

THE ULTIMATE HANDBOOK TO
**BECOME AN
EXCEL NINJA**

By

CA. RISHABH PUGALIA

=SUMIFS()

Name	Gender	Age	Spouse
Price, Susan	F	25	\$ 10,000
Swann, Trina	F	37	\$ 12,000
Hobbs, Patsy	M	21	\$ 8,000
McCook, Sheri E.	M	22	\$ 20,000

Criteria range: A2:D2
Criteria value: M
Criteria range: A3:D3
Criteria value: >=21

Add the info specified by a given set of conditions or criteria.
Criteria_range— Is the range of cells you want to evaluate.

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=INDEX

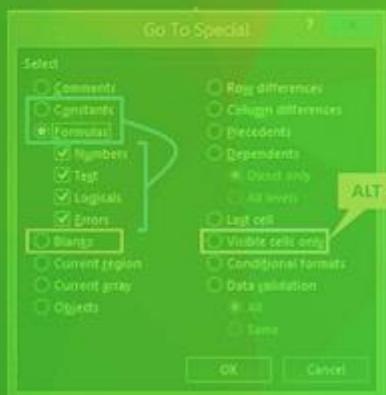
=MATCH

Name

Price, Susan

Swann, Trina

Hobbs, Patsy



Note from the Author:

Hi there!

In the last 12 years, I have been an auditor, an interest rate futures trader, a debt capital markets analyst and an Excel & PowerPoint Trainer. I loved all the roles. However, the current one stands first among equals.

After having interacted with almost 10,000 professionals across the country as a Trainer, I gathered a solid sense of how they could significantly increase their productivity 3x – 10x with little effort. And the best outcome of the learning is that the improvement becomes permanent. I am fortunate that my workshops' attendees loved my way of explaining concepts and more importantly the way my case studies could relate to their work.

While some struggle with applying basic VLookups (one dimensional), I would help them learn 2-D, 3-D, reverse lookups. And that is what my latest online program is all about – expanding the possibilities and make it attainable through bite-sized manageable learning steps.

To make the online learning more effective, I have prepared a picture based eBook for everyone's reference. The content has been mapped to the video lectures for convenient reference and revision. My friends complain that I talk in bullet points (in other words express more in less words). Well, this book does exactly does that – less words, more pictures and illustrations. I do not want my programs' attendees to add another thick fat Excel handbook on their shelves for aesthetic display of their interest in Excel. I want this Ultimate HandBook on their desktops and in their hands (print version).

I hope you love this book as much I loved making it.

Regards,

CA Rishabh Pugalia,
Co-Founder, Yoda Learning Solutions

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Advanced Excel Ninja – by CA Rishabh Pugalia

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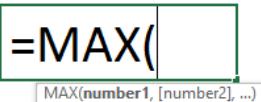
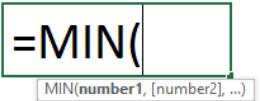
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#0101 – 0109: Super Essential Keyboard Shortcuts

Starters		
1	Alt	Press and release the ALT key to display the <i>Key Tips</i> next to each Ribbon command
2	Ctrl C ; Ctrl X ; Ctrl V	Copy ; Cut; Paste
3	Ctrl D	Copies the cell contents down
4	Ctrl R	Copies the cell contents to the right
5	Ctrl Enter	To fill all the selected cells with text/nos./formula
Workbook Navigation		
6	Ctrl PgDn	Moves to the next sheet
7	Ctrl PgUp	Moves to the previous sheet
Sheet Navigation & Cell(s) Selection		
8	Ctrl A	Selects the entire worksheet/data array depending on active cell selected
9	Ctrl Arrow key	Moves to the edge of a data block; if the cell is blank, moves to the first nonblank cell
10	Shift Arrow key	Expands the selection in the direction indicated (one cell at a time)
11	Ctrl Shift Arrow key	Select from the active cell to the end of a row/column
12	Ctrl Shift End key	Selects from the active cell to the last used cell
13	Ctrl BackSpace	Navigate to the beginning of selected data (keeping the selection intact)
14	Shift Spacebar	Selects the entire row(s) in the selected range
15	Ctrl Spacebar	Selects the entire column(s) in the selected range
Row/Column - Add or Delete		
16	Alt I C	Insert Column
17	Alt I R	Insert Row
18	Ctrl Shift +	Displays the Insert dialog box to insert new cells/rows/columns
19	Ctrl -	Displays the Delete dialog box to delete the selected cells/rows/columns
Formula Ninja		
20	F4	Repeats the last command or action, if possible
21	F4	Also, used for Cell referencing (\$); discussed later
22	F2	Begins editing the active cell

23	Ctrl `	Displays the formula in each cell instead of the resulting value [Hint: ` is back tick key above the TAB key]
24	Ctrl [and F5+Enter	Navigate to precedent cells and return back [*conditions apply]
25	ALT =	Auto sum
26	Ctrl A after formula open	Opens up "Function Arguments" box E.g. After writing =SUM(), press Ctrl A
27	Shift F3	Call out "Insert Function (fx)"/"Function Arguments" dialog box
28	Tab and Shift Tab	Moves down / up amongst a series of tabs/boxes
Format		
29	Ctrl 1	Activates "Format cells"
30	Ctrl ;	Inserts today's date
31	Ctrl Shift 3	Changes the date format to "22-May-2015"
32	Alt H K	Applies the Number format with two decimal places, thousands separator, and minus sign (-) for negative values
Miscl		
33	Ctrl F2	Print Preview
34	Ctrl F1	Displays or hides the ribbon
35	Alt ;	Selects visible cell from the selection
Paste Special		
36	Alt, E, S, V ENTER	Paste Special - Value
37	Ctrl Alt V V Enter	
38	QAT	

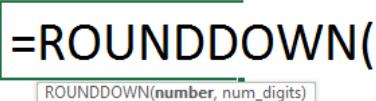
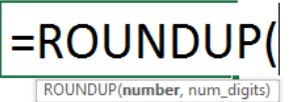
#0201: Used in Financial Modeling and Tax Computation

 <small>MAX(number1, [number2], ...)</small>	<ul style="list-style-type: none"> Used in Tax Computations & Financial Models to prevent choosing of negative numbers for subsequent calculations. E.g. =MAX(0,A1) chooses 0 or value in cell A1, whichever is higher E.g. Penalty for late deposit = higher of 2% of dues or Rs.100
 <small>MIN(number1, [number2], ...)</small>	<ul style="list-style-type: none"> Used in logics such as “lower of the two numbers” in the area of Tax Computations, specific areas of Financial Engineering =MIN(A1:A5) is same as =SMALL(A1:A5,1)

