



# MS EXCEL

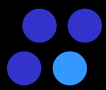
WORKSHEET AND CELL OPERATIONS

MS EXCEL

COMPUTER



# CELL OPERATIONS

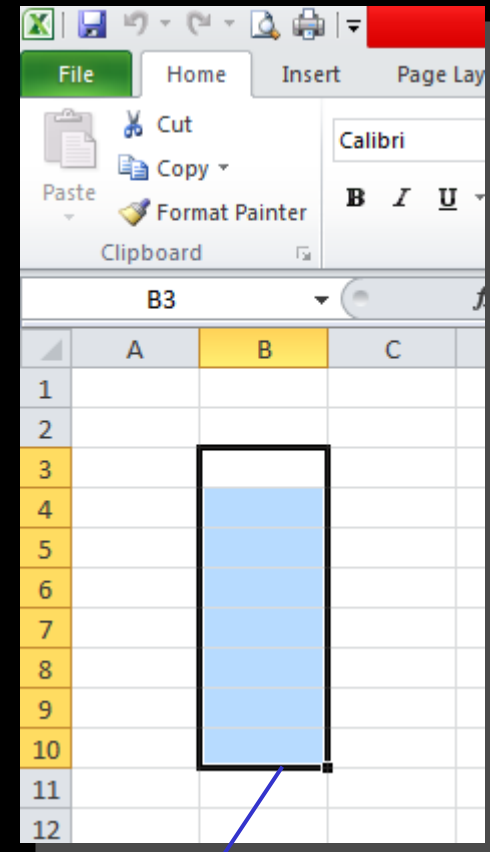


## SELECTING A CELL or A RANGE

*To select a single cell*, simple click on it.

*To select a range of cells*, click on one of the cells, and while holding your mouse button down, drag your mouse until all of the cells you would like to select are highlighted.

*Also you can use SHIFT+ Arrow keys, to select cell range.*

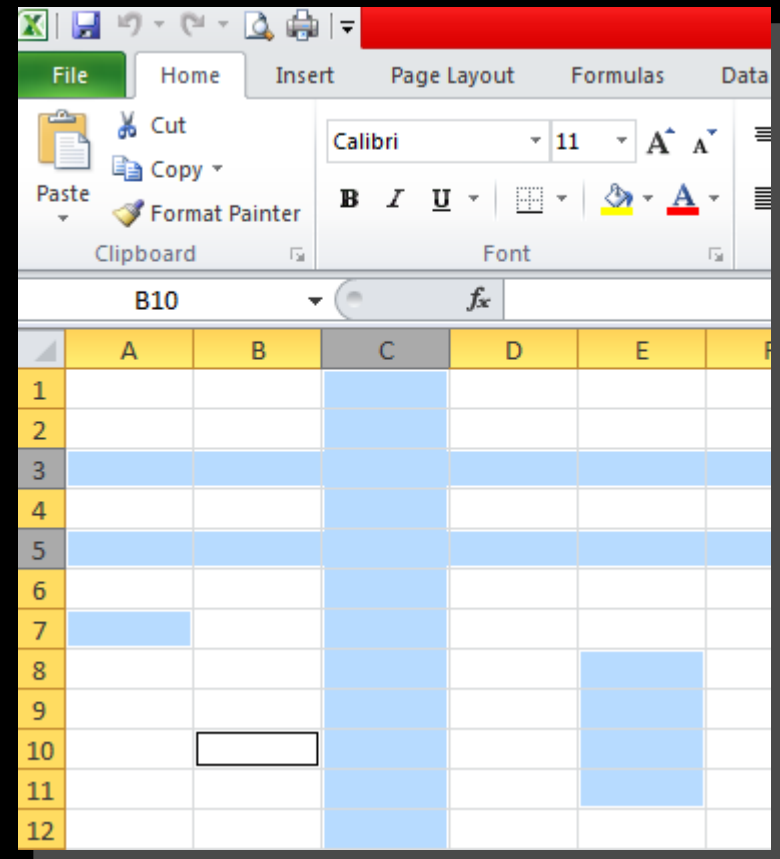


Just drag mouse pointer.

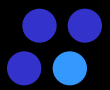


**To select the cells that are not together (non-contiguous cells or non – adjacent cells)**

**You can click the cells or range of cells by holding down the control-key.**



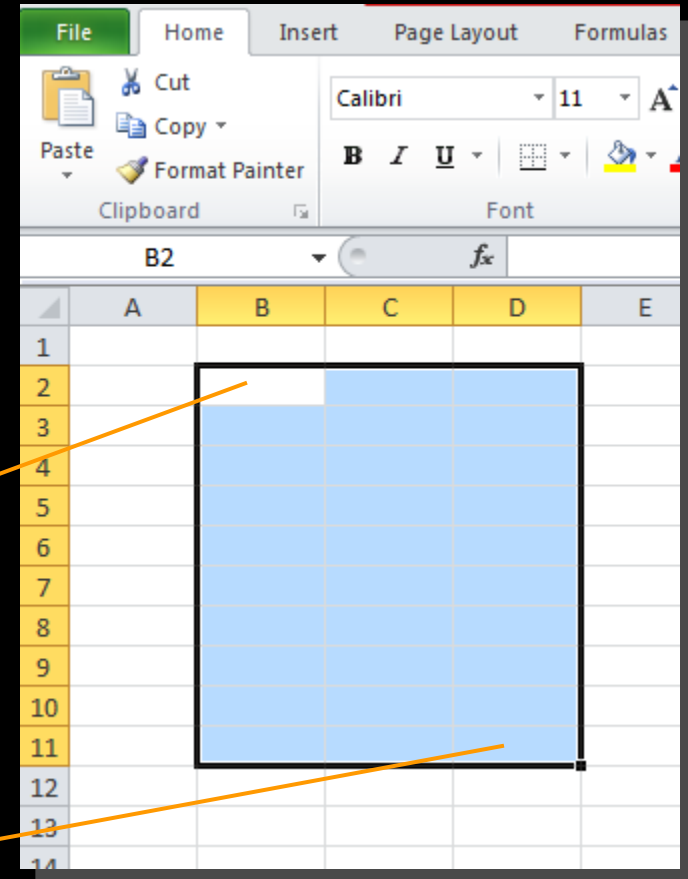
By the same way, you can select the non-adjacent rows and columns.



