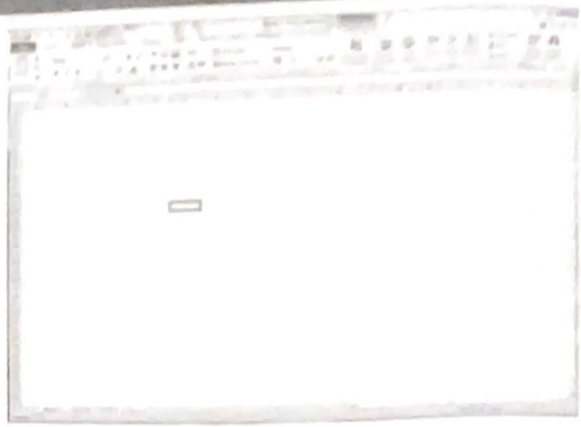
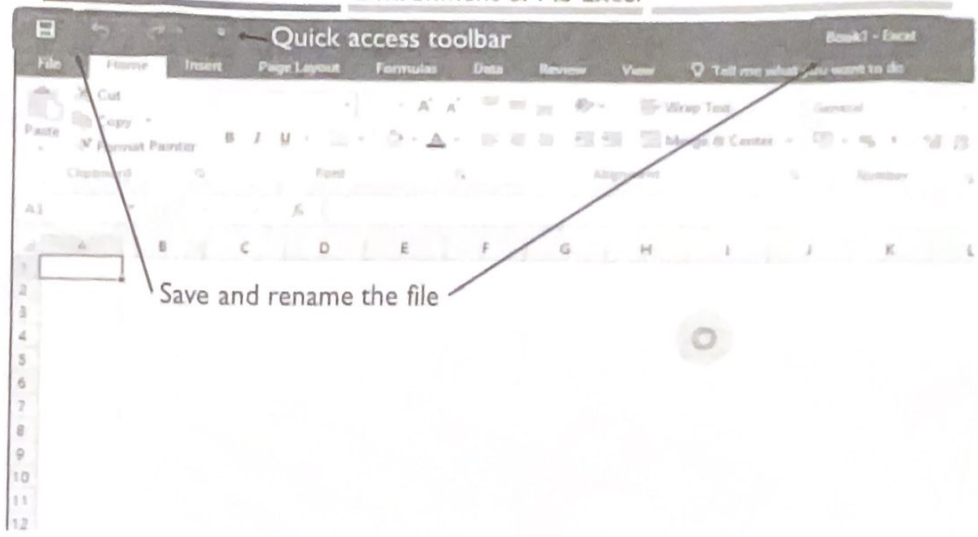
GETTING STARTED...

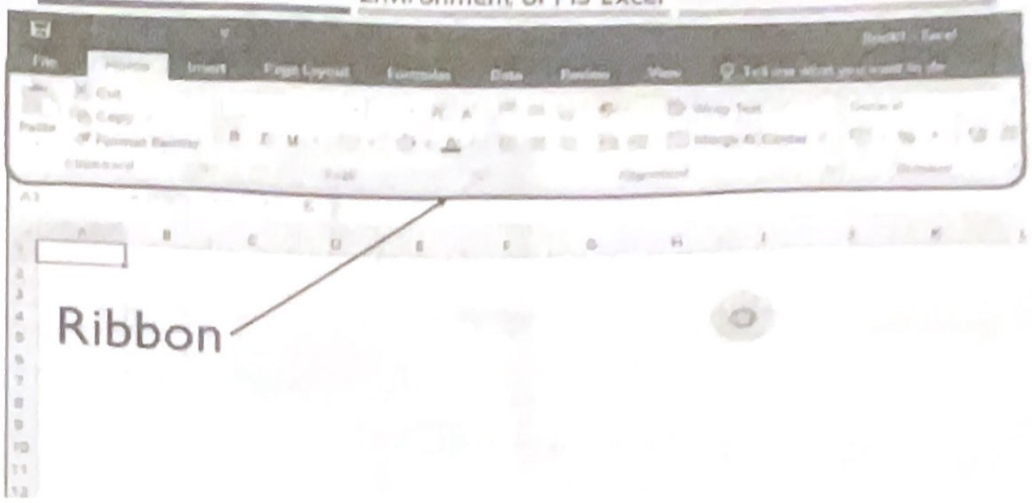
1. Save and rename the file
2. Quick access toolbar
3. Ribbon
4. HOME tab
5. INSERT tab
6. PAGE LAYOUT tab
7. FORMULAS tab
8. DATA tab
9. REVIEW tab
10. VIEW tab



