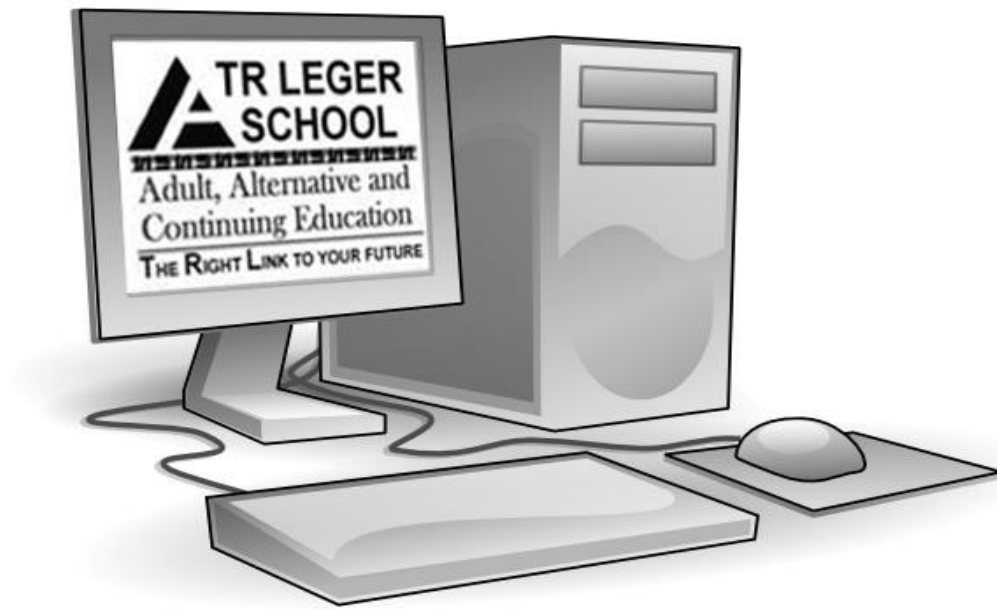# Essential Skills for Spreadsheets

Microsoft Excel 2007

TR Leger
Adult Literacy and
Employment Preparation
Program

Table of Contents

Computer Course Pre-Evaluation

Congratulations on beginning the Essential Skills for Spreadsheets guide. Please take a moment to fill out this survey. You may circle your answers. When you have filled out the survey please hand it in to the Instructor.

1. I am comfortable using a computer.

    Yes   Somewhat   No

2. I have used a spreadsheet before.

    Yes   Somewhat   No

3. I understand basic bookkeeping.

    Yes   Somewhat   No

4. I know how to budget my personal finances.

    Yes   Somewhat   No

5. I need this training for my job.

    Yes   Somewhat   No

6. I am interested in using the computer to organize information.

    Yes   Somewhat   No

7. I will use these skills in the future.

    Yes   Somewhat   No

Introduction to Microsoft Excel 2007

Microsoft Excel 2007 is a program that lets the user add information to a spreadsheet/ worksheet. Each workbook starts with three worksheets, 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

Opening Excel 2007

1. Look on the Desktop for the Excel Icon. If Excel is not visible on the screen, click on **Start, All Programs**, click on **Microsoft Office** and click on **Excel 2007.**

2. If the Icon can be found on the desktop click on it.

3. Excel will open into this screen.

---
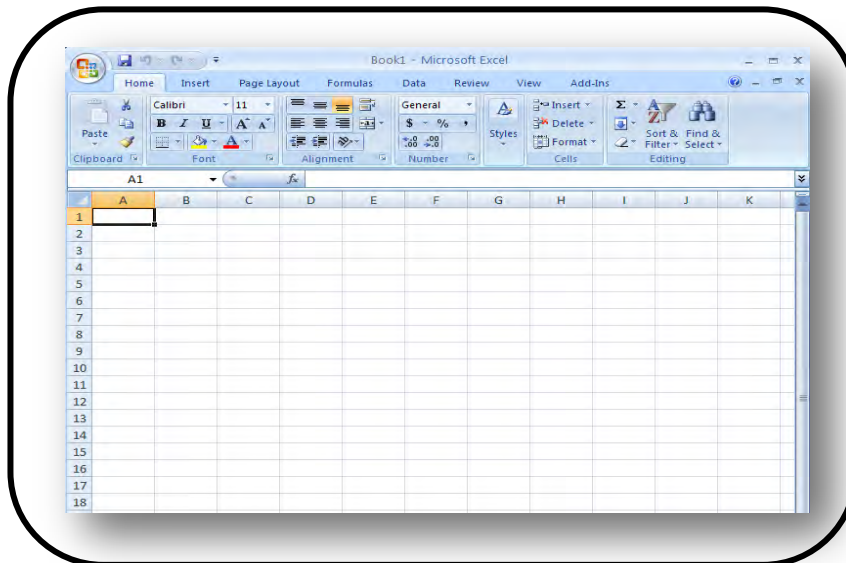
4. If your desktop does not have <u>Icons</u>, the Excel Icon can be found by selecting the start button at the bottom left of the screen.

5. A menu will open, as shown in the diagram below.

6. Select the MS Office Excel 2007.

7. Once you click on this Icon, the Excel Spreadsheet will open.

The Excel Screen

The Excel screen looks different from the Word screen.
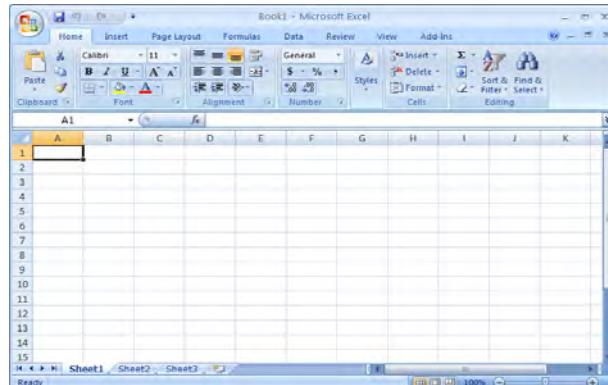
This is because the Excel screen is made up of rows and columns of **Cells**.

A **Cell** is a box where you can enter text or other information.
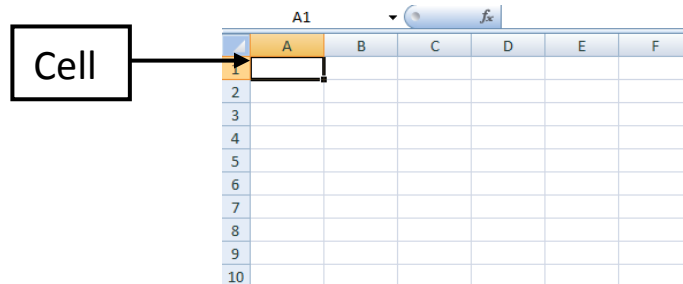
In Excel, each row has a number and each column has a letter. Cells are identified by their column letter and a row number.

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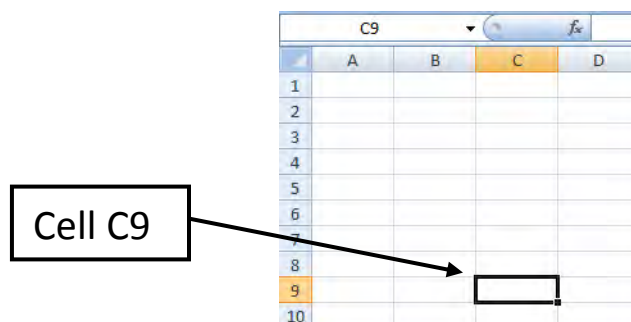
The Excel Ribbon

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, View, Add-Ins and Acrobat.
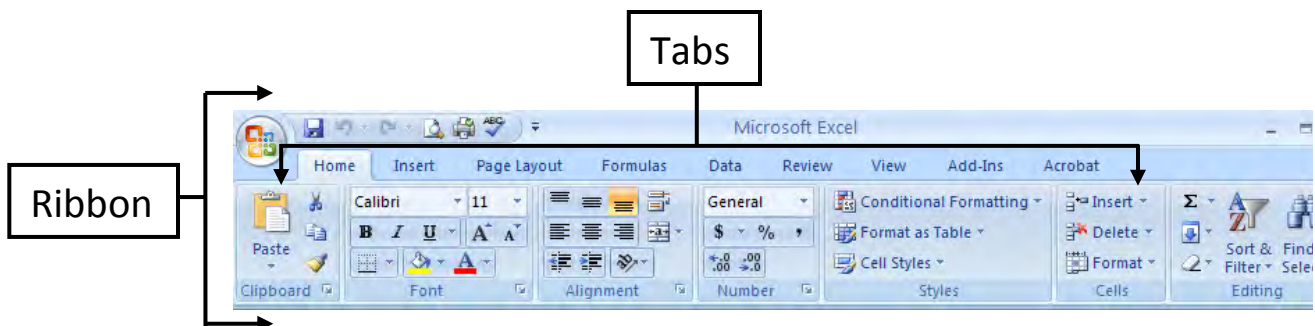
Each tab has different **Groups** of **Tools**.
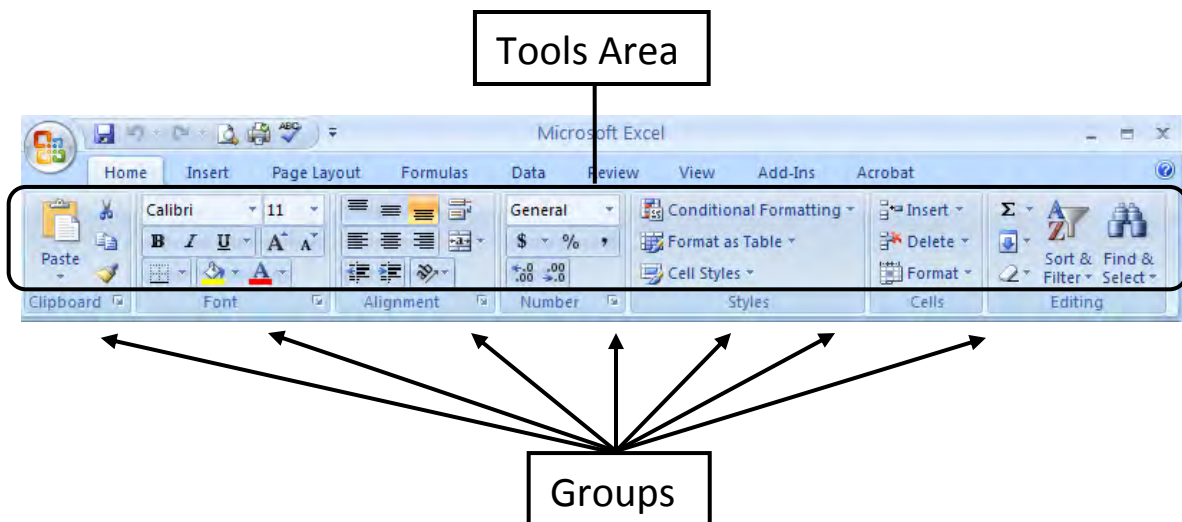
Tabs and Tools

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
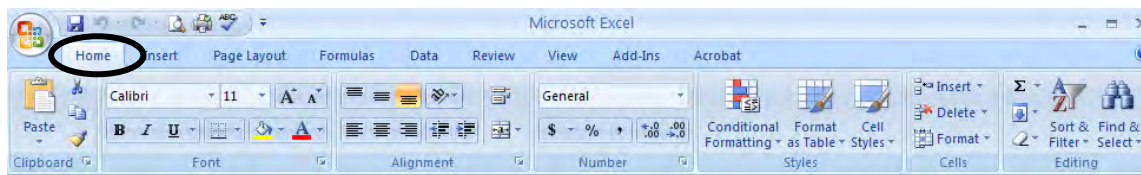
Home Tab Tools

The **Insert** Tab

Insert Tab Tools

The **Page Layout** Tab
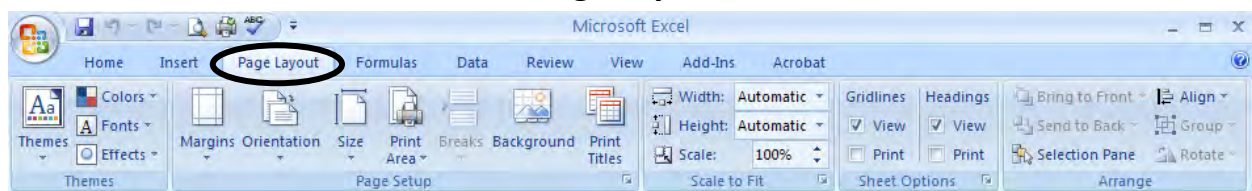
Page Layout Tab Tools

The **Formulas** Tab

Formulas Tab Tools

The **Data** Tab

Data Tab Tools

The **Review** Tab

Review Tab Tools

The **View** Tab

View Tab Tools
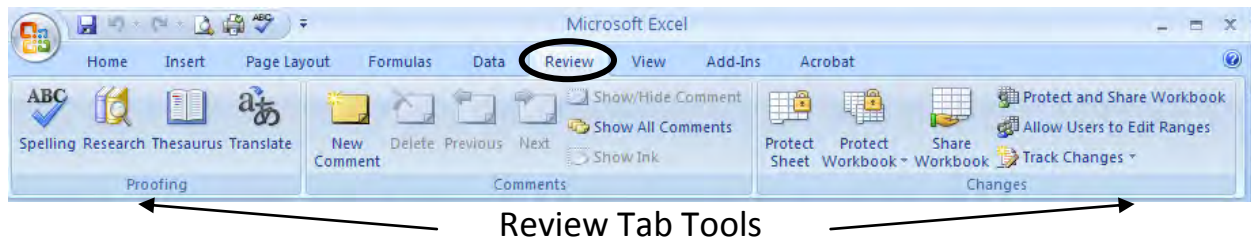
Basic Options in Excel 2007

1. This is the Excel Office Button.

The **Office Button** is always in the top left corner of the screen.
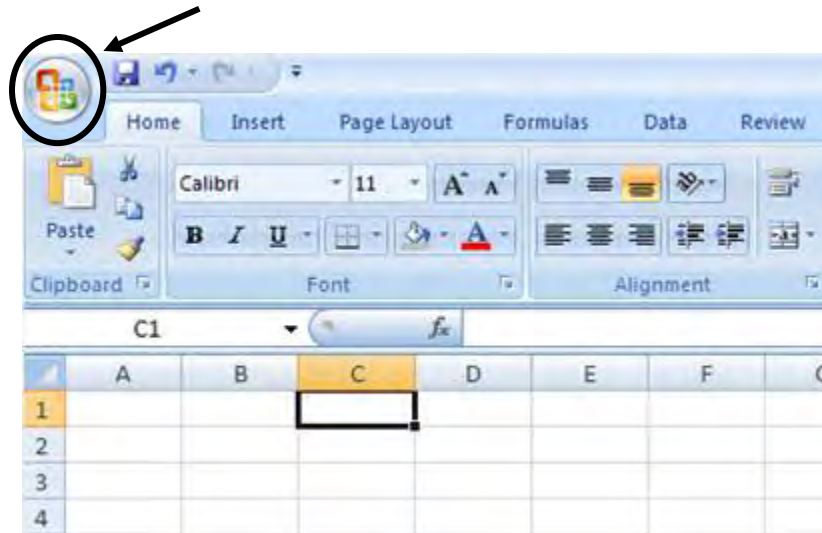
Opening a New Workbook

To open a New Workbook:

1. Click on the Office Button.

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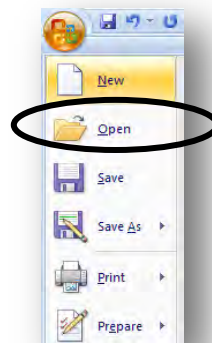
3. Once you click on the New option, then select create a new blank document. A new workbook will open.