#0202: Used in pricing discovery processes

 <small>LARGE(array, k)</small>	<ul style="list-style-type: none"> Auction such as highest bid value, second highest bid value and so on. E.g. H2 will be =LARGE(A1:A5,2)
 <small>SMALL(array, k)</small>	<ul style="list-style-type: none"> Vendor evaluation such as lowest bid value L1, second lowest bid value L2 and so on. E.g. L2 will be =SMALL(A1:A5,2)

#0203 – 0204: For rounding numbers

 <small>ROUND(number, num_digits)</small>	<ul style="list-style-type: none"> "<i>num_digits</i>" signifies “number of decimal digits”. E.g. For the starting number 52.233 – “2” implies 52.23, “1” implies 52.20, and 0 implies 52.00 =ROUND(A1/50, 0) * 50 [implies nearest 50] – same technique also applicable with ROUNDUP & ROUNDDOWN E.g. Cell A1 = 5344.2 =ROUND(A1/10,0)*10 = 5340.0
 <small>ROUNDDOWN(number, num_digits)</small>	<ul style="list-style-type: none"> E.g. Cell A1 = 5349.2 =ROUNDDOWN(A1/10,0)*10 = 5340.0
 <small>ROUNDUP(number, num_digits)</small>	<ul style="list-style-type: none"> E.g. Cell A1 = 5342.2 =ROUNDUP(A1/10,0)*10 = 5350.0
<ul style="list-style-type: none"> MROUND() do not work with +/- nos. simultaneously AND it does not accommodate the logic of round up and round down. 	

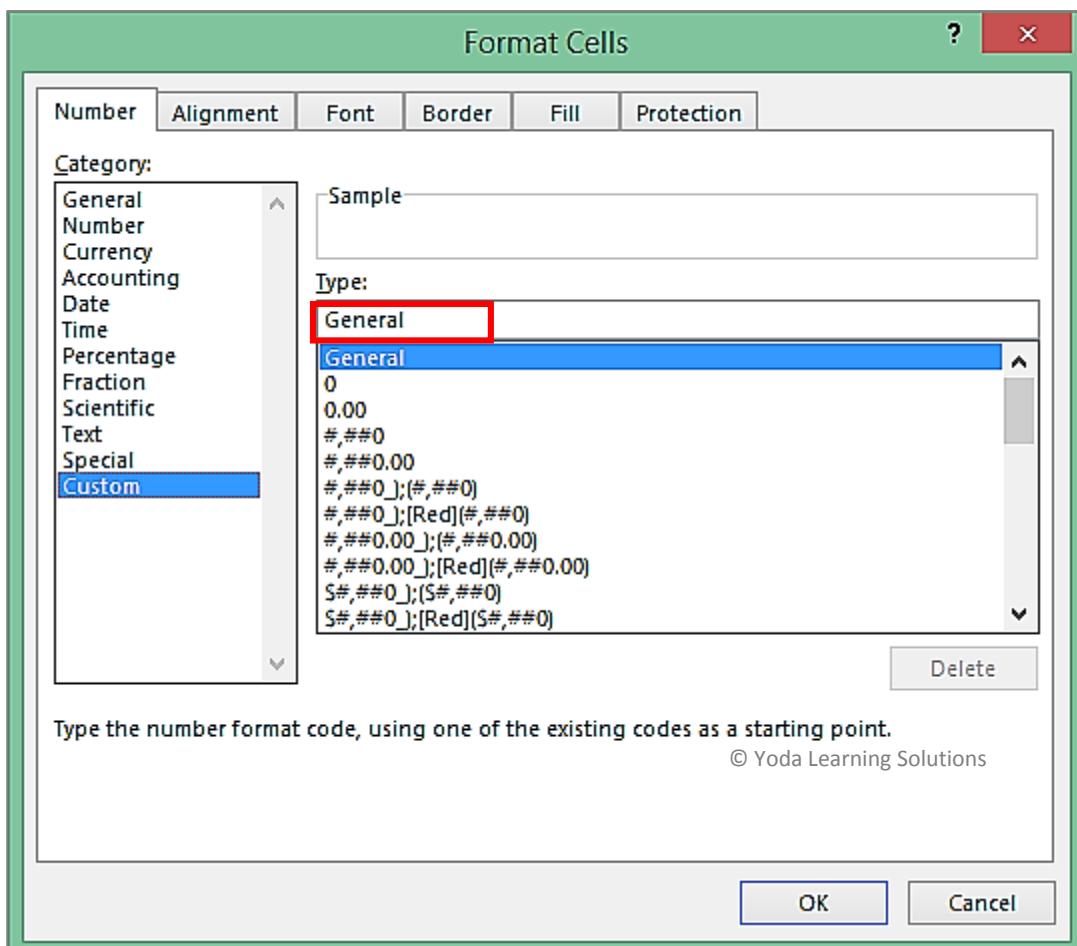
#0205: For Counting

=COUNT(<small>COUNT(value1, [value2], ...)</small>	<ul style="list-style-type: none"> Counts the number of cells which have numeric value
=COUNTA(<small>COUNTA(value1, [value2], ...)</small>	<ul style="list-style-type: none"> Counts the number of cells which IS NOT a blank (i.e. numbers, alphabets, alphanumeric, space)
=COUNTBLANK(<small>COUNTBLANK(range)</small>	<ul style="list-style-type: none"> Counts the number of cells which IS a blank
<ul style="list-style-type: none"> COUNTIF() and COUNTIFS() will be discussed later in the book. COUNTIFS() is a logic based cell counting mechanism 	

#0206 – 0207: For Weighted Average & Compounding/Discounting

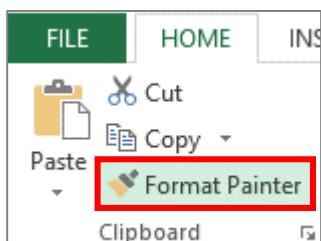
=SUMPRODUCT(<small>SUMPRODUCT(array1, [array2], [array3], ...)</small>	<ul style="list-style-type: none"> Multiplies corresponding cells in two or more ranges and returns the sum of those products. E.g. =SUMPRODUCT(A1:A2,B1:B2) = (A1*B1) + (A2*B2) The array arguments must have the same dimensions. E.g. =SUMPRODUCT(A1:A2,B1:B3) is invalid Used with =SUM() for computing weighted average Was used to create condition-based sum logic before SUMIFS() was introduced
=POWER(<small>POWER(number, power)</small>	<ul style="list-style-type: none"> Used in Financial Modeling – discounting cash flows, compounding Caret sign (^) is a perfect substitute. E.g. 25 =POWER(5,2) and is same as =5^2

#0301 – 0302: Formatting Tricks incl. Special Custom Formats [Shortcut: Ctrl 1]

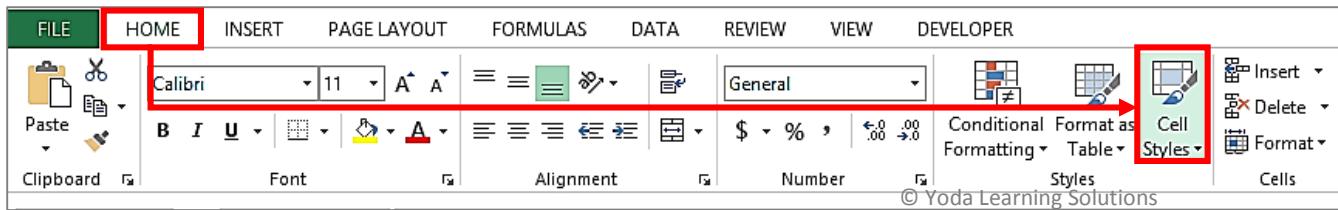


CUSTOM FORMAT	EFFECT
@*.	"Cell width adjusted" trailing full stops
"Rs."	Prefix/Suffix
000000	Self-adjusting Prefix Zeroes (up to 6)

- “Double-click” Format Painter to use it uninterrupted. Press <Esc> to return escape out of Format Painter mode.



