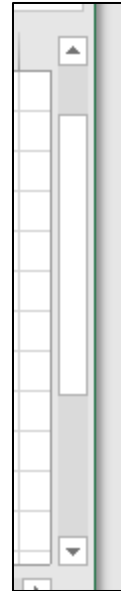
have this image  beside it to help locate it.

6. Scroll down to bottom.
7. Double click on the USB drive.
8. Click in the 'file name' box.
9. Delete everything in the 'file name' box.
10. Type the name of your spreadsheet.
11. 

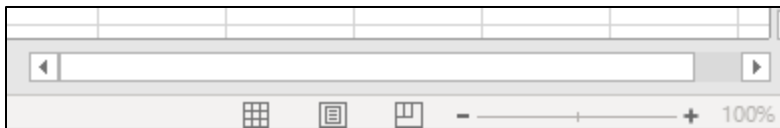
Scrolling Up, Down and Across



Scrolling Down



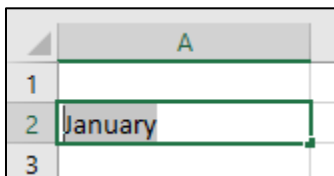
Scrolling Across



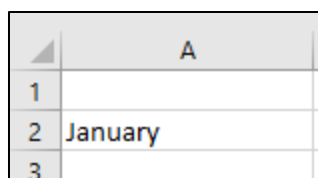
Selecting and Deselecting

Excel is made up of Cells and Rows.

1. To select a Cell, simply click your cursor in the Cell and begin to type information.
2. To select any text in the Cell, double click inside the Cell. Make sure that your cursor is either at the end of the word or the beginning.
3. Click and hold the left button on the mouse.
4. Move the mouse across the word.
5. The word will appear highlighted, as shown below. This text is now selected.



6. To deselect the word, click your mouse anywhere on the page outside the selected word.
7. When the mouse is clicked off the word, the word will deselect.



Rows and Columns

Columns are identified by the letters of the alphabet.

	A	B	C	D	E	F	G	H	I	J	K
--	---	---	---	---	---	---	---	---	---	---	---

Rows are identified by numbers.

1
2
3
4
5
6
7
8
9
10
11
12

Columns

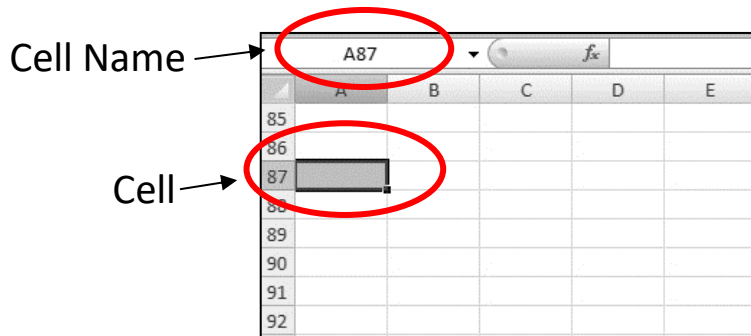
Rows

	A	B	C	D	E	F
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						

Cells

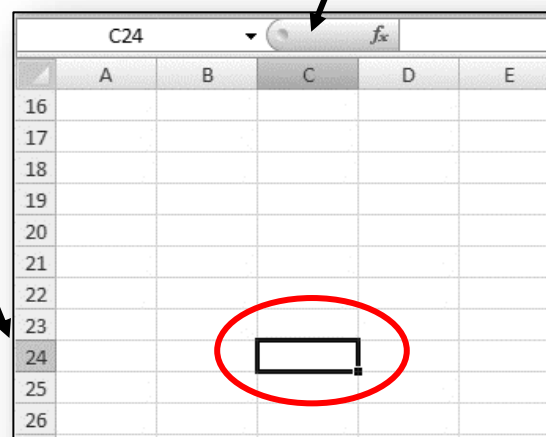
Cells are the tiny boxes in the Rows and Columns. The Cell name can be found just above the Spreadsheet.

For example, the Cell highlighted below is named Cell A87:



Cell names are identified by the Column and the Row where they are located.

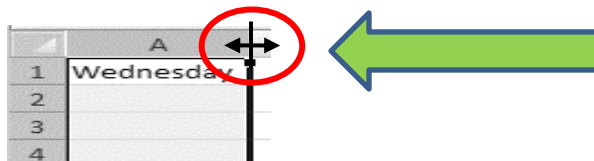
For example, Cell C 24 is found in Column C and Row 24.



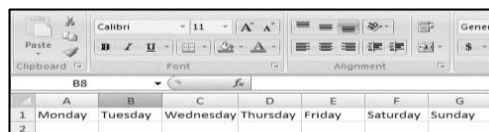
Practice # 1

1. Open Excel 2016.
2. When the program opens, you will see a new workbook.
3. The first workbook that is open is called Book 1.
4. You can create a New Workbook by clicking on New under the File button and choosing Blank workbook. Each new workbook will have a new number.
5. Once the Worksheet opens, click on Cell A1.
6. Type Monday.
7. Click on Cell B1. **You can also move to the next Cell using the arrow keys.** Then type Tuesday in the cell next to Monday.

You may find that the information does not fit in the Cell. If this happens click off the Cell and then click in the Column heading. For example, a Cell in **Column A** needs to be wider. When a thin black cross appears, click and drag outward to make the Column bigger. Drag the opposite direction to make the Column smaller.



8. From Cell **C1-G1** type the rest of the weekdays.
9. Save file on your memory stick as **Weekdays** and close.

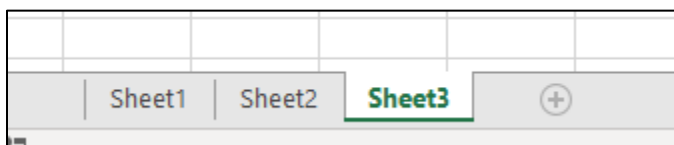


Workbooks and Worksheets

Worksheets are the pages that you are working with. A Worksheet is also considered a **Spreadsheet**.

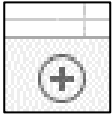
A **Workbook** is the file that holds all the Worksheets.

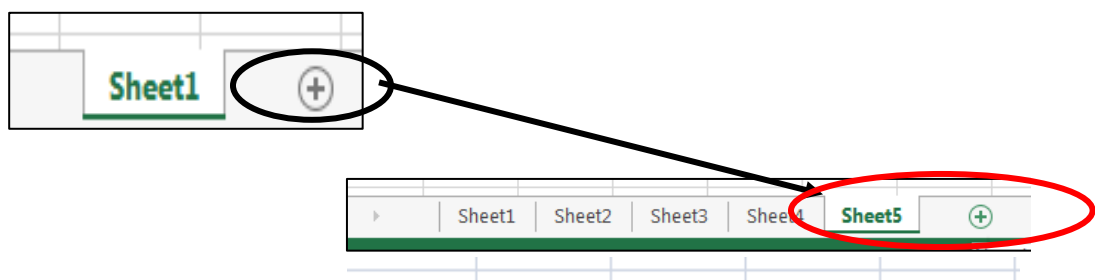
Each Workbook has three Worksheets. You may add more Worksheets to the Workbook if you wish.



You can see a sheet at the bottom of the page called Sheet 1.

1. To work with a sheet, click your cursor on the tab of the sheet you want to work with. This action activates the Worksheet so that you may work with that sheet.

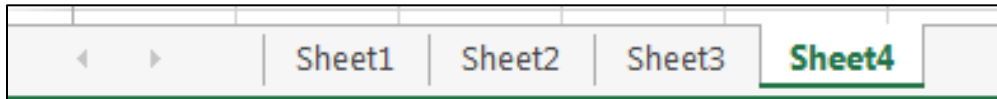
2. To add another sheet, you must click on the plus sign  located to the right of Sheet 1. Click the plus sign to add as many sheets as you need. Each click will add a new sheet to your workbook.



Add or Move a Worksheet

Sometimes you may want to move a worksheet to a different location in your workbook. There are two ways to move a worksheet.

1. To move a worksheet, place your cursor on the sheet number tab, to move the sheet number, click and drag to its new spot. Once you have picked its place, release the cursor.

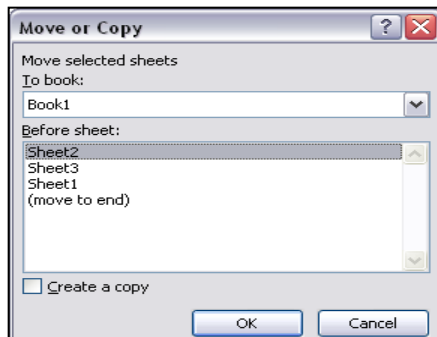
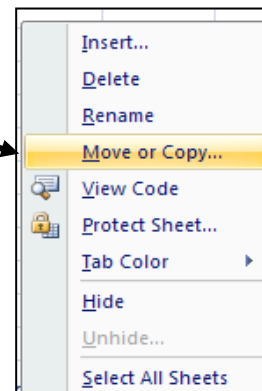


Or

Right click your cursor on the worksheet tab and a menu will open.

2. Click on the Move or Copy Tool.

3. Once you click on the Move or Copy Option, a menu will open.



4. Move the worksheets by clicking on a 'before sheet' location from this menu. Click 'OK'.

Adding a Worksheet

1. Click on this plus sign located at the bottom of the worksheet.

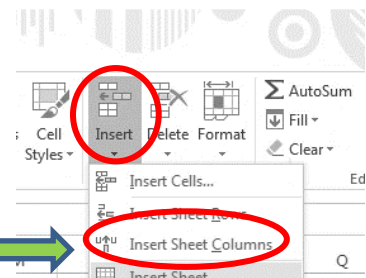


2. This will add a new blank sheet. It will automatically be named Sheet 2.

Or

The second way can be found in the Home Tab at the top right-hand side of the ribbon.

3. Select 'Insert' from the Cells tool area.

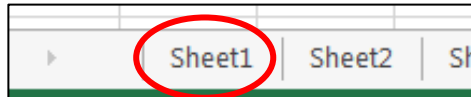


4. Click on Insert Sheet. This will also be named Sheet 2.

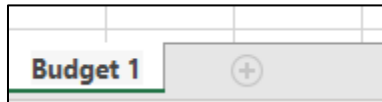
Note: When you insert a new sheet, the new sheet will move into the first place. If you wish the numbers to go up from right to left then you can click on the sheet you wish to relocate, hold the mouse button down and drag the sheet into the order that you want.

Changing the Name of a Worksheet

1. Click on the sheet you want to change.
2. Right click on the name of the worksheet you want to rename. Select the 'rename' option, the sheet name will become highlighted.



3. Once the sheet name is highlighted type in the new name.



Practice # 2

1. Open a new Excel Workbook.
2. Click on the Sheet 1 Tab at the bottom of the Excel Spreadsheet. Click the right button of the mouse and select the rename option from the menu that opens.
3. Rename sheet 1 'Canadian 1'.
4. Continue to rename sheets 2 and 3.
5. Rename sheet 2 'Canadian 2'.
6. Rename sheet 3 'Canadian 3'.
7. Save spreadsheet as 'Canada' and close.

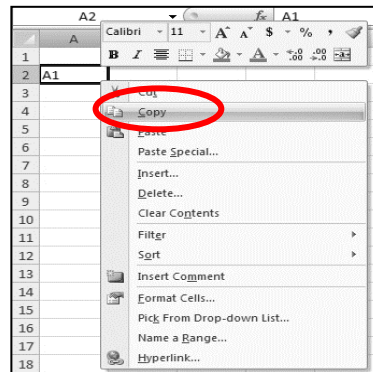
Deleting and Copying a Cell

1. To delete something from a Cell, click your cursor into the Cell that you want changed.
2. Press delete on your keypad, or type in new information.

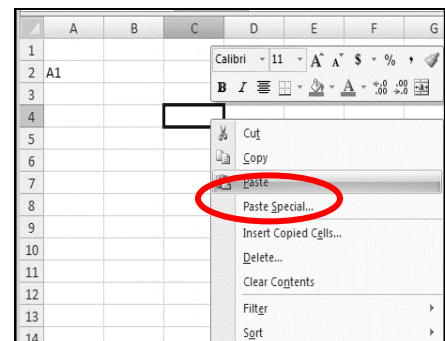
To Copy

1. Click in the Cell.
2. Right click and a drop-down menu will open.
3. Click on Copy.

Note: the cell you have selected will have a box around it flashing to show it has been copied



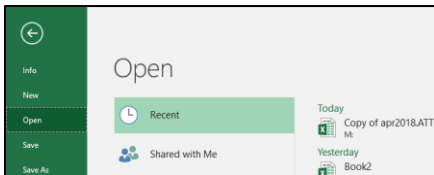
4. Move your Cursor to the Cell where you want to Paste the information.
5. Right click for drop down menu.
6. Click on the paste options and the text will Paste to the Cell you selected.



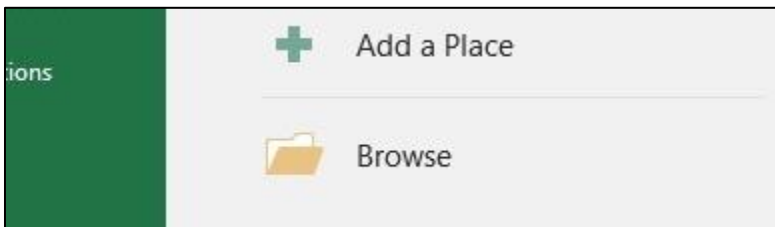
Note: The flashing will stop once you have clicked another cell to work in or when you press ESC on the keyboard.

Opening a File in Excel

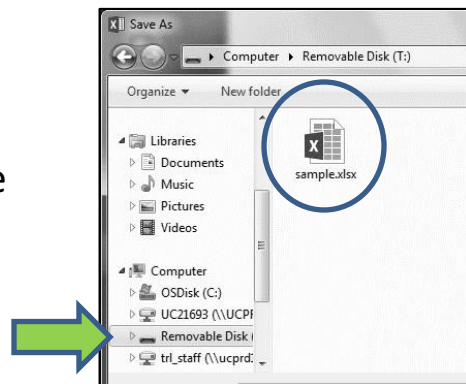
1. With a Workbook open, put your memory stick into the USB port.
2. Click on the File Tab on the left-hand corner of your Ribbon.
3. Click on Open and then click on Recent




4. Choose the file you would like from the list of the workbooks that you have recently worked on.
5. Note: If the file you need is not listed in your recent workbooks, then click on the Browse icon.



6. Click on Browse
7. Scroll down to the bottom and choose the USB option (Removable Disk) to see your files.
8. Click on the file you wish to open.



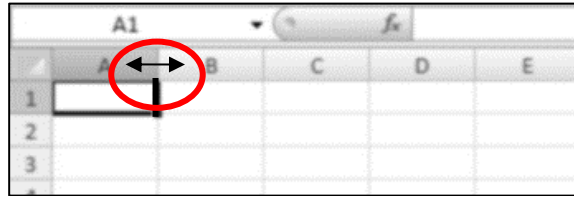
Practice # 3

1. Open 'Weekdays'.
2. Select Cell A1 and right click in Cell A1.
3. When the menu opens click on the 'Copy' tool.
4. The border around the Cell will begin to flash. This tells you that the computer is ready to copy the information.
5. Move your cursor to Cell A5, right click in Cell A5 and when the menu opens click on 'Paste'.
6. Touch the Escape key to stop the flashing border after you are finished. The Escape key is to the top left of the keyboard. 
7. Move your cursor to Cell B1 and right click.
8. Copy and Paste this information in Cell B5.
9. Continue to Copy and Paste all weekdays to Row 5.
10. Save and close.

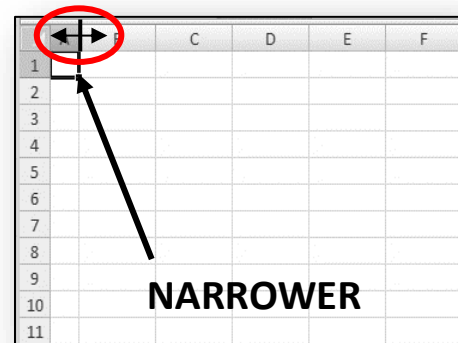
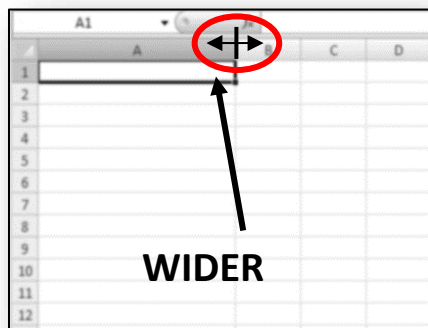
***Please note that some of the weekdays, Wednesday for instance does not fit into the Cell. In this case adjust the Cell width. If you need instructions, please refer to page 27 in this manual.**

Making a Row/Column Wider or Narrower

1. Click on the Column header you want to make wider.

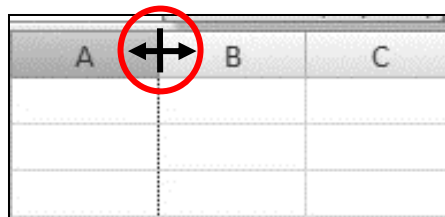


2. Once this black arrow appears, you can click, hold and drag the Column either way, to make it wider or narrower.

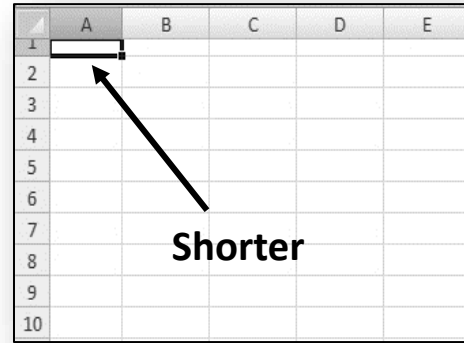
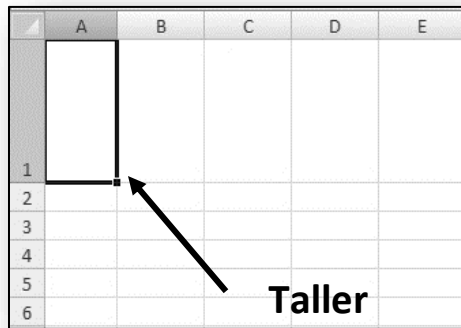


If the text shows as #####, there are a few possibilities. One possibility is that the Cell is not wide enough for the text. (see pg. 56 for formatting)

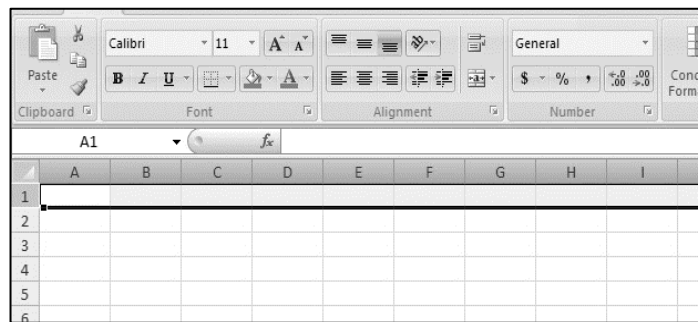
If this happens, simply make the Cell wider by dragging the arrow as shown below.