Saving to USB (Memory Stick/Removable Disk)

1. With a Workbook open, put your memory stick into the USB port.

2. Click on [disk icon] beside the Office Button. Or select the **Save As** option from the Options button.

3. Click on [My Computer icon] on the left hand side.
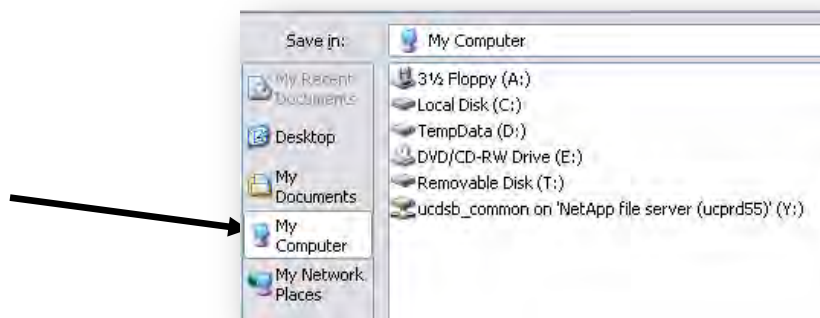
4. Scroll down to bottom.

5. Double click on the USB/Removable Disk drive. When you have named your file, you may save it here.
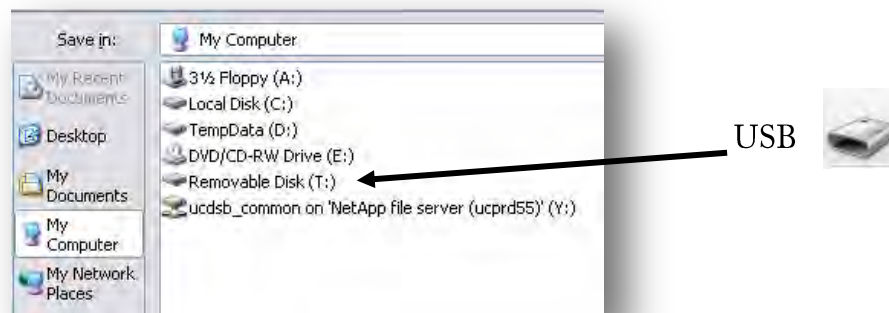
Scrolling Up and Scrolling Down
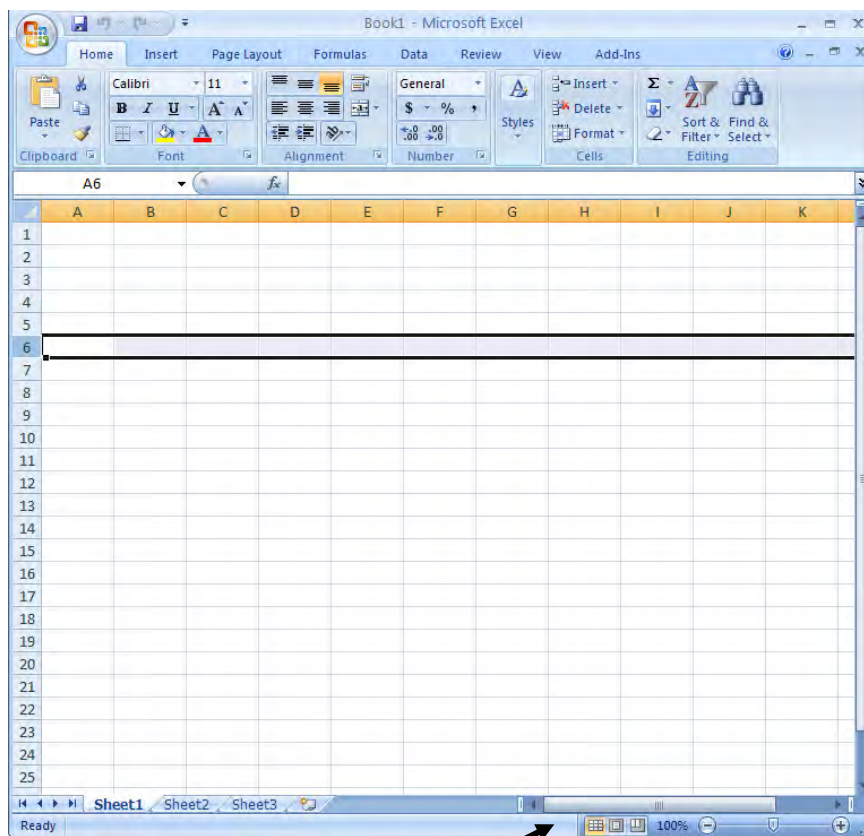
Scrolling Down

Scrolling Across

You may also scroll up and down the page by using the Arrows on your keypad.

UP and **DOWN**

ACROSS and **BACKWARDS**

Selecting and Deselecting

Excel is made up of Cells and Rows.

1. To select a Cell, simply click you 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.
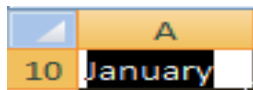
6. To deselect the word click your mouse anywhere on the page outside the selected word.

7. When the mouse is clicked off the word, the word will deselect.
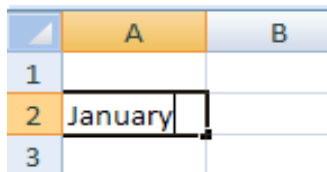
Rows and Columns

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

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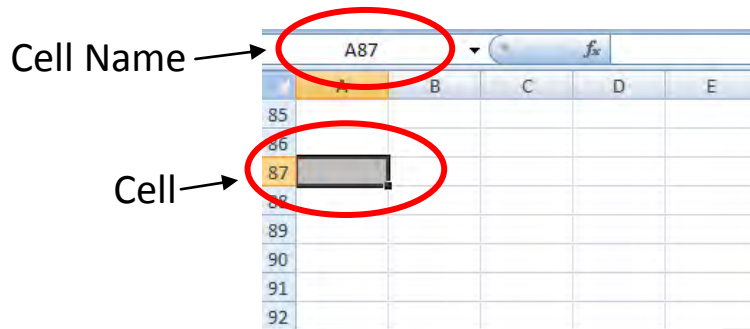
Cell names are identified by the Column and the Row where they are located.

For example Cell C 24 is found in Column C and Row 24.
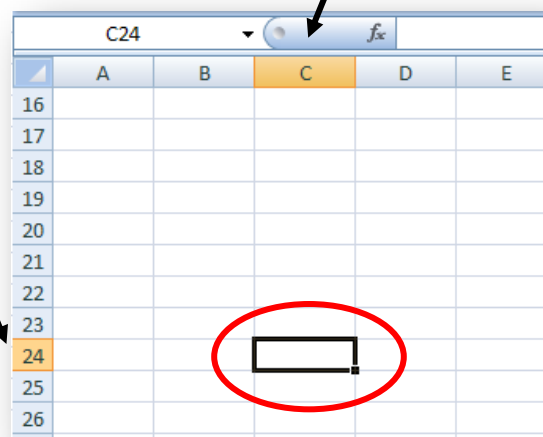
Practice Activity # 1

Activity 1

1. Open Excel 2007.
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 Office button. 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.
8. Type "Tuesday"

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. Click your cursor in **Column A** to highlight the Column and move your cursor to the line on the right side of the Column heading. When a black cross appears, drag outward to make the Column bigger. Drag the opposite direction to make the Column smaller.
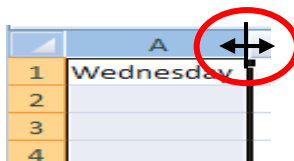
9. From Cell **C1-G1** add the rest of the weekdays.
10. Save file on your memory stick as "Weekdays" and close.
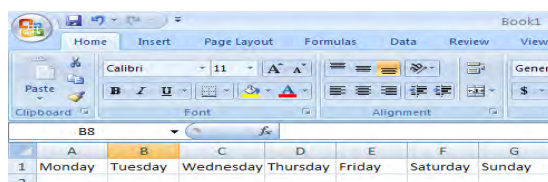
Workbooks and Worksheets

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 page, but each one starts with three Worksheets.
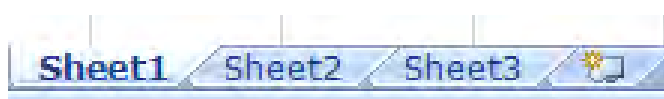
You can see these sheets named on tabs at the bottom of the page. The Worksheets are called Sheet 1, Sheet 2, and Sheet 3.

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 particular sheet.

2. To add another sheet you must click on the last sheet in the Row and click on the icon shown below. Once you click on this icon another sheet will open.
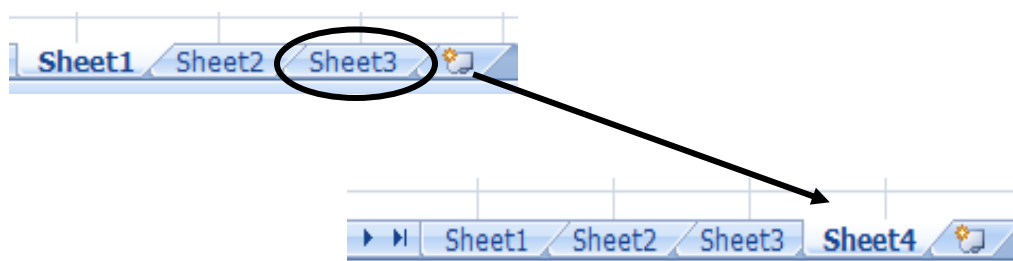
Changing the Name of a Worksheet

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.
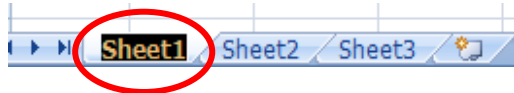
3. Press <u>delete</u> on the keypad and type in the <u>new name</u>.
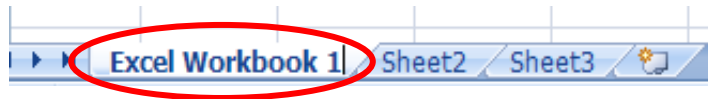
Activity 1

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 "<u>Canadian 1</u>".

4. Continue to rename sheets 2 and 3.

5. Rename sheet 2 "<u>Canadian 2</u>".

6. Rename sheet 3 "<u>Canadian 3</u>".

7. Save as "Provinces" 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.
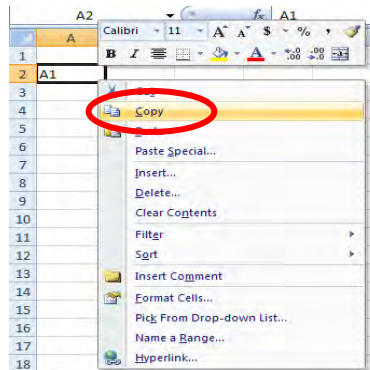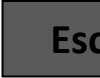
4. Move your Cursor to the Cell where you want to Paste the information.

5. Right click for drop down menu.

6. The text will Paste to the Cell you selected.
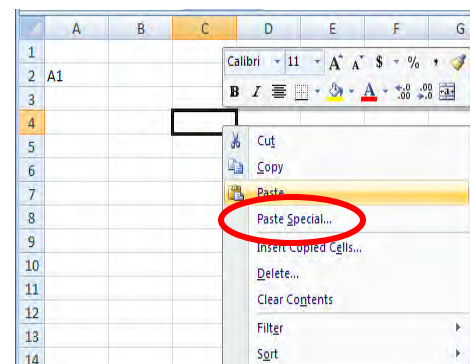
Practice Activity # 3

Activity 1

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. **Esc**

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 Narrow

1. Click on the Column header you want to make wider.
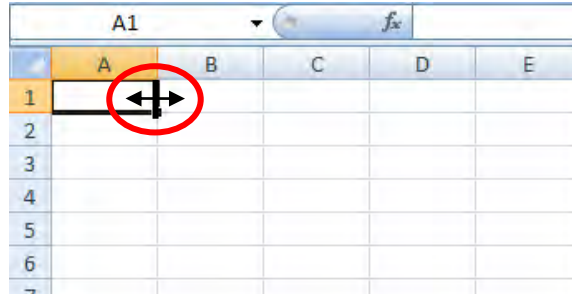
2. Once this black arrow appears, you can click, hold and drag the <u>Column</u> either way, to make it wider or narrow.