#0303 – #0304: Using CELL STYLES for automating formatting for MIS Reporting & Financial Models



"New Cell Style" lets you create customized cell format which you can apply and re-apply on any worksheet of the workbook. Additionally, if you change the "definition" of any existing cell style, the changes are universal. Thus, **modifying a cell style affects all cells in a workbook that use that cell style**. This can save a lot of time.

Good, Bad and Neutral

- Normal
- Bad
- Good
- Neutral

Data and Model

- Calculation
- Check Cell
- Explanatory ...
- Input
- Linked Cell
- Note

Output

Warning Text

Titles and Headings

Heading 1	Heading 2	Heading 3	Heading 4	Title	Total
20% - Accent1	20% - Accent2	20% - Accent3	20% - Accent4	20% - Accent5	20% - Accent6
40% - Accent1	40% - Accent2	40% - Accent3	40% - Accent4	40% - Accent5	40% - Accent6
60% - Accent1	60% - Accent2	60% - Accent3	60% - Accent4	60% - Accent5	60% - Accent6
Accent1	Accent2	Accent3	Accent4	Accent5	Accent6

Themed Cell Styles

Number Format

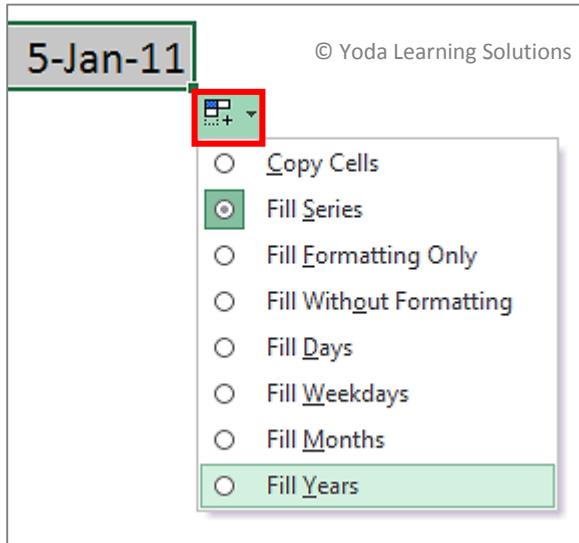
- Comma
- Comma [0]
- Currency
- Currency [0]
- Percent

New Cell Style...

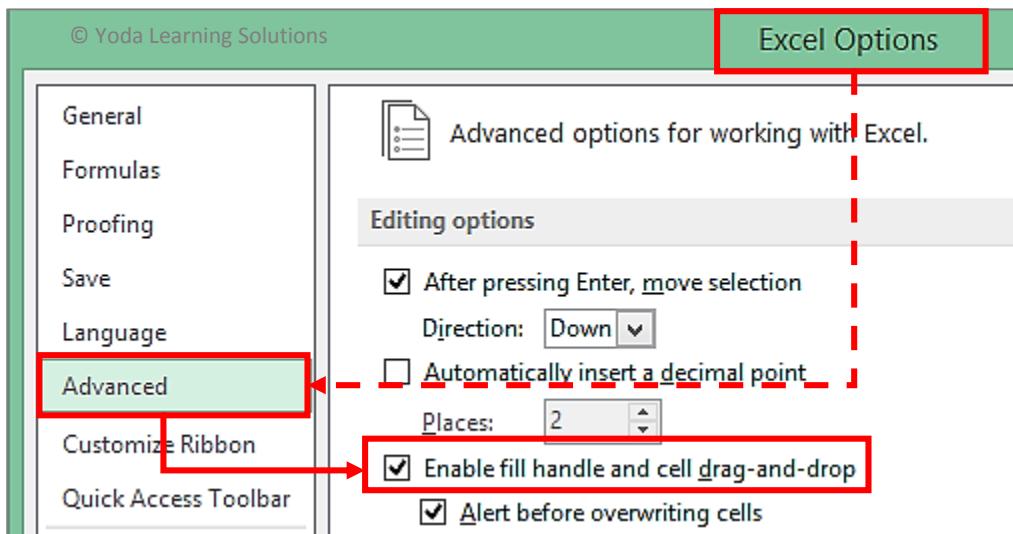
Merge Styles...

- Right click a cell style to modify or delete it.
- A cell style is stored in the workbook where you create it.
- Open a new workbook and click on "[Merge Styles](#)" (beneath New Cell Style) to import a cell style (keep the old workbook with the original cell style open).

#0305 – #0307: Cell drag-n-drop Auto Fill Options



- Also, refer =EOMONTH() for formula based Fill Months (1), Fill Quarters (3) and Fill Years (12)
- If the fill-handle doesn't appear or the mouse cursor isn't allowing you to draw the contents of a cell, please check if the "Enable fill handle and cell drag-and-drop" setting is turned ON.



#0308: Paste Special – Transpose vs. TRANSPOSE()