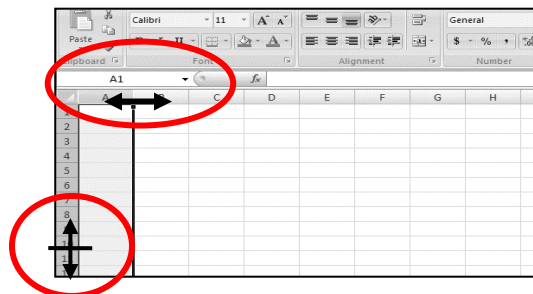
3. Use the same arrow to make the Rows taller or shorter. Move the cursor between the number of the Row you wish to resize until you see the double-edged arrow. Now click the arrow and drag the row to size.



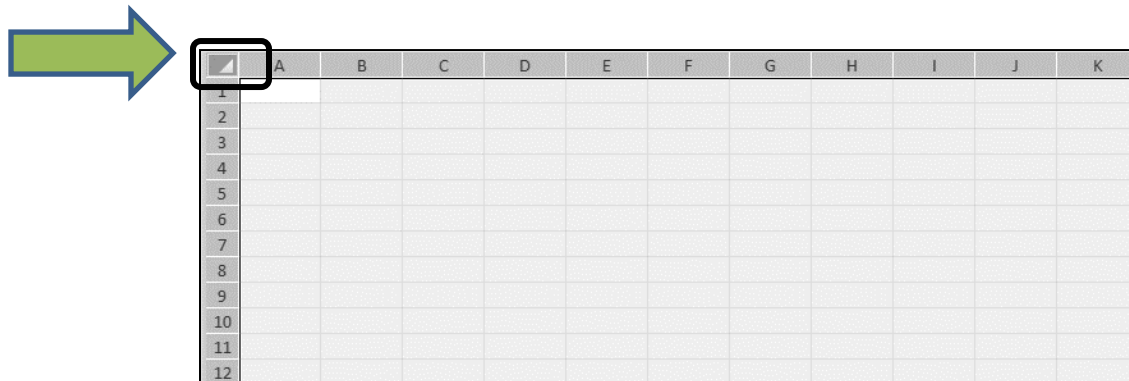
You can also select rows by placing your cursor in the Row header until you see a small black arrow pointing down. When you click, it will highlight the Row.



This also applies to selecting Columns, but instead of selecting the Row header, you select the Column header.

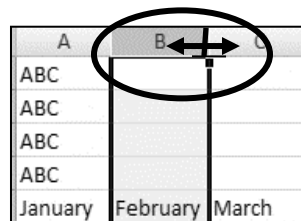


To highlight the whole table, click on the small triangle shape between the A and 1.

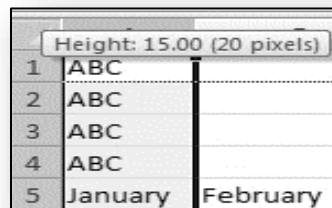


Row and Column Sizes

1. To see the size of a Column, highlight the Column.
2. Click your cursor on the outside right line of the Column Heading and left click. A small bubble will open and tell you the size of the Column. This is shown in the diagram below.



3. While holding, move your cursor back and forth to adjust the width from smaller to a larger size.
4. The same can be done for the Row measurements, by clicking the cursor on the bottom line of the Row and left clicking while dragging



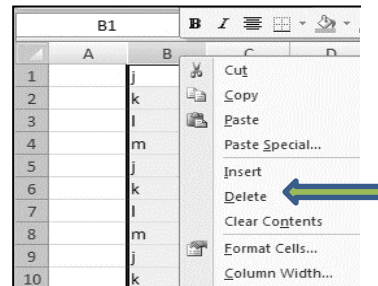
Note: The Rows are measured by Height and the Columns are measured by Width.

Deleting Contents in Columns and Rows

Click on the Row or Column header that you wish to delete.

1. Once the Row or Column is highlighted, right click inside it.
2. When the menu opens, click on delete.

	A	B	C	D
1		j		
2		k		
3		l		
4		m		
5		j		
6		k		
7		l		
8		m		
9		j		
10		k		



3. Once delete is clicked, the Row or Column will be removed.

	A	B	C
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Using Autofill

Autofill is a useful tool, especially for files that contain information like days of the week or months. This is because you can type a little bit of information and Autofill will fill in the rest.

1. Type Monday into Cell 'A1' and Tuesday into Cell 'B1' as shown in the picture below.


	A	B	C	D	E
1	Monday	Tuesday			
2					
3					

2. After typing Monday and Tuesday, left click the cursor in Cell A1 and, while holding the left button down, drag the cursor to Cell B1.

	A	B	C	D	E
1	Monday	Tuesday			
2					
3					

3. With Cells A1 and B1 selected, move your cursor to tiny black box in the bottom right corner of Cell B1 until you see a black cross. +

	A	B	C	D	E
1	Monday	Tuesday			
2					
3					

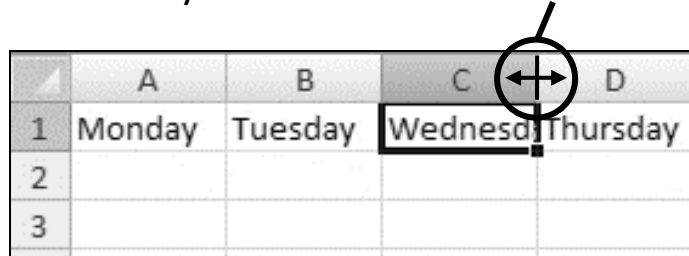


4. Click on the black cross and drag your cursor until you reach the Cell where you would like the information to end.

	A	B	C	D	E	F
1	Monday	Tuesday	Wednesday	Thursday		
2						
3						
4						

5. Autofill will fill in the rest of the days.

6. You may have to widen some columns to fit all the information. Make the Column larger by moving the cursor over the line to the right of the column you want to enlarge. You can change the width of the column when your icon looks like this.

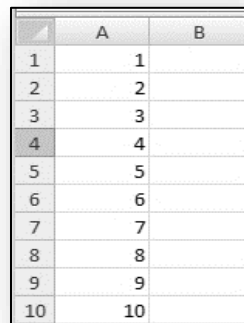


	A	B	C	D
1	Monday	Tuesday	Wednesday	Thursday
2				
3				

7. Drag your cursor outward to make the Column wider or inward to make the Column narrower.

8. The same Autofill is also useful for filling in months, numbers and any sequence.

The diagram below shows how Autofill works with numbers, this time using the Rows instead of columns.



	A	B
1	1	
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	
10	10	

Autofill is a great tool to use in formulas, which are explained later in the booklet.

Practice # 4

Task 1

1. Create a new workbook.
2. In Cell A1, type January.
3. In Cell A2, type February.
4. Using the Autofill tool, drag down until you fill in all the months of the year in the Rows below.
5. Using the Column width arrow in the Column header, drag the Column wide enough to fit all the names of the months.
6. Save as 'Months' and close.

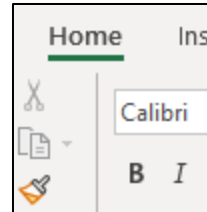
Task 2

1. Open 'Months'
2. In Cell A14 type January.
3. In Cell B14 type February.
4. Autofill the rest of the months until December.
5. Adjust the size of the Rows if need be to fit all the text.
6. Save and close.

Adding Columns and Rows

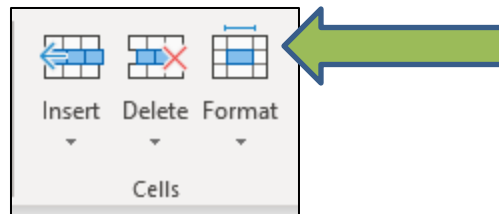
1. Click in the cell where you want to add the Row or the Columnn.

2. Click on the Row or Column heading.



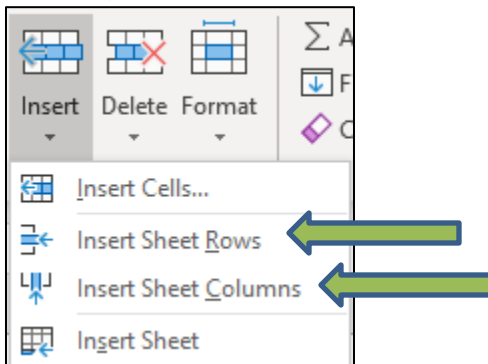
3. Click on the Home Tab.

4. Go to the Cells Tool.



5. Click on the Insert Tool arrow.

Once you click on Insert a drop-down menu will open.



6. Click on either 'Insert Rows' or 'Insert Columns'. This is useful when you need to add information to a worksheet.

Practice # 5

1. Open a new Excel workbook.
2. Type the words for the even numbers from two to twenty, one in each Cell, beginning at Cell A1 and across to J1.
3. Now insert Columns between each number to add in the odd numbers.
4. You will notice that when you select Column A, and insert your first new Column, the number 'two' that you had typed will move over to Column B, allowing you room to type the number 'one' in Column A. Each time you insert, the Column will appear to the left of the Column you select.
5. Select Column C and continue to insert all the odd numbers. When you are finished, you will have the entire set of numbers from one to twenty. This will take you from Column A all the way to Column T. Adjust the width of Column Q to fit the text.
6. Save as 'Numbers' and close.

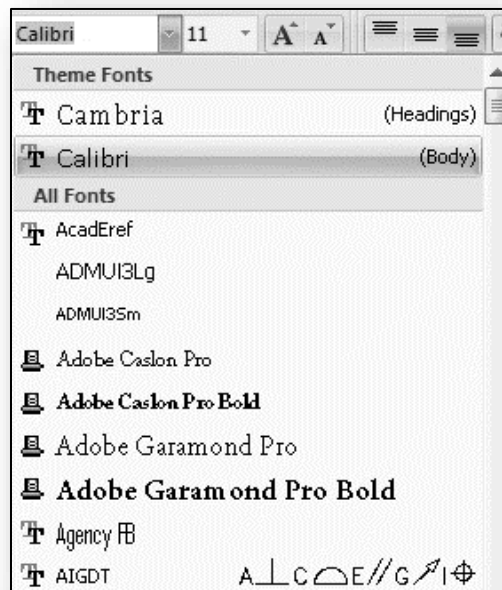
Fonts

1. To change the Font style in Excel, simply click on the Cell you want to change.
2. Go to the Home Tab.

3. Open Font menu.

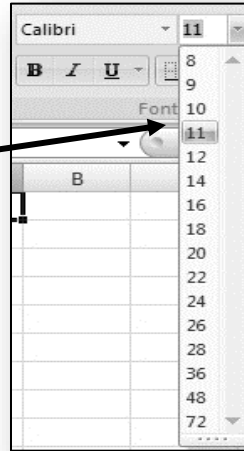


4. Select a Font from the drop-down menu and click on it. This will replace the highlighted text with the new font.



Font Size

1. To change font size in Excel, click on the Cell you want to change.
2. Go to the Home tab.
3. Open the Font menu.
4. Choose a font size.



For example:

Word (size 14)

Word (size 26)

Word (size 72)

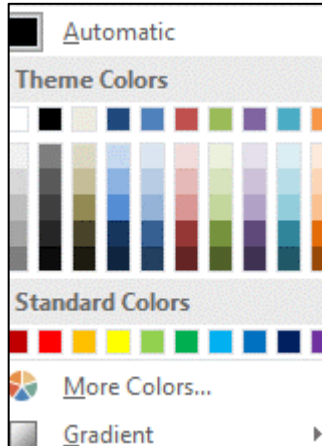
Word (Size 116)

Font Colour

1. To change a Font color, click on the Cell and highlight the text within the Cell to make the change.
2. Go to the Home Tab.
3. Click on the Font color Icon in the Font Tools.



4. A drop-down menu will open, and you may click the color that you like.



Font Styles

1. To make Text **BOLD**, highlight the text and click on the Home Tab.



2. Click on the **Bold** Icon in the Font tools.



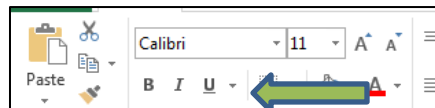
3. To make Text *Italic*, click on the Home Tab.



4. Click on the *Italic* Icon in the Font tools.



5. To make the text Underlined, click on the Home Tab.



6. Click the underline icon from the Font tools.



Practice # 6

Task 1

1. Open 'Canada' Click on Sheet #1 (Canadian #1)
2. Starting in Column A and continuing through to Column E, type the following Provinces, Ontario, Quebec, British Columbia, Manitoba and Alberta.
3. Click the mouse into the 'Column A' box that contains the Province of Ontario.
4. Click on the Home Tab.
5. Click on the Font color and change the font color to Red.
6. Click the mouse into the Column B box that contains the Province of Quebec and change the font color to Blue.
7. Click in the Column C box that contains the Province of British Columbia and change the font by selecting the Font Tools and change the font to **Arial Black**.
8. Click the mouse in Column D and change the font to Green.
9. Click the mouse in Column E and change the font to **Comic Sans**
10. Save and close.

Task 2

1. Open 'Canada'.
2. Go to Worksheet 2
3. In Column D Row 2 type Cold Winters.
4. In Column E Row 2 type Oil Country and change the font to Century Gothic, found in the Font tool.
5. Select Cell F1 and Insert a new Column heading called CANADA.
6. Adjust Cell width as necessary.
7. Save and Close.

Practice # 7

Task 1

1. Open 'Canada'.
2. Click on the 'Canadian 1' worksheet.
3. Click on Column A header and make the Column width 16.00 (117 pixels) in size.
4. Click on Column D and change the Column width 21.00 (152 pixels) in size
5. Save and close.

Task 2

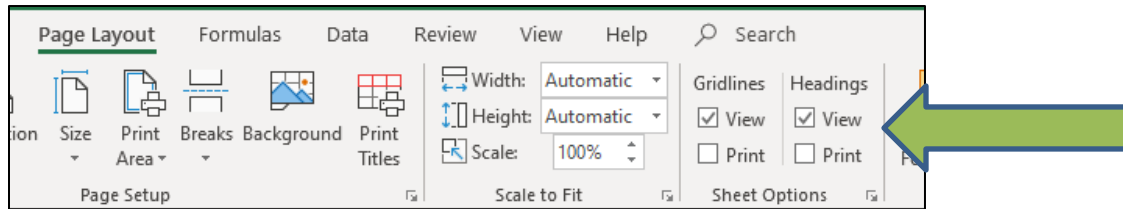
1. Open 'Canada'.
2. Right click on Column D and delete the Column by selecting delete from the 'drop-down menu.
3. Column D should now contain the Province of Alberta.
4. Highlight Column D and right click the mouse again. This time select INSERT and Excel will insert a new Column.
5. Name this new Column D, Man-2.
6. Save and close.

Practice # 8

1. Open 'Months'.
2. Click on Column A and highlight all the text in the Column.
3. Click on the Home Tab and choose ALGERIAN TEXT.
4. Click on Column A and highlight all the text.
5. Click on the *Italics Tool* in the Home Tab. Make all the text in Column A *Italic*.
6. Save and Close.

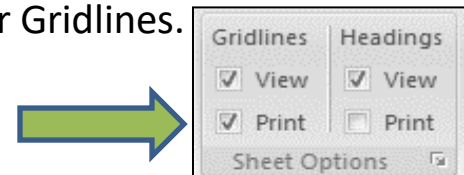
Gridlines

The lines in your spreadsheet will not show up on your printout unless you select the **Gridlines** first. Gridlines are the borders around the Cells in your spreadsheet.

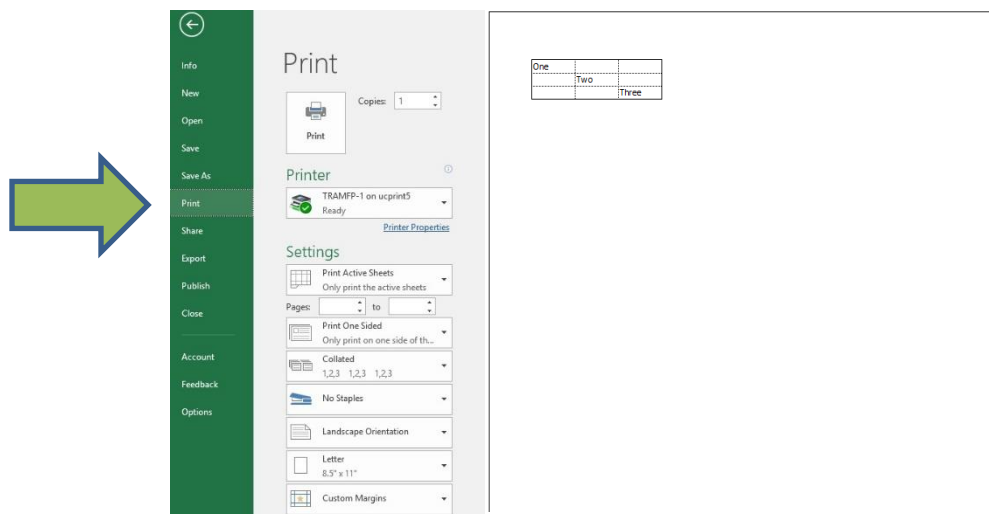


1. To select the Gridlines, click on the Page Layout Tab. Select Sheet Options.

2. Make a check in the Print option box under Gridlines.



3. Click on the File Tab and select Print

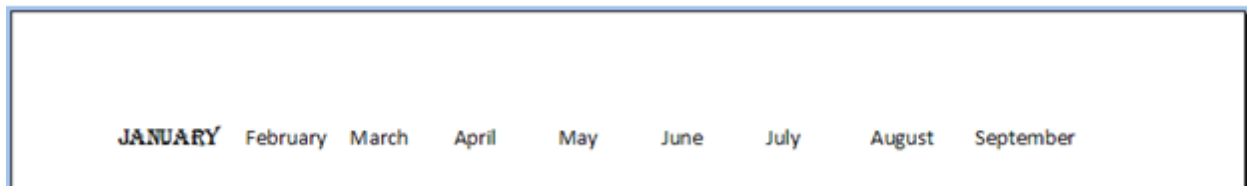


4. Click on Print, the Print Preview will appear to the right.

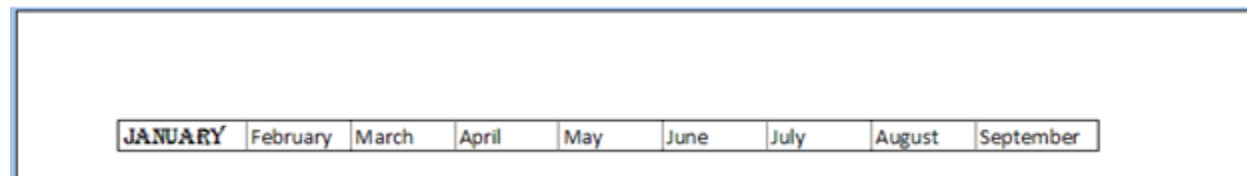
4. You will see what your work will look like printed.
5. Return to your Home tab to continue work on your Spreadsheet

Remember: The lines in your spreadsheet will not show up on your printout unless you select the **Gridlines** first. You also cannot choose gridlines if you have not typed something in your spreadsheet or if you are not connected to a printer.

This is what the print preview will look like **before** you check the Print box under Gridlines.



This is what the print preview will look like **after** you check the Print box.