WIDER

NARROWER
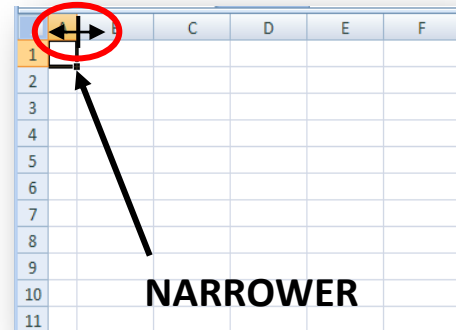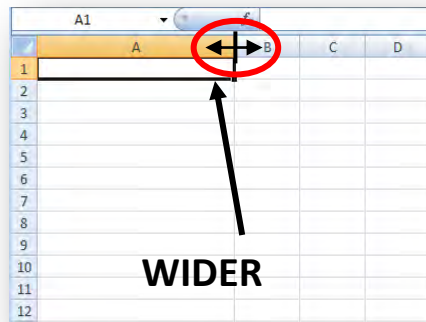
If the text shows as **#####**, there are a few possibilities. One possibility is that the Cell is not wide enough for the text. (see pg. 53 for formatting)

If this happens, simply make the Cell wider by dragging the arrow as shown below.
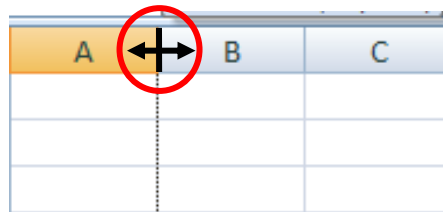
3. Use the same arrow to make the <u>Rows</u> taller or shorter. Move the cursor to the Row you wish to resize until you see the double edged arrow. Now click the arrow and drag the row to size.
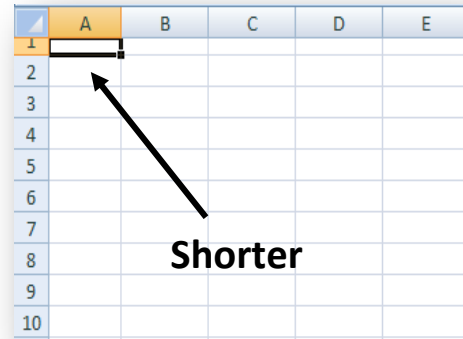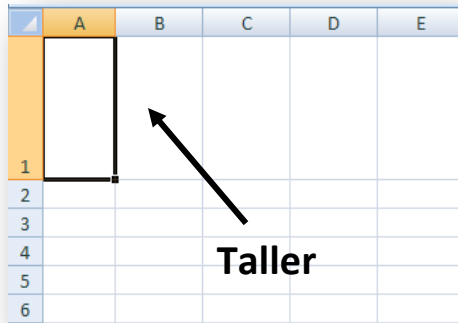
You can also select entire Rows or Columns by placing your cursor in the Row or Column header until you see a small black arrow pointing across or down. When you click, it will highlight the Row.
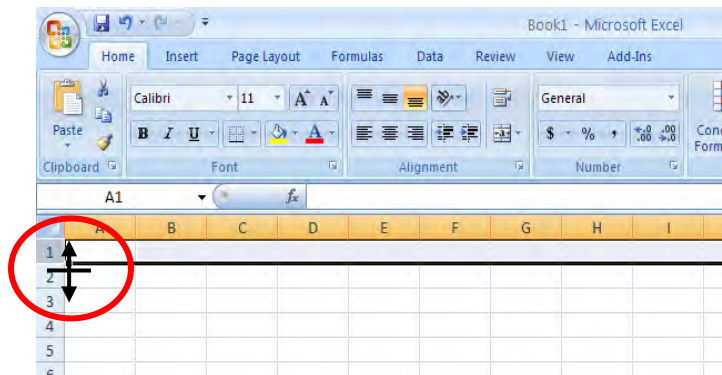
This also applies to selecting Columns, but instead of selecting the Row header, you select the Column header.
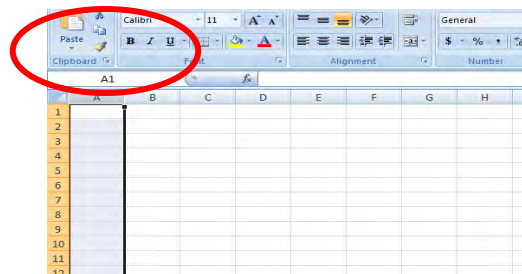
To highlight the whole table, click on the small arrow between the A and 1.
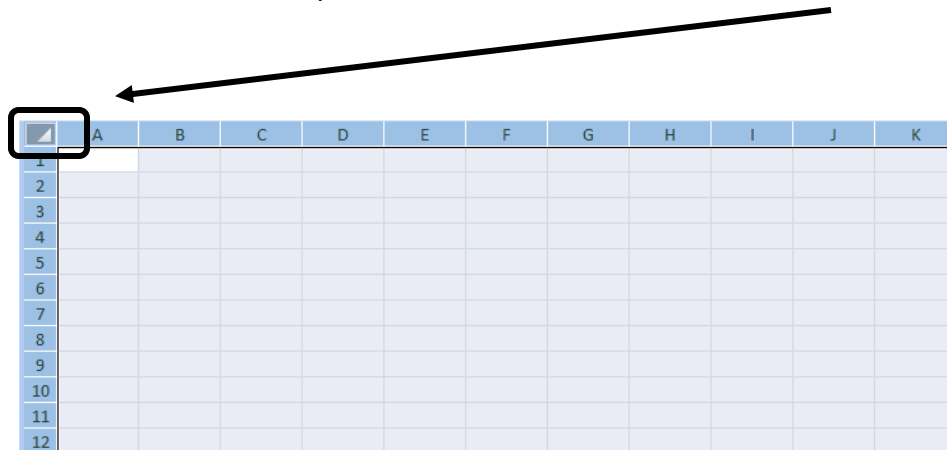
Row and Column Sizes

1. To see the size of a Column, highlight the Column.

2. To see the size of the Column, 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.
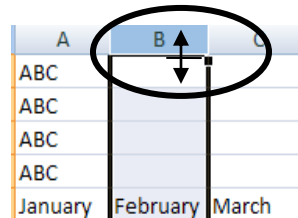
3. While holding, move your cursor back and forth to adjust the width from smaller to a larger size.

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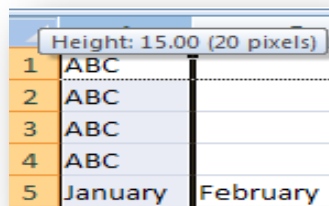
Note: The Rows are measured by Height and the Columns are measured by Width.

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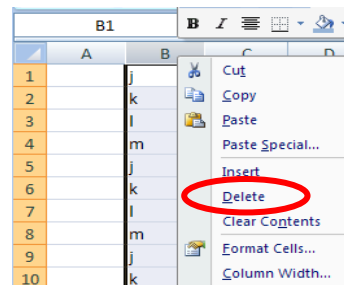
3. Once delete is clicked, the Row or Column will be removed.

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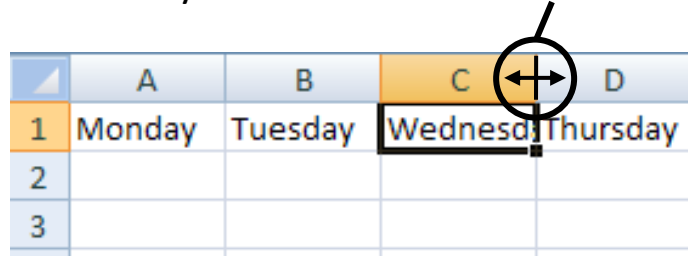
3. With Cells A1 and B1 selected, move your cursor to the bottom right corner of Cell B1 until you see a black cross.

	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.

A1				f_x	Monday	
	A	B	C	D	E	F
1	Monday	Tuesday	Wednesd:	Thursday		
2						
3						
4						
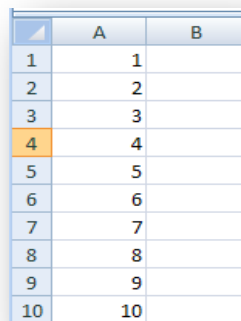
5. Autofill will fill in the rest of the days.

6. You may have to wider some columns to fit all of 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.

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.

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

Practice Activity # 4

Activity 1

1.   Open 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.

Activity 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.

Add or Move a Worksheet

Sometimes you may want to move a worksheet to a different location in your workbook.

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

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

3. Click on the Move or Copy Tool.
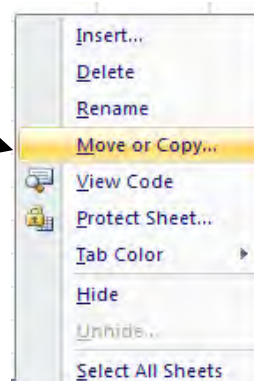
4. Once you click on the Move or Copy

Option, a menu will open.
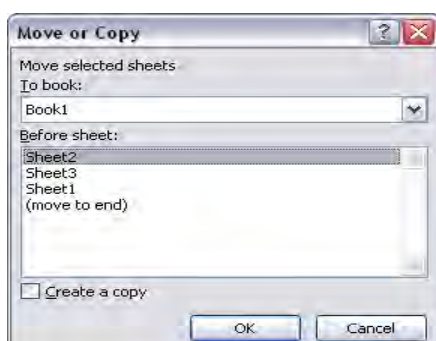
5. Move the worksheets by clicking on a "before sheet" location from this menu. Click "OK".

Adding a Worksheet

There are two ways to add a new Worksheet in Excel.
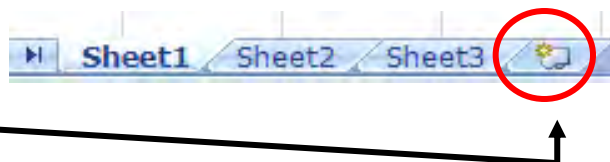
1. Click on this button located at the bottom of the worksheet. This will add a new blank sheet. It will automatically be named Sheet 4. If you add a new sheet and the new worksheet appears in place of a sheet other than sheet 4, rename your sheets in the proper order. Sometimes this happens can happen depending on the computer.

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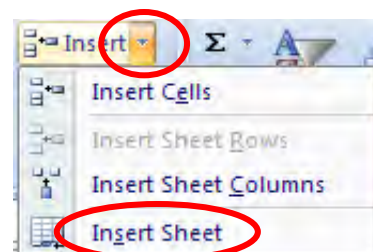
4. Click on Insert Sheet. This will also be named Sheet 4.

Adding Columns and Rows

1. First choose where you want to add the Row or the Column.

2. Click on the Row or Column heading.

3. Click on the Home Tab.
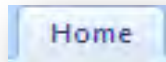
4. Go to the Cells Tool.
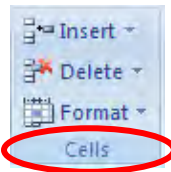
5. Click on the Insert Tool arrow.
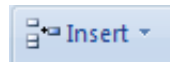
   Once you click on Insert a drop down menu will open.
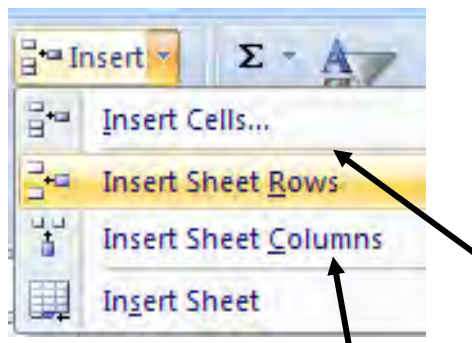
6. Click on either "Insert Rows" or "Insert Columns". This is useful when you need to add information to a worksheet.

Practice Activity # 5

Activity 1

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.
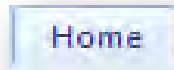
2. Go to the Home Tab.