**To select the cells that are together (contiguous cells or adjacent cells)**

**You can click the starting cell of the range and press and hold down the shift-key, then click the finishing cell of the range.**

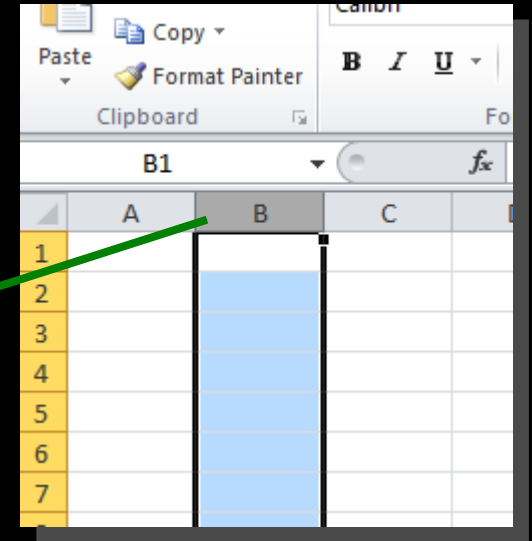
By the same way, you can select the adjacent rows and columns.





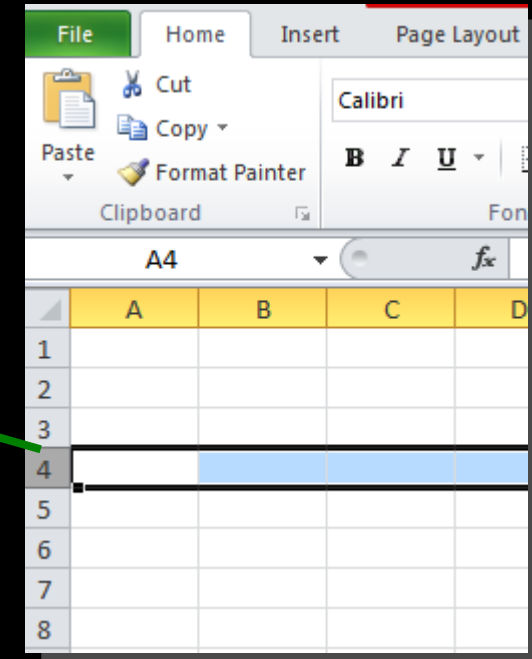
## To select a column

You can click on **the Column Letter**.



## To select a row

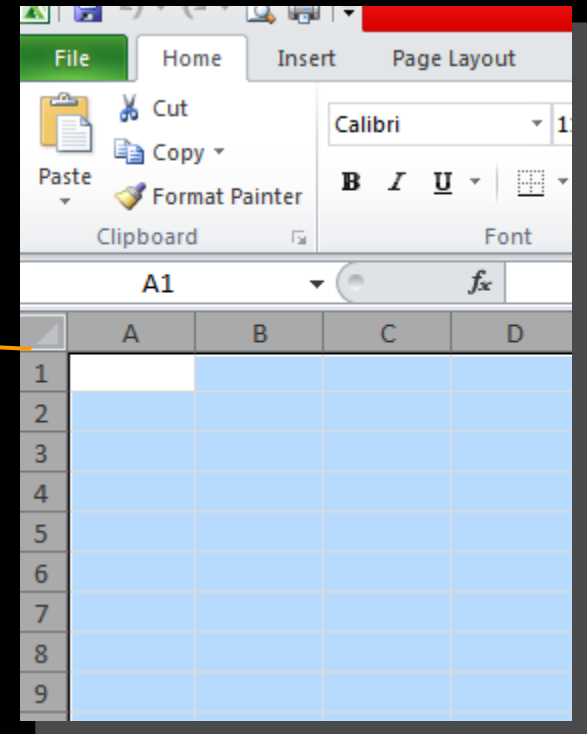
You can click on **the Row Number**.





To select all the cells in a sheet

You can click **this box.**  
or  
press the CTRL + A





# MOVING AROUND IN THE SPREADSHEET





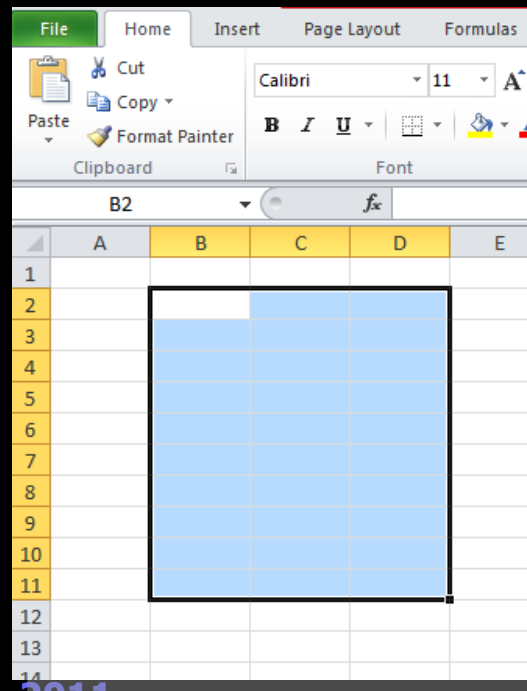
## MOVING AROUND IN A SHEET

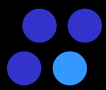
- Press the arrow keys move the active cell one cell at a time to right, left, up and down or press enter key to move one cell down, tab key to right, Shift+Enter up, Shift+Tab to left.
- Similarly use the [PageUp] and [PageDown] keys to move the active cursor up or down a screen at a time.
- [Home] moves to the first column on the current row
- [Ctrl]+[Home] moves the first cell, A1
- [End], then [Home] moves to the first cell in the document
- CTRL + right arrow key, moves to the last cell in the same row
- CTRL + left arrow key, moves to the first cell in the same row
- CTRL + up arrow key, moves to the first cell in the same column
- CTRL + down arrow key, moves to the last cell in the same column



