

## Spread Sheet and its Business Applications :

A Worksheet or sheet is essentially a matrix of rows and columns. Consider a sheet of paper on which horizontal and vertical lines are drawn to yield a rectangular grid. The grid namely a cell is the result of the intersection of a row with a column.

A Worksheet or sheet is a single page in a file created with an electronic Spreads program such as Excel or Google Spreadsheets. Ms Excel is the most powerful spreadsheet package developed by Microsoft for Windows.

### The main spreadsheets:

Numerous spreadsheets have been produced by the main software companies. The main Spreadsheets are:

- \* Microsoft Excel
- \* Sun staroffice calc.
- \* Open calc
- \* IBM/Lotus 1-2-3 in the smart suite suite

### \* To Start Excel :-

1. click the start button on the taskbar.
2. point to programs or All programs
3. click Microsoft office
4. click Microsoft office Excel 2007.

After open MS Excel we find. —

1. File Tab: Displays basic commands such as open, save, print etc.
2. Home Tab: Supports tasks such as copying, pasting, editing etc.
3. Insert Tab: Displays items you might want to put on a worksheet.  
from tables, pictures, charts, diagrams etc.
4. Page Layout Tab: Changes the format of data, uses rules to adjust width or height, change page orientation.
5. Formula Tab: Displays pre-written formulas in function library, displays all formulas.
6. Data Tab: Imports data from different source, sort or filter data.

\* creating workbooks;

1. Click on file tab
2. click on New
3. Click on create button.

\* Adding Headers & Footers;

Go to insert tab → click on Header & Footer

\* Delete Worksheet Row & column;

1. Select home tab
2. Select Insert or Delete.

## \* Format cells:

When we format cells in Excel, we change the appearance of a number without changing the number itself. We can apply a number format (ex. 0.8, 0.80, 80%, etc) or other formatting (alignment, font, border etc.)

① Enter the value 0.80 into cell B2

By default, Excel uses the general format for numbers. To apply a number format, use the format cells dialog box.

② select cell B2

③ Right click, and then click format cells ~~of~~

(press CTRL + <sup>08</sup>1)

The format cell dialog box appears.

④ For example, on the Number tab select currency.

⑤ Click OK.

cell B2 still contains the number 0.8. We only change the appearance of this number, not the number itself. The most frequently used formatting commands are available on the Home tab.

⑥ On the Home tab in the Number group, click the percentage symbol to apply a percentage format.

⑦ On the Home tab, in the Alignment group, center the number.

- ⑧ On the Home tab, in the Font group, change the font color.
- ⑨ On the Home tab, in the Font group, add borders

### AutoSum :

To start things off, let's look at an example using a formula that provides a total amount.

Gas	250
Electricity	310
Food	120
petrol	480
Total	<input type="text"/>

in total row we want to display the sum of all exp?

- Then →
- ① click Home tab
  - ② click Editing
  - ③ click AutoSum.

We can see that the formula starts with a '=',  
all formula must start with "="

The next part is SUM which you can guess represents the sum function.

Select the all numerical value i.e cells B2 to B7

→ The range is define as B2:B7

# SOME COMMON FORMULA ERRORS IN EXCEL

- ##### error

When your cell contains this error code, the column isn't wide enough to display the value. Cell width is less to contain your data.

	A	B	C	D	E
1	7,500,000				
2	#####				
3	500,000				
4					
5					

1. Click on the right border of the column A header and increase the column width.

	A	B	C	D	E
1	7,500,000				
2	15,000,000				
3	500,000				
4					
5					

**Tip :** double click the right border of the column A header to automatically fit the widest cell in column A.

- #NAME? error

The #NAME? error occurs when Excel does not recognize text in a formula.

	A	B	C	D	E
1	4				
2	5				
3	3				
4	#NAME?				
5					
6					

1. Simply correct SU to SUM.

A4		=SUM(A1:A3)			
	A	B	C	D	E
1	4				
2	5				
3	3				
4	12				

• #VALUE! error

Excel displays the #VALUE! error when a formula has the wrong type of argument.

A4		=A1+A2+A3			
	A	B	C	D	E
1	4				
2	5				
3	Hi				
4	#VALUE!				

1. (a) Change the value of cell A3 to a number. (b). Use a function to ignore cells that contain text.

A4		=SUM(A1:A3)			
	A	B	C	D	E
1	4				
2	5				
3	Hi				
4	9				
5					
6					

• #DIV/0! error

Excel displays the #DIV/0! error when a formula tries to divide a number by 0 or an empty cell.