Environment of MS Excel



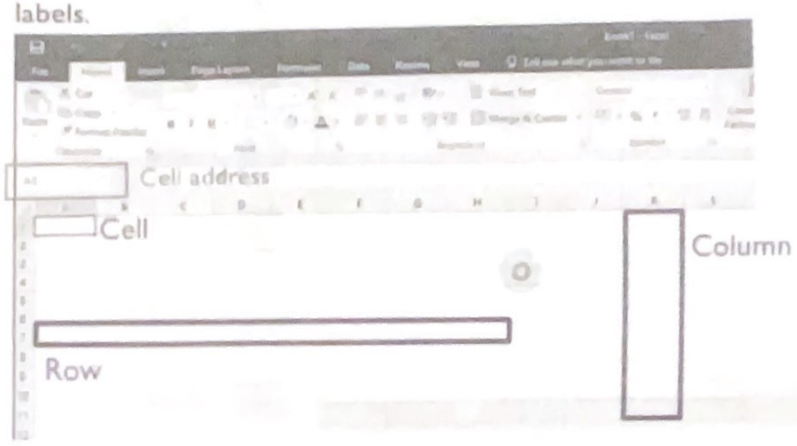
Environment of MS Excel



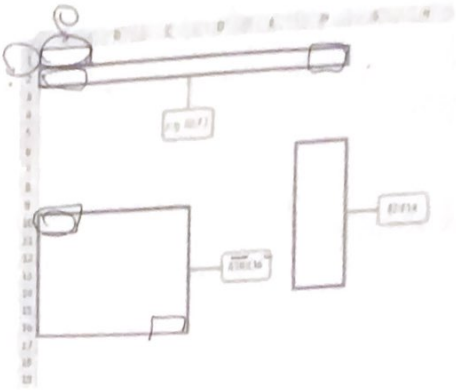
Environment of MS EXCEL

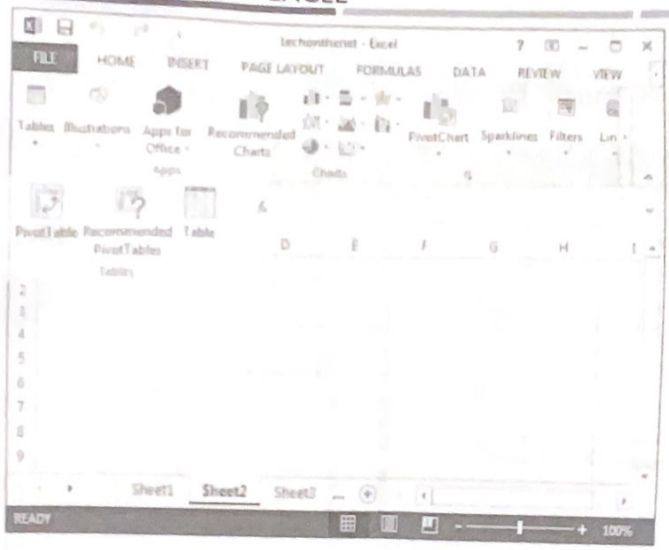
HOME tab

Excel is divided into rows, columns and cells and like a game of Battleship, each cell has a place on the grid that can be referenced using the row and column labels.



A cell range is used to define the position of a group of cells. It is usually indicated by a colon ":". The representation of a cell range is "top-left cell address:bottom-right cell address".