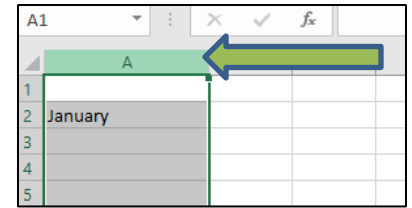


Borders

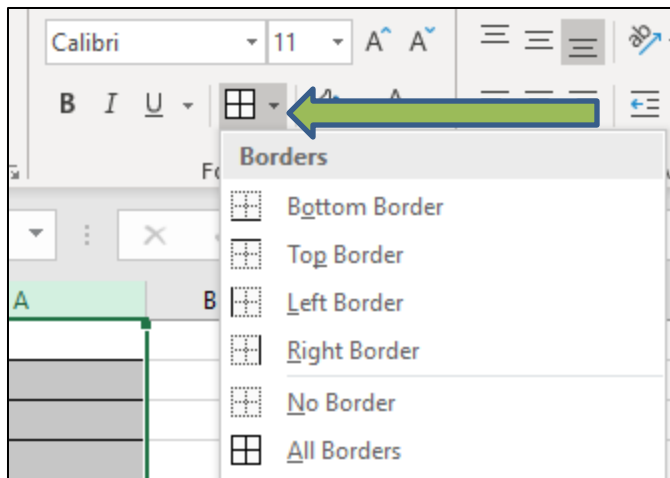
Borders are like Gridlines. The main difference is that Gridlines always stay the same, but you can change the way your **Borders** look. Gridlines will show up around every Cell, but you can choose which Cells you want to put Borders around and how you want them to look. Borders will print automatically without having to check a box.

Adding Borders to Selected Cells

1. Highlight the column you want to put borders around by clicking on the column letter.

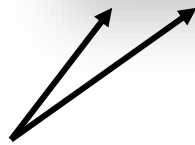


2. Click on the Home Tab and then click on the arrow to the right of Borders.



3. You will see a drop-down menu with options such as Bottom Border, All Borders, Right Border, etc.
4. Click on the left Border option. This will place a left border along the side of the Row you selected.
5. Follow the same process to put a border around a Column. Highlight the Column you want the Border to appear in.
6. Click on the Border Icon and click on the Right or Left Border option.

	A	B	C	D	E	F	G	H	I
1	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
2									
3	1		1		1		1		
4	2		2		2		2		
5	3		3		3		3		
6	4		4		4		4		
7	5		5		5		5		
8	6		6		6		6		
9	7		7		7		7		
10	8		8		8		8		
11	9		9		9		9		
12	10		10		10		10		



Right borders are placed here.

Bottom Borders are placed on each Row here.

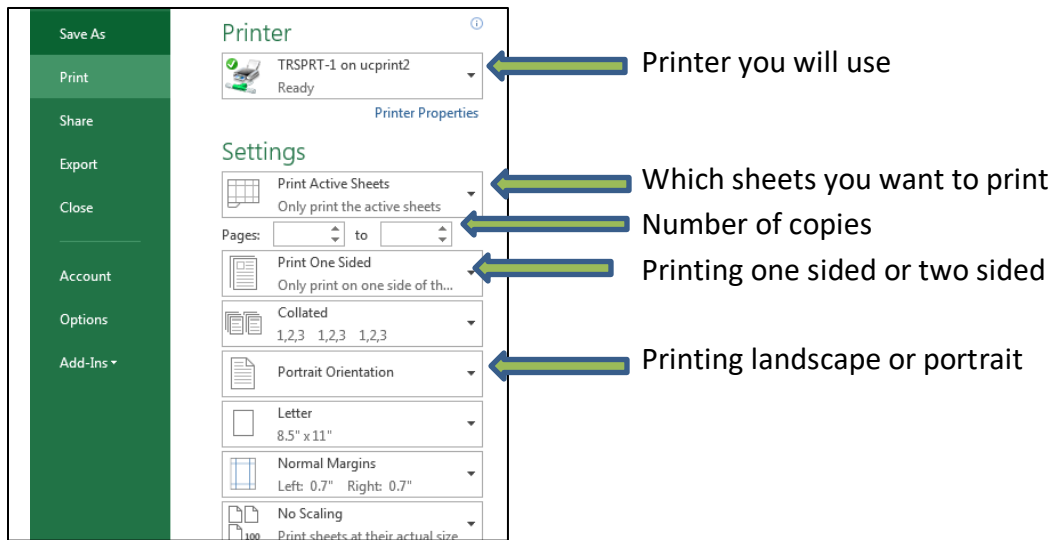
* Note: Since columns have unlimited numbers of rows, you will not need to put a Bottom Border on a column (just on rows).

1193			
1194			
1195			
1196			
1197			

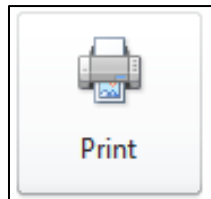
Printing

In order to Print, click on the File Tab.

You will be given options to choose your number of copies, printer type, and Settings

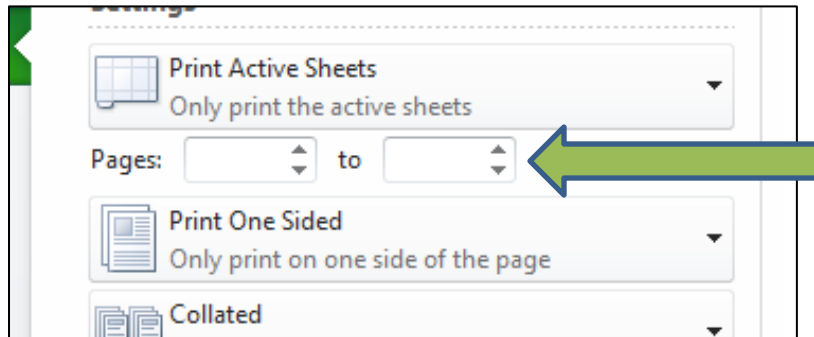


When you are ready to print your spreadsheet, click on the print option.



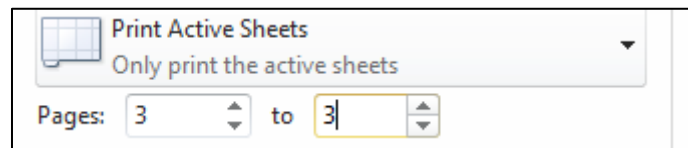
Printing a Page Range

1. If you wish to select certain pages, click on the Pages and type in the pages you want to print. For example, if you would like to print pages 1 to 3. type 1 in the section after *Pages:* and 3 in the section after *to*:



Printing Specific Pages

1. If you only want to print **page 3** of a 15-page document, select Pages by clicking the box beside the Pages option and typing 3 in the From: and 3 again in the To: section. This ensures that only page 3 will Print.



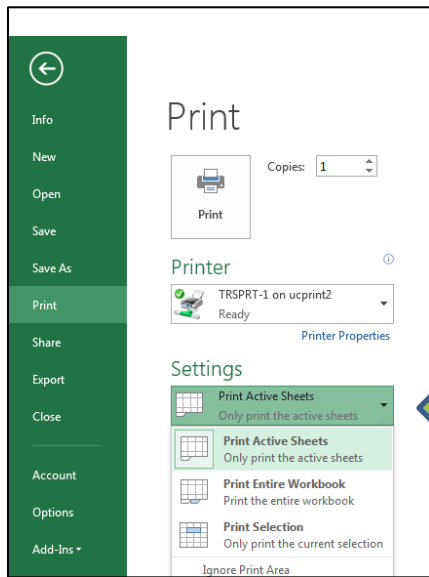
2. Click Print

To Print a Section

1. Highlight the area that you want to print. This will ensure that you are only printing the part of the Worksheet that you want printed.

2. Click on Print under File Tab on the Ribbon.

3. Click on Print Selection

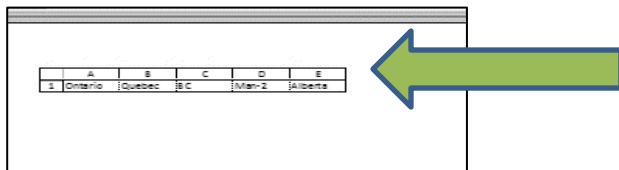


	A1		fx	Inventory	
	A	B	C	D	
1	Inventory	Cost/per Item	Items Sold	Sub Total	
2	Meat Pies	\$1.54	6	\$9.24	
3	Chocolate	\$1.25	0	\$0.00	
4	Almonds	\$7.99	4	\$31.96	
5	Pop	\$1.25	0	\$0.00	
6					
7	Total			\$41.20	
8					
9					
10					
11	1	Inventory	Cost/per Item	Items Sold	Sub Total
12	2	Meat Pies	\$1.54	6	\$9.24
13	3	Chocolate	\$1.25	0	\$0.00
14	4	Almonds	\$7.99	4	\$31.96
15	5	Pop	\$1.25	0	\$0.00
16	6				
	7	Total			\$41.20

4. The Print Preview will be at the right of your print option screen.

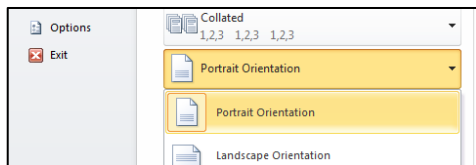
Practice # 9

1. Open 'Canada'
2. Make sure that you are working with the Excel sheet named 'Canadian 1'.
3. Click on the Page Layout Tab.
4. Look at the Sheet Options Tools.
5. Click a check into the two boxes View and Print, under Gridlines options.
6. Click on the File Button.
7. Click on Print
8. When the Print Preview menu opens on the right you should see gridlines.



The lines that appear around the text are the gridlines.

9. You may want to change the style of the page printing to Landscape, otherwise it prints on two pages. This can be achieved by clicking on orientation in your print menu.

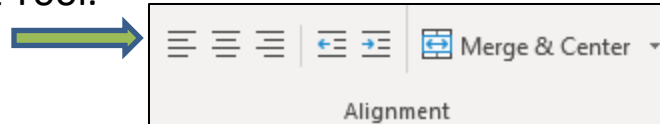


10. Return to your Home Tab
11. Save and close.

Cell Alignment

1. Click on the Home Tab.

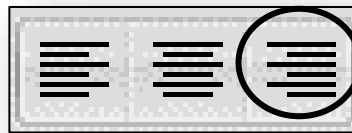
2. Go to the Alignment Tool.



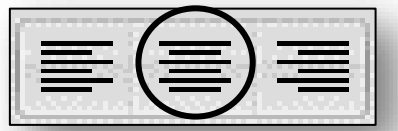
3. In order to align Cell text to the left of the page, click on this Icon.



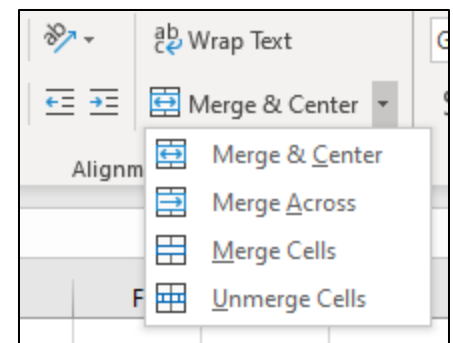
4. To align Cell text to the Right of the page, click on this Icon.



5. To align the Cell text to the center, click on this Icon.



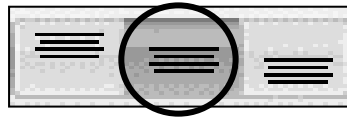
6. To **Merge Cells** first highlight the Cells that you want to merge. Click on the Merge and Center from the Home Tab and a 'drop-down menu will open. From this menu you can select the way that you would like the Cells to merge. To deselect click on the Unmerge Cells option from the same menu.



7. To align the Cell text to the upper center of the Cell, click this Icon.



8. To align the Cell text to the center and centered within the Cell, click this Icon.



9. To align the Cell text to the lower center of the Cell, click this Icon.



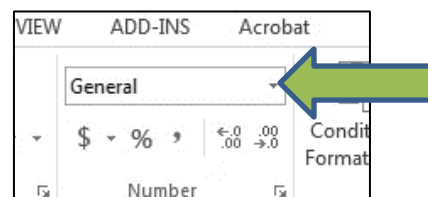
Practice # 10

1. Open 'Months'
2. Click and highlight Column A - Cells A1-A6 and center align the text.
3. Click and highlight Column A – Cells A7-A12 and right align the text.
4. Starting in Cell B1 through to B9, type the numbers from 1 to 9.
5. Highlight the text in Column B and left align the text.
6. Save and close.

Number Formatting

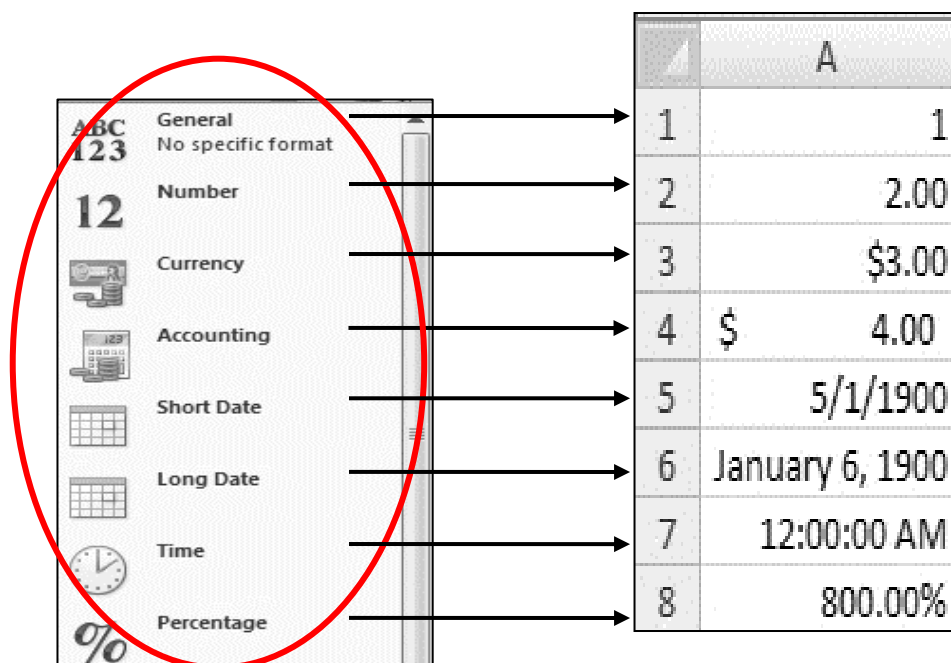
1. To format a Cell by a number format, first double click on the Cell.
2. Go to the Home Tab.
3. Click on the arrow beside General Number Format Tool.

4. A drop-down menu will open.



5. Click on the format of choice.

6. Below are examples of what the formatting will look like for each of the number options.

A diagram illustrating the relationship between the Number Format dropdown menu and the resulting cell formatting. On the left, a dropdown menu is shown with a red circle around it. The menu items are: General (No specific format), Number, Currency, Accounting, Short Date, Long Date, Time, and Percentage. On the right, a spreadsheet grid shows the results of applying these formats to the number '1' in column A. Arrows connect each menu item to its corresponding row in the spreadsheet.

	A
1	1
2	2.00
3	\$3.00
4	\$ 4.00
5	5/1/1900
6	January 6, 1900
7	12:00:00 AM
8	800.00%

A1 type: November 16, 2000
B1 type: November 17, 2000
C1 type: November 18, 2000
D1 type: November 19, 2000
E1 type: November 20, 2000

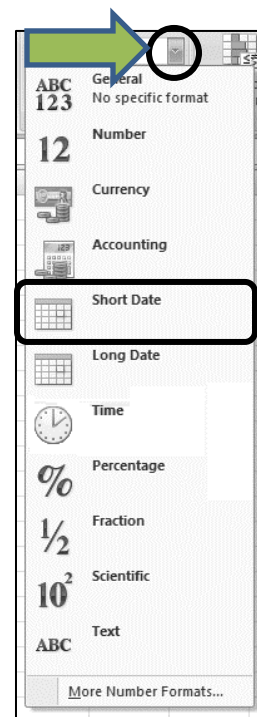
Once you start typing the information, the dates may change to dd/mm/yy format. This is the short date format. If the numbers automatically change to this format, you will not need to change them.

If the date does not change to the Short Date option, follow steps 4 through 7. If the date changes, skip to step 8.

If the date in a Cell changes to #####, it means that the Cell must be wider for the information to fit.

4. Highlight Cells A1 to E1 and go to the Home Tab.

Go to the Number Format drop down menu by clicking on the arrow to the right of the box.



5. Click on Short Date.
6. The Row of dates should change to a dd/mm/yy version.
7. Save as 'Short Date' and close.

Practice #12

1. Open 'Short Date'
2. Highlight Cells A1-E1
3. Click on the Home Tab.
4. Go to the Number Tool.
5. Click on the drop-down menu and select the Long Date version.

If you try to change to a long date version and the date will not fit in the Cell, the information will appear as #####. The width of the Cells needs to be adjusted and the information will fit in. Do this by placing cursor between the column letters you need to stretch, holding your finger down on the mouse button and dragging.

6. The Long Date version will appear as November 16, 2000.
7. Once the dates have been changed Save and Close.

Basic Spreadsheet Formulas

* Multiply	→	To multiply two Cells, the formula would look like this. = (A2*A4)
/ Divide	→	To divide two Cells, the formula would look like this. = (A2/A4)
= Equal	→	Formulas always begin with =
- Subtract	→	To subtract two Cells, the formula would look like this. = (A2-A4)
+ Add	→	To add two Cells, the formula would look like this. =(A2+A4)



When you want to add more than two Cells together, you must use the SUM function.

If you want to add Cells (**A1, A2, A3, A4, A5, A6, A7**) together, just type the following formula.

=SUM(A1:A7)

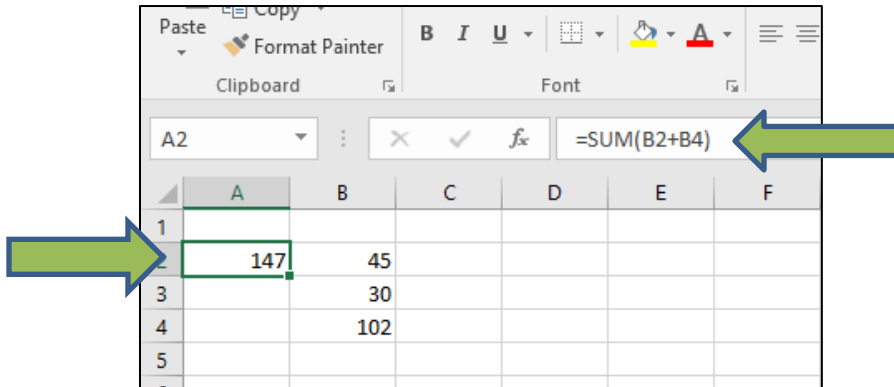
= SUM must always be applied when you are adding Cells like this (A1:A7) otherwise Excel does not know what you want to do.

When you type SUM, you are telling Excel to add Cells A1 through to A7

1. **=** is always the first step in a formula.
2. () Brackets must be placed around the Cell names.
Example =SUM(A2:A10) or = (A1/A9) or = (A1*A6) or = (A9-A15)

The formula Bar is located at the top of the Excel page. This is the easiest place to write your formulas.

Typing the formula directly into the Cell will do the same thing.



The following are some examples of how to use Excel formulas.

Example 1: Rate of Pay * weekly hours.