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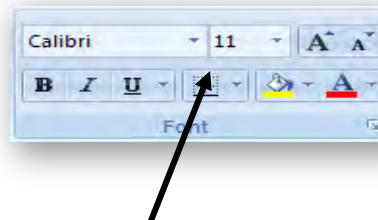
4. Select a Font from the drop down menu and click on it. This will replace the highlighted text with the new font.
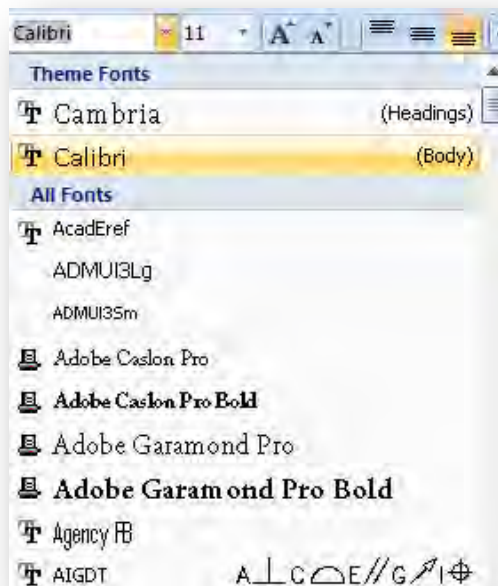
Font Size

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.
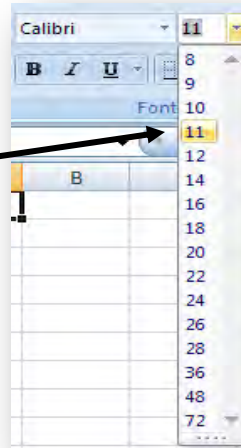
For example:

<u>Word</u>(size 14)

<u>Word</u>(size 26)

<u>Word</u>(size 72)

<u>Word</u>(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.
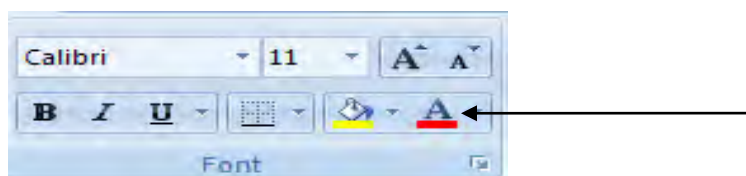
4. A drop down menu will open and you may click the color that you like.
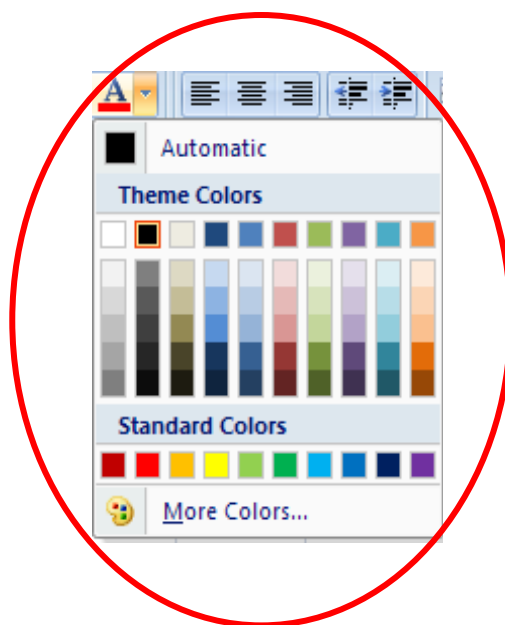
Font Styles

1. To make Text **BOLD**, <u>highlight</u> the text and click on the Home Tab.
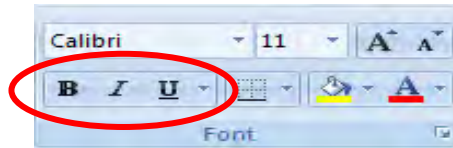
2. Click on the **Bold** Icon in the Font tools.
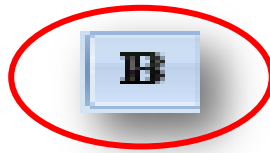
1. To make Text *Italic*, click on the Home Tab.

2. Click on the *Italic* Icon in the Font tools.
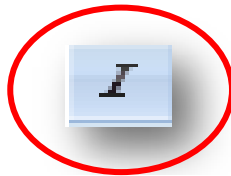
1. To make the text <u>Underlined</u>, click on the Home Tab.

Click the <u>underline</u> icon from the Font tools**.**
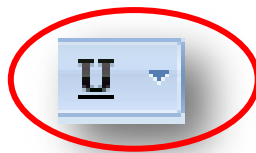
Practice Activity # 6

Activity 1

1. Open "Provinces"

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 <u>Font color</u> and change the font color to <u>Red.</u>

6. Click the mouse into the Column B box that contains the Province of Quebec and change the font color to <u>Blue</u>.

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 **<u>Arial Black.</u>**

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 **Bodoni MT Black.**

10. Save as and close.

Activity 2

1. Open "Provinces".

2. In Column D Row 2 type <u>Cold Winters</u>**.**

3. In Column E Row 2 type <u>Oil Country</u> and change the font to Century Gothic, found in the Font tool**.**

4. Select Cell F1 and Insert a new Column heading called <u>CANADA.</u>

5. Adjust Cell width as necessary.

6. Save and Close.

Practice Activity # 7

Activity 1

1. Open "Provinces".

2. Click on the Column A Header.

3. Click on "Canadian 1" worksheet and make the Column width 16.00 (117 pixels) in size.

4. Click on Column D and change the Column width 21.00 (28 pixels).

5. Save and close.

Activity 2

1. Open "Provinces".

2. Right click on Column D and delete the Column by selecting delete from the dropdown 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 Activity # 8

Activity 1

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.
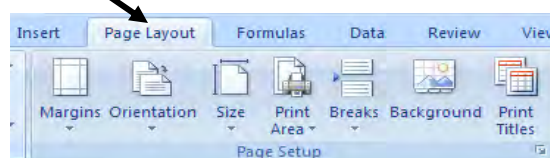
2. Make a check in the Print option box under Gridlines.
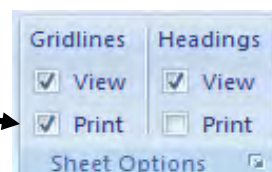
3. Click on the Office Button to see Print Preview.

4. Click on Print and then Print Preview.
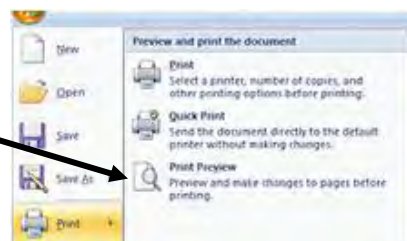
5. You will see what your work will look like printed.
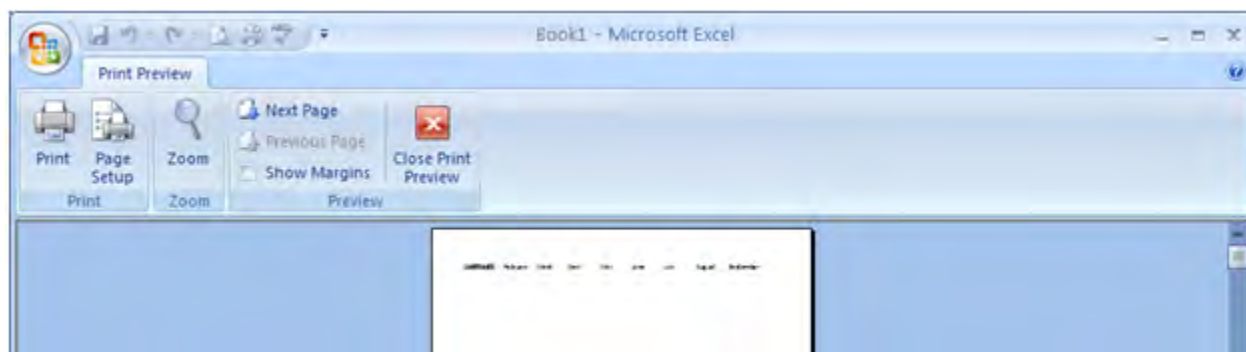
6. Close Print Preview

Remember: The lines in your spreadsheet will not show up on your printout unless you select the **Gridlines** first

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

JANUARY February March April May June July August September
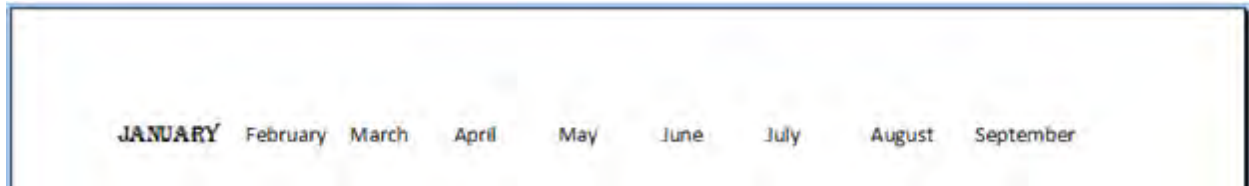
This is what the print preview will look like **after** you check the Print box.

| JANUARY | February | March | April | May | June | July | August | September |
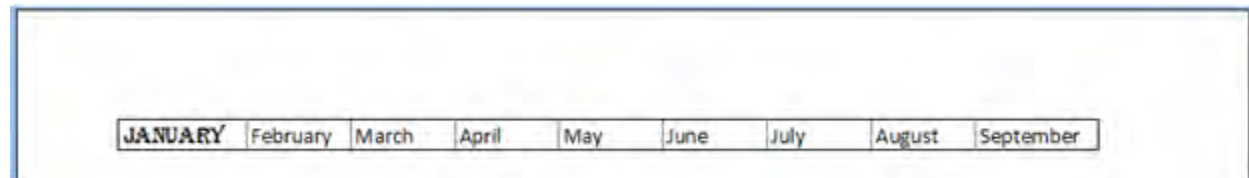
Borders

Borders are similar to 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 Row you want to put borders around.

2. Click on the Home Tab and then click on the arrow to the right of Borders.
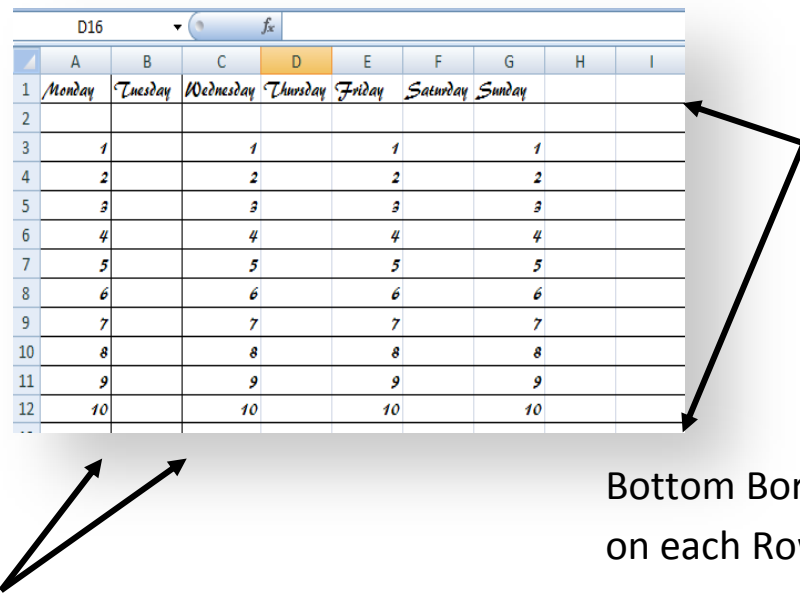
3. You will see this drop down menu:

   Borders
   - Bottom Border
   - Top Border
   - Left Border
   - Right Border
   - No Border
   - All Borders
   - Outside Borders
   - Thick Box Border
   - Bottom Double Border
   - Thick Bottom Border
   - Top and Bottom Border
   - Top and Thick Bottom Border
   - Top and Double Bottom Border
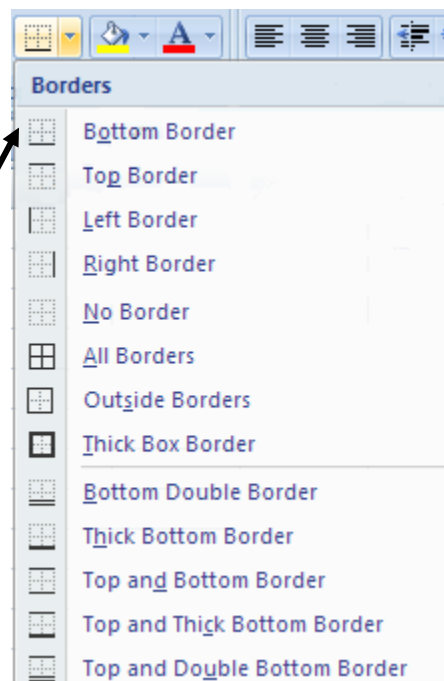
4. Click on the Bottom Border option. This will place a border along the bottom of the Row you selected.

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.

Bottom Borders are placed on each Row here.

Right borders are placed here.
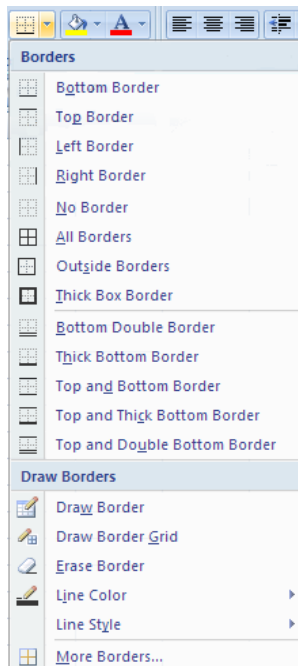
Printing

In order to <u>Print</u>, click on the Office Button.

1. Click the print option.
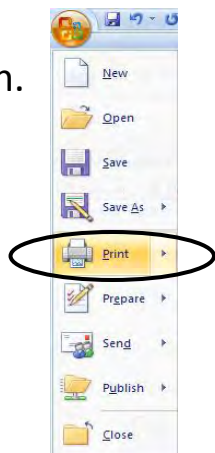
2. When you click on the Print option, a menu will open. Click [OK] to print the document.