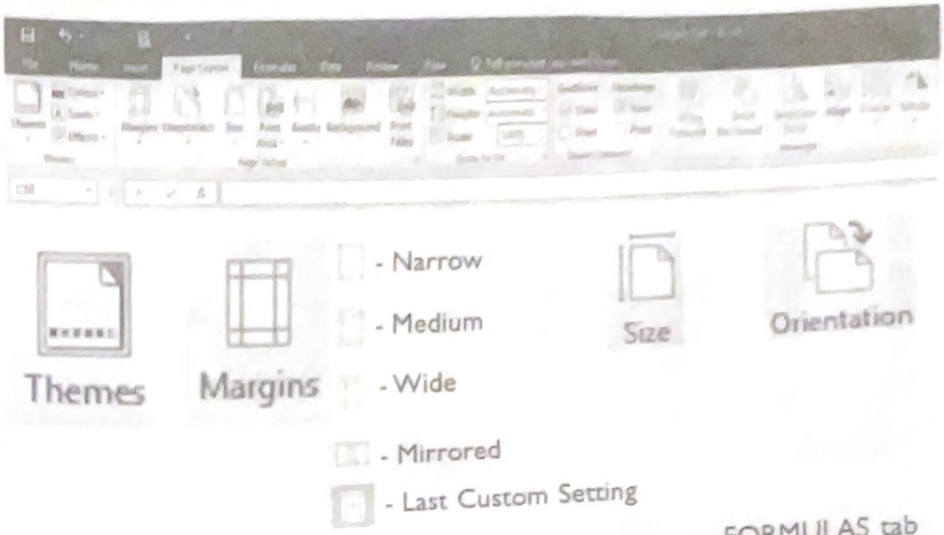




- Column
- Bar
- Radar
- Line
- Pie
- Scatter
- Area

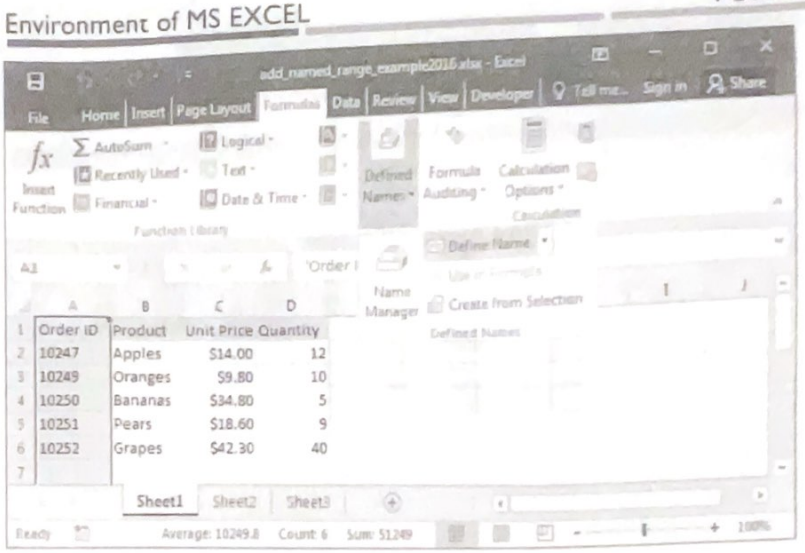
Environment of MS EXCEL

PAGE LAYOUT tab



Environment of MS EXCEL

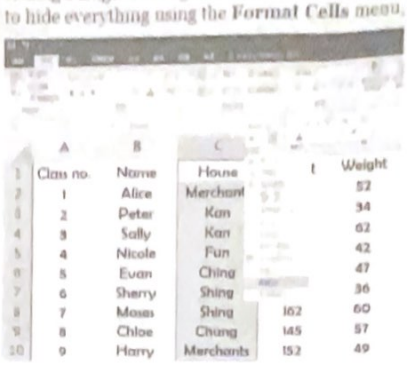
FORMULAS tab



Hiding / Unhide

Manipulation of MS EXCEL

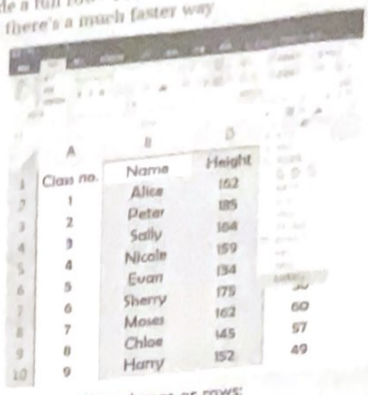
Hiding a single cell is great, but what if you want to hide a full row? You could use the same steps listed above to hide everything using the **Format Cells** menu, but there's a much faster way



	A	B	C		
1	Class no.	Name	House	t	Weight
2	1	Alice	Merchant		52
3	2	Peter	Kan		34
4	3	Sally	Kan		62
5	4	Nicole	Fun		42
6	5	Evan	Ching		47
7	6	Sherry	Shing		36
8	7	Moses	Shing	162	60
9	8	Chloe	Chung	145	57
10	9	Harry	Merchants	152	49