	A	B	C	D
1	Employees	Weekly Hours	Rate of Pay	Total
2	Roger	45	9.99	=B2*C2
3	Danny	16	10.15	
4	Sammy	25	10.15	
5	Steve	32	10.5	
6	Carl	49	10.5	
7	Sara	48.00	10.5	
8	Pamela	47	9.99	
9	Troy	58	10.15	

	A	B	C	D
1	Employees	Weekly Hours	Rate of Pay	Total
2	Roger	45	9.99	449.55
3	Danny	16	10.15	
4	Sammy	25	10.15	
5	Steve	32	10.5	
6	Carl	49	10.5	
7	Sara	48.00	10.5	
8	Pamela	47	9.99	
9	Troy	58	10.15	

Multiply Cells B2*C2 and Column D will show the salary.

Example 2: Inventory Cost and Inventory Sales

	A	B	C	D	E
1	Inventory	Cost/ per Item	Items Sold	Sale Price	Profit
2	Gum	\$0.20	6	\$1.00	=D2-B2
3	Chocolate Bars	\$0.50	12	\$1.00	
4	Chips	\$0.54	15	\$1.00	
5	Pop	\$0.23	14	\$1.00	
6	Candy	\$0.52	11	\$1.00	
7	Bags	\$0.58	16	\$1.00	

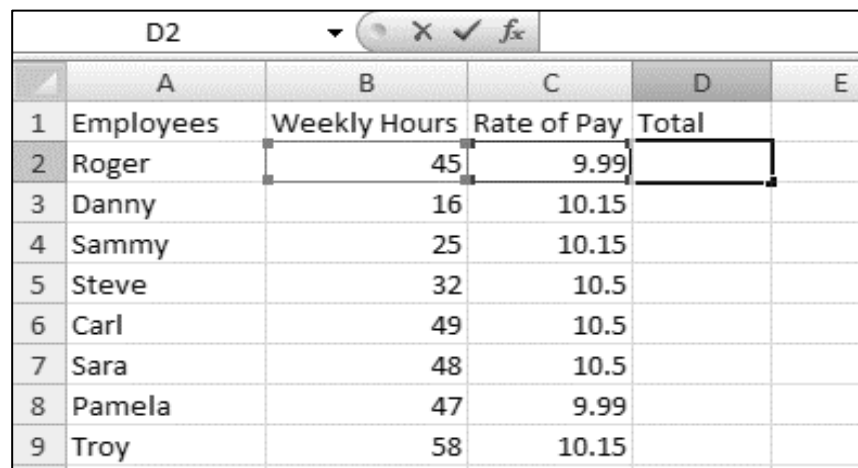
	A	B	C	D	E
1	Inventory	Cost/ per Item	Items Sold	Sale Price	Profit
2	Gum	\$0.20	6	\$1.00	\$0.80
3	Chocolate Bars	\$0.50	12	\$1.00	
4	Chips	\$0.54	15	\$1.00	
5	Pop	\$0.23	14	\$1.00	
6	Candy	\$0.52	11	\$1.00	
7	Bags	\$0.58	16	\$1.00	

If you happen to have a negative number when it should be positive check and see that the formula is correct, and the numbers are not in the wrong place.

Example: Example 2 would be $-\$.80$ if the formula is $=(B2-D2)$ rather than $=(D2-B2)$

Practice # 13

1. Open a New Excel Workbook.
2. Recreate the following Sheet.



	A	B	C	D	E
1	Employees	Weekly Hours	Rate of Pay	Total	
2	Roger	45	9.99		
3	Danny	16	10.15		
4	Sammy	25	10.15		
5	Steve	32	10.5		
6	Carl	49	10.5		
7	Sara	48	10.5		
8	Pamela	47	9.99		
9	Troy	58	10.15		

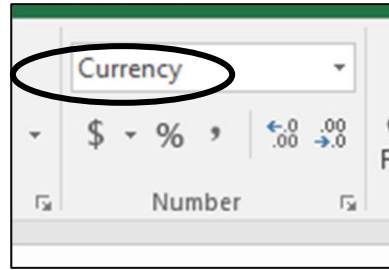
3. Click in Cell D2 and type the following multiplying formula $=(B2*C2)$. The answer should appear as 449.55.
4. Continue to fill in the rest of the Total Column by using Autofill to input the formula.
5. Once each employee has their Total Column filled in, Save as 'Rate of Pay' and close.

Practice # 14

1. Open a new Excel Workbook.
2. In Column A, Rows 2-5 type the following words, one in each Row:
Gum
Soda
Bread
Milk
3. In Cell B1 type Cost, C1 type Retail and in D1 type Profit.
4. In Column B, Rows 2-5 type the following numbers, one in each Cell:
0.30
0.40
0.75
0.80
5. Change the formatting to Accounting. Click on column B; rows 2-5 and then click on the Home Tab and the Number. Select Accounting from the drop-down menu.
6. Highlight the numeric information again and click on the Currency Option and center the information in the Cells.

7. In Column C, Rows 2-5 type the following numbers, one in each Row:

- 1.12
- 1.10
- 3.50
- 4.09



8. Highlight column C; rows 2-5 and click on the Currency formatting, center the information in the Cells.

9. In Cell D2 write the following formula. =SUM(C2-B2) This formula will show the profit made on each item. Autofill the formula from Cells D2 –D5.

10. Save as 'Currency' and close.

Nested Formulas

Nested formulas are used when you need to calculate more than one item in a spreadsheet.

	A	B	C	D
1	Inventory	Cost/ per Item	GST Tax	
2	Meat Pies	\$1.54	7%	
3	Chocolate Bars	\$1.25		
4	Almonds	\$7.99		
5	Pop	\$1.25		
6				
7	Total Bill	\$12.03	\$0.84	\$12.87

To figure out the sales tax on a single item, the following formula would be useful. **=SUM(B2*C2)**

To calculate the whole cost of the list, you must calculate the total of Column B and place the answer in Cell B7. This is shown in the diagram above. The total cost of Cells B2 through B5 is \$12.03, which is in Cell B7. **=SUM(B2:B5)**

Then the cost of the Sales Tax is added. The GST Tax is calculated by taking the Total in Cell B7 and multiplying that answer by 7% which is located in Cell C2. **=SUM(B7*C2)**

Finally, to add the cost of the Sub-Total in Cell B7 added to the cost of GST Tax in C7 to calculate the TOTAL price for the shopping in Cell D7. **=SUM(B7+C7)**

Practice # 15

1. Create a new Excel Workbook.
2. Recreate the following Excel Spreadsheet. Leave the information blank from Cell D2 to D7. We will input formulas to calculate these Cells.

	A	B	C	D	E
1	Inventory	Cost/per Item	Items Sold	Sub Total	
2	Meat Pies	\$1.54	6	\$9.24	
3	Chocolate	\$1.25	0	\$0.00	
4	Almonds	\$7.99	4	\$31.96	
5	Pop	\$1.25	0	\$0.00	
6					
7	Total			\$41.20	

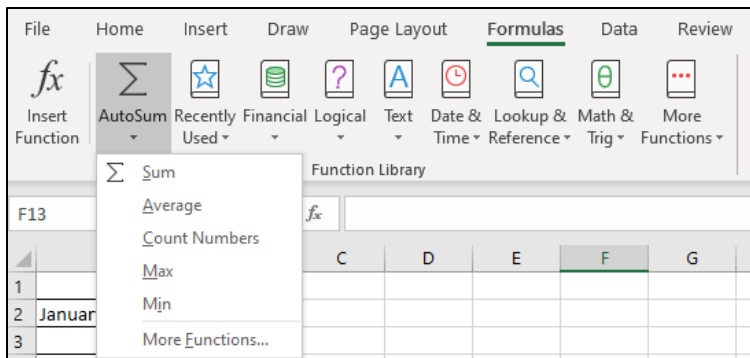
3. Click in Cell D2 and type the following formula =SUM(B2*C2)
Your answer should be the same as the answer in the diagram Cell D2 that is shown above. Use your Auto fill and fill the formula into Cells D3, D4 and D5.
4. Type Total in Cell A7. Click your cursor in Cell D7 and type the following formula =SUM(D2:D5) and hit enter. The answer should be the same as shown in Cell D7 in the diagram above.
5. Save as 'Shopping List' and close.

Excel Functions

Excel has built in functions that let you figure out an average, minimum and maximum totals for spreadsheets.

For example, if I own a store, I may want to calculate the average Sales for the months of, January, February, March, April, May and June.

1. Click on the Formula Tab.



1. Go to the Formula Library Tool (under Auto Sum). This is where you can locate the SUM, AVERAGE, MIN and MAX functions.
2. Click on the Sales in Column B from January to June by clicking on B3. When the text box displays, move your cursor to the bottom right corner.


1	Monthly Sales	
2	Months	Sales
3	January	\$4,400.00
4	February	\$6,800.00
5	March	\$5,990.00
6	April	\$2,000.00
7	May	\$10,000.00
8	June	\$12,000.00
9	July	\$6,600.00
10	August	\$14,000.00
11	September	\$12,000.00
12	October	\$2,000.00
13	November	\$4,000.00
14	December	\$6,600.00
15		
16	Average Sales	=AVERAGE(B3:B8)

3. When a small black arrow appears, right click on the arrow and drag downward until you reach B8.

2. Click in B16, Click on the Average function. When the Average function appears in between the brackets () type B3:B8 and click enter.

3. Once the formula shows in the Cell where you want the Average, click enter and the total will appear. B16 shows an Average Total of the monthly Sales for January through to June.

	A	B	C
1	Monthly Sales		
2	Months	Sales	
3	January	\$4,400.00	
4	February	\$6,800.00	
5	March	\$5,990.00	
6	April	\$2,000.00	
7	May	\$10,000.00	
8	June	\$12,000.00	
9	July	\$6,600.00	
10	August	\$14,000.00	
11	September	\$12,000.00	
12	October	\$2,000.00	
13	November	\$4,000.00	
14	December	\$6,600.00	
15			
16	Average Sales	\$6,865.00	



Practice # 16

1. Open a new Excel Workbook.

2. Type in Column G (Row 11) 10000 (Row 12) 15000 (Row 13) 20000 (Row 14) 25000 (Row 15) 30000 (Row 16) 35000

3. In Column G, Row 17, type the following Average formula.
=Average(G11:G16)

4. Hit Enter and the number 22500 should appear in Column G, Row 17.

5. Save as 'Average' and close.

Practice # 17

1. Open the Excel workbook called 'Average'.
2. Copy the following information.

	A	B	C	D	E
1	1	2	3	4	5
2	2	10	100	150	200
3	3	20	200	250	300
4	4	30	300	350	400

3. In Column F, Row 1 type Min, in Column G, Row 1, type Max and in Column H, Row 1, type Average.
4. Click in Cell B2 and highlight until Cell E2.
5. Click on the Formulas Tab and click on the AutoSum, a drop-down menu will appear. When this menu opens click on the MIN function. Continue to do the same for the MAX function and the Average Function. These functions are found in the same drop-down menu.
6. Once B2-E2 are complete for the MIN, MAX and Average functions, do the same for B3-E3 and B4-E4. Use your AutoSum to fill in the Cells if you wish.
7. Save and close.

Relative and Absolute References

A **relative reference** is a formula that changes when you copy it somewhere else. By default, all Excel formulas are relative references because they change when autofilled to different cells.

An **absolute reference** is a formula that does **not** change, even when you copy the formula to other Cells. Absolute reference is useful when you need to use Autofill or copy and paste formulas.

To create an Absolute formula, you add a dollar symbol \$ before the numbers and letters of each Cell reference. You add \$ signs before each Row number and Column letter.

Relative Reference:

=SUM(A1+A2)

Absolute Reference

=SUM(\$A\$1+\$A\$2)

The absolute reference is now locked and will not change when you move it to another Cell.

\$A\$2	The column and the row do not change when copied
A\$2	The row does not change when copied
\$A2	The column does not change when copied

Relative References

1. Enter the values shown in the picture to the right.

	A	B	C	D	E
1	10				
2	10	20			
3					
4					

2. Type this formula into Cell B2: **=SUM(A1+A2)**
3. Click inside Cell B2 to select it.
4. Using the Autofill tool, drag down the formula to Cell B3.
5. Your spreadsheet should now look like the picture below.

With Cell B3 still highlighted, look at the formula bar. You should see this formula: **=SUM(A2+A3)**

	A	B	C	D	E
1	10				
2	10	20			
3		10			
4					

Why do we see 10 in Cell B3 instead of 20? After all, we were trying to add 10 + 10. This problem is caused by relative referencing.

Excel didn't just copy the formula, but also the location of the Cells. Excel looked at where the Cells were, relative to the B2 Cell, and copied this as well.

The first reference in Cell B2 is to Cell A1, which is up one row, and left one column. Cell A2 is one column to the left of Cell B2. When you used Autofill to move the formula into Cell B3, Excel did not just copy the formula. Excel also copied the location of the references: 'up one, left one' and 'one to the left'.

The images below show how Excel will change a formula when it is a relative reference. The arrows points to the Cells each formula is referring to.

Cell B2

	A	B	C
1	10		
2	10	20	

=SUM(A1+A2)

Cell B3 (after Autofill)

	A	B	C
1	10		
2	10	20	
3		10	

=SUM(A2+A3)

Absolute References

When you click to drag a formula down in Excel it changes the formula for each line. For example:

	=SUM(B2:F2)
	=SUM(B3:F3)
	=SUM(B4:F4)
	=SUM(B5:F5)

Sometimes, you want part of the formula to stay the same and not change. This is when you use an

absolute reference. You use it, so when you drag the formula down to the next line, the part you need to stay the same will do so.

In the following example, you are going to create an inventory list for Frank’s Food Cart. The spreadsheet will show sales from the month of August 2017. Frank’s food items are subject to HST and he wants total sales for the month including taxes. Frank will want the cell with the tax to not change from line to line, so he needs an absolute reference.

Make sure that you place your 13% in cell F3. *This will ensure you properly recreate this exercise.*

1. Merge and center cells C1 and C2 and enter ‘Frank’s Food Cart – August 2017’

A		B	C	D	E	F
1			Frank's Food Cart - August 2017			
2						
3					Tax:	13%
4	Menu Item	Price	Amount Sold	Total		
5	Chicken fingers	\$6.00		=B5*C5)*\$F\$3		
6	Chicken Taco	\$4.00		77		
7	Frank's Famous Poutine	\$6.25		78		
8	French Fries	\$4.50		103		
9	Fried mushrooms	\$4.00		5		
10	Fried pickles	\$4.50		15		
11	Jumbo Hot Dog with Sauerkraut	\$4.50		92		
12	Sloppy Joe	\$5.00		10		

2. Fill in the information in the example below. Type in each item, cost and quantity sold
3. In cell D5 type in the formula $= (B5 * C5) * \$F\3
4. The dollar signs tell the spreadsheet not to change that formula.
5. Drag your new formula down from D5 to D13. Notice how the formula to calculate taxes stays the same

Frank's Food Cart - August 2017				
				Tax:
Menu Item	Price	Amount Sold	Total	
Chicken fingers	\$6.00		7 \$	5.46
Chicken Taco	\$4.00		77 \$	40.04
Frank's Famous Poutine	\$6.25		78 \$	63.38
French Fries	\$4.50		103 \$	60.26
Fried mushrooms	\$4.00		5 \$	2.60
Fried pickles	\$4.50		15 \$	8.78
Jumbo Hot Dog with Sauerkraut	\$4.50		92 \$	53.82
Sloppy Joe	\$5.00		10 \$	6.50
Strawberry Slushy	\$4.00		21 \$	10.92

6. Highlight the total column and change the format to accounting.
7. Create a formula in Cell C14 to total amounts sold and one in Cell D14 to total the amount in sales.

Practice #18

Task 1

1. Open a new Excel Workbook.
2. You are going to create a Payroll information sheet in Excel to make things a lot easier for your boss. The company that you work for sells tiles. There are 5 employees in the company, and each makes an hourly wage and a commission based on their sales. Each employee earns a different wage and has a different sales total, but all earn the same commission. Commissions are based on total sales x 2.8% and then are added to their salary. Follow the following steps to create this Excel Worksheet with an Absolute Reference.
3. Click in Cell A1 and highlight through to Cell F1. Merge and Center these Cells.

Employee	Hourly Wage	April Hours	Total Sales	Wage Total	Total Commission	Total Pay
Sarah	14	67	2800	=B5*C5	2.8%	=SUM(E5:F5)
Hiram						
Nadir						

4. Type **Tile World** into the Merged Cells. Change the Font to **Baskerville Old Face** and change the font size to **28**.

Choose a Theme Colour for the background and apply it to Cells A1 through to F1.

5. In Cell B4 type **Hourly Wage**.
6. Type **\$14.00** into Cell B5, \$15.00 in cell B6, \$17.00 in Cell B7, \$14.00 in cell B8 and \$22.00 in cell B9
7. In Cell C4 type the title **April Hours**
8. Type **67** in Cell C5, **120** in Cell C6, **90** in Cell C7, **24** in Cell C8 and **115** in Cell C9.
9. In Cell D4 type Total Sales and underneath on each line in the D column type the following totals: **\$2,800, \$5000, \$4,200, \$724, and \$5,539**
10. In Cell E4 type Wage Total
11. In Cell F3 type 2.8%
12. In Cell E5 enter a formula to calculate Sarah's wage total **=(B5*C5)** and drag this formula from E5 to E9 for each employee.
13. In Cell F5 enter the formula with the absolute reference to calculate each employee's commission. **=(D5*\$F\$3)**
14. Drag the formula down from F5 to F9
15. In the G column in Cell 4, type in Total Pay. This is where you are going to calculate the wage total and the total commission, type **=SUM(E5:F5)** in cell G5.

4	Employee	Hourly Wage	April Hours	Total Sales	Wage Total	Total Commission	Total Pay
5	Sarah	\$14.00	67	\$2,800	\$938.00	\$ 78.40	\$ 1,016.40
6	Hiram	\$15.00	120	5000	\$1,800.00	\$ 140.00	\$ 1,940.00
7	Nadir	\$17.00	90	4200	\$1,530.00	\$ 117.60	\$ 1,647.60
8	Miho	\$14.00	24	724	\$336.00	\$ 20.27	\$ 356.27
9	Josephine	\$22.00	115	5539	\$2,530.00	\$ 155.09	\$ 2,685.09
10							
11							

16. Drag this formula from Cell G5 to Cell G9.
17. Highlight each column title and align it to the center.
18. Highlight Cells B5 to G9 and format as accounting.
19. Shade Tile World in grey
20. Print a copy for your instructor and explain to him/her why you used an absolute reference for this exercise. If you are working from home, please Save under filename 'Absolute Reference' and attach to an email for your instructor.

Task 2

Bruce Smith needs to calculate his pay information.

He needs to work out his vacation pay amount and his gross and net pay from the information he has on his paystub. He is paid 4% vacation pay. He worked 54.24 hours this week at a \$14.00 pay wage.

	A	B	C	D	E	F	G	H	I	J
1										4%
2	Pay Record 2020 - Bruce Smith									
3	Pay Date	Hourly Wage	Hours Worked	Holiday Pay	Gross Pay	CPP	EI	Taxes	Net Pay	
4	Friday, January 10, 2020	\$ 14.00	\$ 54.24			\$ 33.41	\$ 12.79	\$ 61.59		
5										

His CPP deduction was \$33.41. His EI deduction was \$12.79. His tax deduction was \$61.59.

1. Enter this information into a spreadsheet for Bruce. Be sure to use your **long date** (in cell A4) and accounting formatting tools to format the cells.


*Change column C (Hours Worked) to General formatting using the number formatting tool in the Home tab.