Printing a Page Range

1. If you wish to select certain pages, click on the <u>Pages</u> and type in the pages you want to print. For example if I would like to print pages 1 to 3. I would type 1 in the From: section and 3 in the To: section.
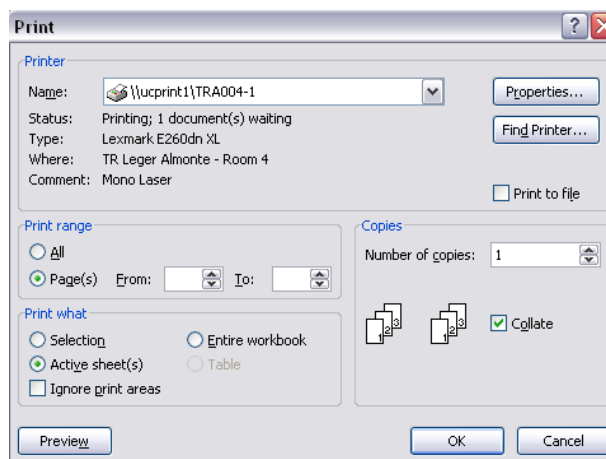
Printing Specific Pages

1. If you only want to print **page 3** of a 15 page document, select Pages by clicking the ball beside the Pages option and typing 3 in the <u>From:</u> and 3 again in the <u>To:</u> section. This ensures that only page 3 will Print.
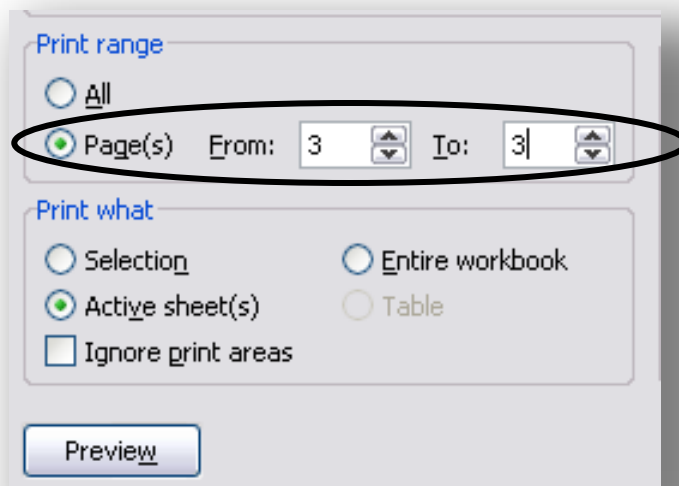
2. Click OK.

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 the Page Layout Tab.

3. Click on the Print Area Tool and select **Set Print Area** from the drop down menu.

4. Click on Print Preview and view your page. The only area that should show up on the Print Preview screen is the area that you had highlighted.

Practice Activity # 9

Activity 1

1. Open "Provinces"
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 Office Button.
7. Click on Print Preview from the Print option.
8. When the Print Preview Menu opens you should see gridlines.
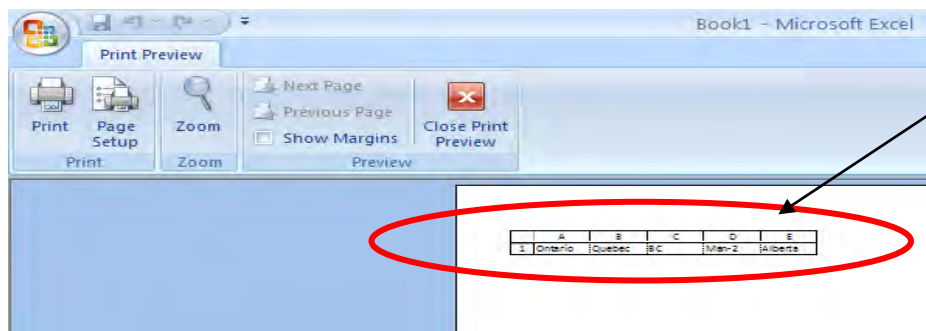
The lines that appear around the text are the gridlines.

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 the Page Layout Tab and selecting the Landscape option from the drop down menu. Landscape prints widthwise, while portrait prints lengthwise.

10. 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.
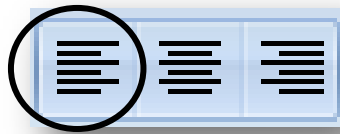
4. To align Cell text to the Right of the page, click on this Icon.

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 Cells Icon from the Home Tab and a dropdown 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.
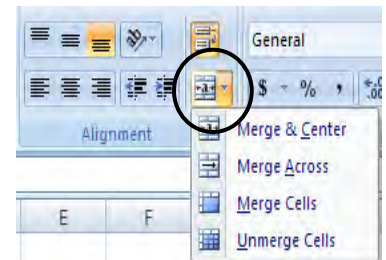
7. To align the Cell text to the upper center of the Cell, click this Icon.

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.
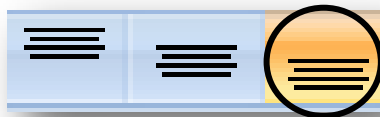
Practice Activity # 10

Activity 1

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.
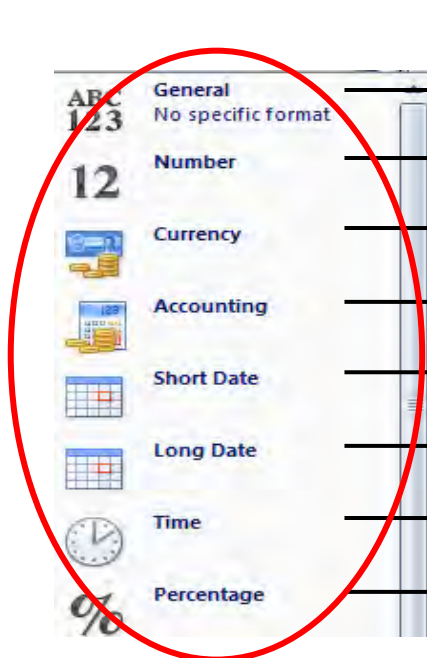
Number Formatting

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 General Number Format Tool arrow.

4. A drop down menu will open.

5. Click on the format of choice.
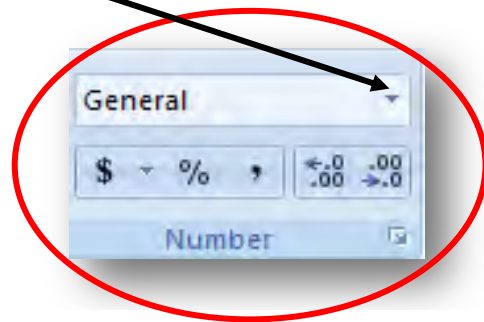
6. Below are examples of what the formatting will look like for each of the number options.

Date Formatting

Practice Activity # 11

1. There are two types of date formatting: long format and short format.

2. Open a New Excel Workbook.

3. Click your cursor in "A1" and type: November 16, 2000
   > A1 and 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.

5. Go to the Number Format drop down menu by clicking on the arrow to the right of the box.
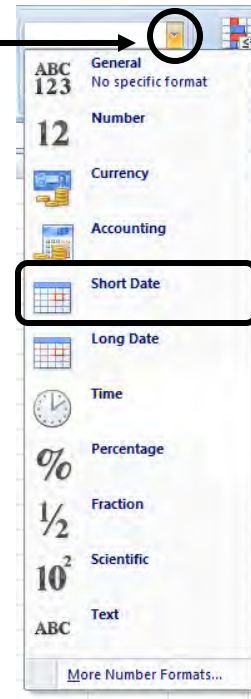
6. Click on Short Date.

7. The Row of dates should change to a dd/mm/yy version.

8. Save as "Short Date" and close.

Practice Activity #12

Activity 1

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.

6. The Long Date version will appear as November 16, 2009.

7. Once the dates have been changed, Print the Worksheet.

8. 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)

▾ ⊙ ✗ ✓ *fx* | =SUM(A2:A7) | ⨯

When you want to add more than two Cells together, you must use the <u>SUM</u> 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 <u>always</u> the first step in a formula.
2. ( ) Brackets must always 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.
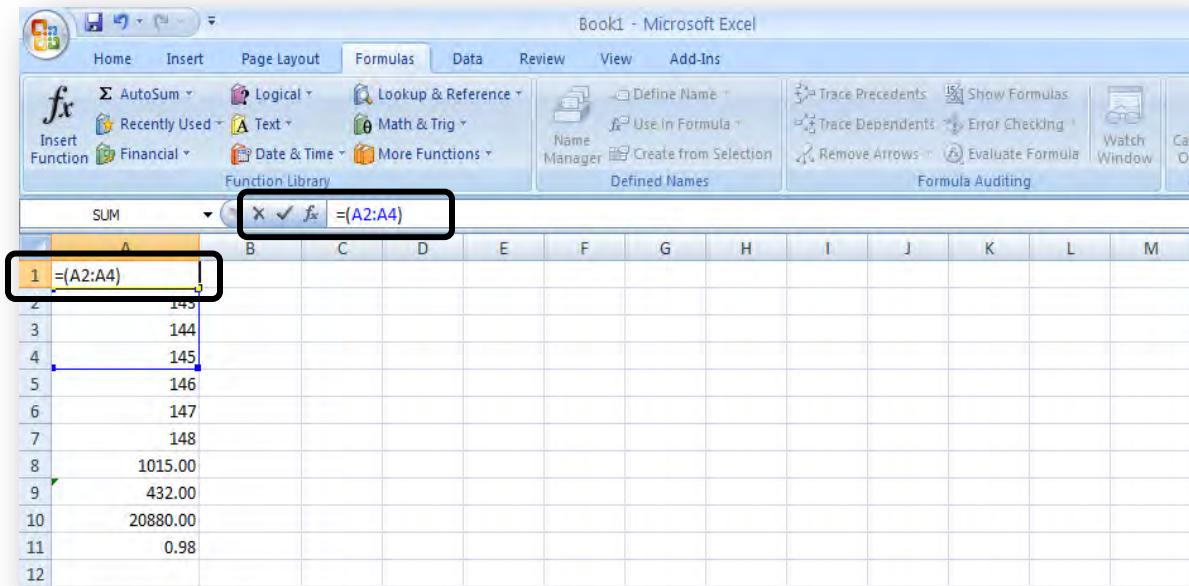
The following are some examples of how to use Excel formulas.

Example 1: Rate of Pay * weekly hours.

	A	B	C	D
	SUM		✗ ✓ ƒx =(B2*C2)	
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
	D3		ƒx	
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
	SUM		✗ ✓ ƒx =(D2-B2)		
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
	E2		ƒx =(D2-B2)		
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	
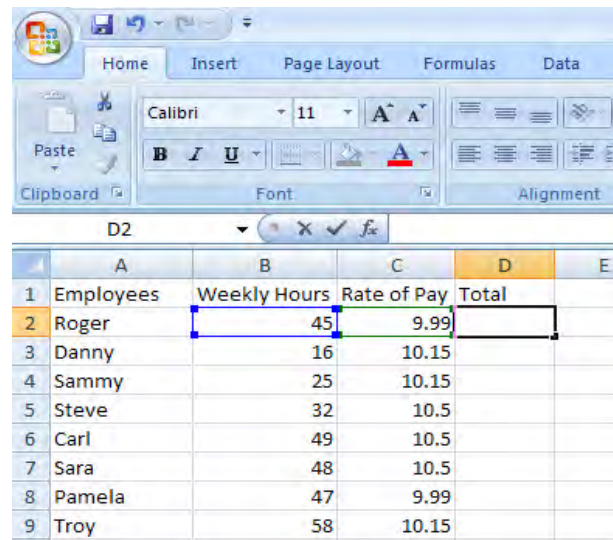
If you happen to have a negative number when it should be positive check and see that the formula is correct and the numbers are not in the wrong place.

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

Practice Activities # 13

Activity 1

1. Open a New Excel Workbook.

2. Recreate the following Sheet.

3. Click in Cell D2 and type the following formula =(B2*C2)

4. The answer should appear as 449.55.

5. Continue to fill in the rest of the Total Column by using Autofill to input the formula.

6. Once each employee has their Total Column filled in, Save as "Rate of Pay" and close.

Practice Activity # 14

Activity 1

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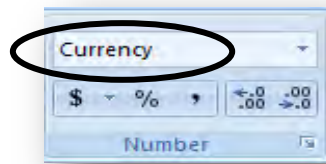
8. Highlight C 2-5 and click on the Currency formatting, center the
   information in the Cells.

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)**

In order 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 located 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 Activity # 15

Activity 1

1. Open 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.

D2				f_x =SUM(B2*C2)	
	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.
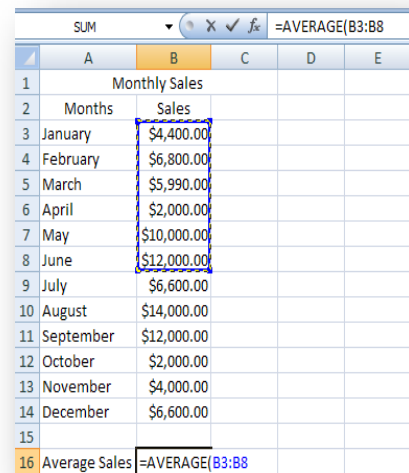
For example, if I own a store, I may want to calculate the average Sales for the months of, January, February, March, April, May and June.

1. Click on the Formula Tab.

2. Go to the Formula Library Tool. This is where you can locate the SUM, AVERAGE, MIN and MAX functions.

	Months	Sales
1		
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	
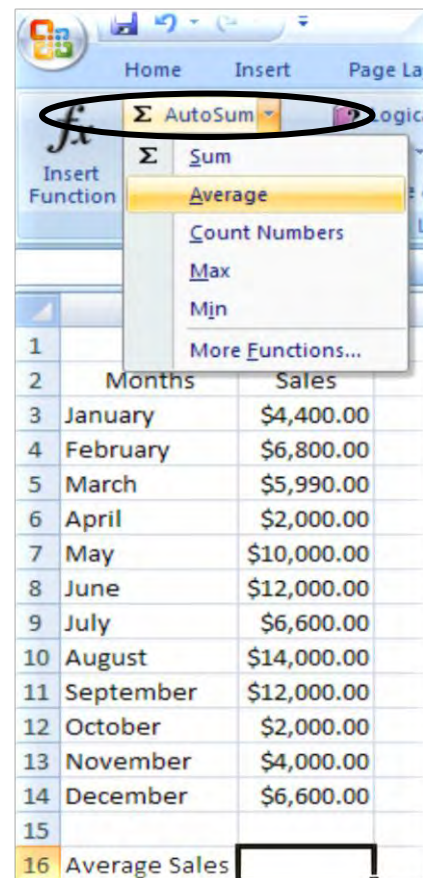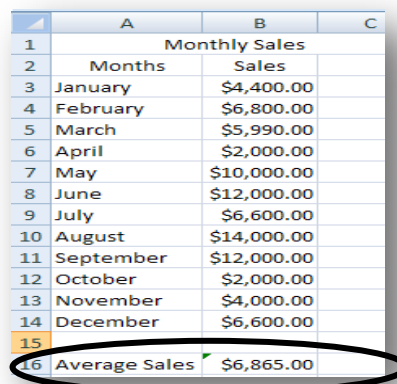
3. Click on the Sales in Column B from January to June by clicking on B3. When the text box displays, move your cursor to the bottom right corner.