A3		=A1/A2			
	A	B	C	D	E
1	4				
2	0				
3	#DIV/0!				

1. (a) Change the value of cell A2 to a value that is not equal to 0.  
 (b) Prevent the error from being displayed by using the logical function IF.

A3		=IF(A2=0,"",A1/A2)			
		B	C	D	E
1	4				
2	0				
3					
4					
5					

**Explanation :** If cell A2 equals 0, an empty string is displayed. If not, the result of the formula A1/A2 is displayed.

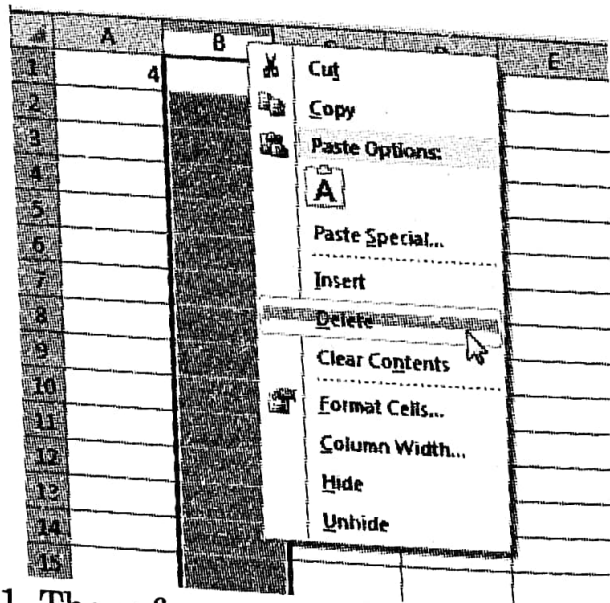
• **#REF! error**

Excel displays the #REF! error when a formula refers to a cell that is not valid.

1. Cell C1 references cell A1 and cell B1.

C1		=A1+B1			
	A	B	C	D	E
1	4	6	10		
2					
3					

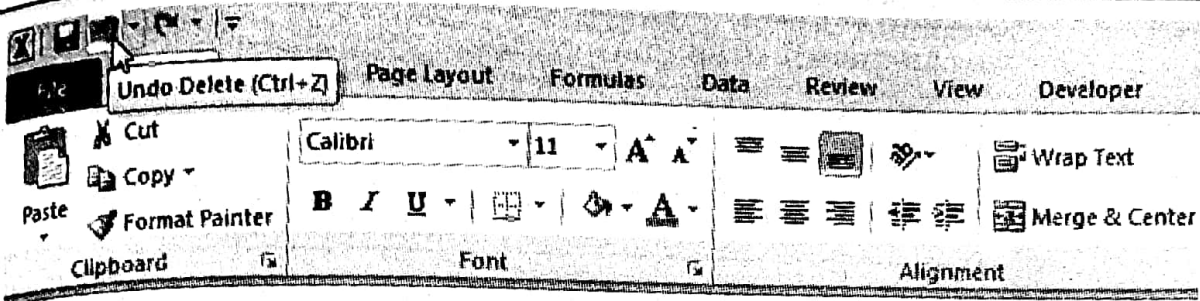
2. Delete column B. To achieve this, right click the column B header and click Delete.



3. Select cell B1. The reference to cell B1 is not valid any more.

B1		=A1+#REF!			
	A	B	C	D	E
1	4	#REF!			
2					
3					

4. To fix this error, you can either delete +#REF! in the formula of cell B1 or you can undo your action by clicking Undo in the Quick Access Toolbar (or press CTRL + z).



## Cell References

Cell references in Excel are very important. Understand the difference between relative, absolute and mixed reference, and you are on your way to success.

### • Relative Reference

By default, Excel uses relative reference. See the formula in cell D2 below. Cell D2 references (points to) cell B2 and cell C2. Both references are relative.

	A	B	C	D	E	F	G	H	I
1	Product	Quantity	Price	Amount					
2	bread	2	1.5	=B2*C2					
3	butter	1	1.2						
4	cheese	3	2						
5	ham	3	1.8						
6									
7									

1. Select cell D2, click on the lower right corner of cell D2 and drag it down to cell D5.

	A	B	C	D	E	F	G	H	I
1	Product	Quantity	Price	Amount					
2	bread	2	1.5	3					
3	butter	1	1.2	1.2					
4	cheese	3	2	6					
5	ham	3	1.8	=B5*C5					
6									
7									

Cell D3 references cell B3 and cell C3. Cell D4 references cell B4 and cell C4. Cell D5 references cell B5 and cell C5. In other words, each cell references its two neighbors on the left.