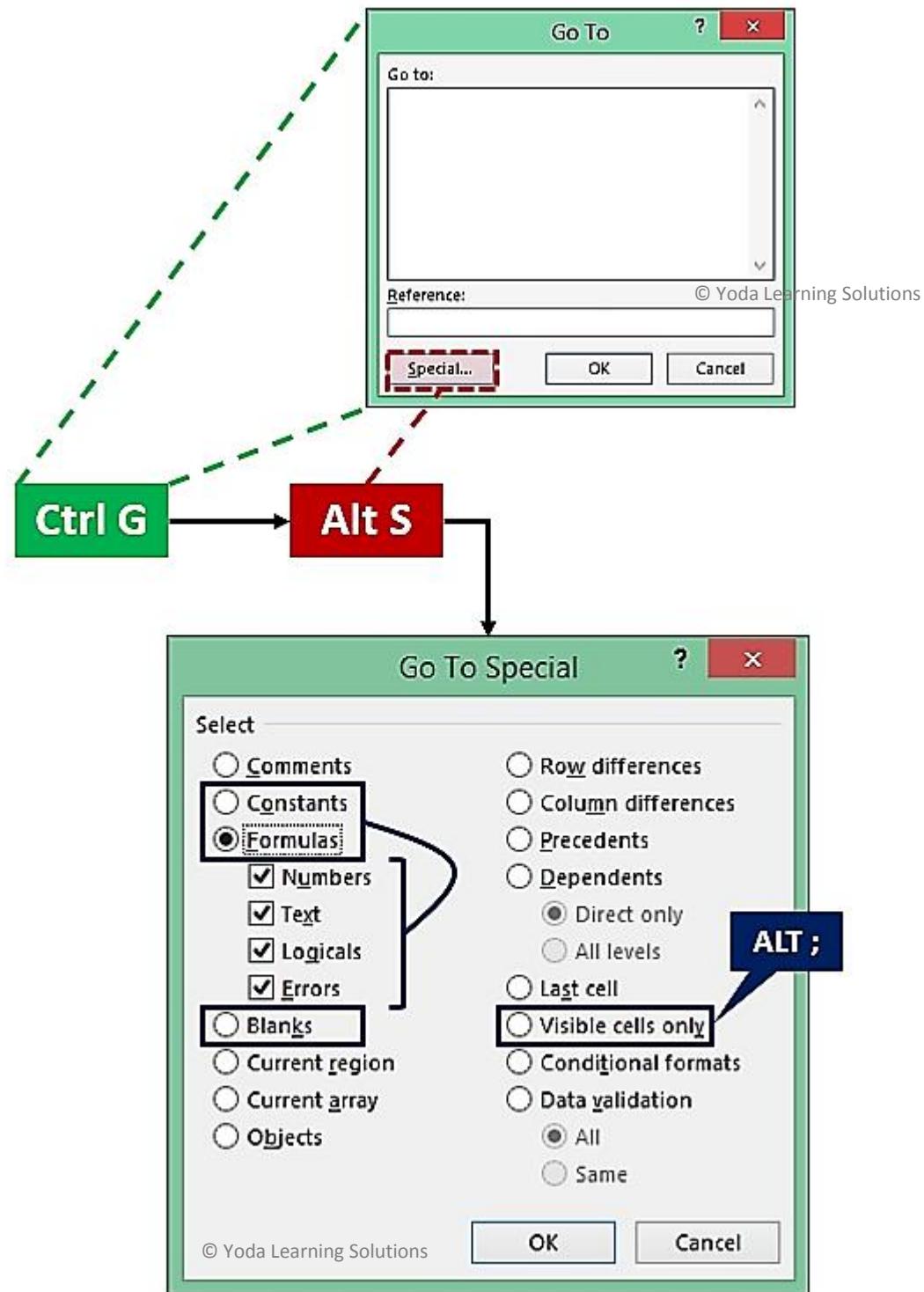
- **Paste Special – Transpose** switches/re–arranges the data in a table from rows and columns to columns and rows, respectively. However, it doesn't create "links" to the original cells. Thus, any change in the original table will not affect the "transposed" table.
- Writing a **=TRANSPOSE()** formula with **Ctrl + Shift + Enter** will create links too
 - Copy the data set to be "transposed"
 - Paste Special – Transpose
 - <Delete> cell values but keep the cell selection intact (this is to avoid counting the original cells and carefully select a fresh range in line with that)
 - Directly type **=TRANSPOSE(** and then, choose the original range of data, say A1:B5
 - Close the parentheses ")" and press Ctrl + Shift + Enter together to enter the formula as an "array" formula

#0401 – 0402: Absolute & Relative referencing using \$ (Locking the cell/range)

- After selecting a cell or a range of cells, keep pressing the function key **<F4>** to toggle between the four combinations of cell referencing (as indicated):

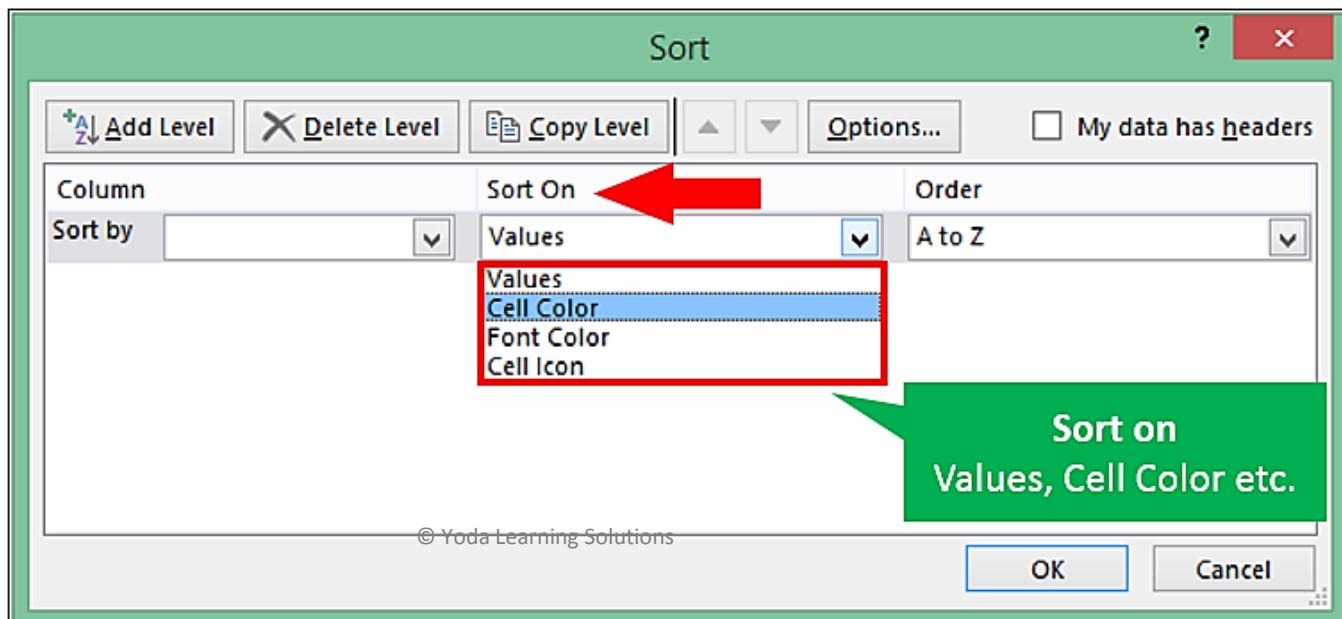
$=A1$	$=$A\1	$=A\$1$	$=$A1$
–	Row Fixed&Col Fixed	Row Fixed	Col Fixed
A1 becomes B1 if copied sideways (right)	\$A\$1 remains \$A\$1 if copied sideways	A\$1 becomes B\$1 if copied sideways (right)	\$A1 remains \$A1 if copied sideways
A1 becomes A2 if copied downwards	\$A\$1 remains \$A\$1 if copied downwards	A\$1 remains A\$1 if copied downwards	\$A1 becomes \$A2 if copied downwards