4. When a small black arrow appears, right click on the arrow and drag downward until you reach B8. A blue box will appear around the selected area.

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

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

Practice Activity # 16

Activity 1

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 Activity # 17

Activity 1

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 type Min, in Column G type Max and in Column H 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. All of 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.

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.

In order 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.

Relative References
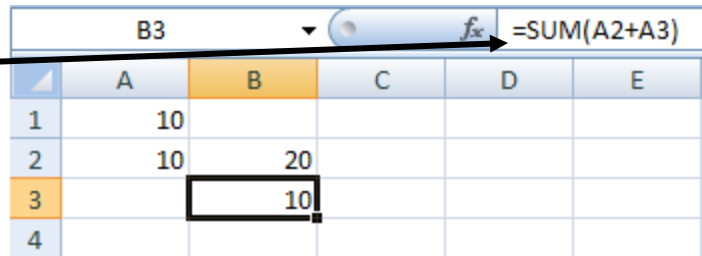
1. Enter the values shown in the picture below.

B2			*fx*	=SUM(A1+A2)
	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 highlight it and use Autofill to

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					

B3   *fx* =SUM(A2+A3)

Why do we see 10 in Cell B3 instead of 20? After all, we were trying to add 10 + 10.

The 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	
3			
4			

=SUM(A1+A2)

Cell B3 (after Autofill)

	A	B	C
1	10		
2	10	20	
3		10	
4			

=SUM(A2+A3)

Absolute References

If you want the correct answer in Cell B3, you have stop Excel from using Relative Cell Referencing. What you need is Absolute Cell Referencing. Absolute referencing keeps one or more parts of your formula the same, even when you copy, paste or Autofill.

1. Highlight Cell B2 again, and change the formula to this:
   =SUM($A$1+$A$2)

2. Use Autofill again to move the formula from Cell B2 to Cell B3. You should now have the correct answer.

B3			f_x	=SUM($A$1+$A$2)	
	A	B	C	D	E	F
1	10					
2	10	20				
3		20				
4						

You can add absolute references to all or part of a formula. Sometimes, you may only want one part of a formula to stay the same. You can do this by adding dollar signs only around the cells you want to stay the same. For example, if I want Cell C2 to stay the same but B2 to change, I would only put dollar signs around C2: =(B2*$C$2)

When to Use Absolute References

The following is an example of when an Excel user might need to use absolute references.

The chart below shows that the number of cars sold by each salesperson. Tim sold 18% of the cars in August.

	A	B	C	D	E	F	G	H
1		August	September	October	November	December	Totals	Last Check
2	Tim	58	74	52	58	84	326	
3	Sam	84	60	50	74	58	326	
4	Joe	82	62	50	70	62	326	
5	Sara	84	60	60	60	62	326	
6	Dan	60	60	60	60	86	326	
7								
8	Overall Percent							

The reason why we need an Absolute Reference for this worksheet is that the total number of cars to be sold stays the same from month to month.

If we want to find out what percentage of total cars each salesperson has sold, we need to use an absolute reference.

	A	B	C	D	E	F	G	H
1		August	September	October	November	December	Totals	Last Check
2	Tim	58	74	52	58	84	326	
3	Sam	84	60	50	74	58	326	
4	Joe	82	62	50	70	62	326	
5	Sara	84	60	60	60	62	326	
6	Dan	60	60	60	60	86	326	
7								
8	Overall Percent							
9								
10								
11	Tim	17.79%	22.70%	15.95%	17.79%	25.77%	100.00%	100.00%
12	Sam	25.77%	18.40%	15.34%	22.70%	17.79%	100.00%	100.00%
13	Joe	25.15%	19.02%	15.34%	21.47%	19.02%	100.00%	100.00%
14	Sara	25.77%	18.40%	18.40%	18.40%	19.02%	100.00%	100.00%
15	Dan	18.40%	18.40%	18.40%	18.40%	26.38%	100.00%	100.00%

To find out how what percentage of cars Tim sold in August, type the following formula into Cell B11.

$$=(B2*100\%)/\$G\$2$$

Tim sold 17.7 % in August.

Because the total does not change, our formula has an absolute reference to column G. For example, the formula we just saw has an absolute reference to cell G2.

$$=(B2*100\%)/\$G\$2$$

Note the dollar signs;

They are what make this an absolute reference.

	A	B	C	D	E	F	G	H
1		August	September	October	November	December	Totals	Last Check
2	Tim	58	74	52	58	84	326	
3	Sam	84	60	50	74	58	326	
4	Joe	82	62	50	70	62	326	
5	Sara	84	60	60	60	62	326	
6	Dan	60	60	60	60	86	326	
7								
8	Overall Percent							
9								
10								
11	Tim	17.79%	22.70%	15.95%	17.79%	25.77%	100.00%	100.00%
12	Sam	25.77%	18.40%	15.34%	22.70%	17.79%	100.00%	100.00%
13	Joe	25.15%	19.02%	15.34%	21.47%	19.02%	100.00%	100.00%
14	Sara	25.77%	18.40%	18.40%	18.40%	19.02%	100.00%	100.00%
15	Dan	18.40%	18.40%	18.40%	18.40%	26.38%	100.00%	100.00%

Cell **B2** (the number of cars Tim sold in August) ***** (multiplied by) **100%** (of products sold) / **$G$2** (the total of cars sold by Tim from August until December).

Copying an Absolute Reference

Copy the following information into a new Worksheet.

	A	B	C	D	E	F	G	H
1		August	September	October	November	December	Totals	Last Check
2	Tim	58	74	52	58	84	326	
3	Sam	84	60	50	74	58	326	
4	Joe	82	62	50	70	62	326	
5	Sara	84	60	60	60	62	326	
6	Dan	60	60	60	60	86	326	
7								
8	Overall Percent							
9								
10								
11	Tim						100.00%	
12	Sam						100.00%	
13	Joe						100.00%	
14	Sara						100.00%	
15	Dan						100.00%	

1. In Cell B11, enter the formula:
$$=(B2*100\%)/\$G\$2$$

2. Use your Autofill tool to copy the information from Cell B11 to F11.

3. In Cell B12 enter the formula:
$$=(B3*100\%)/\$G\$3$$

4. Use your Autofill tool to copy the information from Cell B12 to F12.

5. Ensure that you select the "percentage" format for Cells B11 through to H15. A **Last Check** Column has been added to ensure that you are correct in staying with the 100% of total Sales. The formula is =SUM(B11:F11) and use Autofill to fill in the rest. Insert this formula in Cell H11 through H15.

6. Apply a colour format of your choice to add colour to the chart.

7. Continue this formula through to B15.

8. Save as "ABSOLUTE" and close.

Practice Activity # 18
Activity 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 4 employees in the company and each makes the same hourly wage and the same commission. 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.

4. Type **Tile World** into the Merged Cells. Change the Font to Baskerville Old Face and change the font size to 36. Choose a Theme Colour for the background and apply it to Cells A1 through to F1.

5. In Cell B3 type **Hourly Wage** and center the text in the Cell.

6. Type **$12.00** into Cell B4 and Autofill through to Cell B7.

7. In Cell C3 type the title **Commission**, center and adjust width as needed.

8. Type in Cell C4 **2.70%,** C5 **2.70%,** C6 **2.70%** and Cell C7 **2.70%.**

9. In Cell D3 type **Monthly Sales**, center and change width as needed to fit the information.
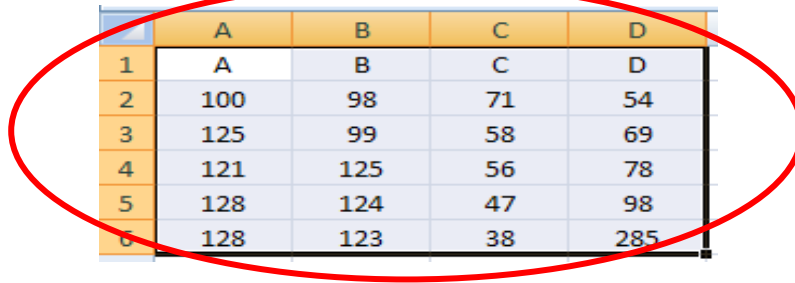
10. In Cell D4 type **$2400**, D5 type **$1900**, D6 type **$1400**, D7 type **$3200**.

11. In Cell E3 type **April/Hours** and center the text.

12. Type the following numbers into the following Cells,

    E4 **67**
    E5 **60**
    E6 **74**
    E7 **80**

13. In Cell F3 Type **Total Hours/Commission**, center the text and adjust the width as needed.

14. In Cell F4 type the following formula **=SUM(B4*E4)+($C$4*D4)**, use Autofill to fill in the information for the rest of the employees.

15. Once you are done your Worksheet should look like the one below. Check your totals with the ones on the chart below. Save as Absolute Reference Formula and close.

Tile World

	Hourly Wage	Commission	Monthly Sales	April/Hours	Total Hours/Commission
Sarah	$12.00	2.70%	$2,400	67	$868.80
David	$12.00	2.70%	$1,900	60	$771.30
Joe	$12.00	2.70%	$1,400	74	$925.80
Sandra	$12.00	2.70%	$3,200	80	$1,046.40

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.

Borders

Bottom Border
Top Border
Left Border
Right Border
No Border
All Borders
Outside Borders
Thick Box Border
Bottom Double Border
Thick Bottom Border
Top and Bottom Border
Top and Thick Bottom Border
Top and Double Bottom Border

Draw Borders

Draw Border
Draw Border Grid
Erase Border
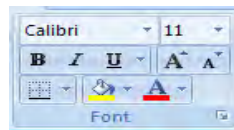
5. A drop down menu will open. Click on the style of border you want from this menu.
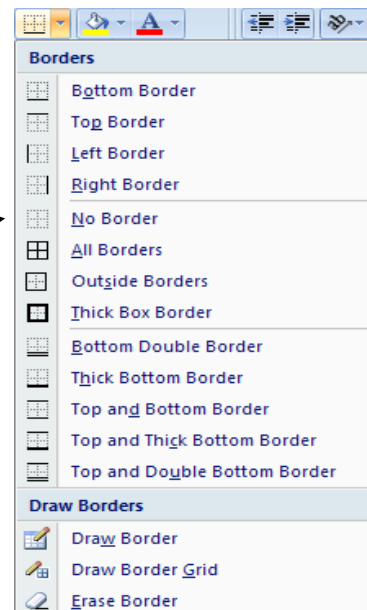
6. The tables below are a few examples of what some of the borders will look like.

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:

Draw Border

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 that 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.
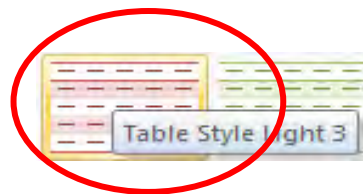
1. To format a Cell, follow the same steps by clicking on the Home Tab.

2. Click on Cell Styles.
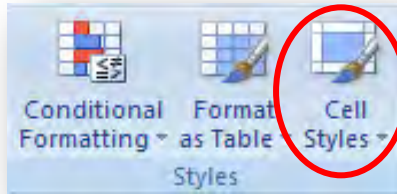
3. When you click on the Cell Styles, the drop down menu will open. From this menu click on the Cell formatting that you want.

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

Practice Activity # 19

Activity 1

1. Open "Months".

2. Highlight the months from January to December.

3. Click on the Home Tab.

4. Click on the Styles Tool.

5. Click on the **Format as Table** tool.

6. Click on the style from the menu.

7. When the menu <u>Format as Table</u> opens, click OK.

8. Highlight the entire Table and select a thick black <u>outside</u> 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 a number of ways. Here are some examples:

"Black" or "White"

"Right" or "Wrong"

"Up" or "Down"
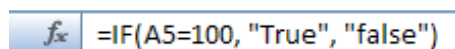
"Sold" or "In stock"

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 does not B4= 1, then it is "False".
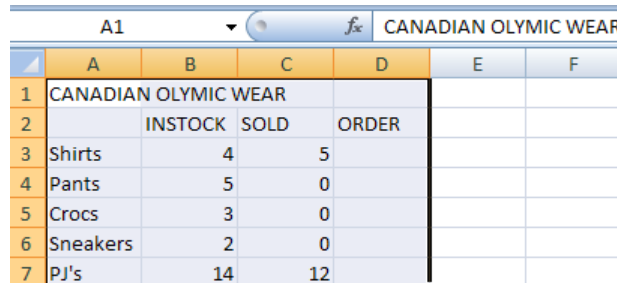
f_x =IF(A5=100, "True", "false")

	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 Activity # 20

Activity 1
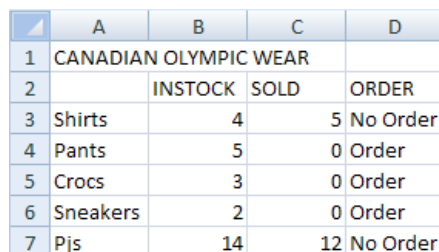
1. Open "Provinces".

2. Open the CANADIAN 3 Worksheet.

3. Type the following Information:

	A	B	C	D	E	F
					CANADIAN OLYMIC WEAR	
1	CANADIAN OLYMIC WEAR					
2		INSTOCK	SOLD	ORDER		
3	Shirts	4	5			
4	Pants	5	0			
5	Crocs	3	0			
6	Sneakers	2	0			
7	PJ's	14	12			

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.