Steps of Hiding columns or rows:

1. Click the Column or Row
2. Right Click
3. Choose "Hide"



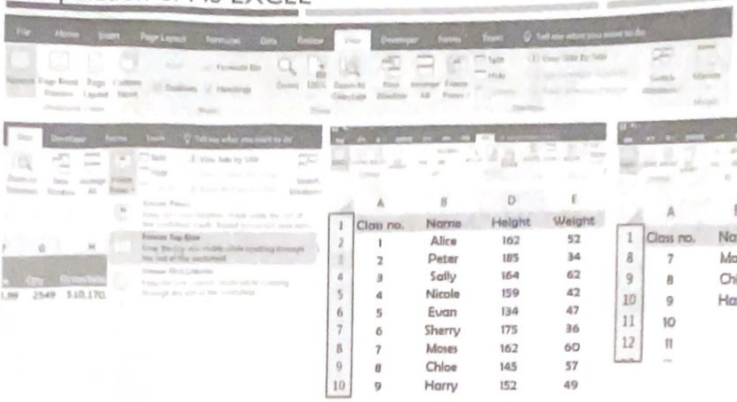
	A	B	D
1	Class no.	Name	Height
2	1	Alice	162
3	2	Peter	185
4	3	Sally	164
5	4	Nicole	159
6	5	Evan	134
7	6	Sherry	175
8	7	Moses	162
9	8	Chloe	145
10	9	Harry	152

Steps of Unhide columns or rows:

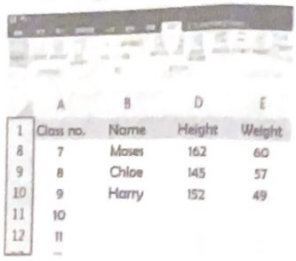
1. Click the Columns or Rows between hided columns or rows
2. Right Click
3. Choose "Unhide"

Freeze Top Row

Manipulation of MS EXCEL

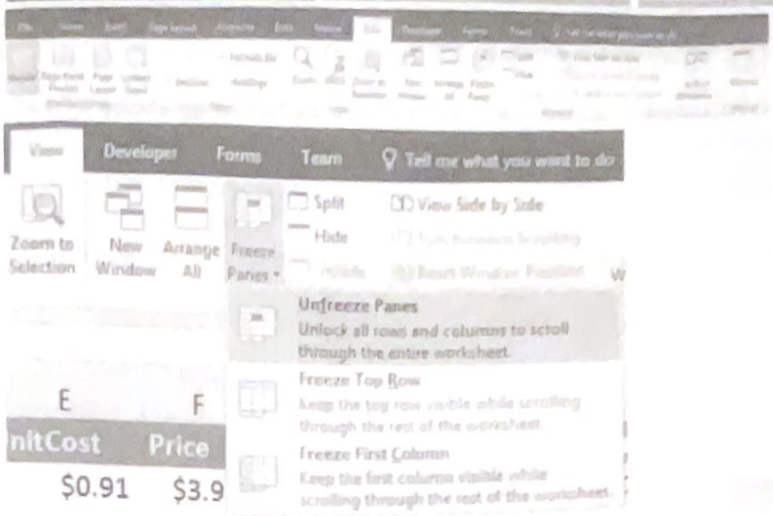


	A	B	D	E
1	Class no.	Name	Height	Weight
2	1	Alice	162	52
3	2	Peter	185	34
4	3	Sally	164	62
5	4	Nicole	159	42
6	5	Evan	134	47
7	6	Sherry	175	36
8	7	Moses	162	60
9	8	Chloe	145	57
10	9	Harry	152	49

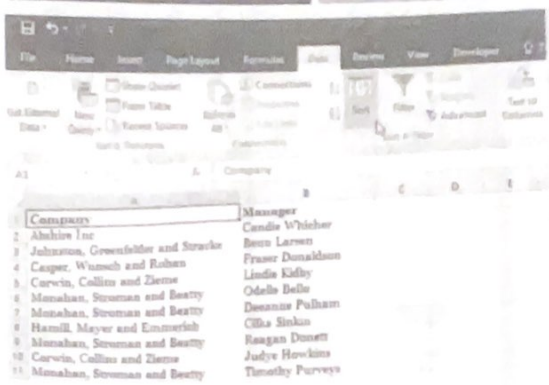


	A	B	D	E
1	Class no.	Name	Height	Weight
8	7	Moses	162	60
9	8	Chloe	145	57
10	9	Harry	152	49
11	10			
12	11			