### • Absolute Reference

See the formula in cell E3 below.

1. To create an absolute reference to cell H3, place a \$ symbol in front of the column letter and row number of cell H3 (\$H\$3) in the formula of cell E3.

	A	B	C	D	E	F	G	H	I
1									
2		Length (cm)	Width (cm)		Length (inch)	Width (inch)		Conversion rate	
3		1	10		=B3*\$H\$3			0.3937008	
4		5	10						
5		4	8						
6		2	10						
7									
8									



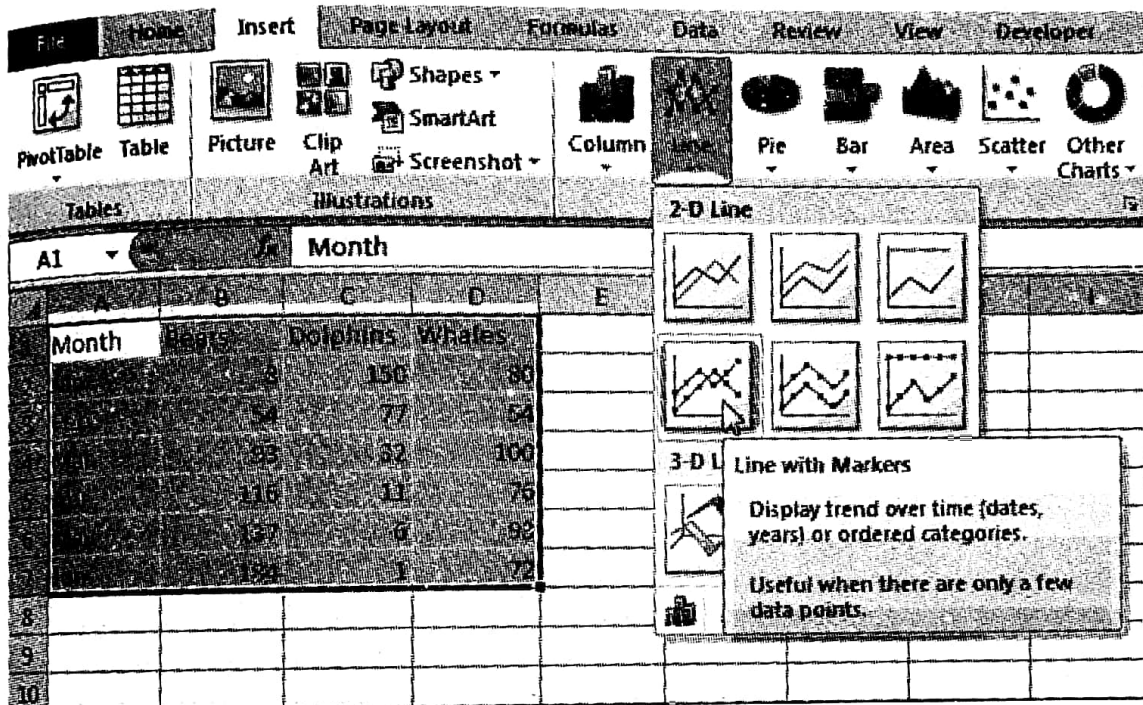
## Charts

A simple chart in Excel can say more than a sheet full of numbers. As you'll see, creating charts is very easy.