2. Place the 4% vacation pay into cell J1.

3. After entering the data, type an absolute reference into cell D4 to calculate Bruce's vacation pay. **=(B4*C4)*\$J\$1**

	A	B	C	D	E	F	G	H	I	J
1										4%
2	Pay Record 2020 - Bruce Smith									
3	Pay Date	Hourly Wage	Hours Worked	Holiday Pay	Gross Pay	CPP	EI	Taxes	Net Pay	
4	Friday, January 10, 2020	\$ 14.00	\$ 54.24	\$ 30.37		\$ 33.41	\$ 12.79	\$ 61.59		
5										

4. In cell E4 create a formula that multiplies cells B4 and C4 and then adds cell D4.
5. In cell I4 create a formula that deducts cells F4, G4 and H4 from cell E4.
6. Consider: What is Bruce's net pay for January 10, 2020?
7. Now add the following information from Bruce's January 24th paystub.

<p>Heart and Hat Construction </p> <p>14 Mulberry Way, Smalltown, Ontario K6S 4D5 613-555-3434; heartandhat@gmail.com</p> <p>NON-NEGOTIABLE – THIS IS NOT A CHEQUE..... \$590.84</p> <p>Bruce Smith 5 Main St East, Apartment 12 Smalltown, ON K6S 5R4</p>	
<p>Bruce Smith</p>	<p>Pay: \$590.84</p>
<p>Earnings</p> <p>Pay period January 12, 2020 to January 24, 2020</p> <p>Hourly wage @\$14.00/hour</p> <p>@44.19 hours</p> <p>4% Vacation Pay</p>	<p>Deductions</p> <p>CPP - \$25.95</p> <p>EI - \$10.42</p> <p>Tax - \$16.20</p> <p>Withheld - \$52.57</p>

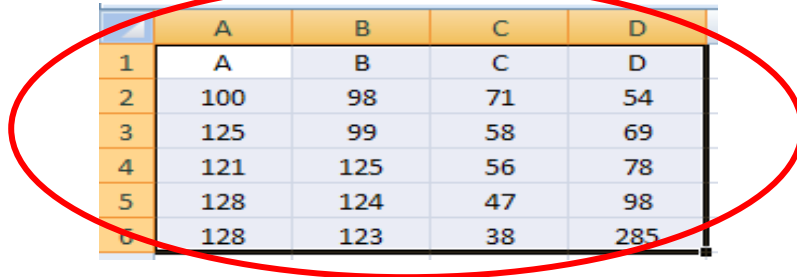
8. Autofill the formulas to complete the data. Observe how the absolute reference in cell D4 does not change when it is moved down to the next row.
9. Consider: What was Bruce's vacation pay amount for this pay period?

10. In cell I5 total Bruce's net pay for January 2020.
11. In cell I6 determine his pay average. You can do this by totaling his net pay and dividing it by 2 or using an average formula.
12. Add gridlines to this spreadsheet. This is in the Page Layout Tab. Make sure the Print box is clicked.
13. Save your work under the filename **Bruce's Pay**.

Formatting Borders

To place a border around a Cell or a table:

1. Highlight any table or the Cell, as shown in the diagram below.



	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285

2. Click on the Home Tab.

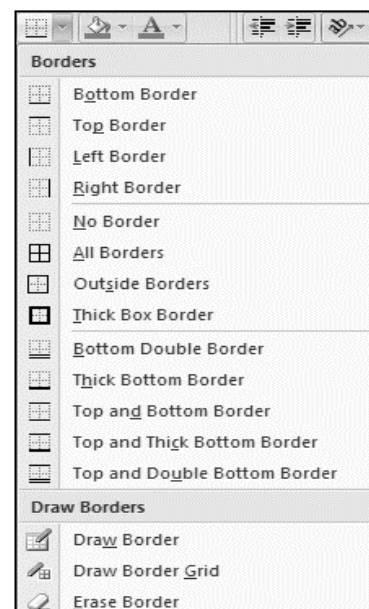
3. Go to the Font Tools.




4. Click on the Border Tool.




5. A drop-down menu will open. Click on the style of border you want from this menu.




6. The tables below are a few examples of what some of the borders will look like.

 All Borders


	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285

 Thick Box Border

	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285

 Top and Double Bottom Border

	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285

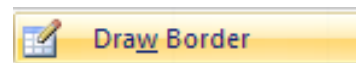
 Thick Bottom Border

	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285

Drawing Borders

	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285

To draw a border, click on the same menu and select the:



When you see the pencil icon, draw the border on the table where you want it to appear.

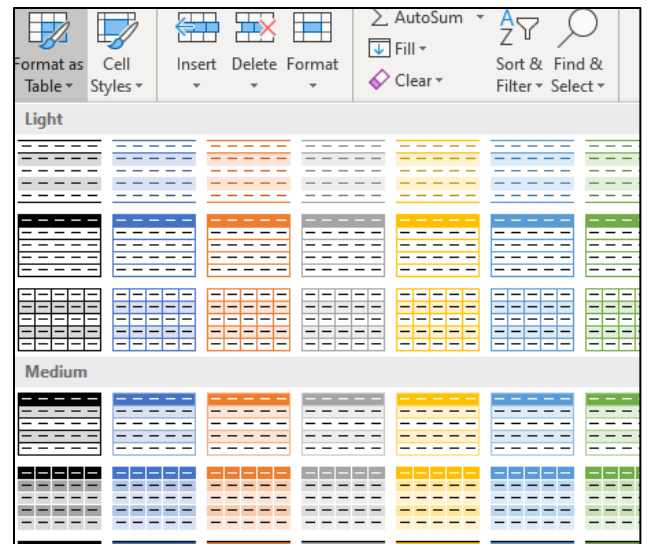


Table and Cell Colour Formatting

Formatting Excel Tables gives the table a colourful design. Adding colours can make a chart or table easier to read. Excel has many built in formatting options to choose from.

To format a table, highlight the area, where you want to place the formatting.

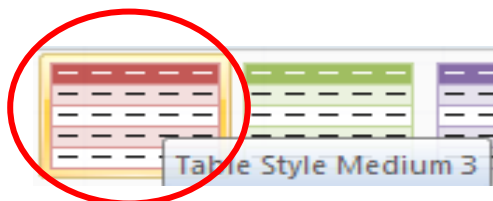
1. After highlighting the area in the table, click on the Home Tab.
2. Go to the Styles Tool.
3. Click on the Format as Table.
4. When the drop-down menu opens, click on the format design of your choice. Below are two examples of design choices.



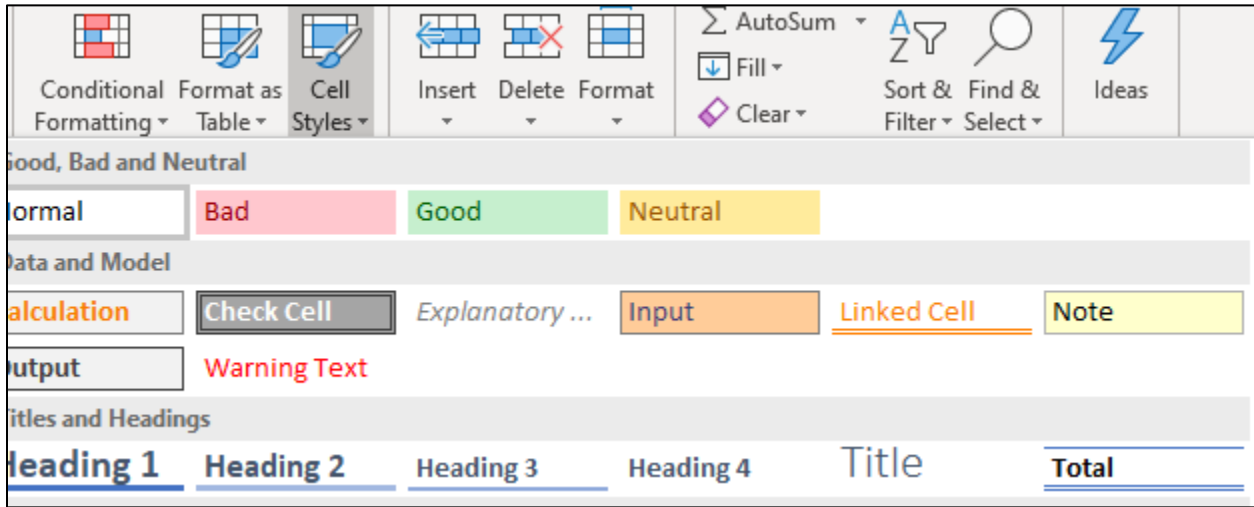
A	B	C	D
100	98	71	54
125	99	58	69
121	125	56	78
128	124	47	98
128	123	38	285



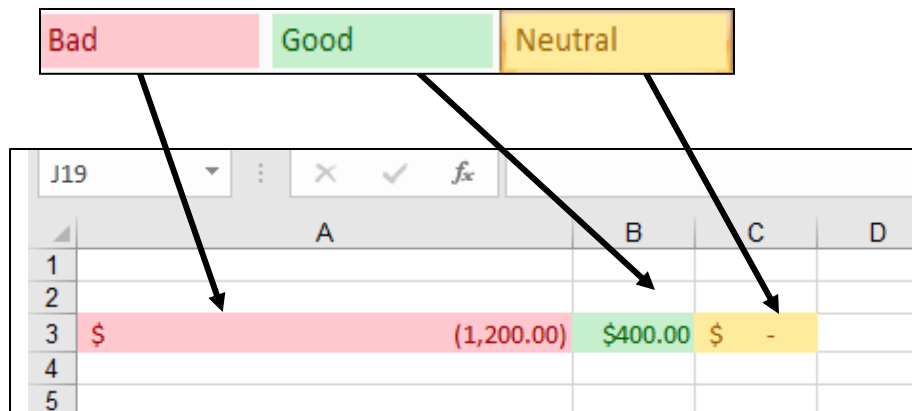
A	B	C	D
100	98	71	54
125	99	58	69
121	125	56	78
128	124	47	98
128	123	38	285



1. To format a Cell, click into a cell and then follow the same steps by clicking on the Home Tab.
2. This time click on Cell Styles located to the right of format as table.
3. Click in a cell and then choose one of the cell styles



The diagram below shows what the Cell looks like when the formatting is applied.



Practice # 19

1. Open 'Months'.
2. Highlight the months from January to December.
3. Click on the Home Tab.
4. Go to the Styles Tool.
5. Click on the **Format as Table** tool.
6. Click on the style from the menu.
7. When the menu Format as Table opens, click OK.
8. Highlight the entire Table and select a thick black outside border.
9. Save and close.

IF Function

The IF function can be used to determine if something is one way or another.

This can be used if the statement is either "True" or it is "False".

It can be used in many ways. Here are some examples:

“Black” or “White”

“Right” or “Wrong”

“Up” or “Down”

“Sold” or “In stock”

Remember that IF functions are the same as any formulas and they must always begin with an = (Equal sign).

An example of an If statement is:

`=IF(B4=1, "True", "False")`

What this means is that if the IF Cell B4=1 then it is “True”. IF Cell B4 does not = 1, then it is “False”.

`=IF(A5=100, "True", "false")`

	A	B	C	D
1	A	B	C	D
2	100	98	71	54
3	125	99	58	69
4	121	125	56	78
5	128	124	47	98
6	128	123	38	285
7	false			

Practice # 20

1. Open Canada.
2. Open the CANADIAN 3 Worksheet.
3. Type the following Information exactly as shown on the next page:

	A	B	C
1	CANADIAN OLYMPIC WEAR		
2		Sold	Instock
3	Shirts	4	5
4	Pants	5	0
5	Crocs	3	0
6	Sneakers	2	9
7	Pajamas	14	12
8	Mittens	6	0
9			
10			

4. Click your cursor in Cell D3 and type the following formula,
=IF(C3=0,"Order", "No Order") click enter.
5. Continue the formula in D4 and type,
=IF(C4=0,"Order", "No Order"), click enter.
6. Continue in D5 and type,
=IF(C5=0,"Order", "No Order"), click enter.
7. Continue in D6 and type,
=IF(C6=0,"Order", "No Order"), click enter.
8. Continue in D7 and type,
=IF(C7=0,"Order", "No Order"), click enter.

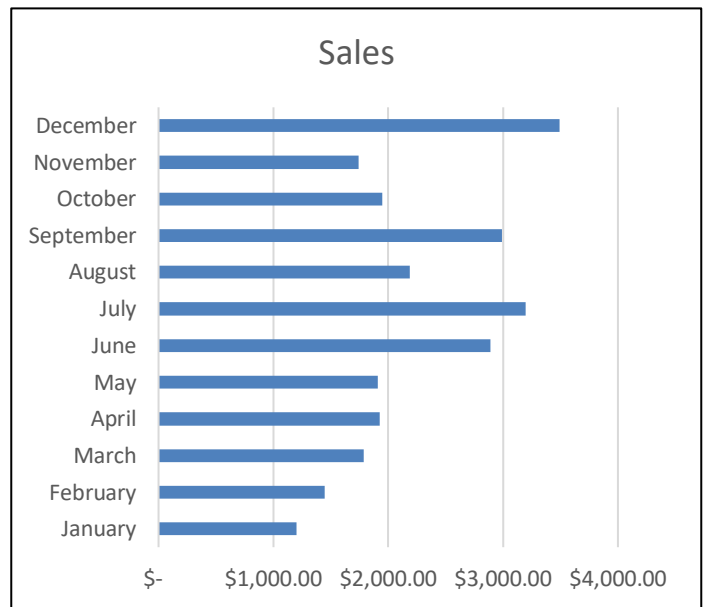
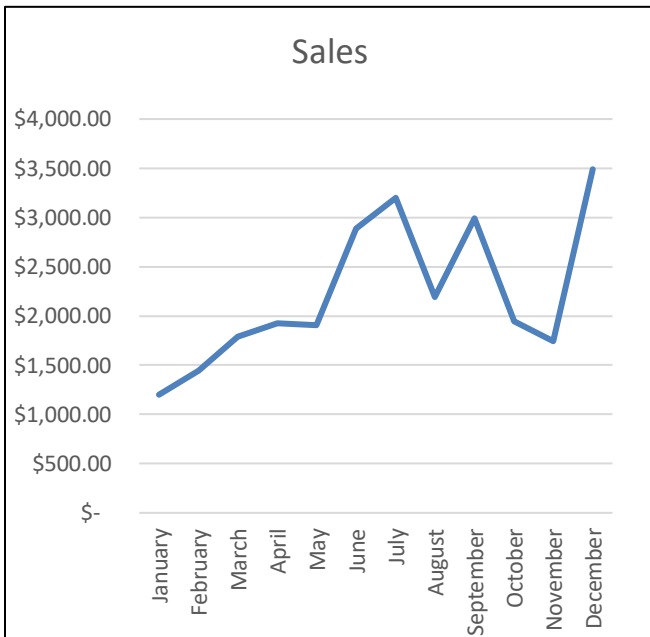
Your Worksheet should now look like this:

	A	B	C	D	E
1	CANADIAN OLYMPIC WEAR				
2		Sold	Instock	Order	
3	Shirts	4	5	No Order	
4	Pants	5	0	Order	
5	Crocs	3	0	Order	
6	Sneakers	2	9	No Order	
7	Pajamas	14	12	No Order	
8	Mittens	6	0	Order	
9					
10					

***You can also use Autofill to fill out the formula. Click on D3 and move your cursor until you see a black arrow. Drag the information to Cell D6.**

Charts

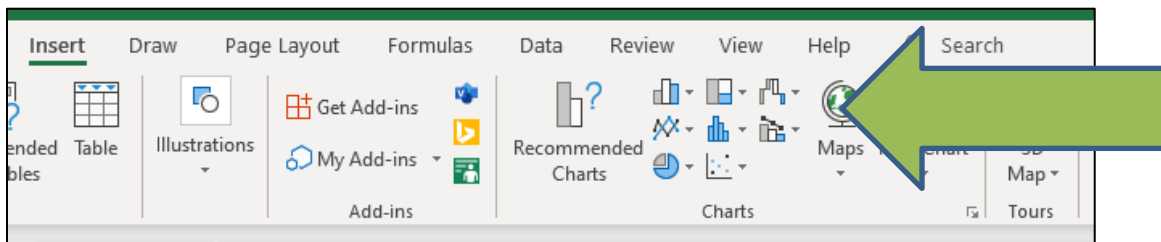
You can make charts and graphs representing your data in Excel.



1. Highlight the information in the worksheet that you want to display in the Chart.

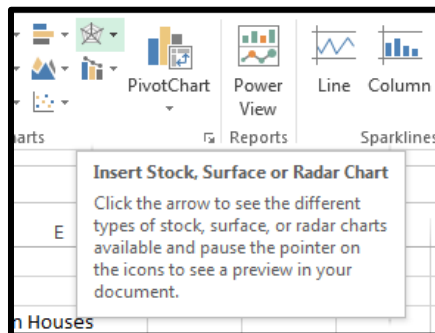
	B	C	D	E
1	Test 1	Test 2	Test 3	
2	Angela	10	8	8
3	Donny	8	7	7
4	Tommy	9	9	8
5	Kayla	5	10	5

2. Click on the Insert Tab.
3. Click on the type of Chart that you want from this menu.

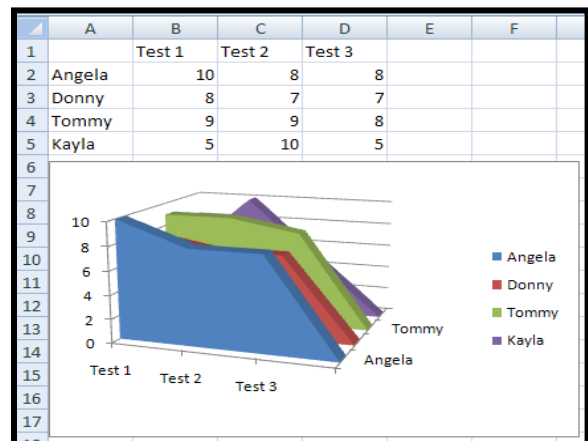


There are pictures (icons) that show the types of charts. Click on the little down arrow beside the photo to see the chart's options.

Note: If you let the cursor hover over each picture, an information tag will come up telling you about each chart. This trick will work for any icon on the Ribbon in Excel.



Once you select the style of chart that you like, click on the chart and it will show on your worksheet.



If you are unsure which Chart to choose, you can click on the Recommended Chart option.

You can move the chart around the page by clicking your mouse on the Chart. Once the four-way arrow appears, you can drag the chart.

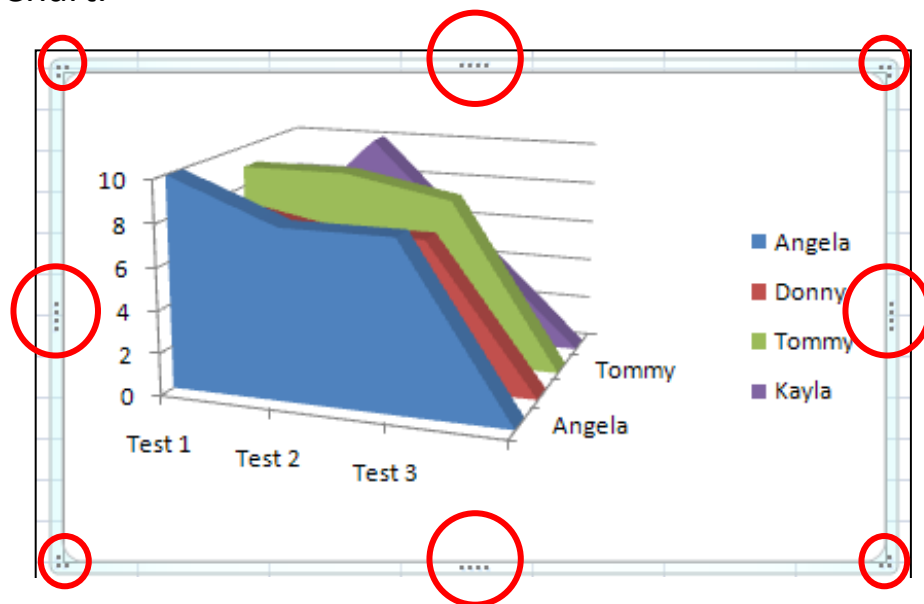
Release the mouse button where you want the chart to remain.