Unfreeze Panes



Sorting

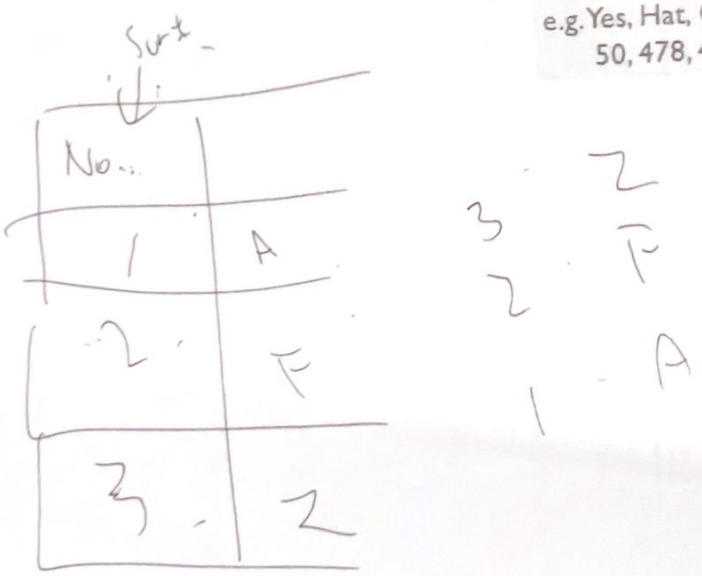


Types of Sorting:
1. Ascending order

e.g. 1, 3, 6, 7, 14, 23
e.g. A, B, Grab, Hat, Yes
1, 11, 2, 45, 478, 50 (text)

Types of Sorting:
2. Descending order

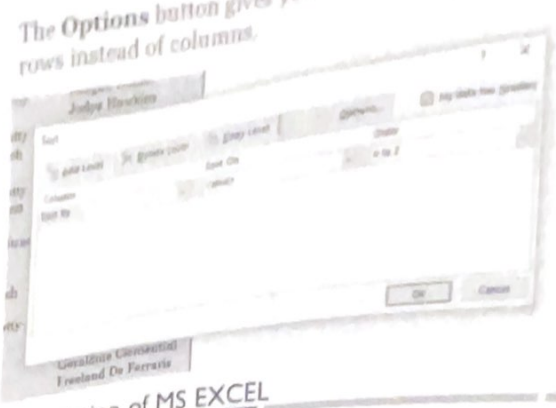
e.g. 90, 74, 56, 34, 22, 1
e.g. Yes, Hat, Grab, B, A
50, 478, 45, 2, 11, 1



Sorting

At the top, you'll see the **Add Level**, **Delete Level**, and **Copy Level** buttons. These allow you to add different levels of sorting.

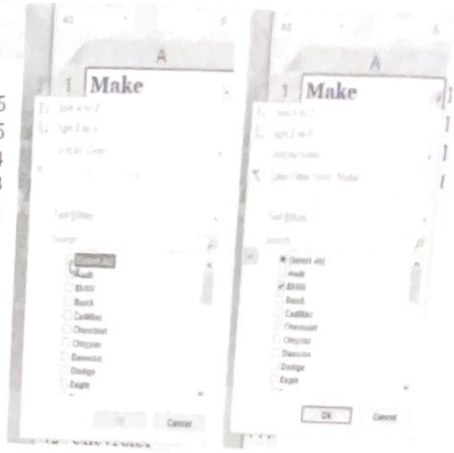
The **Options** button gives you a couple extra features, including the ability to sort rows instead of columns.



Filtering

Highlight the cells in the range you'd like to filter, then click the **Filter** button.
Choose the data you need and click OK.