#0501 – 0506: Go To – Special (Ctrl + G or F5)



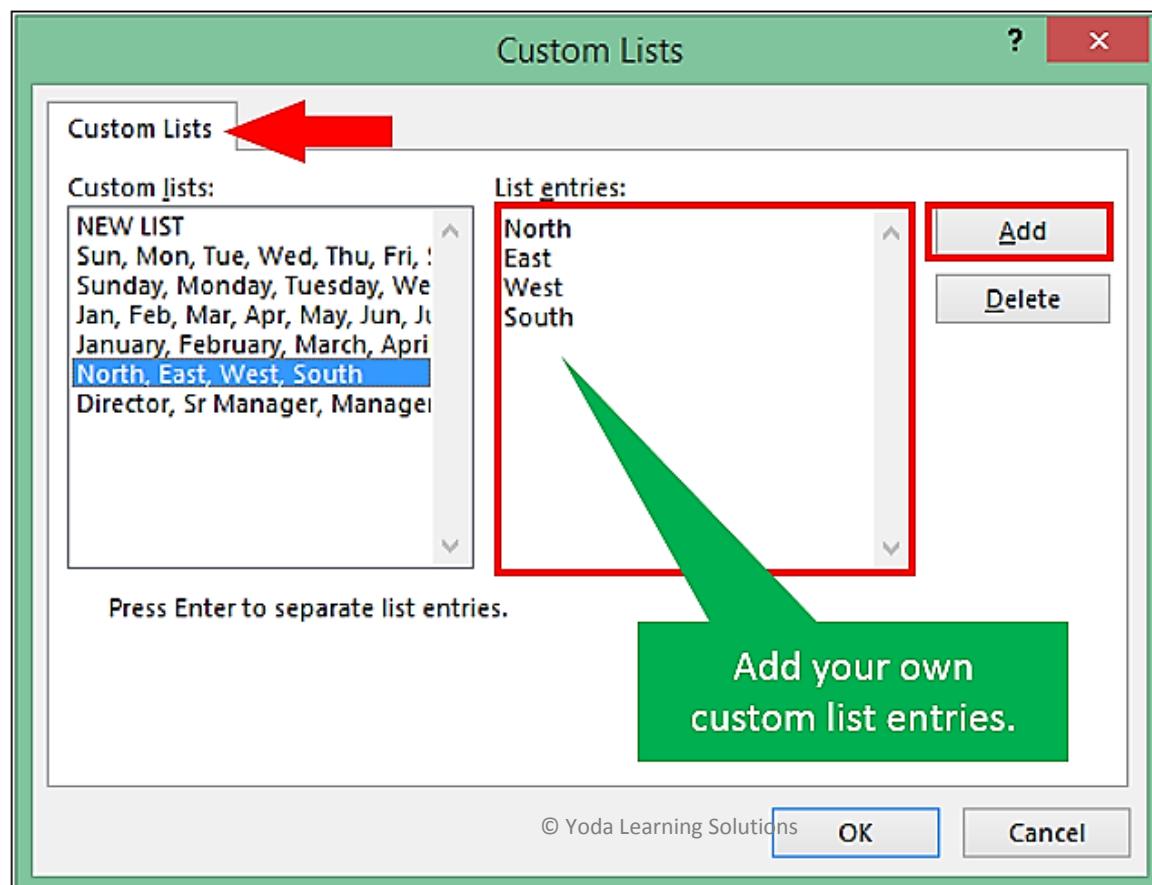
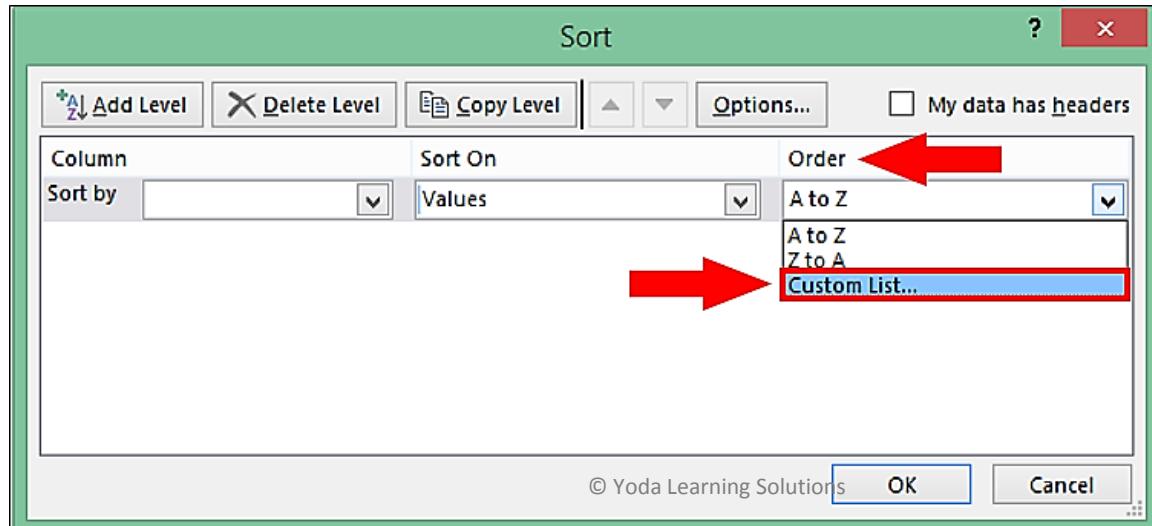
- Often used with **Ctrl+Enter**: With multiple cells selected (can be non-contiguous), this shortcut will enter the same data / formula logic in all cells in the selection at once.

#0601: Vertical Sort - 1-level & 2-level



#0602: Custom Sorting

- “Order” > “Custom”: allows to prepare own custom sequence in which the data can be sorted. E.g. Partner, Director, Sr Manager, Manager, Analyst OR North, East, West, South