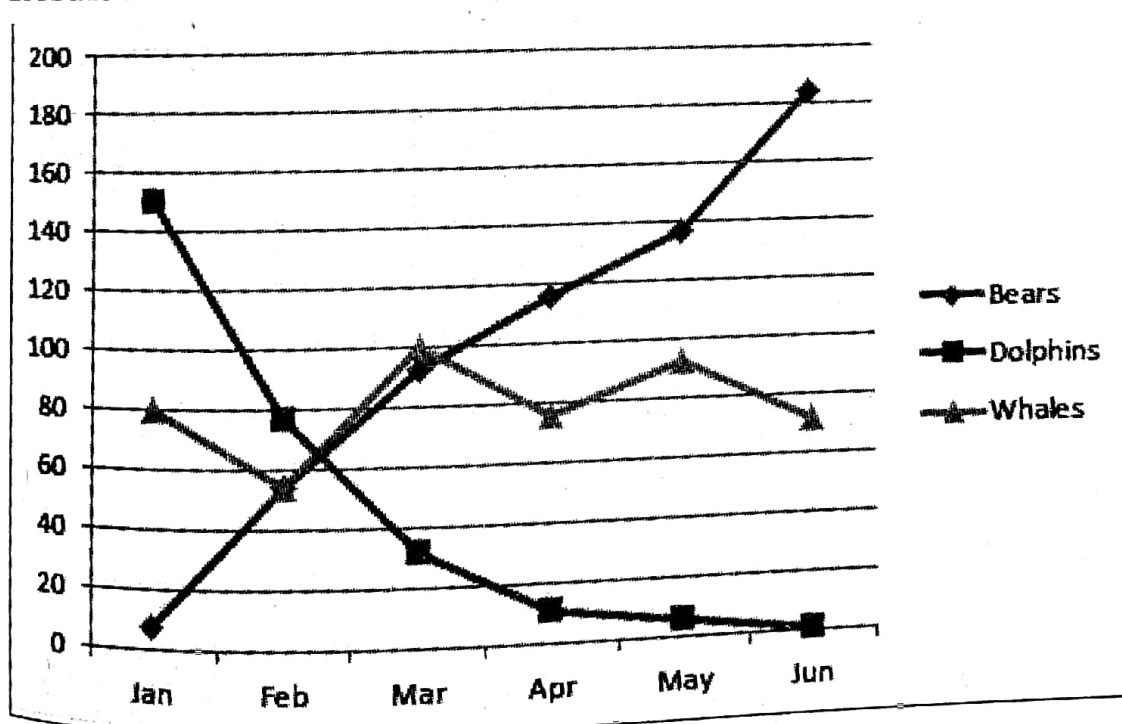
### Create a Chart

To create a line chart, execute the following steps :

1. Select the range A1:D7.
2. On the Insert tab, in the Charts group, choose Line, and select Line with Markers.



Result :



### Change Chart Type

You can easily change to a different type of chart at any time.

1. Select the chart.
2. On the Insert tab, in the Charts group, choose Column, and select Clustered Column.

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PivotTable Table Picture Clip Art Screenshot

Tables Illustrations

Chart 3

	A	B	C	D
1	Month	Bears	Dolphins	Whales
2	Jan	8	150	80
3	Feb	54	77	54
4	Mar	93	32	100
5	Apr	116	11	76
6	May	137	6	93
7	Jun	184	1	72
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

2-D Column

3-D Clustered Column

Compare values across categories by using vertical rectangles.

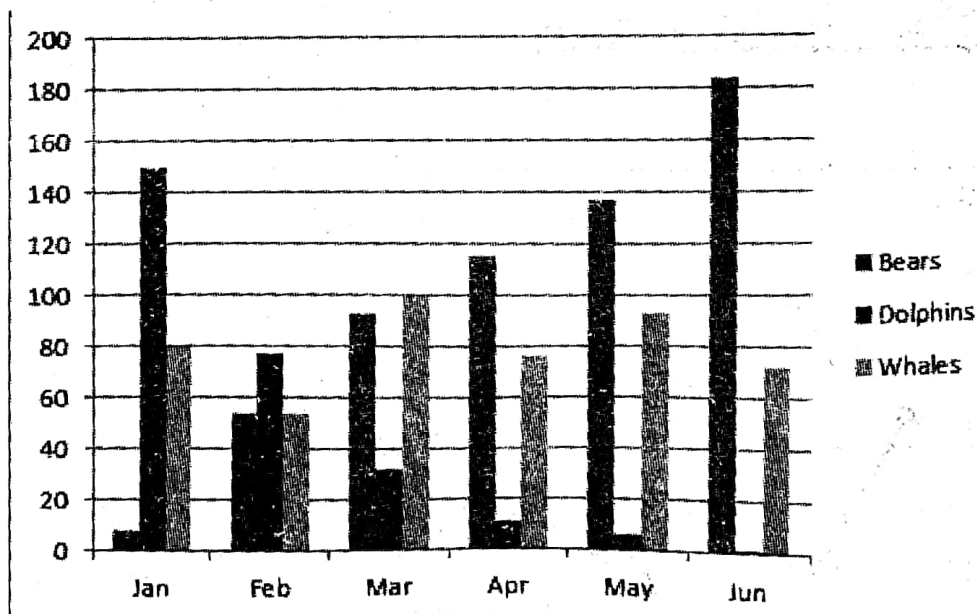
Use it when the order of categories is not important or for displaying item counts such as a histogram.