9. Your Worksheet should now look like this:

	A	B	C	D
1	CANADIAN OLYMPIC WEAR			
2		INSTOCK	SOLD	ORDER
3	Shirts	4	5	No Order
4	Pants	5	0	Order
5	Crocs	3	0	Order
6	Sneakers	2	0	Order
7	Pjs	14	12	No Order

10. Save and close.

*You can also use Autofill to fill out the formula. Click on D2 and move your cursor until you see a black arrow. Drag the information to Cell D6.

Charts

Charts are a great way to showcase information.

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 Tool and then click on the Charts tool.

3. Click on the type of Chart that you want from this menu.
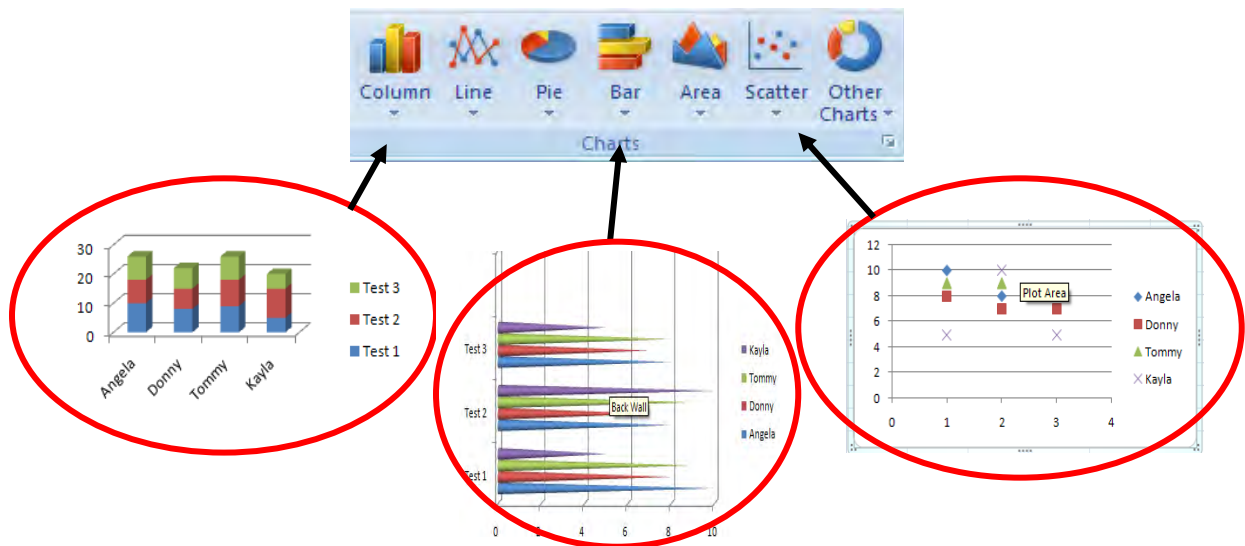
4. Once you select the style of Chart that you like, click <u>Enter</u> and the chart will show on your worksheet.

5. 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.
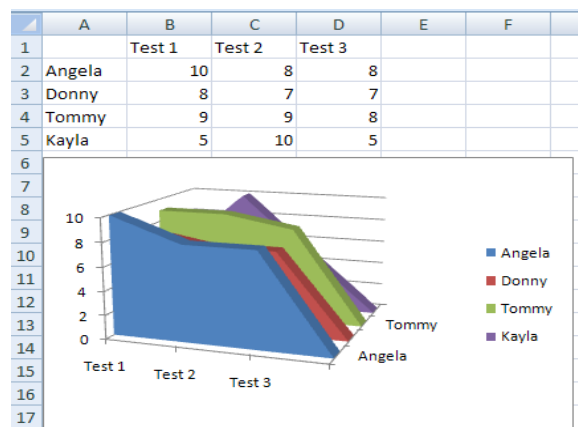
Resize a Chart

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 light green border will appear around the Chart.
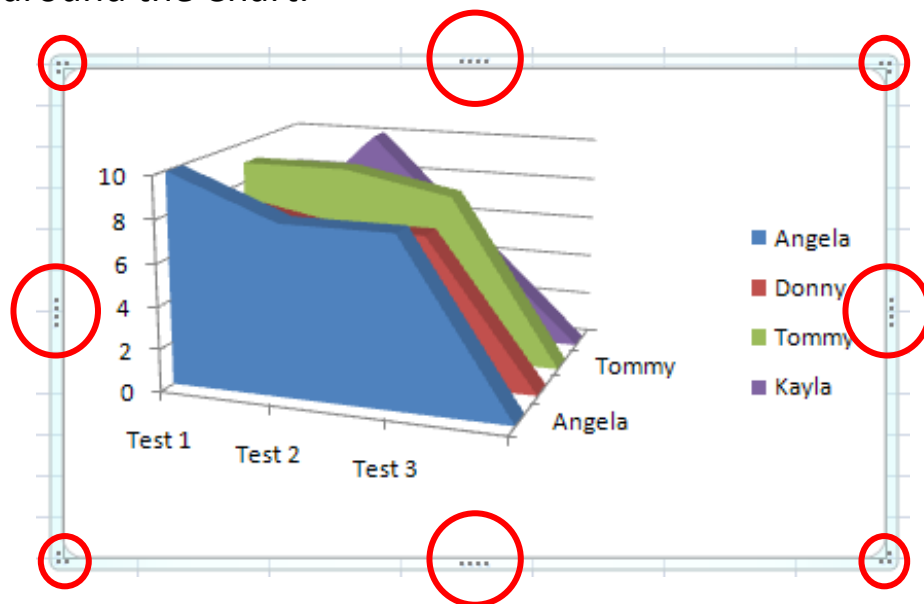
3. The green border has 8 places on the outside where there are <u>small dots</u>. These dots are circled above.

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.

Practice Activity # 21
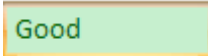
Activity 1

1. Open "Provinces".

2. Click on the CANADIAN 3 worksheet and highlight all the text in the spreadsheet.

3. While this section is highlighted, click on the Insert Tab.

4. Click on the Charts Tool and click on Columns.

5. Click on any Column Chart from this drop down menu.

6. A Chart should appear in the worksheet once a Chart is chosen.

7. Resize the Chart and move it under the highlighted Inventory information. The Chart should look something like this diagram.

8. Save and close.
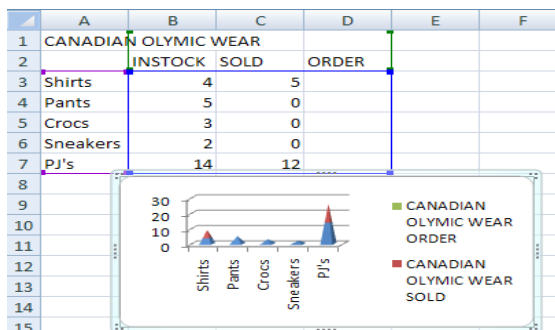
Practice Activity # 22

Activity 1

1. Open "Weekdays".

2. Highlight Colum B.

3. Click on the Home Tab.

4. Click on the Styles Tool.

5. Click on the Cell Styles.

6. Choose the   Good   selection.

7. Highlight Column D.

8. Click on the Borders Tool in the Home Tab.

9. Apply a Bottom Border.

10. Print and hand 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. Click on 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.
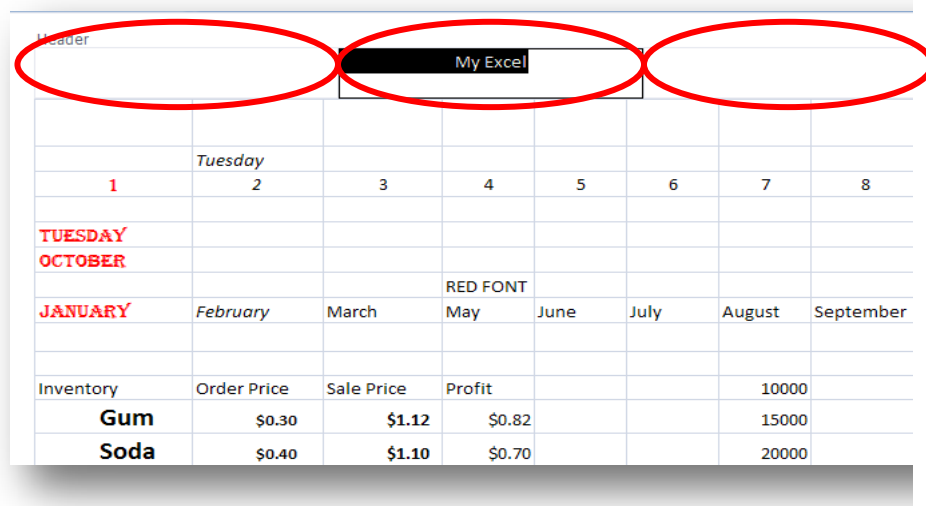
4. If you do not want a <u>Header</u> but want a <u>Footer</u> click on the Go to Footer Tool in the Design Tab.
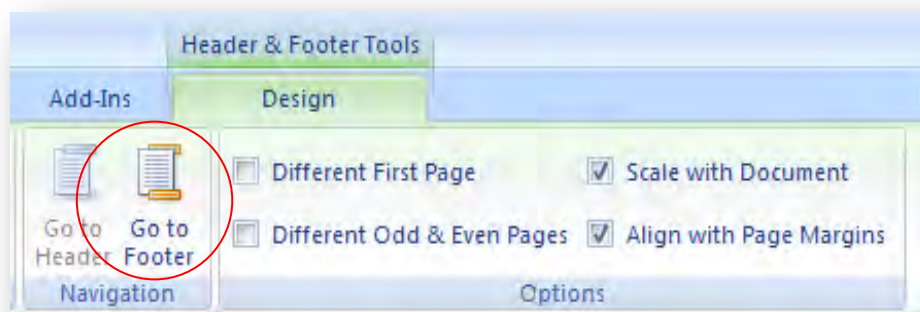
5. To type in the Header or Footer, click your cursor in the Header/Footer section.

HEADER SECTION
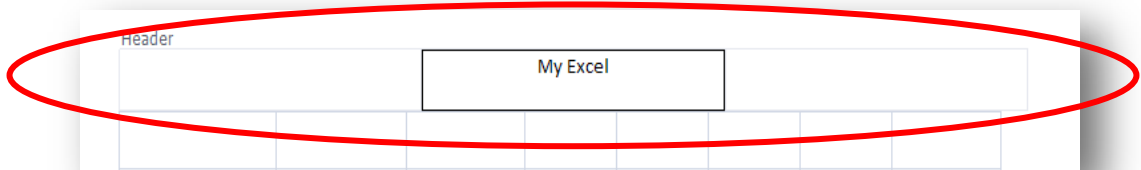
FOOTER SECTION
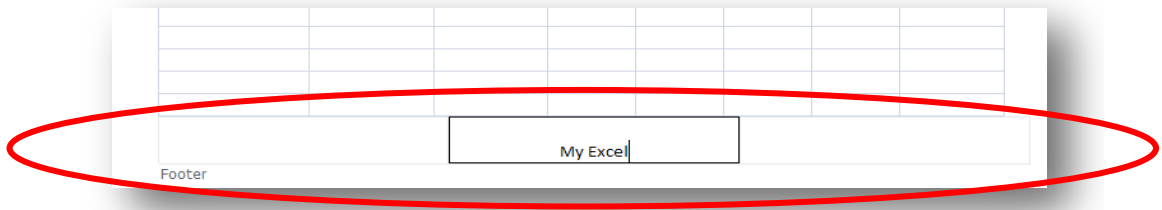
6. There are three sections to each of the Footer and Header sections. Text can be typed into any of these sections.
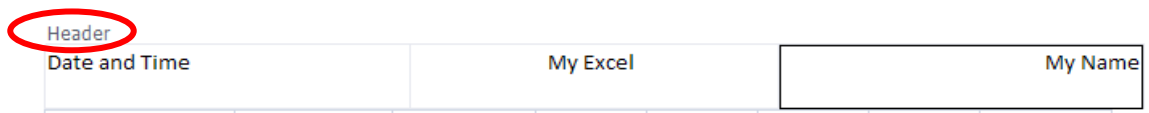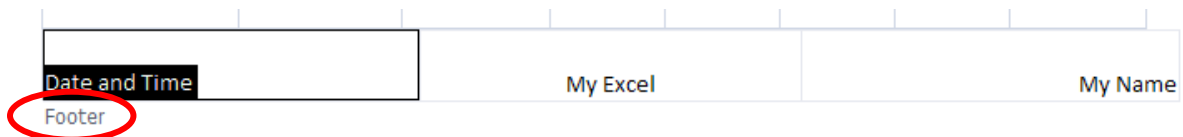
The Header/Footer will show up on the Print Preview and Print versions of the document, not always on the screen version.

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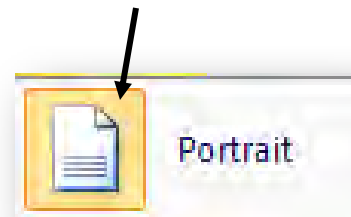
If you choose Landscape, the sheet will print out like this.
Landscape view is useful in spreadsheets
that are wide.
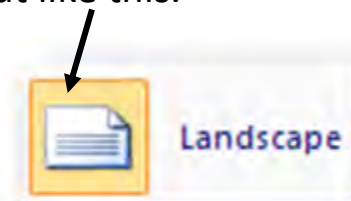
Text Wrapping

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.
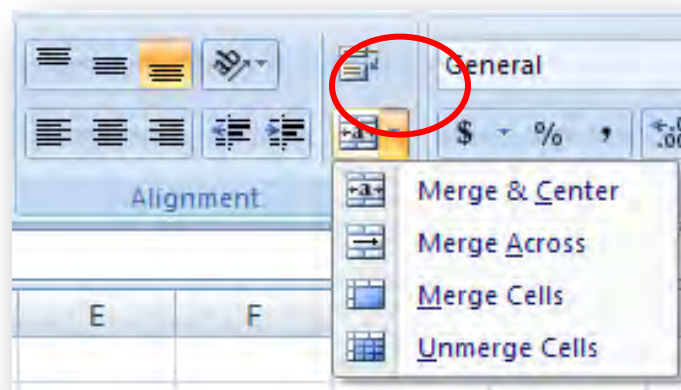
2. Type the words **Microsoft Excel Text Wrap** Tool into Cells A1, B1, and C1.