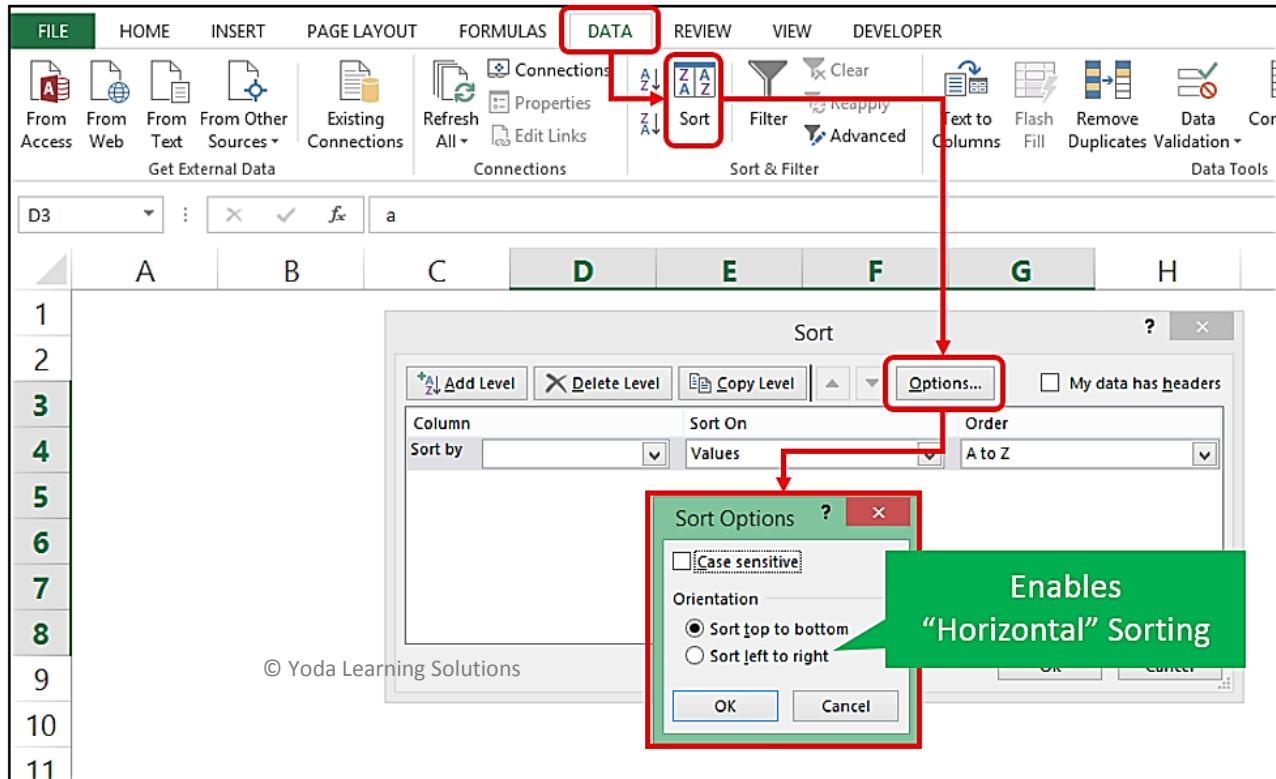


#0603: Sort Trick - add alternate blank rows in-between existing rows

	A	B	C	D	E	F	G	H	
1	Zone	Amt. \$	DUMMY SN			Zone	Amt. \$	DUMMY SN	
2	North	1,612		1		North	1,612		1
3	North	285		2					1
4	North	611		3		North	285		2
5	East	501		4					2
6	East	241		5		North	611		3
7	West	586		6					3
8	West	1,213		7		East	501		4
9	West	374		8					4
10	South	9,321		9		East	241		5
11	South	324		10					5
12	South	2,775		11		West	586		6
13	South	1,954		12					6
14				1		West	1,213		7
15				2					7
16				3		West	374		8
17				4					8
18				5		South	9,321		9
19				6					9
20				7		South	324		10
21				8					10
22				9		South	2,775		11
23				10					11
24				11		South	1,954		12
25				12					12

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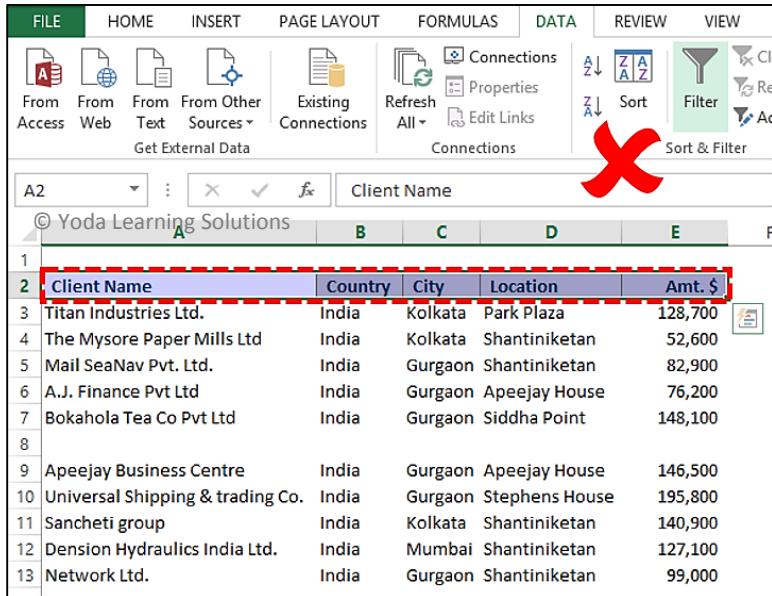
#0604: Horizontal Sorting (Left to Right)



- “Options” > “Horizontal Sort > Left to Right”: is used to re-arrange the columns – all at once, without using “Cut” & “Insert Cut Cells” for each instance
- Using **synthetic “DUMMY Serial No.”** column helps (1) create blank rows in-between and, (2) remember the original sequence of row items

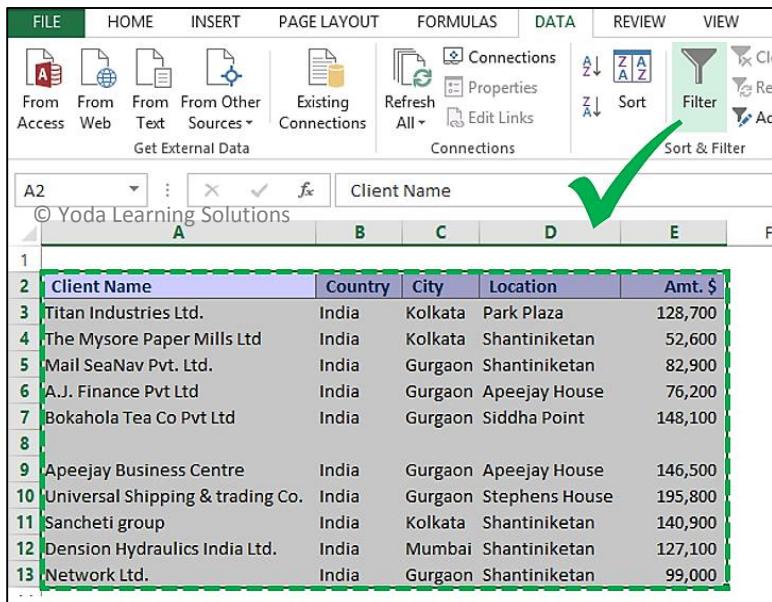
#0605 – 0606: Filter - Choosing the dataset correctly

- Choosing just the header row/cells before applying Filter will lead the “Filter” to ignore the data rows after the blank row.