## MOVING AROUND IN A SELECTED AREA

- **First select a range**
- Enter to move to the bottom cell in the same range
- Shift + Enter to move to the upper cell in the same range
- Tab to move to the next cell in the same range
- Shift + Tab to move to the left cell in the same range

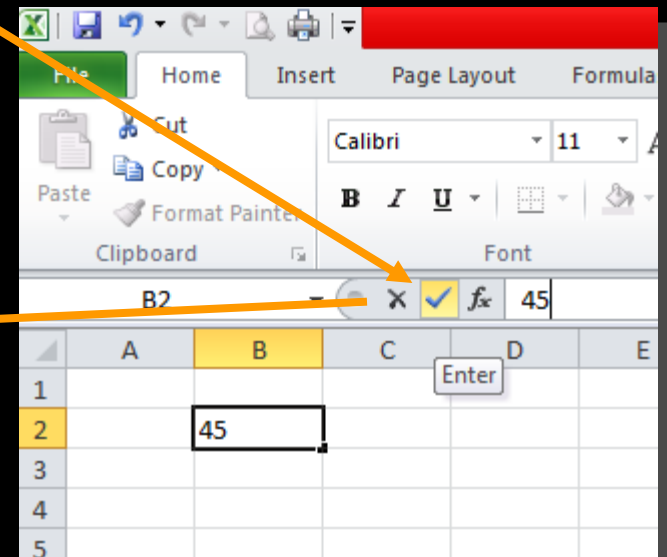


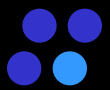


## ENTERING DATA INTO A CELL

- Click a cell to make it active cell
- Just type what you wish
- Press the [ENTER] key or press an arrow key or click the enter button.

To cancel the typing just press the ESC key or click the Cancel button.





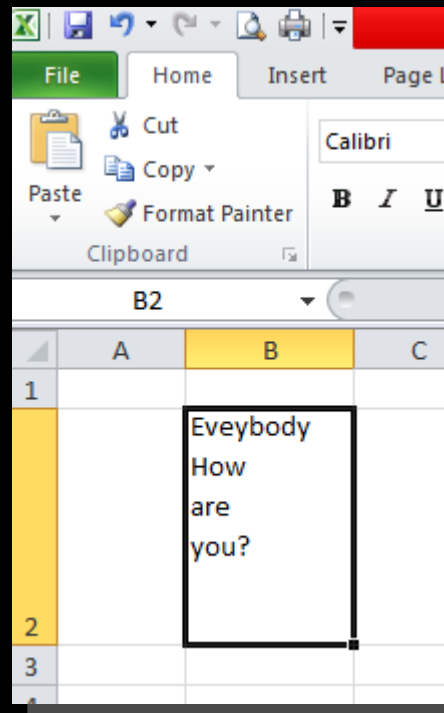
## CLEARING CELL CONTENTS

- Select the cell that you want to clear
- Just press DEL or DELETE key.



## ENTERING MULTIPLE LINE OF DATA IN THE SAME CELL

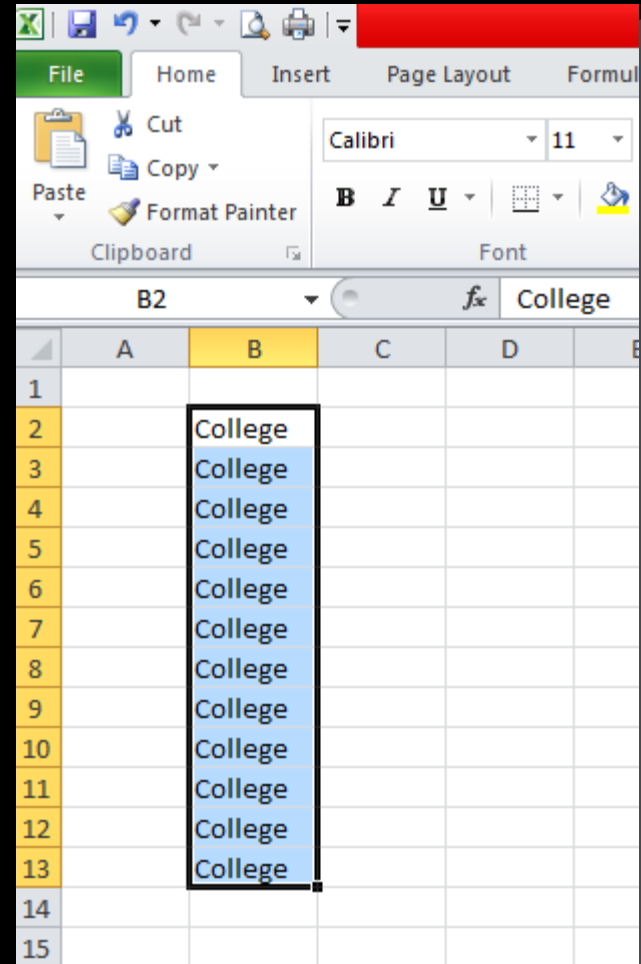
Press the ALT + Enter at the end of the  
every line

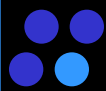




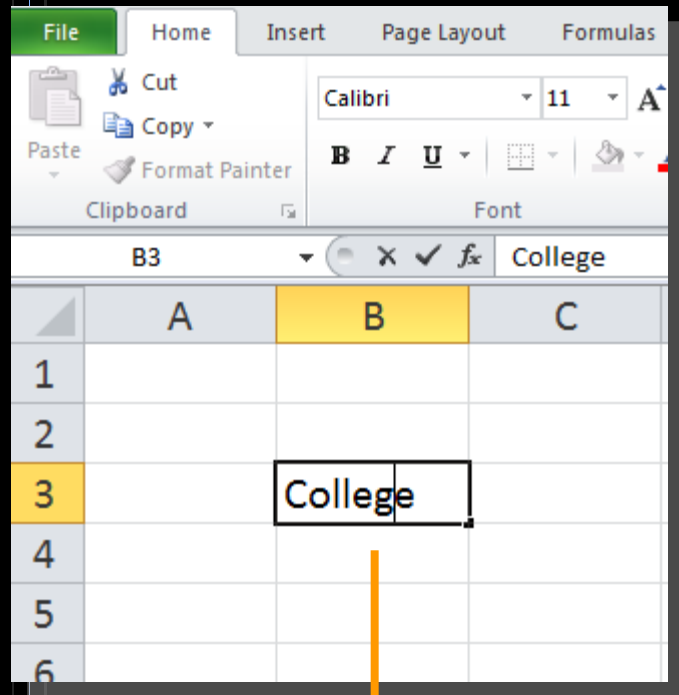
## ENTERING SAME DATA INTO AN AREA (RANGE)

- Select a range
- Just type what you wish
- Press the CTRL + [ENTER] key.