Cone

Pyramid

All Chart Types...

## Result :



## Switch Row/Column

If you want the animals, displayed on the vertical axis, to be displayed on the horizontal axis instead, execute the following steps :

1. Select the chart. The Chart Tools contextual tab activates.
2. On the Design tab, click Switch Row/Column.

charts [Compatibility Mode] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Developer

Chart Tools

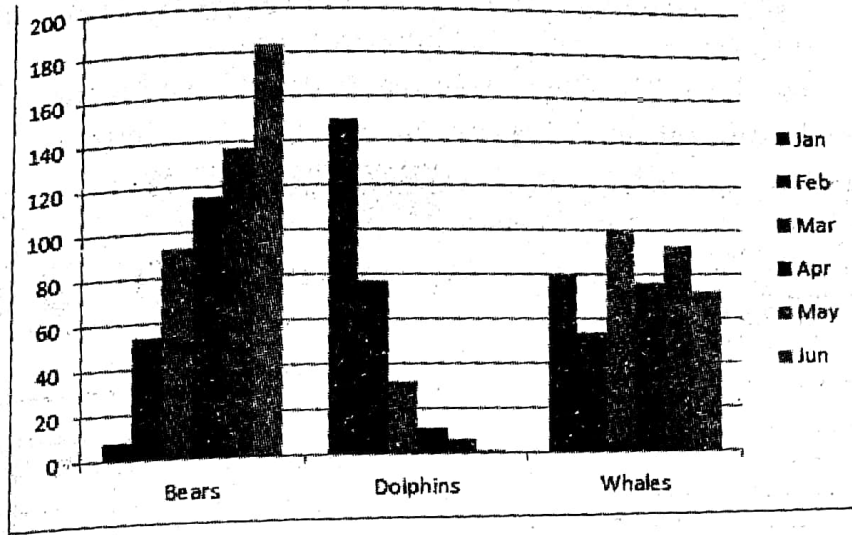
Design Layout

Change Chart Type Save As Template

Switch Row/Column Select Data Quick Layout - Chart L...

Chart Styles

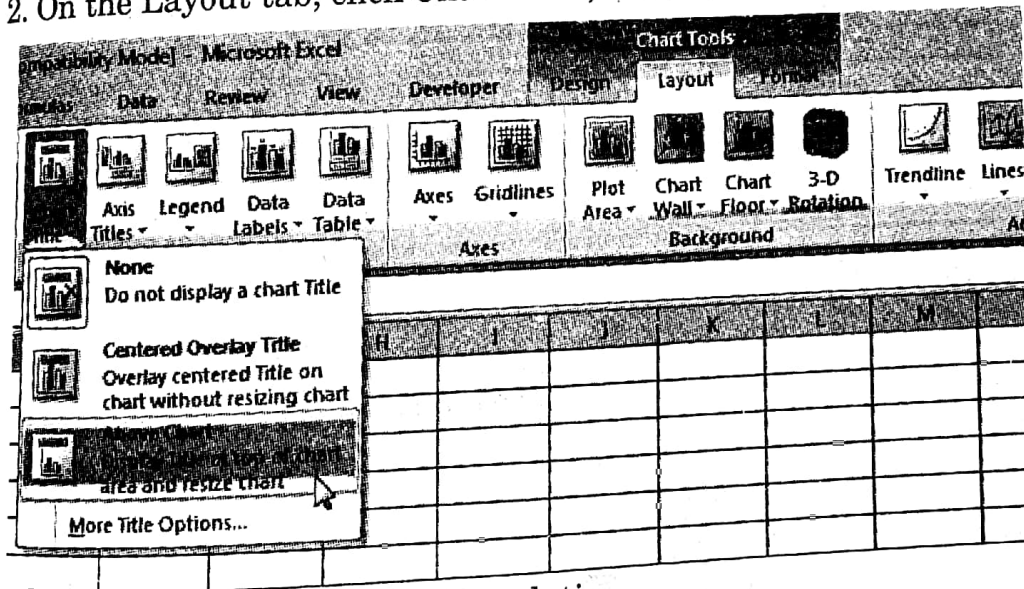
Result :



### Chart Title

To add a chart title, execute the following steps :

1. Select the chart. The Chart Tools contextual tab activates.
2. On the Layout tab, click Chart Title, Above Chart.



3. Enter a title. For example, Population.

Result :