Charts are a great visual way to showcase information.

Resize a Chart

If you want to change the size of the Chart on the worksheet:

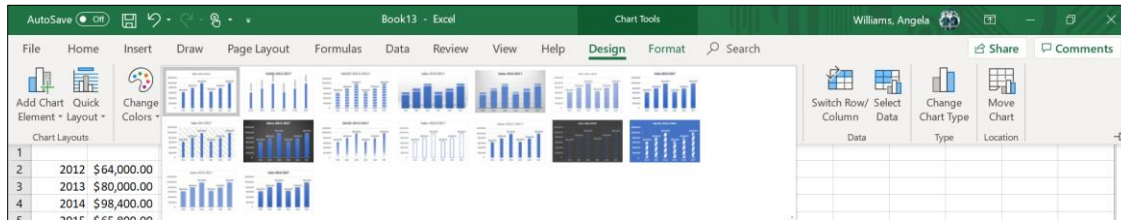
1. Click on the Chart.
2. Once the Chart is selected a border will appear around the Chart.



3. The green border has 8 places on the outside where there are small dots. These dots are circled above.
4. When you hold your cursor over these dots, you will see an arrow. Click and hold down your mouse and pull the Chart in or out with the arrow to resize it.

Design and Format Tabs

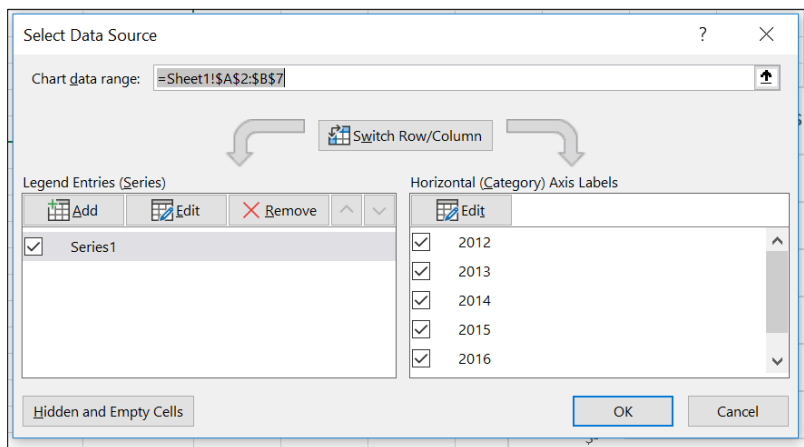
When you click on the chart in Excel, the chart Design and Format tabs will appear.



In Design, you can choose different styles or colours for your chart.

You can also decide which data you want added to or removed from your chart.

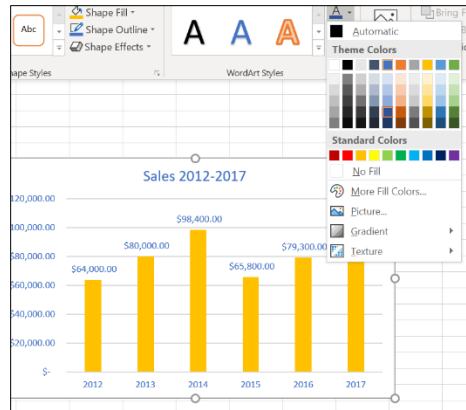
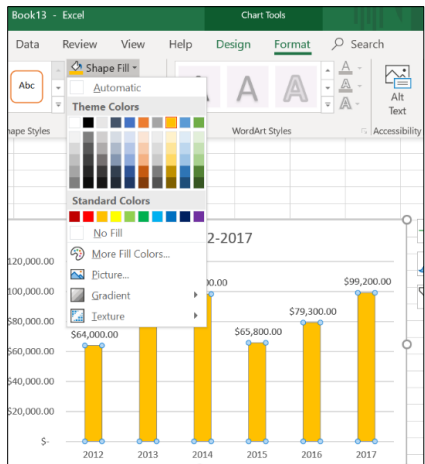
This is located under Select Data.



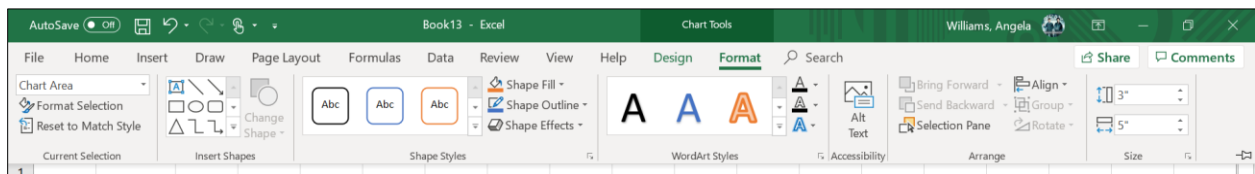
You can choose to take sections out of your chart if you wish by unchecking the boxes and clicking OK.

You can Edit and Add data as well, as needed.

In Format, you can make changes to the colour and shapes of your chart.

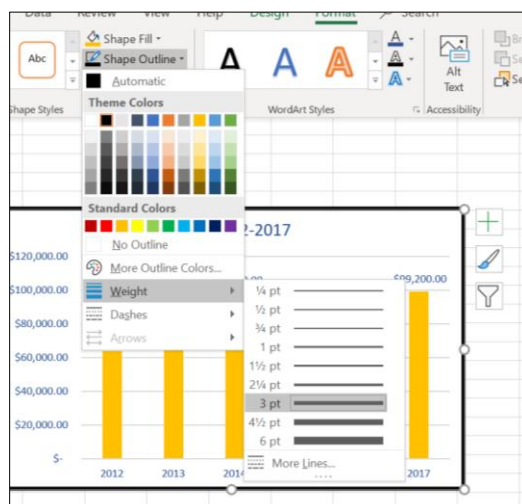


You can change font colours and styles and add outlines to your chart as well.



In this example, the bars have been selected and changed to yellow by using the Chart Format tab, then the whole chart has been selected and the text has been changed to blue.

Finally, a black border has been added to the chart, with a width size of 3pts by selecting a colour and then the width from the outline 'drop-down menu'.

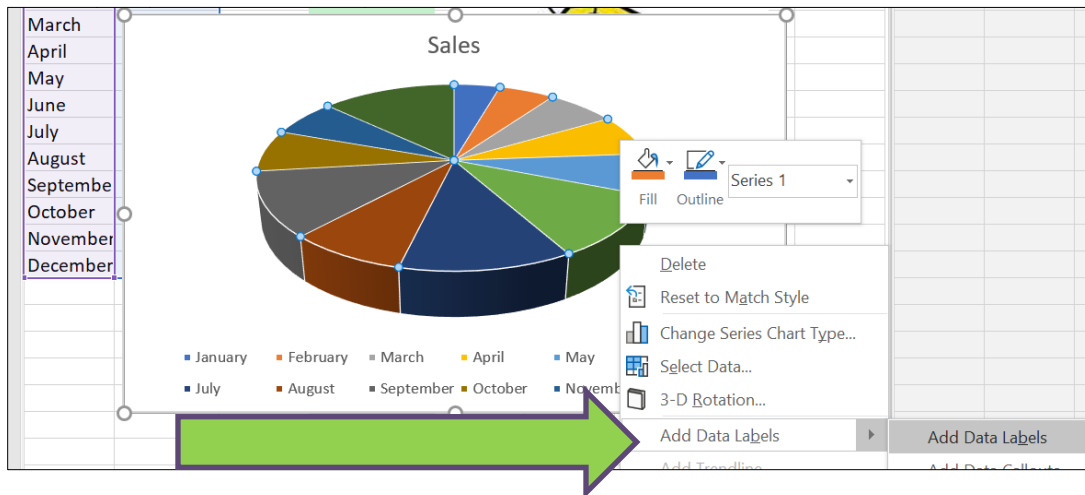


Adding Data Labels

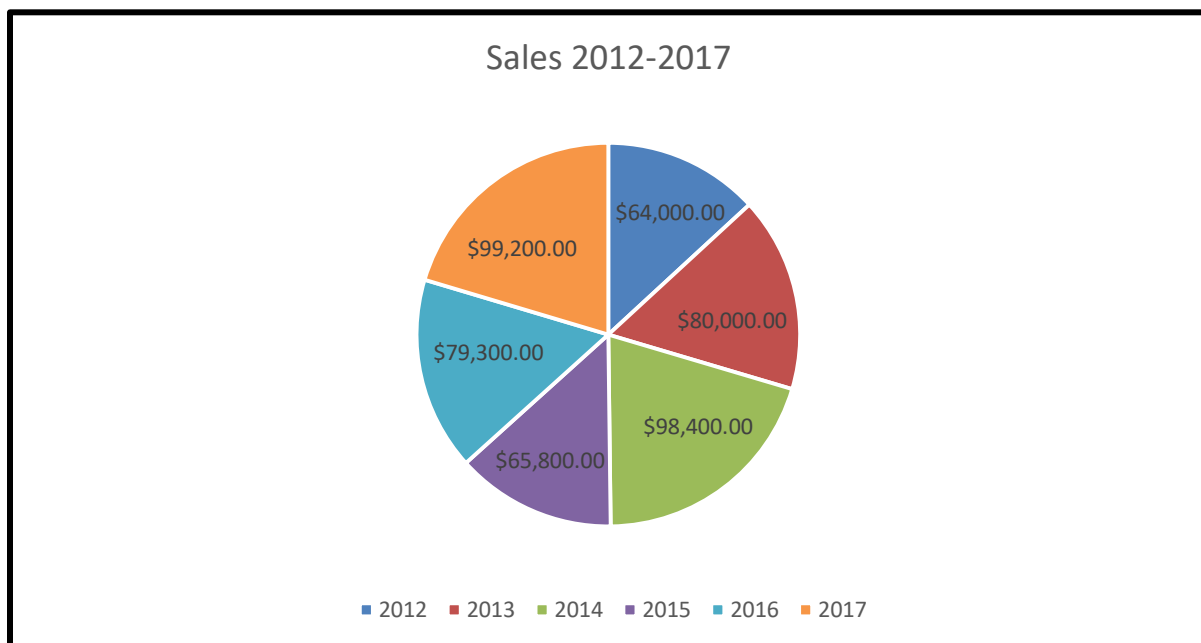
You can add data labels to your chart to better represent your data.

To add data labels, click on the chart itself to select Add Data Labels and then right click to bring up your options menu.

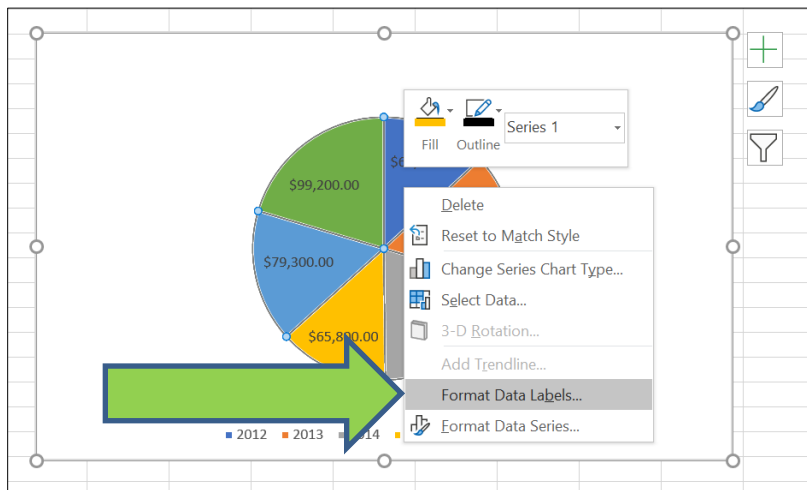
Select Add Data Labels.



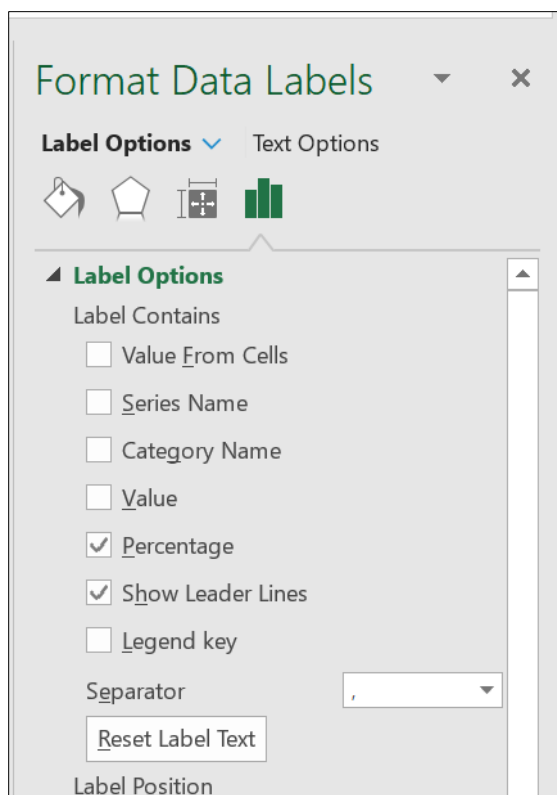
Your data will appear. In this example, it is information on monthly sales totals.



If you wish to show percentages in your graph or chart, click directly on your chart once again and right click to show options.



Choose Format Data Labels and click percentages from the screen that appears on the right side of your screen. If you just want percentages, uncheck values to remove the data totals.

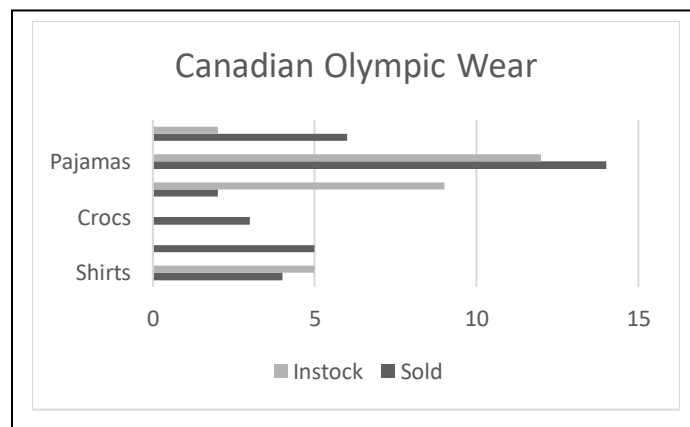


Note: If you wish to select data for a chart that is not next to each other in your spreadsheet simply highlight one column or row and then hold down your **Control key** on your keyboard to highlight the other column or row.

Practice # 21

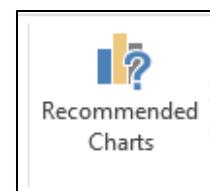
1. Open 'Canada'.
2. Click on the CANADIAN 3 worksheet and highlight all the text in the spreadsheet, excluding column D. **Do not** highlight the order column.
3. While this section is highlighted, click on the Insert Tab.
4. Go to the Charts Tool and Click to Insert the Bar Chart.
5. Click on the Clustered Bar Chart from this drop-down menu.
6. A Chart should appear in the worksheet once a Chart is chosen. Click on title and type Canadian Olympic Wear as the Chart title.
7. Resize the Chart and move it under the highlighted Inventory information. The Chart should look something like this diagram.

8. Save and close.



Using Recommended Charts

If you are unsure of which chart to choose, the program will make a recommendation based on the data in your spreadsheet.



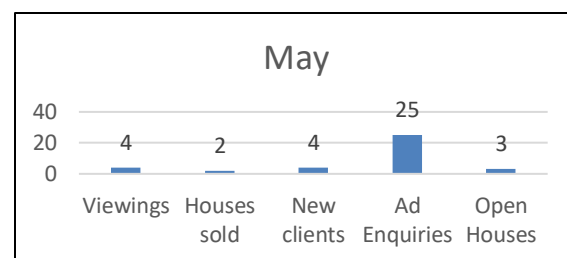
Click the Insert Tab to view the recommended chart option.

Practice #22

1. To try this option, open a new workbook.
2. Type the information provided below into your worksheet.
3. Highlight all cells from A3 to E4 (Rows 3 and 4)

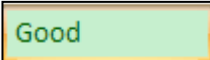
	A	B	C	D	E	F
1	Real Estate Statistics for May - Sales Rep. 224; Jackie Jones					
2						
3	Viewings	Houses sold	New clients	Ad Enquiries	Open Houses	
4	4	2	4	25	3	

4. Click on the recommended chart icon.
Click okay to accept the chart.



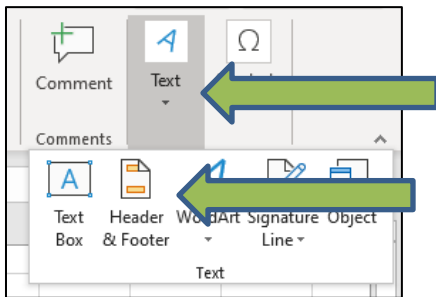
5. Try some design options and add data labels to the chart that you choose.
6. Print this chart for your instructor if you are in the classroom. If you are working from home, Save this to your USB under the filename 'Chart Example.'

Practice # 23

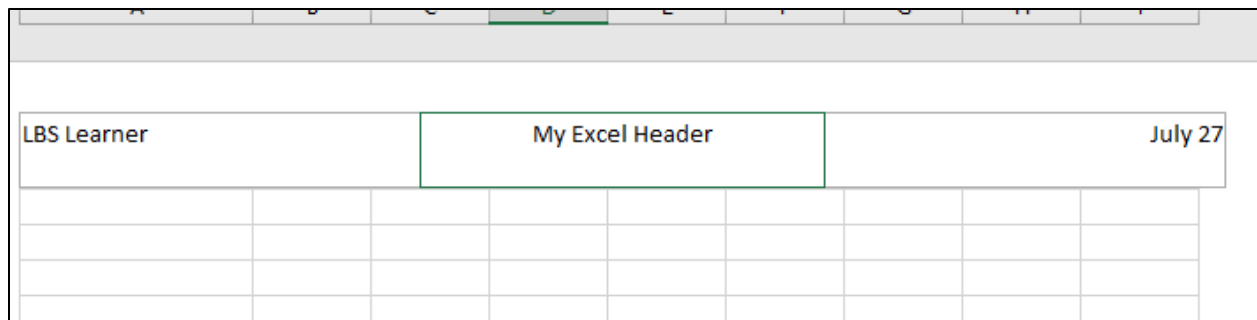
1. Open 'Weekdays'.
2. Highlight Column B.
3. Click on the Home Tab.
4. Go to the Styles Tool.
5. Click on the Cell Styles.
6. Choose the  selection.
7. Highlight Column D.
8. Click on the Borders Tool in the Home Tab.
9. Apply a Left Border to the column.
10. Print and give it to your Instructor.
11. Save and Close.