B	C	D
Model	**Year**	**Value**
Fit	1992	$25,202.25
M5	1995	$26,720.95
F-Series	1998	$33,054.84
Veracruz	1992	$38,541.68
Explorer	1998	$22,137.21



Summary

Formatting cells (Bold, underline, alignment)
Hide/Unhide columns
Freeze column

Auto Fill function
Merge & Center function

Find & Replace
Using AutoFilter- Sorting Data

Data Restoration

Renaming a Worksheet

Topic 2: Formula

Formula

The following four elements may be included in a formula:

1. References, e.g. =**A1**
2. Operators, e.g. =A1 + A2, =A1-5
3. Constants, e.g. =**3**
4. Functions, e.g. =**SUM(A1:A2)**

Arithmetic operator

Arithmetic operator	Symbol Used in Spreadsheet	Formula Example
Addition	+	= A1 + A2
Subtraction	-	= A1 - A2
Multiplication	*	= A1 * A2
Division	/	= A1 / A2
Exponentiation	^	= A1 ^ A2

Relative Reference vs Absolute Reference

Relative Reference

In the last section, when the formula "=A1+A2+A3" in cell A5 is copied to cell B5, it changes to "=B1+B2+B3". The reason is that cell references in Microsoft Excel are relative to the locations of the cells by default. In other words, when we copy a formula with a relative reference to another cell, the reference will change based on the distance between the source and target cells.

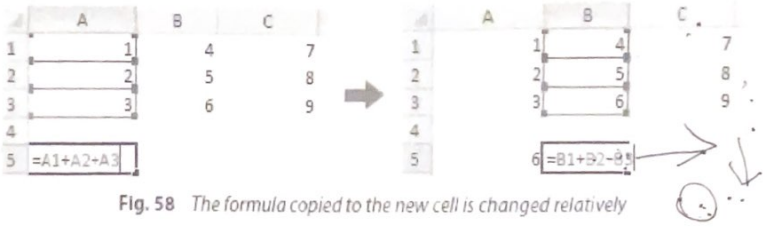


Fig. 58 *The formula copied to the new cell is changed relatively*

This kind of cell reference is called "relative reference". Since it sometimes leads to calculation mistakes, we can use "absolute reference".

Absolute Reference

An absolute reference is a cell reference that is unaffected by the changes in the location of the cells. In other words, when we copy a formula with an absolute reference another cell, the reference in the formula will remain unchanged. We can lock a row or a column by adding a "$" symbol before the part(s) to be locked. See the followir examples:

- *Lock a column*

Fig. 59 *Locking column A*

- *Lock a row*

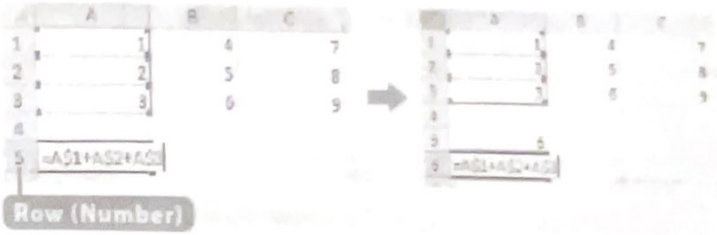


Fig. 60 *Locking rows 1-3*

- *Lock both a column(s) and a row(s)*

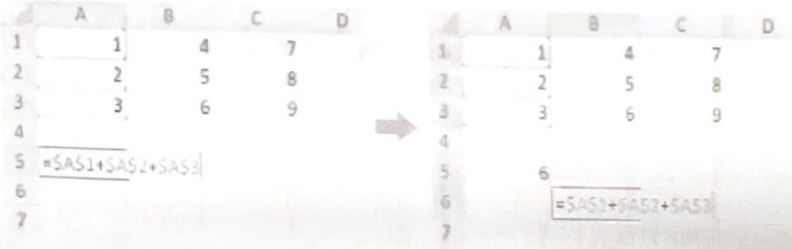


Fig. 61 *Locking both column A and rows 1-3*

Mathematical Functions

Function	Format	Description
SUM	=SUM (A1:A3)	Calculate the sum of cells A1, A2 and A3.

Statistical Functions

Function	Format	Description
AVERAGE	=AVERAGE (A1:A3)	Calculate the average of cells A1, A2 and A3.
MAX	=MAX (A1:A3)	Output the largest value among cells A1, A2 and A3.
MIN	=MIN (A1:A3)	Output the smallest value among cells A1, A2 and A3.