3. Once you have typed the information, click on the Text Wrap Icon.
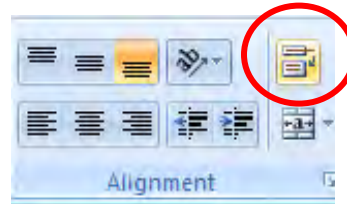
4. Finally you will have to widen Row 1 in order for the two lines of text to show on the Worksheet. Center the information that you typed. Your text should look like the text shown in the diagram below.
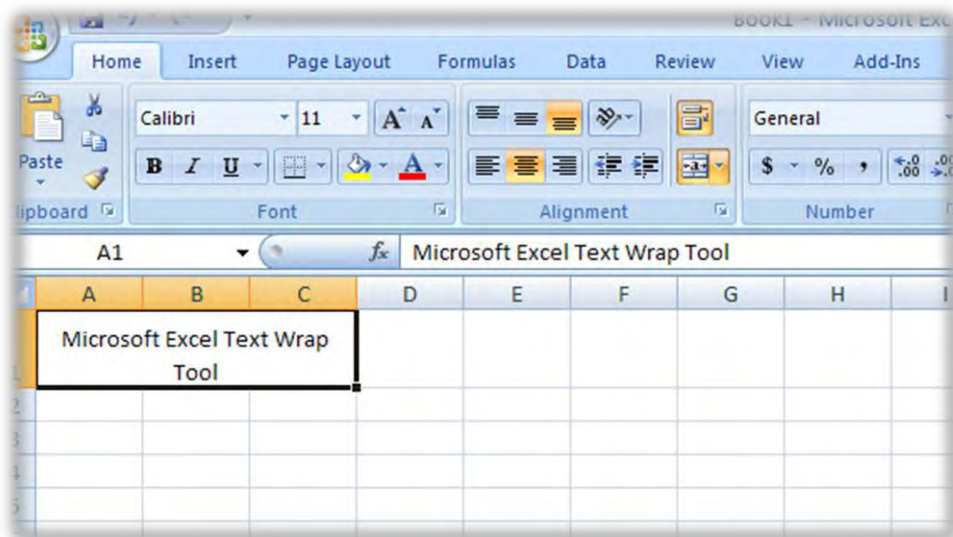
Practice Activity # 23

Activity 1

1. Open "Provinces"
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 "PROVINCES" in the second Header box.
6. Type "your name" in the third Header box.
7. Change the orientation of the page to Landscape.
8. Print <u>Current Page</u>.
9. Save and close.

Activity 2

1. Open "Provinces".
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 "PROVINCES" 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. Print
10. Save and close.

Practice Activity # 24

Activity 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. Print
9. Close.

Activity 2

1. Open "Rate of Pay".
2. Click on the Insert Tab.
3. Click on the Header/Footer Tool.
4. Type <u>Employee Rate of Pay</u> into the middle text box.
5. Print.
6. Save and close.

Final Demonstration

1. Open a new Excel Workbook.
2. Starting in Cell B1, type January; in C1, type February.
3. Click on Cell B2 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, **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 of the information is correct and that it is in the correct Cell.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		January	February	March	April	May	June	July	August	September	October	November	December
2	Income	4200	3400	4100	3300	3200	3100	4700	4100	4200	4200	4200	3900
3													
4	Rent	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
5	Groceries	600	620	540	540	620	510	570	580	590	420	410	500
6	Car Expense	320	320	350	360	240	202	280	360	410	202	230	410
7	Utilities	900	910	890	880	870	860	850	901	906	910	915	879
8	Entertainment	710	790	200	200	900	800	500	490	485	475	200	200
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 or not the expenses exceed the income.

14. Highlight Cells B12 through M12 and center align the text.

15. 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.

16. Highlight the entire spreadsheet and select a Table colour format of your choice.

17. Click on Cell A14 type Annual Report 2010. Click off the Cell and then click on the Cell again, this time select text wrap so the Annual Report 2010 appears in the same Cell, but on two separate lines. Align text to the center in Cell A14.

18. Select Cells B12 through M12 and center align the text.

19. Highlight the entire spreadsheet and click on the Column chart and insert a chart into the spreadsheet. Move 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. Save as *Final Demonstration* and close.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		January	February	March	April	May	June	July	August	September	October	November	Decembe
2	Income	$4,200.00	$3,400.00	$4,100.00	$3,300.00	$3,200.00	$3,100.00	$4,700.00	$4,100.00	$4,200.00	$4,200.00	$4,200.00	$3,900.0
3													
4	Rent	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.00	$1,200.0
5	Groceries	$600.00	$620.00	$540.00	$540.00	$620.00	$510.00	$570.00	$580.00	$590.00	$420.00	$410.00	$500.0
6	Car Expense	$320.00	$320.00	$350.00	$360.00	$240.00	$202.00	$280.00	$360.00	$410.00	$202.00	$230.00	$410.0
7	Utilities	$900.00	$910.00	$890.00	$880.00	$870.00	$860.00	$850.00	$901.00	$906.00	$910.00	$915.00	$879.0
8	Misc.	$710.00	$790.00	$200.00	$200.00	$900.00	$800.00	$500.00	$490.00	$485.00	$475.00	$200.00	$200.0
9													
10	Total	$3,730.00	$3,840.00	$3,180.00	$3,180.00	$3,830.00	$3,572.00	$3,400.00	$3,531.00	$3,591.00	$3,207.00	$2,955.00	$3,189.0
11													
12	Budget	Within	Over	Within	Within	Over	Over	Within	Within	Within	Within	Within	Within
13													
14	Annual Report												
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

Part 2
Additional Activities

Congratulations, you have finished the basics of Essential Skills Spreadsheets and are now ready to apply those skills to the workplace or your home needs. You will be asked to complete the following exercises using your new skills. If you get stuck on any task, refer back to the section that teaches you how to use the tools you need.

Tip: Creating a document or spreadsheet involves a certain amount of creative freedom. You can customize your document or spreadsheet to "look" anyway you prefer. As long as all the proper information is included and that it is easy enough to find it, you can do as you please!

Activity 1:
Monthly Household Expenses

To keep track of your monthly bills, you will create a template to calculate the total you spend each in year each category.

1. Insert a header at the top of your document.
2. In the centre of the header, type in the name Monthly Budget 2011.
3. Change the font size to 24 and bold it. Text wrap if needed.
4. In column "A" starting in row 7 list each bill you receive in a month. (e.g.: phone, gas, heat, mortgage/rent etc)
5. Adjust the Width of the column if needed.
6. In row 6 starting in column "B" type your months starting with January and February (remember you can auto fill the rest of the months).
7. Skip a row below your list of bills, then type in totals in Column "A".
8. In the Totals row at the bottom of each month (from column B to M) you will add the formula to calculate how much you spend each month.
9. Again once you have created the formula at the bottom of the B column, you can auto fill to column M.
10.   In Column "O" you will add the same formula to calculate how much you spend each year for each category (e.g.: groceries or heating or phone).
11.   Select all your Cells and change the formatting to "Accounting".
12.   Save to your USB memory stick as "Monthly Budget".

13. Print a copy.
14. Close.

Skills needed in Activity #1:

- Designing
- Inserting
- Auto Fill
- Formulas

- Formatting Cells
- Printing
- Saving to USB

Hint: Your formulas will start =SUM(……)

Activity 2:
Travel Budget

You are preparing for a family trip. You will want to know how much this trip will cost you and how much will you have to save each month.

1. Insert a header at the top of your document.
2. In the centre of the header, type in the name Family Trip 2012.
3. Change the font size to 24 and bold it. Text wrap if needed.
4. In column "A" starting in row 7 list each expense you will have. (e.g.: hotels, food, gas, airline tickets, car rental etc.)
5. Adjust the Width of the column if needed.
6. In row 6 starting in column "B" type the heading cost per day.
7. In column "C" type Total cost for holiday.
8. In column "C" write the formula for each holiday expense that multiplies the daily costs by total number of days you are planning your holiday. (remember you can auto fill the

formula down the column (remember to format your Cells to accounting).

9. At the bottom of column "C" write a different formula to add the total expense for your holiday.

10.   Save to your USB memory stick as "Travel Budget".

11.   Print a copy.

12.   Close.

Skills needed in Activity #2:

- Text Wrapping
- Inserting
- Auto Fill
- Formulas

- Formatting Cells
- Printing
- Saving to USB

Hint: Your formulas will both start as =SUM(……) but will be different within the brackets.

Activity 3:
Travel Options Comparison

You are preparing for a family trip. You are trying to figure out which method of travel is most cost effective for you. There are two adults and three children in your group. You will be travelling to Prince Edward Island. You will travel approximately 1100 km's.

1. Insert a header at the top of your document. In the centre of the header, type in the name Travel Options.

2. Change the font size to 24 and bold it. Text wrap if needed.

3. In column "A" starting in row 5 list each mode of transportation you could use to get to the east coast. (e.g.: airline, car, or train. Use the internet to find the costs)

4. In row 4 starting in column "B" type the heading cost per adult.

5. In column "C" type cost per child.

6. In column "D" Total cost.

7. In Cell "D4" write a formula that will calculate the total cost for each mode of transportation.

8. You can auto fill your formula for the other transportation methods.

9. Save to your USB memory stick as "Travel Options".

10.   Print a copy.

11.   Close.

Skills needed in Activity #3:

- Merging Cells
- Auto Fill
- Formulas
- Formatting Cells
- Printing
- Saving to USB

Hint: Your formula will be complex with two brackets of calculations (B5*2)+(C5*3)

Activity 4:
Cheque Book

You have decided to create a computer version of your cheque book. You will be able to fill in formulas that will do all the calculations for you giving you an accurate and running total of your balance.

1. Insert a header at the top of your document. Title your document by typing "Your Name" and the word "Cheque Account" in the new block you created.
2. Change the font size to 24 and bold it. Text wrap if needed.
3. In Cell "A5" type the word "Date".
4. In Cell B5 type the word "Particulars".
5. In Cell D5 type the word "Deposits".
6. In Cell E5 type the word "Withdrawals".
7. In Cell F5 type the word "Balance".
8. In Cell F6 enter the formula needed to calculate your balance (remember to enter your opening balance in Cell F4 as your formula will need that number to calculate properly).
9. Auto fill to the bottom of your worksheet.
10. Save to your USB memory stick as "Cheque Book".
11. Print a copy.
12. Close.

Skills needed in Activity #4:

- Merging Cells
- Auto Fill
- Formulas
- Formatting Cells
- Printing
- Saving to USB

Hint: Your formula will be complex because it needs to understand that putting a number in column D adds and putting a number in column E subtracts. =SUM(F4+D5-E5)

Activity 5:
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 Activity #5:

- 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%.

Activity 6:
Project Plan

You are planning a series of purchases in the next few years and would like to create a spreadsheet to figure out how to divide the expenses. Every family has a list of things that will happen which they should plan for. Like building a garden shed, planning a vacation, remodelling a room, buying a car or new fridge or adding to the house. You will create a three year plan to list those upcoming expenses and which year you plan on accomplishing them.

1. Open a new workbook and create the 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 three years.
3. In columns B, C and D, type the years 2012, 2013, 2014.
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 or in the case of additions 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. Print a copy.

8. Close.

Skills needed in Activity #6:

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

Hint: Your formulas are simple additions

Activity 7:
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. In column "C" you will indicate the number of a particular item you plan on buying.
5. Insert your formula in column "D" that will multiply the basic cost of an item then auto fill to the bottom of your work sheet.

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. Insert a column between column "C" and "D" and call it taxes.
8. Change your formula in column "D" to include the taxes on only the taxable items. You do not have to adjust the entire column.
9. Save to your USB memory stick as "Grocery List".
10.   Print a copy.
11.   Close.

Skills needed in Activity #7:

- 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.

Computer Course Evaluation

Congratulations on completing the Essential Skills Spreadsheets: Microsoft Excel 2007. Please take a minute to fill out this survey. You may circle your answers. When you have filled out the evaluation please hand it in to the Instructor.

1. I found the instructions in this lesson clear and easy to follow.
     Yes   Somewhat   No

2. I learned new information from this guide.
     Yes   Somewhat   No

3. I understood my exercises and was able to do them in the right order.
     Yes   Somewhat   No

4. I found this work difficult.
     Yes   Somewhat   No

5. I found this work interesting.
     Yes   Somewhat   No

6. I now feel comfortable using Excel 2007.
     Yes   Somewhat   No

7. I will use the skills I learned in the following area of my life.
     School   Work   Home   None

Demonstration Log

Demonstration	Needs Work	Good	Excellent	Comments
1. Adding and deleting Rows, Columns and Cells.				
2. Renaming and saving worksheets and workbooks.				
3. Applying charts				
4. Align Information in Worksheets				
6. Using formulas				
7. Adding Headers/Footers				
8. How to use Columns, Rows and Cells				
9. Applying Table and Cell Formatting				
10. Applying				

Checklist

I have learned about…

- ☐ Opening Excel
- ☐ Excel Tabs and Tool options
- ☐ Creating charts
- ☐ How to open, close and save a document
- ☐ Changing worksheet orientation
- ☐ Appling Average formulas
- ☐ Nested formulas
- ☐ Header and Footer
- ☐ Fonts and styles
- ☐ Creating and Renaming worksheets
- ☐ Borders
- ☐ Paper orientation
- ☐ Cell Formatting
- ☐ Column Formatting