## EDITING CELL CONTENTS



To enter into a cell  
double click on the cell.

Now that you have entered data, you might need to alter the information. There are several ways to do this.

Just to alter information in a cell, firstly click the cell with information, type your new data and press enter. Contents of the cell will replace with the previous one.

To edit a cell, **double-click on the cell or press F2** you want to edit, then the insertion point will appear inside the cell. You can use the arrow keys, backspace and delete keys to edit this cell as needed.



## RESIZING THE ROWS AND COLUMNS

Sometimes you need to change column widths and row heights making wider and sometimes narrower. If text in a cell is wider than the column and there is information in the adjacent cell to its right, then the text information is truncated.

### 1<sup>st</sup> WAY

Drag to resize			
	A	B	C
1			
2			
3			

To adjust a column's width is to place your mouse pointer on the border between the column numbers. The mouse pointer will become a double headed arrow. Click and drag with the double-arrow until the column is the width you want. To adjust the row height, locate the mouse pointer on the border between the row numbers.





## RESIZING THE ROWS AND COLUMNS

2<sup>rd</sup> WAY

Drag to resize			
	A	B	C
1			
2			
3			

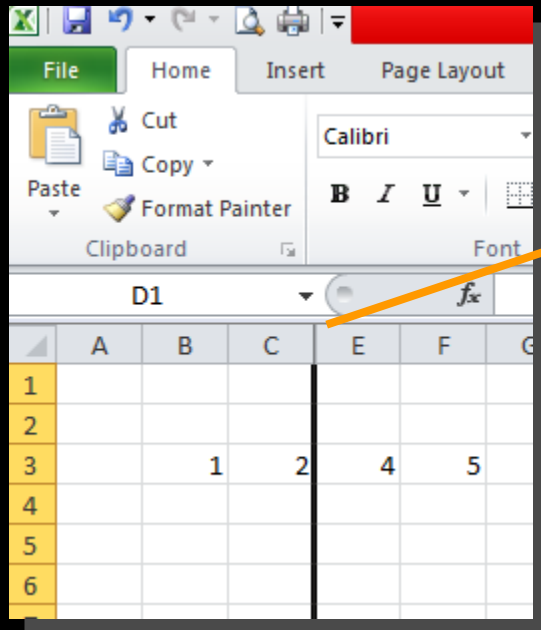
Locate the mouse pointer on the border of the column headings when you see double headed arrow, **double-click** the mouse to adjust the automatically.

To adjust a column's width is to place your mouse pointer on the border between the column numbers. When you see a double headed mouse pointer. Double click the mouse to adjust the column width automatically to exact size. To adjust the row height automatically, you can follow the same method.

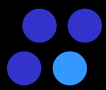


## HIDING AND UNHIDING THE ROWS AND COLUMNS

The designer may hide some columns and rows (they do not need to view) in some case, for example, to make the **report** table with a shorter width to avoid scrolling left and right.



In the picture, Column D is hidden.



# HIDING AND UNHIDING THE ROWS AND COLUMNS

## 1<sup>st</sup> WAY

Hiding rows or columns can be performed in two ways;  
by **selecting** the row or column that you wish to hide, **right clicking** and selecting **Hide**.

## 2<sup>nd</sup> WAY

To hide the columns and rows, you can set their size to zero.



## HIDING AND UNHIDING THE ROWS AND COLUMNS

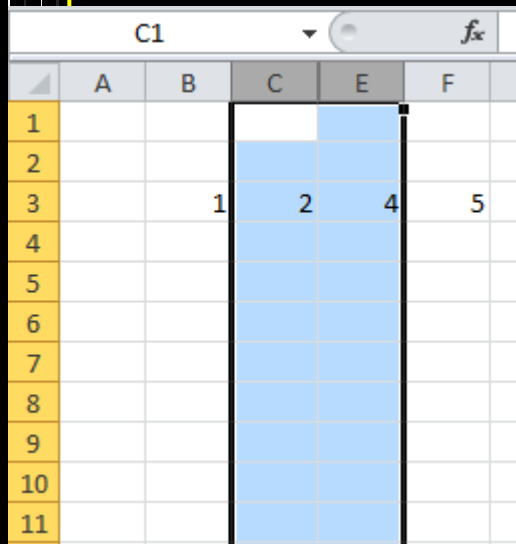
Lets unhide the column now.

**Step 1** Select the column range that contain hidden columns,

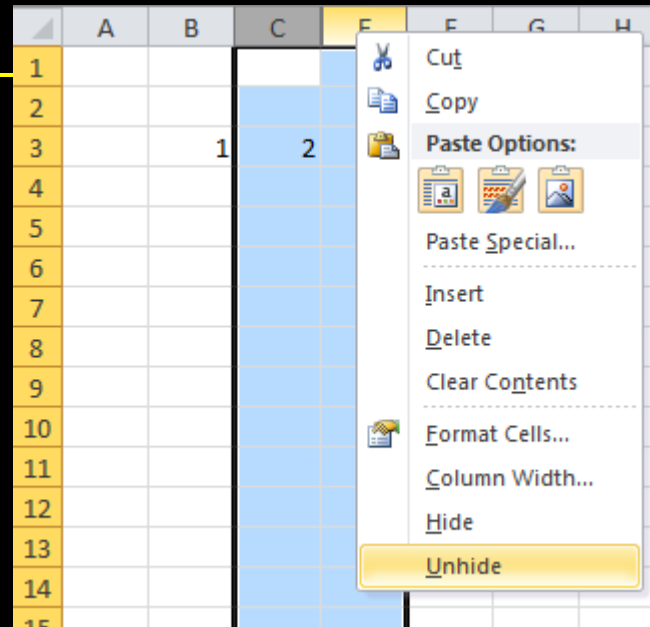
**Step 2** right-click and select Unhide option.