This screenshot shows an Excel spreadsheet with a dataset of client information. The first two rows are headers: 'Client Name', 'Country', 'City', 'Location', and 'Amt. \$'. Rows 3 through 13 contain data for various clients. A red 'X' is drawn over the 'Filter' icon in the 'DATA' tab's ribbon, indicating that selecting only the header row leads to incorrect filtering results.

Client Name	Country	City	Location	Amt. \$
Titan Industries Ltd.	India	Kolkata	Park Plaza	128,700
The Mysore Paper Mills Ltd	India	Kolkata	Shantiniketan	52,600
Mail SeaNav Pvt. Ltd.	India	Gurgaon	Shantiniketan	82,900
A.J. Finance Pvt Ltd	India	Gurgaon	Apeejay House	76,200
Bokahola Tea Co Pvt Ltd	India	Gurgaon	Siddha Point	148,100
Apeejay Business Centre	India	Gurgaon	Apeejay House	146,500
Universal Shipping & trading Co.	India	Gurgaon	Stephens House	195,800
Sancheti group	India	Kolkata	Shantiniketan	140,900
Dension Hydraulics India Ltd.	India	Mumbai	Shantiniketan	127,100
Network Ltd.	India	Gurgaon	Shantiniketan	99,000



This screenshot shows the same Excel spreadsheet as the previous one, but with a green checkmark over the 'Filter' icon in the 'DATA' tab's ribbon. This indicates that selecting both the header row and the data rows (from row 2 to 13) ensures that the filter will correctly apply to all data rows.

Client Name	Country	City	Location	Amt. \$
Titan Industries Ltd.	India	Kolkata	Park Plaza	128,700
The Mysore Paper Mills Ltd	India	Kolkata	Shantiniketan	52,600
Mail SeaNav Pvt. Ltd.	India	Gurgaon	Shantiniketan	82,900
A.J. Finance Pvt Ltd	India	Gurgaon	Apeejay House	76,200
Bokahola Tea Co Pvt Ltd	India	Gurgaon	Siddha Point	148,100
Apeejay Business Centre	India	Gurgaon	Apeejay House	146,500
Universal Shipping & trading Co.	India	Gurgaon	Stephens House	195,800
Sancheti group	India	Kolkata	Shantiniketan	140,900
Dension Hydraulics India Ltd.	India	Mumbai	Shantiniketan	127,100
Network Ltd.	India	Gurgaon	Shantiniketan	99,000

#0607: Filter analysis w. shortcuts

1.	Alt, A, T	Apply/Deactivate Filter on selected data set
2.	Alt + down-arrow	To open up the Filter drop-down options from the header row
3.	Spacebar	To check ON/OFF square checkbox
4.	Home	To quickly reach to the beginning of the options in list of square checkboxes Used to “Select All”, which is placed at the beginning of the list.
5.	End	To quickly reach to the end of the options in list of square checkboxes. Used to navigate to the “(Blank)” or “#N/A” option, which are placed at the bottom of the list.
6.	Alt =	E.g. To generate a =SUBTOTAL(9,\$C\$2:\$C\$200) formula for AutoSum

#0608 - 0609: Using =SUBTOTAL() for calculations w. Filtered list.

The screenshot shows the Microsoft Excel formula bar with the formula `=SUBTOTAL(` entered. A dropdown menu is open next to the closing parenthesis, listing various functions. The function `9 - SUM` is highlighted. The formula bar also shows the argument `SUBTOTAL(function_num, ref1, ...)`. At the bottom left of the formula bar, there is a copyright notice: `© Yoda Learning Solutions`.

- In filtered lists, SUBTOTAL() always ignores values in hidden rows, regardless of `function_num`. E.g. 1 for AVERAGE, 9 for SUM, 109 for SUM again
- In tables with Filter applied, SUBTOTAL() with 109 i.e. SUM will ignore values in the manually hidden rows whereas SUBTOTAL() with 9 will not
- Shortcut for SUBTOTAL() formula for autosum in filtered lists is **ALT =**

#0610: Filter - Applying 2 or more Filters simultaneously on the same sheet

- Creating two (or more) distinct Filtered list on the same sheet is not possible through “Data” tab > “Filter”. Instead, use “Insert” tab > “Table” (or Ctrl + T)

Table (Ctrl+T)
Create a table to organize and analyze related data.
Tables make it easy to sort, filter, and format data within a sheet.

	Client Name	Location	Amt. \$
1	Titan Industries Ltd.	Park Plaza	128,700
2	The Mysore Paper Mills Ltd	Shantiniketan	52,600
3	Mail SeaNav Pvt. Ltd.	Shantiniketan	82,900
4	A.J. Finance Pvt Ltd	Apeejay House	76,200
5	Bokahola Tea Co Pvt Ltd	Siddha Point	148,100

	Client Name	Location	Amt. \$
10	Apeejay Business Centre	Apeejay House	146,500
11	Universal Shipping & trading Co.	Stephens House	195,800
12	Sancheti group	Shantiniketan	140,900
13	Dension Hydraulics India Ltd.	Shantiniketan	127,100
14	Network Ltd.	Shantiniketan	99,000