Header or Footer

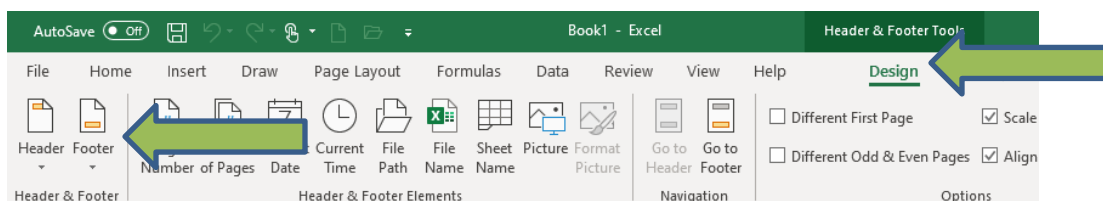
1. To add a header or footer to an Excel Worksheet, click on the Insert Tab.
2. Go to the Text tool and click on the Header/Footer Tool.



3. The Worksheet will change to a worksheet with three header spaces. Click in the area to activate the Header.

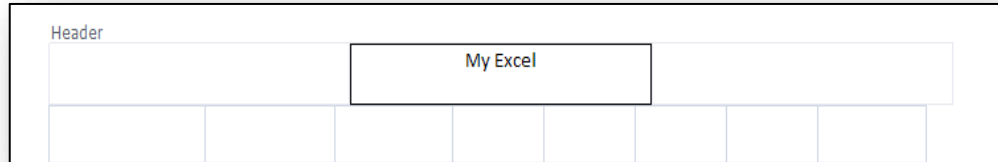


4. If you do not want a Header but want a Footer click on the Text Tool and Select Header and Footer once again.
5. In the Design Tab under Header and Footer Tools click on Go to Footer.

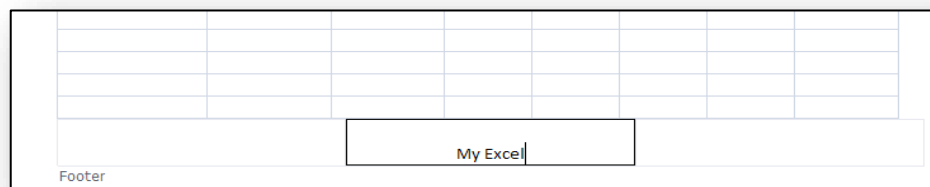


- To type in the Header or Footer, click your cursor in the Header/Footer section.

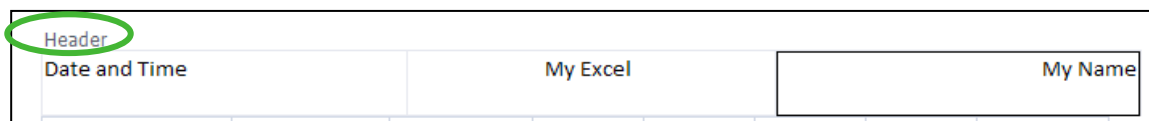
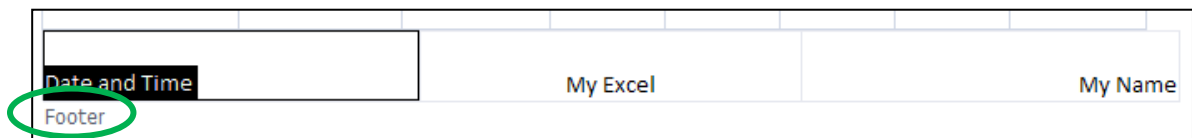
HEADER SECTION



FOOTER SECTION



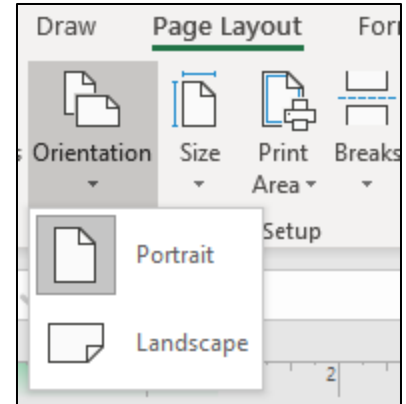
- There are three sections to each of the Footer and Header sections. Text can be typed into any of these sections.



The Header/Footer will show up on the Print Preview and Print versions of the document, not always on the screen version.

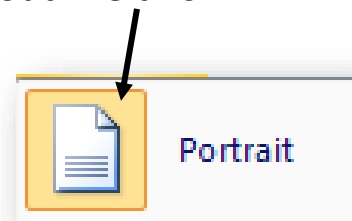
Page Orientation

1. To check the page orientation, click on the Page Layout Tab.
2. Click on the Page Setup Tool.
3. Click on the Orientation Tool arrow.

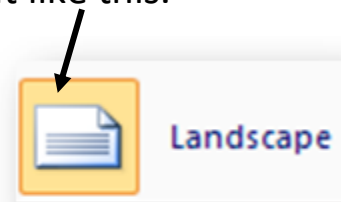


4. When you click on this tool, a drop-down menu will open and ask what orientation you want.

If you choose Portrait the worksheet will print out like this.



If you choose Landscape, the sheet will print out like this.
Landscape view is useful in spreadsheets that are wide.

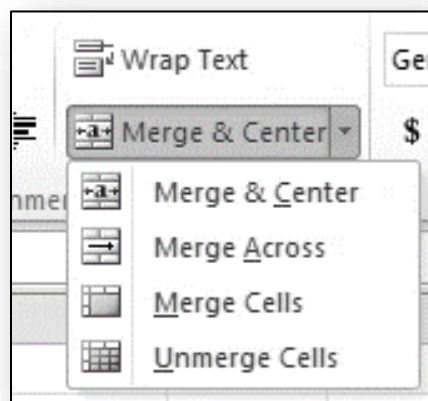


Text Wrapping

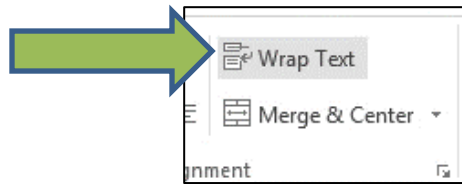
Text Wrapping is a great tool to work with when the information that you are typing needs to be displayed on more than one line. Text Wrapping is also a tricky tool to work with at times.

There are two ways to Text Wrap in Excel. To complete this exercise, you will first Merge and Center all the Cells in your worksheet. This is not always going to be a step in using the Text Wrap tool. Sometimes you will use Text Wrap within an individual Cell and there will be no need to Merge and Center the Cells first. For this exercise, you will be asked to Merge and Center and use more than one Cell to apply the Text Wrap tool.

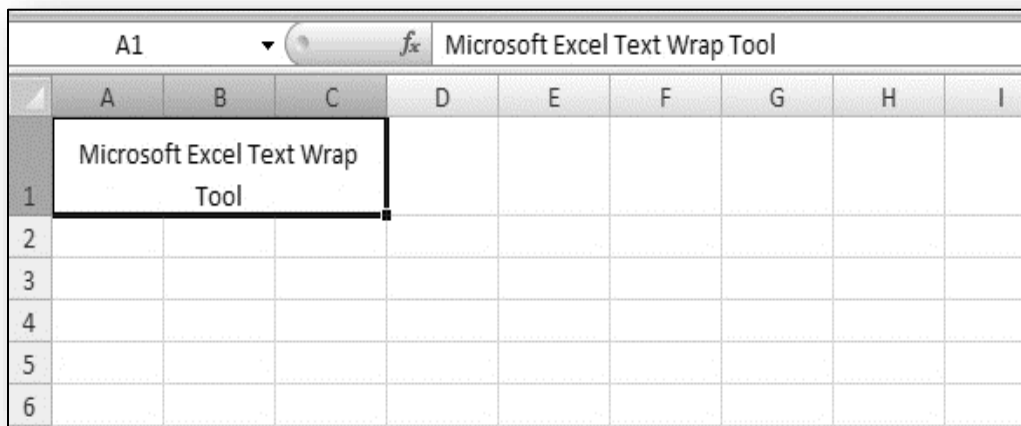
1. Merge and Center Cells A1, B1 and C1. The Merge and Center Tool is in the Alignment Tool in the Home Tab. Select your Cells and click on the Merge and Center option.



2. Type the words **Microsoft Excel Text Wrap Tool** into Cells A1, B1, and C1.
3. Once you have typed the information, click on the Wrap Text Icon.



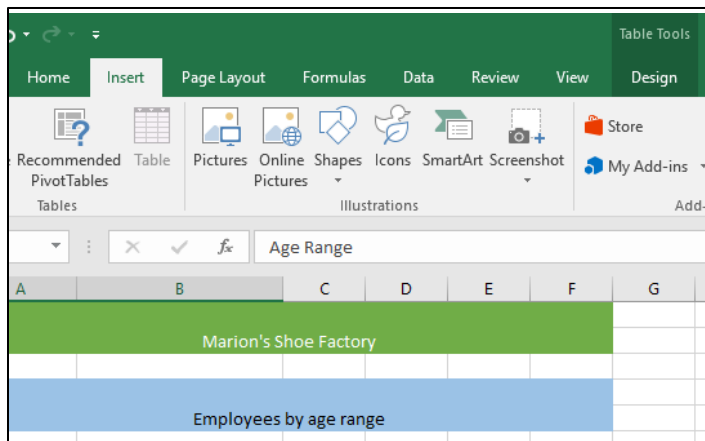
4. Finally, **you will have to widen Row 1 and shorten Column C** for the two lines of text to show on the Worksheet as shown. Center the information that you typed. Your text should look like the text shown in the diagram below.



People Graphs

Note: People Graphs are Insert Tab Add-Ins in Excel. If your version of Excel does not have this Add-In available than you may skip this lesson and continue to the next one in this manual.

1. Merge and Centre from cells A1 and A2 to cells F1 and F2 and Merge and Centre from cells A4 and A5 to cells F4 and F4
2. Highlight the first section in Green. Type in Marion's Shoe Factory
3. Highlight the second section in Light Blue and type in 'Employees by Age Range'



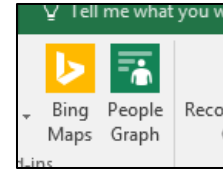
Age Range	Number of Employees
18-29	23
30-39	25
40-49	19
50-59	30
60-69	5
70-79	3
80-89	0
90-99	0

4. See the example above to check your work
5. Type 'Age Range' in cell A7 and 'Number of Employees' in cell B7
6. Fill in the information shown in the table.
7. Highlight all the information, from A7 to B7 and down to A15 and B15.
8. Click on the Home Tab.
9. Click on Format table.

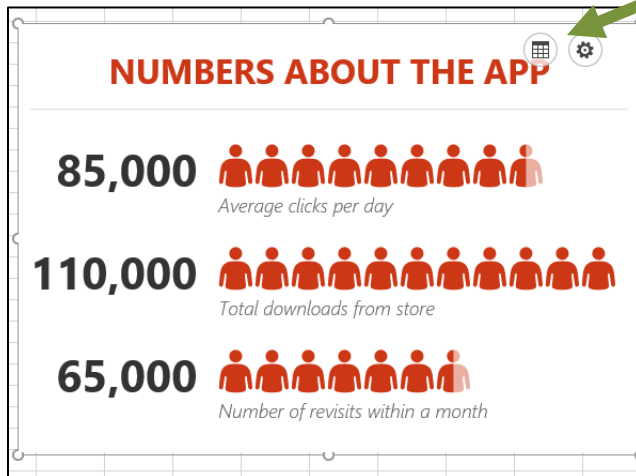
Choose the table format that you like best.



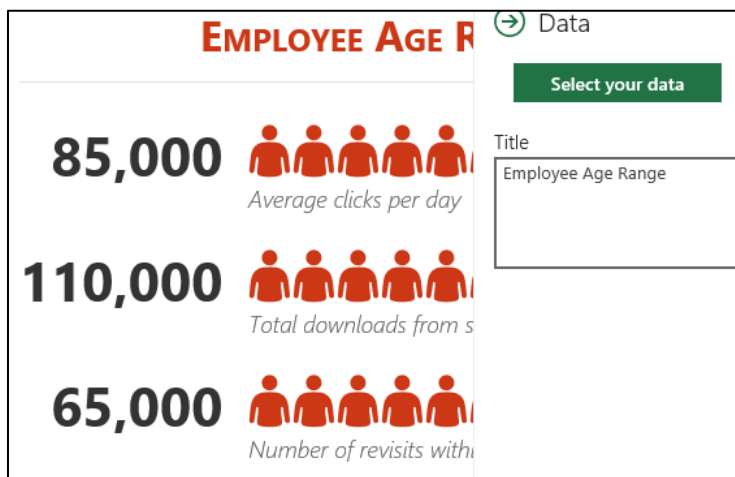
10. Keep the table highlighting.
11. Click on your Insert Tab and choose People Graph.



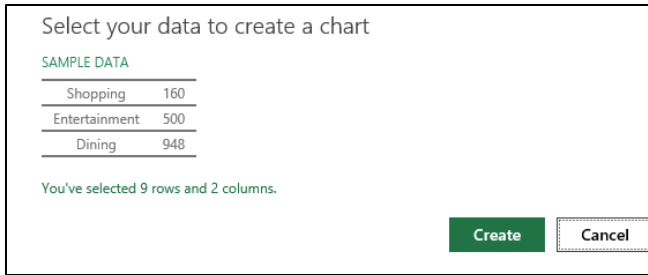
12. You will see this screen:



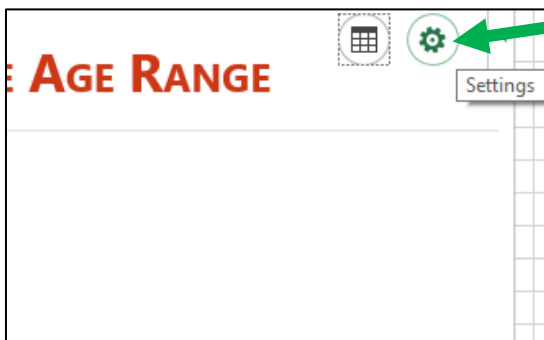
13. Click the data icon.
14. Type Employee Age Range in the white title box and then click select data.



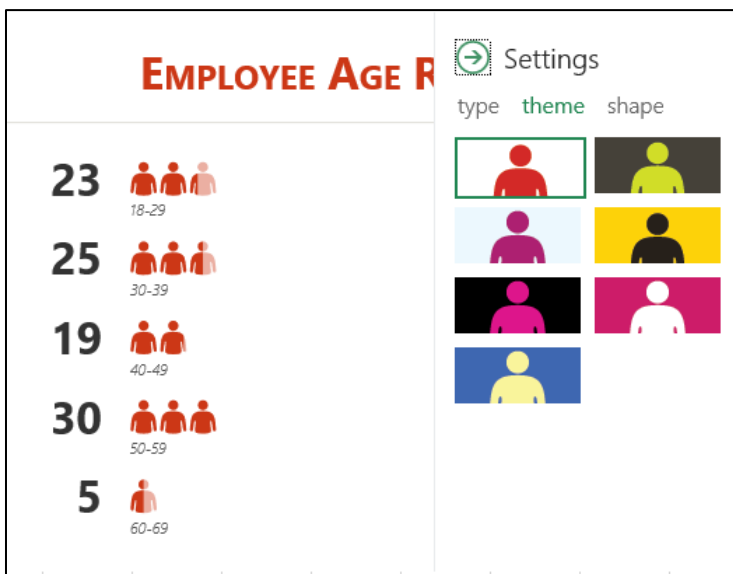
15. Click on Create.



16. Click on the settings icon to change the style and/or colour of your People Graph



17. Click on Themes and choose Theme 7



18. Save under the filename 'People Graph' on your USB.

Practice # 24

Task 1

1. Open 'Canada'
2. With 'CANADIAN 1' Open, click on the Insert Tab.
3. Click on the Text Tool and click on the Header/Footer Tool.
4. A Header section will open on the page, type the 'date and time' in the first Header box.
5. Type 'CANADA' in the second Header box.
6. Type 'your name' in the third Header box.
7. Change the orientation of the page to Landscape.
8. Save and close.

Task 2

1. Open 'Canada'.
2. With 'Canadian 2' open, click on the Insert Tab.
3. Click on the Text Tool and click on the Header/Footer Tool.
4. Click on Go to Footer.
5. Type the 'date and time' into the first Footer box.
6. Type 'Canada' into the second Footer box.
7. Type 'your name' into the third Footer box.
8. Scroll back up to the top of the page.
9. Save and close.

Practice # 25

Task 1

1. Open 'Rate of Pay'.
2. Highlight all the text in this worksheet.
3. Click on the Insert Tab.
4. Click on the Charts Tool and click on the Scatter Chart Tool.
5. Resize the chart to fit nicely into the worksheet. Make the chart larger.
6. Click your cursor in Cell A26. Type TEXT WRAP FEATURE and apply the Text Wrap Feature.
7. Change the orientation to Portrait.
8. Save.
9. Close.

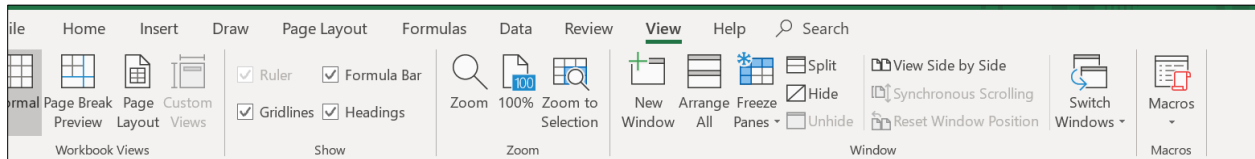
Task 2

1. Open 'Rate of Pay'.
2. Click on the Insert Tab.
3. Click on the Header/Footer Tool.
4. Type Employee Rate of Pay into the middle text box.
5. Save.
6. Close.

Freezing Panes

The ability to freeze panes is in the View Tab.

In this Tab, you can also zoom in or out on your spreadsheet and select how you will view your page.

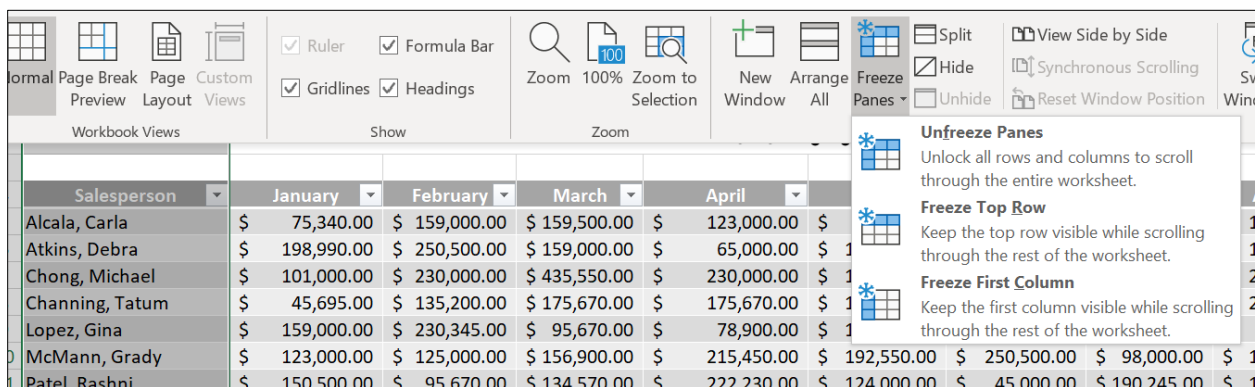


Sometimes, you will be working with sheets that have a lot of information. By the time you scroll across or down to see it, your row and column heading might be lost.