Notice that you have now unhidden column **D**.

As mentioned above, you can also perform the hide/unhide operation by right clicking and selecting either **Hide** or **Unhide** from the shortcut menu. This is my preferred option, but it is up to you which one you use.



Step 1



Step 2



# COPYING AND MOVING CELL CONTENTS



## 1<sup>st</sup> METHOD BY USING COPY, CUT, PASTE COMMANDS

When we **Copy** data from one cell to another, we are making a duplicate of the cells content.

When we **Cut** data from a cell we are actually **moving** it from its current location to a new location.

**Pasting** is placing either the **Cut** or **Copied** data in its new destination.

TO COPY, USE COPY AND PASTE COMMANDS.  
TO MOVE, USE CUT AND PASTE COMMANDS.



## COPYING

There are many ways that we can **Copy** in Excel, the way that you do it is purely optional and should be the way you are most comfortable with.

Make sure you have selected the cell which you want to copy. Then you can either:

- i)* Right click on the cell and from the Shortcut menu select **Copy**.
- ii)* Push **Ctrl + C** on your keyboard
- iii)* Select the **Copy** button from the Home ribbon menu.
- iv)* Hold down **Ctrl** key, then Use the **Drag and Drop** operation.



## CUTTING

Again, as with most options in Excel, there are a multitude of ways to **Cut** a cell.

Make sure you have selected the cell which you want to cut. Then you can either:

- i)* Right click and select **Cut** from the Shortcut menu
- ii)* The **Cut** button from the Home ribbon menu (the pair of scissors)
- iii)* Press **Ctrl + X** on your keyboard
- iv)* Use the **Drag and Drop** operation.





## PASTING

After using the copy or cut command, to finish copying or moving data you should use the Paste command.

Now select any other cell and either:

- i)* Right click on the cell and from the Shortcut menu select **Paste**
- ii)* Push **Enter** on your keyboard
- iii)* Push **Ctrl + V** on your keyboard
- iv)* Select the **Paste** button from the **Home ribbon menu** .

In the second way by pressing **Enter** you will **CLEAR** the Clipboard after it has Pasted in the data. You will notice with the other four methods that the contents the cell stays on the clipboard. This means that we could select other cells and continue pasting as much as we like using any of the above methods other than using **Enter** on our keyboard.



## 2<sup>ND</sup> METHOD USING DRAG AND DROP METHOD FOR COPYING AND MOVING

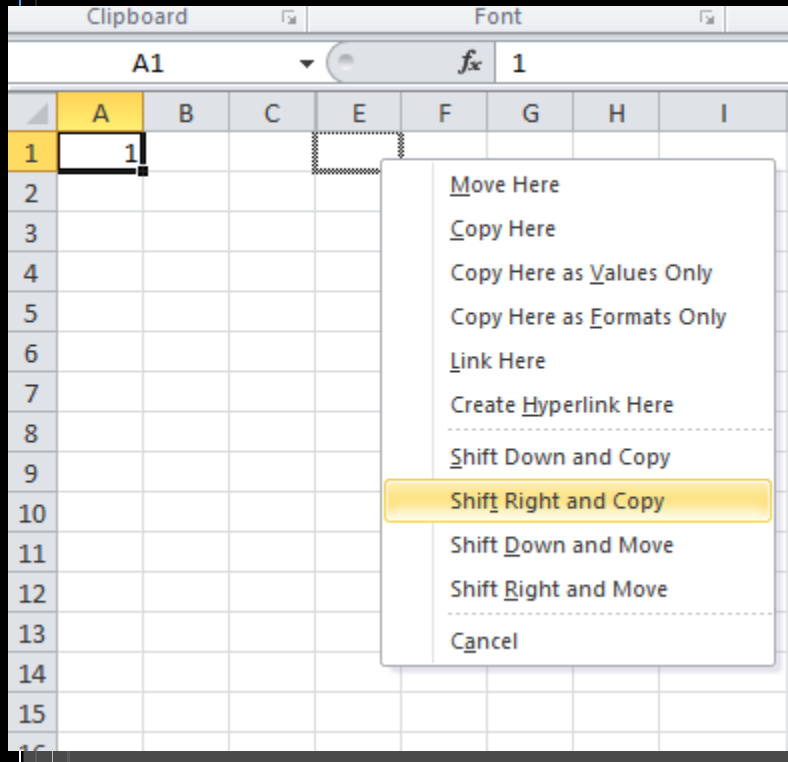
There is another method that can be used to **Copy or move**, this is called **Drag and Drop**, and is possibly the fastest method if you only intend to **Paste** the data into one destination as opposed to various.

For this method, again select the cell which you want to copy or move, hold down your **Ctrl** key to copy or don't press any key to move, and locate your mouse on the border of the cell and drag in the desired location then simply release the mouse button.

*If you also hold down your **Alt** key whilst doing this, you can change sheets by dragging the copied data over the sheet name tab that you wish to copy or move it to.*

## DRAGGING THE CELL BY RIGHT-CLICK

The last method of **Copying** and **Pasting** data is to select the cell you wish to **Copy**, right click on any cell border and holding down the right mouse button drag to any destination cell, then release the mouse button. Excel will display another Shortcut menu, giving you various options. Some of these options are the same as in the **Paste Special** dialogue box so we will only look at the last four options of this Shortcut menu, the **Shift Down and Copy** and the **Shift Right and Copy**.



Again, type any value in cell **A1**, then type any value in cell **D1**. Select cell **A1** and right click on any cell border with the right white arrow showing. Holding down your right mouse button, drag **A1** to cell **D1**, then release the mouse button and select **Shift Down and Copy**. You will notice that Excel shifts down the value of cell **D1** and places it into cell **D2** before it Pastes in the data from cell **A1**. Delete the contents cell **D2**.