RANK	=RANK (cell, Range, order)	If order is 0,or did not enter the order, it ranks numbers in **descending order. (數值越大，position 越前)** If order is 1, it ranks numbers in **ascending order.** **(數值越小，position 越前)**	`= RANK(A1,A1:A2,1)`

Counting Functions

Function	Format	Description	Example
COUNT	= COUNT(range)	Outputs the number of cells **containing numbers** within a range. It will not count cells that include text or symbols.	`=COUNT (A1:A3)`

COUNTIF	=COUNTIF (Range, criteria)	Output the **number of cells** that matches the criteria within a range.	`= COUNTIF(A1:A3, A3)`
			`= COUNTIF(A1:A3, "A")`
			`= COUNTIF(A1:A3,">=5")`
			`= COUNTIF(A1:A3, ">="&A3)`

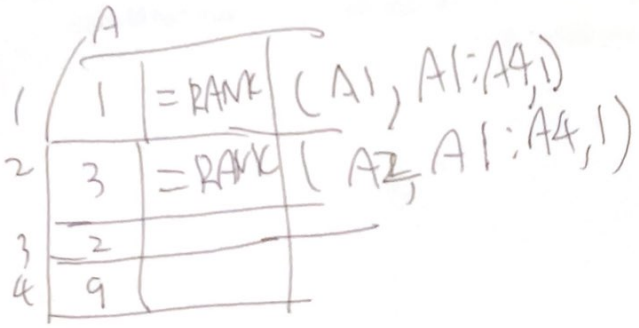
Logical Functions

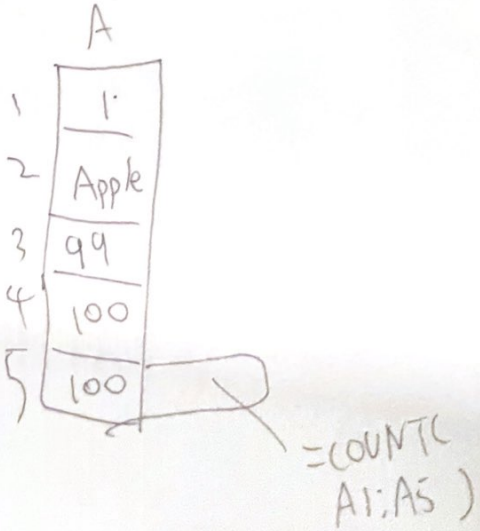
Function	Format	Description	Example
IF	= IF (logical test, value if true, value if false)	Outputs the number of cells containing numbers within a range. It will not count cells that include text or symbols.	= IF(A1>A3, "A", "B") = IF(A1<5, H5, H6)

Logical test

Comparison operator	Symbol Used in Spreadsheet
Larger than	>
Smaller than	<
Larger than or equal to	>=
Smaller than or equal to	<=
Equal to	=
Not equal to	<>

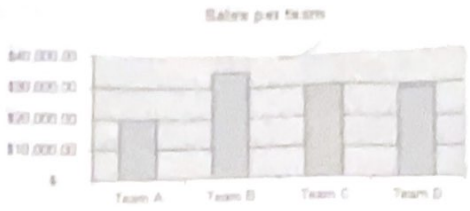
Example: A1>A2, A2=12





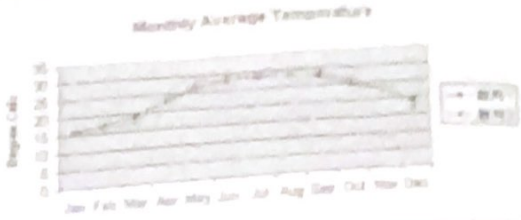
Topic 3 Chart

Different types of charts



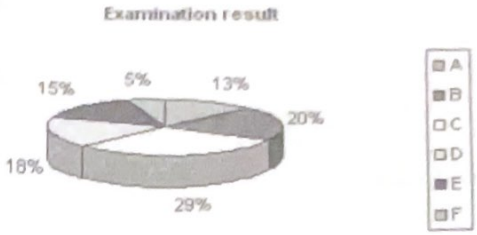
Bar chart

Purpose: Compare data in several categories



Line chart

Purpose: Show the trend of stock price.



Pie chart

Purpose: Compare the proportions or percentages contributed by several categories

Scatter chart

Purpose: Illustrate the correlations between two data series.

Conditional formatting

You can set a formatting logic so that some cells will automatically be shown in specified formats. This conveniently separates the desired cells from others.