You can freeze columns and rows, so they stay in place.

This can make spreadsheets less confusing.

This way you can line up the information with any row or column with your headings.



Shown here: Freezing the first column in a spreadsheet with many columns of data.

You can also highlight a row or column within the spreadsheet and click the Freeze Pane button to freeze that row or column.

If you wish to freeze more than one row or column.

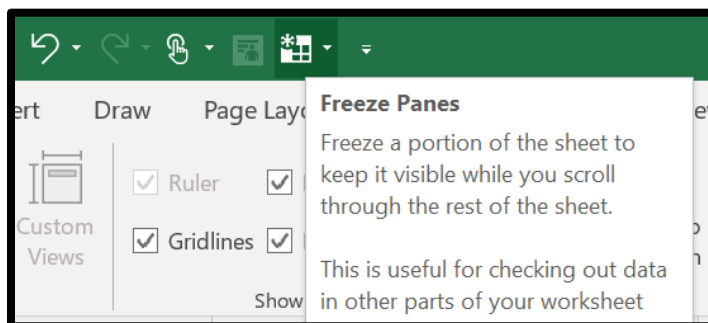
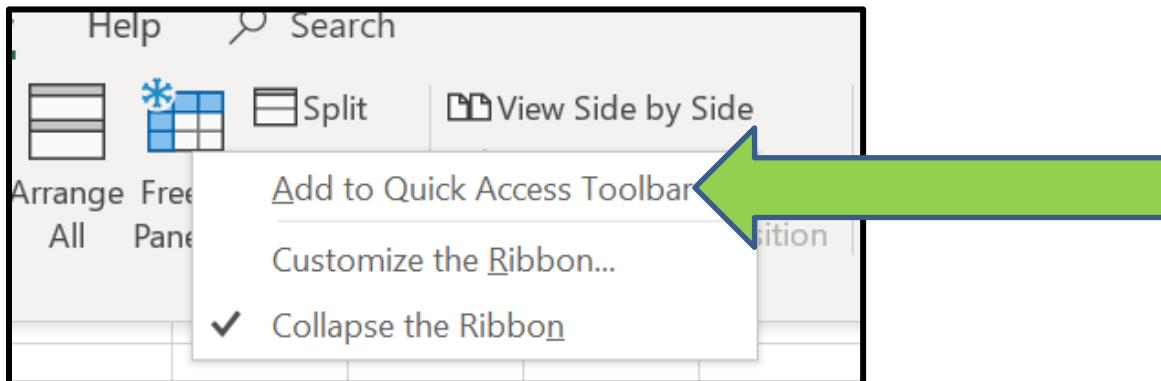
Click in the cell below or beside those you want to freeze.

Select Freeze Panes from the dropdown menu.

This will freeze the panes above (rows) or beside (columns) this cell.

Adding Tools to the Quick Access Toolbar

You can add tools from Excel to your Quick Access Toolbar. Simply, right click on the tool you wish to add.



In this example, the user is adding Freeze Panes to the Quick Access Toolbar to be able to use it more quickly when working in Excel.

Final Demonstration Task

1. Open a new Excel Workbook.
2. Starting in Cell B1, type January; in C1, type February.
3. Click on Cell C1 and, when a small box appears and surrounds the Cell, move your cursor to the lower right corner. Once a small black plus sign appears, drag the rest of the months until December reaches Cell M1.
4. In Cell A2, type Income.
5. Skip Cell A3 and type **Rent** in Cell A4, **Groceries** in Cell A5, **Car Expense** in Cell A6, **Utilities** in Cell A7, and **Entertainment** in Cell A8.
6. Skip Cell A9 and type **Total** in Cell A10.
7. Skip Cell A11 and type **Budget** in Cell A12.

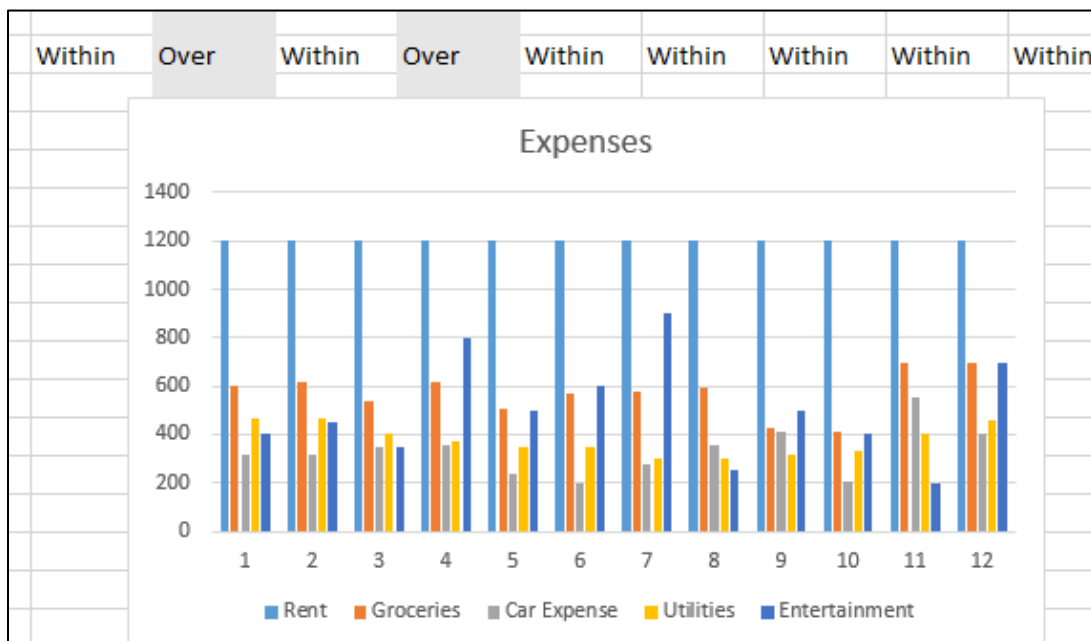
8. Enter the information in the chart below into each Cell. Make sure that all the information is correct and that it is in the correct Cell.

	January	February	March	April	May	June	July	August	September	October	November	December	
1													
2	Income	4200	3000	4100	3300	3200	3100	3500	3600	3500	4000	4200	4200
3													
4	Rent	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
5	Groceries	600	620	540	620	510	570	580	590	425	410	700	700
6	Car Expen	320	320	350	360	240	202	280	360	410	210	550	400
7	Utilities	470	470	400	370	350	350	299	299	320	330	400	460
8	Entertainr	400	450	350	800	500	600	900	250	500	400	200	700
9													
10	Total												
11													
12	Budget												

9. After the information has been entered, take a moment to compare your spreadsheet with the one shown above.

10. Click in Cell B10 and type the following formula =SUM(B4:B8) and click on the formula and drag to Autofill Cells C10 through M10.
11. Highlight Cells B1 through to M1 and center align the text.
12. Highlight B2 through to M10 and select the *Currency* formatting which is located in the Number Command.
13. Click in Cell B12 and type the following IF Statement.
=IF(B10>B2,'Over','Within') This statement will calculate whether the expenses exceed the income.
14. Click on the formula and drag to Autofill cells C12 through M12.
15. Highlight Cells B12 through M12 and center align the text.
16. Make changes to the width so that all the information fits in the Cell appropriately. Change width of Cells for longer months such as December.
17. Highlight the columns that were 'Over' budget and colour them light grey.
18. Click on Cell A14 type Annual Report 2016. Click off the Cell and then click on the Cell again, this time select text wrap, so the Annual Report 2016 appears in the same Cell, but on two separate lines. Align text to the center in Cell A14.

19. Highlight Row 4 to Row 8 and choose a Recommended Chart for the expenses. Title the chart 'Expenses'. Move the chart on the spreadsheet so that it appears below the information.
20. Your chart should look something like the chart below. Should you want to print your chart, your chart will print on two pages.
21. Click on column B to freeze the column A pane of your spreadsheet. This is in your View Tab.
22. Save as *Final Demonstration*, print and close. If you are working from home, email a copy to your instructor.



Congratulations!

You have completed the Essential Skills Spreadsheet: Microsoft Excel 2016.

If you are working in the classroom, please photocopy or print the checklist and hand it in to your instructor.

If you are working off site, please send an email to your course practitioner indicating that you have completed this course along with your final demonstration activity.

Part 2 - Practice and Further Learning

You have finished the basics of Essential Skills Spreadsheets and are now ready to apply those skills.

The following section offers a chance to practice these skills further and learn so more Excel functions. It is your choice if you wish to continue with this next section.

Task 1:

Milestone Stop



Using Excel to Compare

Discuss completing Milestone 30 with your course practitioner.

Please use Excel to complete this task. It will be a good review of formatting cells and table formatting in Excel.

Task 2: Sample Invoice

You are making and selling a craft item. You would like to have an invoice to print giving you a more professional look. You can build one in Excel that will calculate the taxes and the totals.

1. Insert your logo at the top of your workbook.
2. Merge several Cells and add the name of your craft store.
3. Add the word 'Invoice' near the top of the page in bold letters.
4. Create lines for the date, and the buyer's name.
5. Create a space to list the items being sold. Adjust the column width or merge Cells to suit.
6. In the next column, create Cells for the dollar value of the items. Remember to format the Cells to accounting or currency.
7. Create a Cell for taxes and add the formula at a rate of 13%.
8. In the Cell below the tax Cell, write the formula to add the cost of the goods and the tax combined.
9. Save to your USB memory stick as 'Sample Invoice'.
10. Print a copy.
11. Close.

Skills needed in Task #2:

- Adjusting Columns
- Auto Fill
- Formulas
- Formatting Cells
- Printing
- Saving to USB

Hint: Your sample invoice will have more than one formula. One to add the numbers and one that will multiply the sub-total of the goods by the tax rate of 13%.

Task 3: Financial Plan

You are planning a purchase (or purchases) and would like to create a spreadsheet to figure out how to divide the expenses. Sometimes people have a list of things that they need to plan for, like building a garden shed, planning a vacation or spa visit, buying new shelves, remodelling a room, buying new appliances or furniture or medical expenses (eyeglasses, dental surgery, etc.). You will create a two-year plan to list how you plan on saving for this.

1. Open a new workbook and create a header. Give your worksheet the title 'Project Plan'.
2. In column 'A', list the type of projects you would like to finish in the next two years.
3. In columns B, and C, type the next 2 years (for example: if you are doing this course in 2021 then type 2022, and 2023).
4. Format the appropriate Cells to currency and add the costs for each project. Use the internet to find prices if you need to find prices and put in a maximum you would spend.
5. Add the formulas to add each year's project costs. You may change the year an expense will occur if you decide the total cost for a year would be too much.
6. Save to your USB memory stick as 'Project Plan'.
7. Close.

Skills needed in Task #3:

- Adding a Header
- Formulas
- Formatting Cells
- Saving to USB

Hint: Your formulas are simple additions

Task 4: Grocery Budget List

To help you understand the amount of money you will need to do groceries this week, you are creating a spreadsheet that will calculate for you. All you need to do is to fill in the number of each item needed, and the template will do the rest.

1. Create a header and title your worksheet as Grocery Budget.
2. In Column 'A' list all the items you purchase and use in your home from groceries to shampoo to cleaning product and snacks.
3. In column 'B' fill the price you normally pay for the items.
4. Insert a formula in column 'C' that will multiply the basic cost of the taxable items by the 13% sales tax.
5. Calculate the total cost of each item by adding a formula to find the price after taxes in column 'D'
6. At the very end of column 'D' insert a formula to 'add' all the items to give you the total of your grocery order.
7. Save to your USB memory stick as 'Grocery List'.
8. Print a copy.
9. Close.

Skills needed in Task #4:

- Adjusting Columns
- Auto Fill
- Formulas
- Formatting Cells
- Printing
- Saving to USB

Hint: Your worksheet will have three different formulas. One to add the entire grocery order, one to multiply the cost of the items times the number of pieces bought and the third to add taxes on items like candy.

Task 5: Graphing a survey

1. Interview 10 people that you know (students, staff, community members, friends, etc.). Ask them the following question:
2. How many hours do you spend online a week?
3. Merge and Center the cells in row A and add the Title 'Hours of Online Use Per Week.' Use as many cells as you need to fit the title.
4. Shade the title.
5. Highlight and choose a different font type just for the title.
6. Create categories in cells B1 and B2 and then input your data underneath (names and hours online).
7. Highlight the information and make a table.
8. Use a people graph to show the data.
9. Select the laptop icon from shapes.
10. Highlight the information again and use a bar graph of your choice to show your survey data. Make sure both graphs have titles.
11. In your bar graph, change the colour of the graph and add data labels.
12. Move the two graphs next to each other so they are side by side.
13. Print.

Skills needed in Task #5:

- Adjusting Columns
- Merging Cells
- Inserting Tables
- Inserting Charts
- Moving Images
- Formatting Graphs
- Shading Cells
- Printing

Further Learning Online

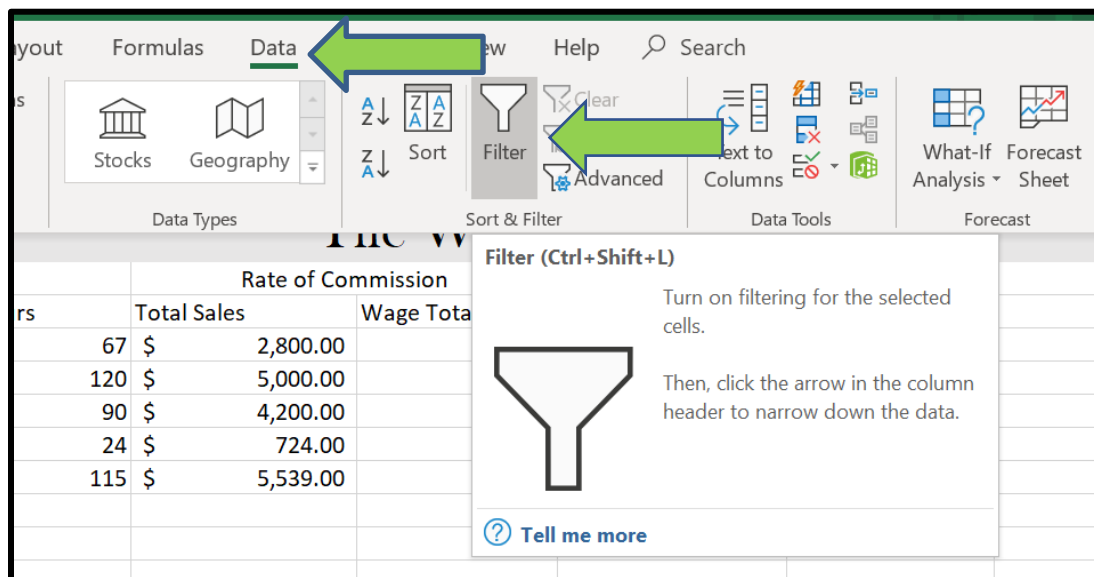
Task 1

Filtering

You may have times that you are working with a spreadsheet with lots of information.

You might want to filter data to be able to focus on certain parts of your worksheets at certain times.

This is located in the Data Tab in Excel, in the Sort and Filter tools.



You will be using this website to learn about filtering.

Please open your browser and enter the following address into your address bar.

<https://edu.gcfglobal.org/en/excel2016/filtering-data/1/>

or you can search Excel Filtering 2016 on the GCF website.

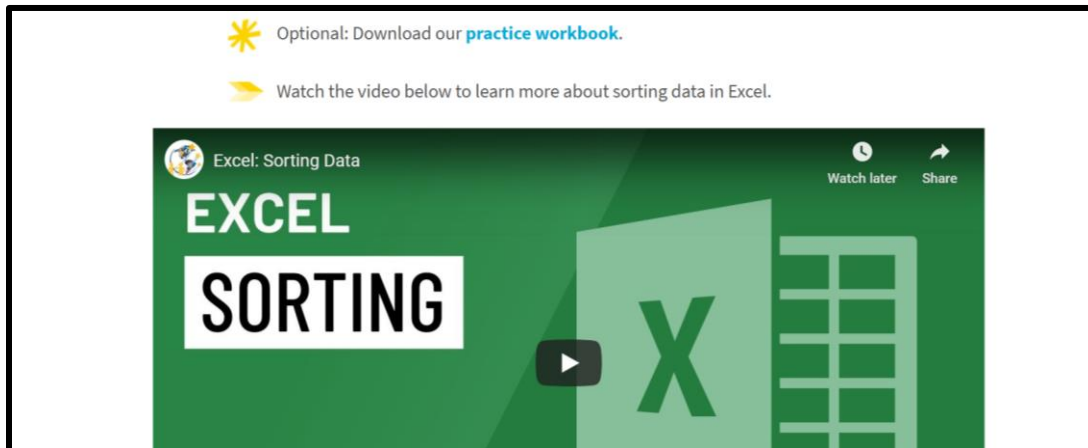
Task 2

Custom Sort

You will be learning about Custom Sort by watching a video on gcflearnfree.org website and then reading the lesson. You can also download the workbooks provided.

Open Google Chrome and type the following web address into your address bar:

<https://edu.gcfglobal.org/en/excel2016/sorting-data/1/>



Complete the Camp Katonka spreadsheet and **then stop**. Ask your instructor if you need help while working on this at any time.

Checklist



Please check all that apply.

While completing this course, I...

- Used the pictures to gather information about Excel 2016 (A1.2)
- Located the information I needed from different sections of the manual to complete tasks and demonstrations (A1.2)
- Scanned the information in each lesson to find information I needed to complete tasks and demonstrations (A1.2)
- Used the index to find information I needed (A1.2)
- Read the titles on each page to find the information I needed (A1.2)
- Understood the information from the reading (A1.2)
- Understood the purpose of the writing (A1.2)
- Found ways to understand any words or terms that I did not know before taking this course (A1.2)
- Could follow the written instructions (E1, A1.2)
- Explained any issues I was having to my instructor and asked for assistance (B1.1, E2)
- Could describe the assistance I needed using the correct terminology (B1.1, E2)
- Completed all writing/typing requested by the manual (2.1)
- Completed an invoice (B3.2b)
- Completed tables and used charts (B3.2b)
- Created spreadsheets for budgets and comparisons (B3.2b)
- Read and understood the numbers/number words used in this manual (C1.1)
- Chose the correct formulas for the assignments (C1.1, D3)
- Knew which math symbols to use (Dollar signs, percent signs, etc.) (C1.1)
- Compared costs when planning a trip (C1.1)
- Designed a budget (B3.3, C1.2)
- Open and closed Excel (D2)
- Printed using Excel (D2)

- Changed size of rows and columns (D2)
- Deleted and added columns (D2)
- Understood and used the Excel Ribbon (D2)
- Used the AVERAGE, MIN and MAX functions (D3)
- Used the 'IF' function (D3)
- Used text wrapping (D3)
- Created charts from my data (D3)
- Created a people graph (D3)
- Completed all the spreadsheets assignments in the review section of the manual (D3)
- Set goals for myself while participating in this Task (E.2)
- Understood what skills and knowledge were important for completing this manual (E.2)
- Set a schedule for myself (E.2)
- Completed the course in the time frame that I set out for myself (E.2)
- Completed work regularly on the course (E.2)