Again, select cell **A1**, right click on any cell border, select cell **D1** again and release the right mouse button. This time select **Shift Right and Copy**. This has now done the same as the **Shift Down and Copy** option, except as the name implies, it has shifted the data in cell **D1** to the right before pasting in the contents of cell **A1**.



## USING PASTE SPECIAL

By default, when you Copy and Paste the content of any cell(s), Excel will **Paste** all cell formatting. We can, however, use what is called **Paste Special** to nominate the attributes of the copied data we wish to Paste.

To do this, again **Copy** the cell(s) in any of the above methods (except Drag and Drop). Now select your destination cell and go to Home ribbon menu > **Open Paste option** > select **Paste Special**

or right click and select **Paste Special** from the Shortcut menu.

This will display the **Paste Special** dialogue box. In this dialog box under the heading **Paste**, there are different options that can be applied, the default is **All**, which is exactly the same as using any of the **Paste** methods described above.

The other options are:



## PASTE SPECIAL OPTIONS

Under the heading **Operation**

- All
- Formulas
- Values
- Formats
- Comments
- Validation
- All except borders
- Column Widths
- Formulas and Number Formats
- Values and Number Formats

Under the heading **Operation**

- None
- Add
- Subtract
- Multiply
- Divide
- Paste Link



To see Paste Special dialog box; after copy or cut, select Paste Special from Edit menu or Right click and then select Paste Special option.



## PASTE SPECIAL OPTIONS

### Formulas

This option would apply only if the cell we copied contained a formula. What this means is instead of the formatting and other attributes of the cell being Pasted, only the formula itself will be Pasted. To put this into some sort of context, imagine the cell containing any formula to be copied where the background colour of the cell is bright yellow, using **Formulas** would not Paste the background colour of the cell, just the formula.

### Values

Again, imagine a cell being copied that contained a formula where the result of that formula was the number 20 (or any other number). Choosing the **Values** option, would mean that we would only be **Pasting** the result of the formula into the destination cell and not the formula itself.



## PASTE SPECIAL OPTIONS

### Formats

Using this option means you will not be **Pasting** the contents of the cell, but only the formatting. Again, imagine a cell with a yellow background containing the number 100 (or any other data). On selecting this option, the destination cell would end up having a yellow background, but not the number 100.

### Comments

This option applies to **Cell Comments** which will be covered in a later lesson.

### Validation

This option applies to **Cell Validation** which will be covered in the Level 2 course.

### All except borders

Means all the cell contents and formatting excluding (without) borders would be **Pasted**. We will be looking at borders later.



## PASTE SPECIAL OPTIONS

### Column Widths

Means no content or formatting will be **Pasted**, except for the width of the column that the data was copied from.

### Formulas and Number Formats

Using this option will **Paste** only formulas and all number formatting options. Number formatting will be covered later.

### Values and Number Formats

This will **Paste** only values and all number formatting options.





## PASTE SPECIAL OPTIONS

The next part of the dialog box has a heading **Operation**.

In order to demonstrate the options under this heading, type the number **2** into cell **A1** and the number **10** in cell **A2**. Copy cell **A1**, then select cell **A2** and again right click and select **Paste Special**.

**None / Add / Subtract / Multiply / Divide**

### **None**

This is exactly as the name implies and means **None** of the options under the heading operation will be applied. Even if this option and all the other options under Operation are not checked, which is the default, **None** would still apply.



## PASTE SPECIAL OPTIONS

### Add

Select the option **Add** and click **OK**. You will notice that Excel adds the copied number (in this case 2) to the value of the destination cell (which in this case is 10) to end up with a total of 12. In other words it adds a copied number to the destination cell.

### Subtract

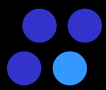
Again, to see this repeat the coping of cell **A1** and again select cell **A2** and right click and select **Paste Special**. This time, select **Subtract** and cell **A2** will be have the number 2 subtracted from its value.

### Multiply

It **Multiplies** the destination cell by the value of the copied data.

### Divide

It **Divides** the destination cell by the value of the copied data.



**The other two options work in the following way:**

## **Skip Blanks**

Type any number into cell **A1**, any number in cell **A2**, leave cell **A3** blank and again type any numbers in cells **A4** and **A5**. Now in cell **B1** to **B5**, type any numbers so that all cells are filled. Now select cell **A1** holding down your left mouse button, drag down until cells **A1** to **A5** are highlighted. Right click anywhere within **A1:A5** and select **Copy**, select cells **B1** to **B5** in the same way, right click and select **Paste Special**. Select the bottom option **Skip Blanks** and click **OK**. What you will notice, is that Excel did not **Paste** the empty cell of **A3** over the top of the value in **B3**. In other words, as the name implies it **skipped the blanks**.

## **Transpose**

While you still have five values in cells **B1:B5**, highlight these cells, right click and select **Copy**, then select cell **D1** choose **Paste Special** and select the option **Transpose**. Click **OK**. You will notice that Excel will have Pasted your rows of values into columns. In other words, instead of cells **D1** to **D5** having the values Pasted into them, you should have **D1** to **H1**.



## PASTE SPECIAL OPTIONS

### Paste Link

The very last option is the **Paste Link** button located at the bottom right of the **Paste Special** dialogue box. To see this work, type any value in cell **A1**, Copy this cell then select any blank cell, right click, choose **Paste Special** and click **Paste Link**. You should notice that your destination cell will be showing the value, the same as your copied cell. If you look in your **Formula Bar** (located under your toolbars) you will see Excel has placed what is known as an **Absolute Cell Reference Formula**, ie; **=A\$1**. It is the dollar symbols that have made the reference absolute. We will be discussing **Absolute** and **Relative** references in detail in a later lesson.



## DELETING CELL(S), ROW(S) AND COLUMN(S)

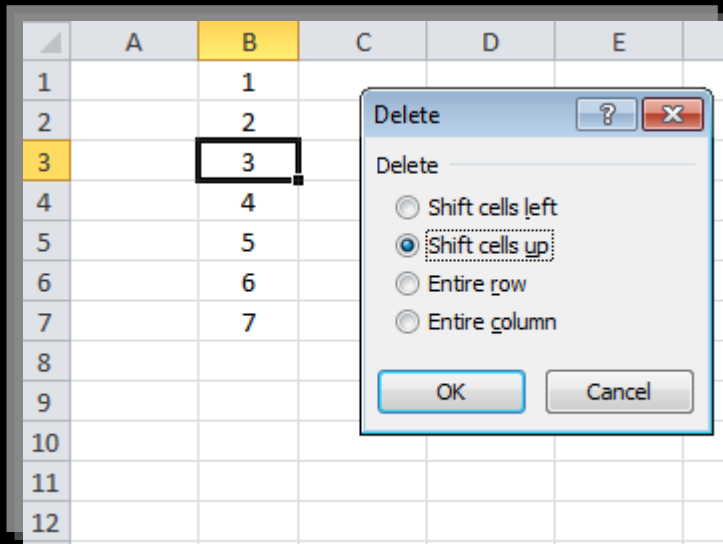
### DELETING CELL(S)

You can delete cell(s) in Excel very easily.

- Select the cell that you want to delete
- From the **Edit menu choose Delete** or **right-click and select Delete option** Excel will display a dialog box asking how you want to shift the remaining cells.
- Specify whether you want to shift cells.
- Click OK.

### DELETING ROW(S) AND COLUMN(S)

Similarly to delete row or column select entire row or column and follows the same rules to delete cell(s).



	A	B	C	D	E	F	G	H	I	J	K	L
1		1										
2		2										
3		3										
4		4										
5		5										
6		6										
7		7										
8												

Step 1 B4 Cell will be deleted.

Step 2 Other cells will shift up

Step 3 A new cell will be added to the end of the column.



## INSERTING CELL(S), ROW(S) AND COLUMN(S)

When working in Excel, there are times that you may need to insert an entire new row, an entire new column or only a single cell. Although the term **Inserting** gives the impression that you are actually adding another row, column or cell, you are **in fact NOT**. You may remember that in the first lesson we mentioned the fact that Excel has 256 columns, 65,536 rows and 1,677,216 cells per worksheet. **These numbers are fixed**, so technically we cannot add more.

So when you insert a cell, row or column What Excel will do? Excel will shift the cell, row or column and will add the new cell, row or column into the this space and then will delete the last shifted cell, row or column. Total number of the cell, row and column will remain same.



## How To Insert a cell

You can insert one cell in Excel very easily.

1. Select the cell near where you want to insert the new cell.
2. From the Insert menu choose Cells or right-click and select Insert. Excel will display a dialog box asking how you want to shift the remaining cells.
3. Specify whether you want to shift cells.
4. Click OK.

If we want to insert more than one cell, row or column at a time, we simply select the appropriate number of rows, cells or columns before using **Insert** either via the menu option or the right click Shortcut menu. For example, if you select four entire rows, then right clicked and selected **Insert**, you would be inserting four new empty rows.

## How To Insert a Entire Column or Row

An inserted row goes above the row you select, while an inserted column goes to the left of the selected column.

1. Select the row to the right or column above where you want to insert a new row or column. You can use the column and row heading buttons to select entire columns and rows.
2. Right click on the column or row heading and **Click Insert**.
4. You do not need to specify where to shift cells.





Finally, just to stress my point that we are not technically adding more rows, columns or cells, go to cell **IV1**, by either typing the cell reference in the **Name box** to the immediate left of the **Formula Bar**, or push **F5** and type **IV1** in the **Reference:** box. Type any data into cell **IV1** and now push **Ctrl + Home** to take yourself back to cell **A1**. Select any entire column, right click and choose **Insert**. You will see that Excel will display a warning letting you know that it cannot shift **non blank cells** off the Worksheet. This is because we have data in cell **IV1**. So, as you can see, Excel isn't really adding an extra column, it is simply moving the last one off the Worksheet before inserting a new one. Press **OK** to cancel out of the warning box.



# WORKSHEET OPERATIONS



# WORKSHEETS

All **Workbooks** must contain at least one **Worksheet**. The maximum number of Worksheets a Workbook can contain is limited only by the available memory of the PC. As a default, Excel places three blank Worksheets in front of you. Each one of these has the default name **Sheet1**, **Sheet2**, **Sheet3** at the bottom.

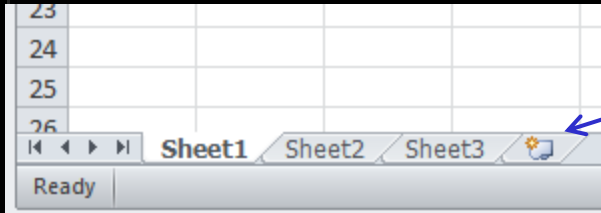
***NOTE: You can change the default of three blank Worksheets by going to File >Options/General and enter the number of the sheets in the box “Include this many Sheets in new workbook”.***

Each separate rectangle within the Worksheet is called a **Cell**. You will notice letters across the top of your Worksheet. These are the names of the columns and go from **A** through to **IV**. The numbers down the left hand side of your sheet of graph paper symbolize row headings labeled with numbers.



# INSERTING WORKSHEET

Adding new Worksheets to a Workbook can be done in a number of ways. The most common are:



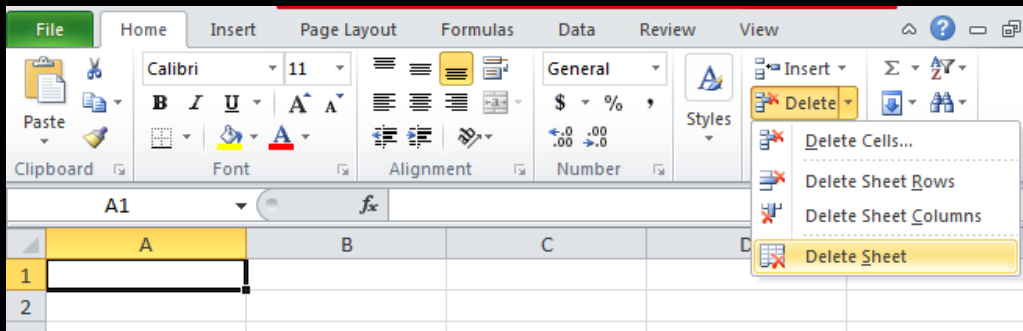
- click “Insert Worksheet” button
- Right click on any Sheet name tab and select **Insert** and then select **Worksheet**.
- Shift + F11



# DELETING WORKSHEET

The logical opposite to inserting Worksheets is Deleting them. This can be done in any of the following ways.

Right click on the Worksheets name tab and select **Delete** or  
In Home tab, select **Delete** and click Delete Sheet



Whichever method we use, Excel will display a warning message letting us know that the deletion cannot be undone.



# NAMING WORKSHEETS

To name a Worksheet we can do so with any of the most methods below:

- Double click the **Worksheet Name** tab. This will allow you to now type the name. Once finished, push **Enter** or click any cell.
- Right click on the **Worksheet Name** tab and select **Rename** from the shortcut menu. Then type the name and hit **Enter** or click somewhere else on your Worksheet.

You can give any name to your worksheets. The only restrictions we have with Worksheet names is:

- They cannot exceed 31 characters.
- They cannot contain the following characters: \ / ? \* [ ].
- The name cannot be the same as another Worksheet in the Workbook.



# MOVING OR COPYING A WORKSHEET

## 1<sup>st</sup> WAY

### COPYING A WORKSHEET

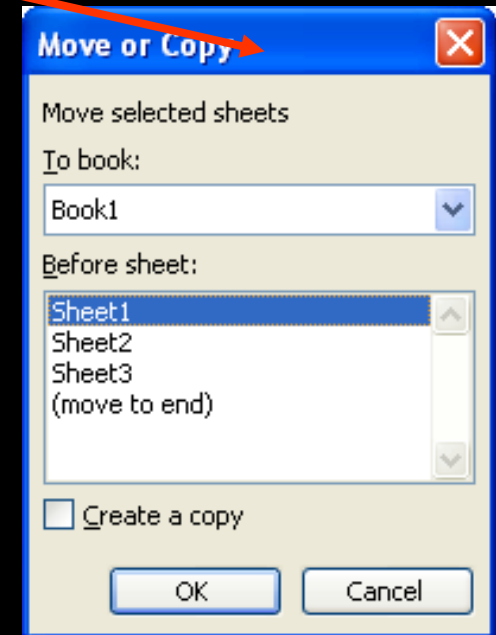
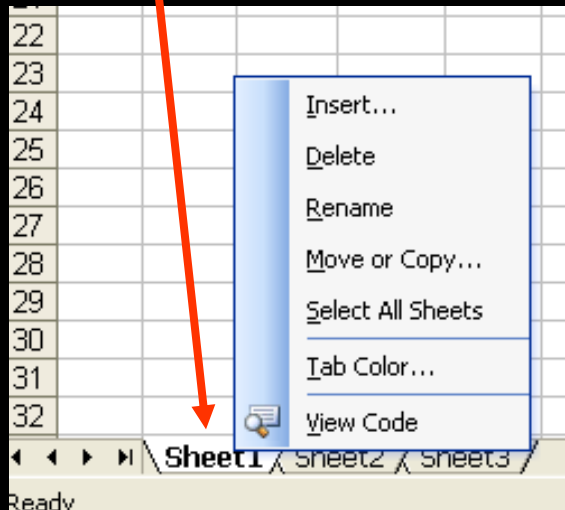
Select the Sheet you want to copy then left click on the name tab and holding down the **Ctrl** key drag it to one side, then release.

### MOVING A WORKSHEET

Simply click the **Worksheet Name** tab, then holding down the mouse button drag it to it's new position and release.

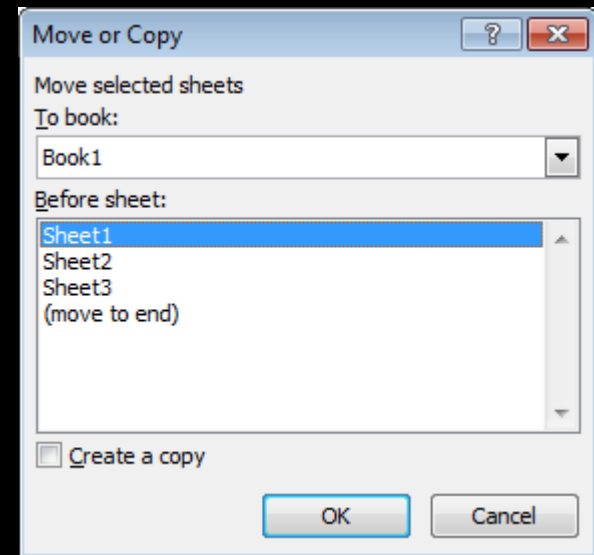
The other method is to use the **Move** or the **Copy** dialogue box.

- Right click on the **Worksheet Name** tab and select **Move** or **Copy**
- You will see the **Move** or the **Copy** dialogue box.





You will see also on this dialogue box *a To book:* box with a small drop arrow to the right. The selection in this box will determine where our sheet will be moved or copied to. The default name in this box will be the active Workbook name (the current Workbook we are in). There will also always be another choice, if we click the drop arrow. This is (**new book**), if we choose this option Excel will automatically make a new Workbook for the sheet to be moved or copied to. Within this box will also be the names of any other open Workbooks, should there be any.



Directly below the **To book:** box is *the Before sheet:* box. Our selection in this box will decide which position our sheet will be moved or copied to. Last of all is *the Create a copy* checkbox. If we check this box Excel will create a copy of our moved Worksheet. In other words our original sheet will remain where it is and a copy of it will be moved to our chosen location. If we leave it unchecked (which is the default) the Worksheet will be moved and not copied.



# SELECTING MULTIPLE WORKSHEETS

To select the adjacent worksheets

Click the starting worksheet tab, hold down the SHIFT key then click the last sheet in your range you wish to select.

To select the non-adjacent worksheets

Click the first worksheet tab, hold down the CTRL key then click the other worksheet tabs one by one.

# CHANGING THE ACTIVE WORKSHEET

- Click the worksheet tabs
- Use worksheet navigation buttons
- Use CTRL + Page up or CTRL + Page down keys.