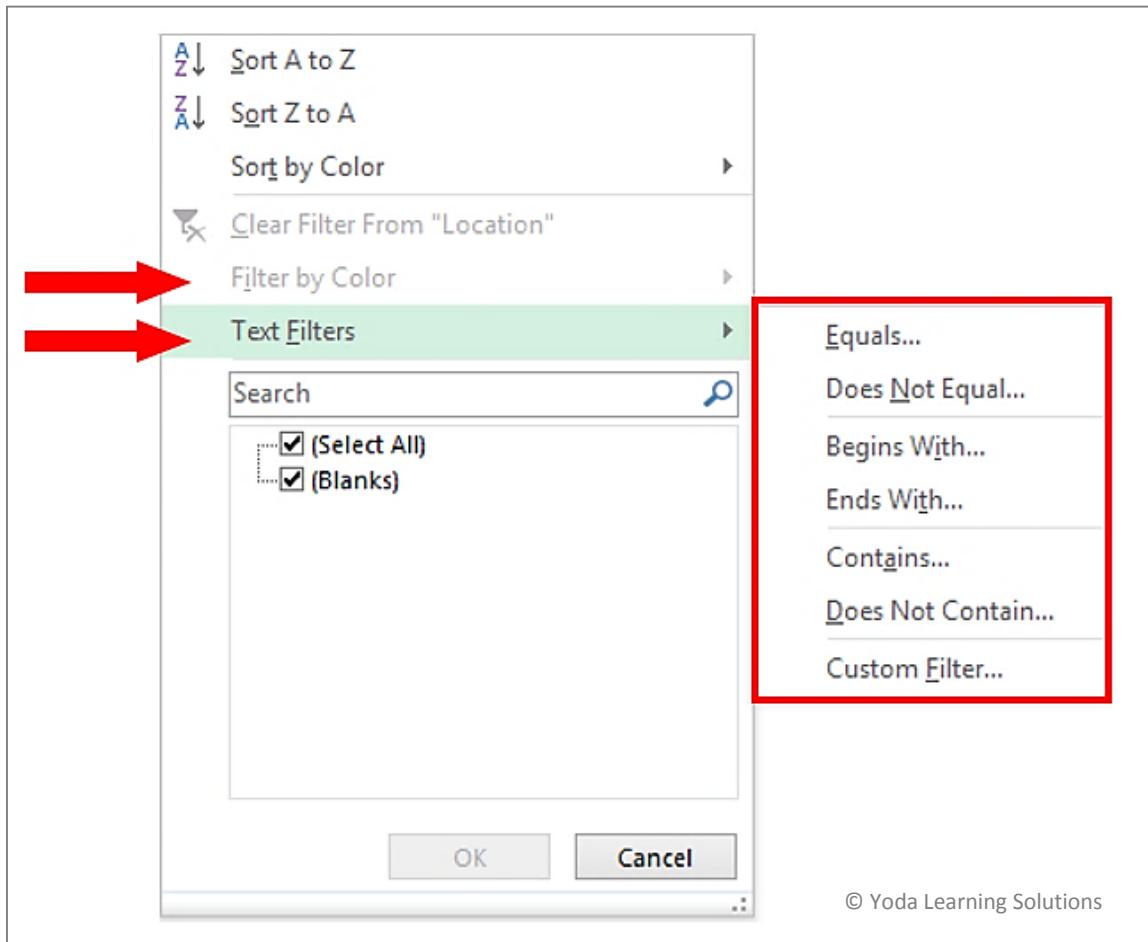
© Yoda Learning Solutions

	Client Name	Location	Amt.
1	Titan Industries Ltd.	Park Plaza	128,700
2	The Mysore Paper Mills Ltd	Shantiniketan	52,600
3	Mail SeaNav Pvt. Ltd.	Shantiniketan	82,900
4	A.J. Finance Pvt Ltd	Apeejay House	76,200
5	Bokahola Tea Co Pvt Ltd	Siddha Point	148,100

	Client Name	Location	Amt.
10	Apeejay Business Centre	Apeejay House	146,500
11	Universal Shipping & trading Co.	Stephens House	195,800
12	Sancheti group	Shantiniketan	140,900
13	Dension Hydraulics India Ltd.	Shantiniketan	127,100
14	Network Ltd.	Shantiniketan	99,000

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#0611: Filter - Color Filter & Text Filter



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#0612 - 0614: Advanced Filter

- "Advanced Filter" can simultaneously pick up differential criteria unlike "Filter". E.g. List of clients from "Park Plaza" with amount ">70,000" AND from "Shantiniketan" with amount ">50,000" has to be extracted in one go.

B

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Advanced Filter

Action
 Copy to another location
 Filter the list, in-place

List range: [Range A1:A10]
Criteria range: [Range B1:B2]
Copy to: [Range C1:C10]
 Unique records only

OK Cancel

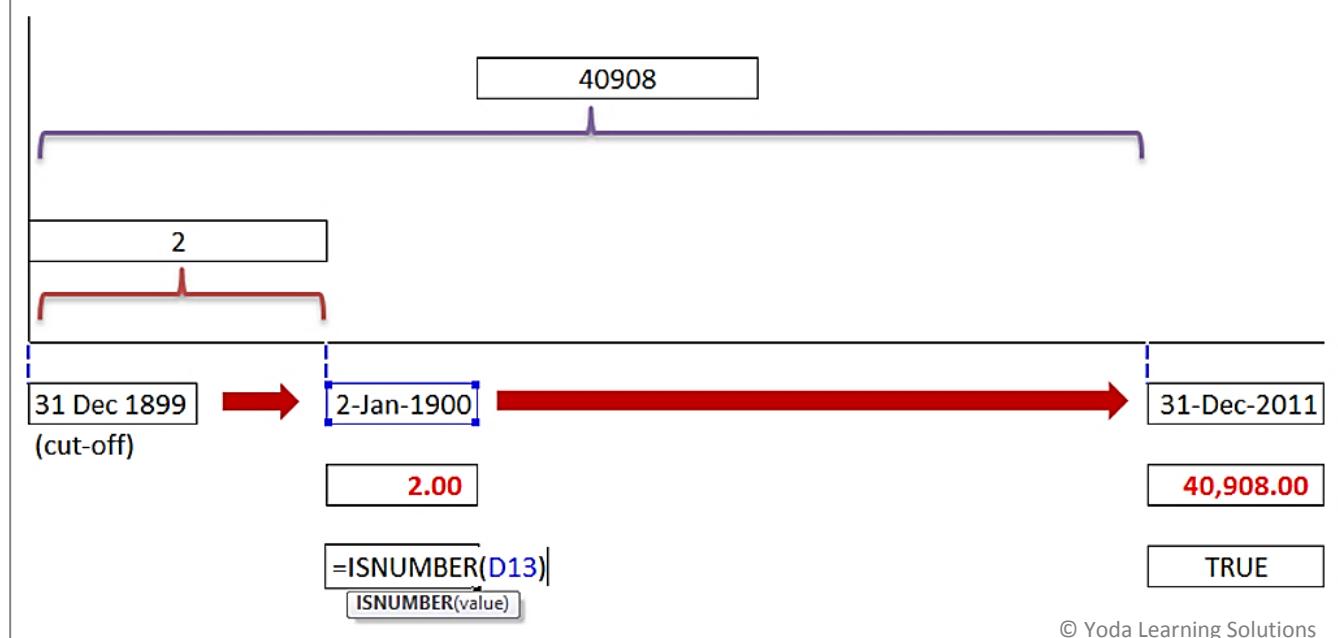
Destination
Select start cell

Criteria	Records selected...
P	Start with the character- P
Park	Start with the word- Park
=“=P”	Only contain the character- P
'=P	Only contain the character- P
=“=Park”	Only contain the text- Park
'=Park	Only contain the text- Park
=“=S?N”	Contain text that begins with S, has one character, and then the letter N (may be more than 3 characters long)
'=S?N	Contain text that begins with S, has one character, and then the letter N (may be more than 3 characters long)
=“=S*N”	Contain text that begins with S, has one or more other characters, and then the letter N
'=S*N	Contain text that begins with S, has one or more other characters, and then the letter N
=	Contain a blank
<>	Contain a non-blank entry
<>A*	Contain any text except text that begins with A
<>*A	Contain any text except text that ends with A
'=???	Contain exactly 3 characters
<>????	Does not contain exactly 4 characters
NOTE: Text filters are not Case Sensitive	

#0701 - 0702: Every valid date (i.e. date that can be understood by Excel) is a number

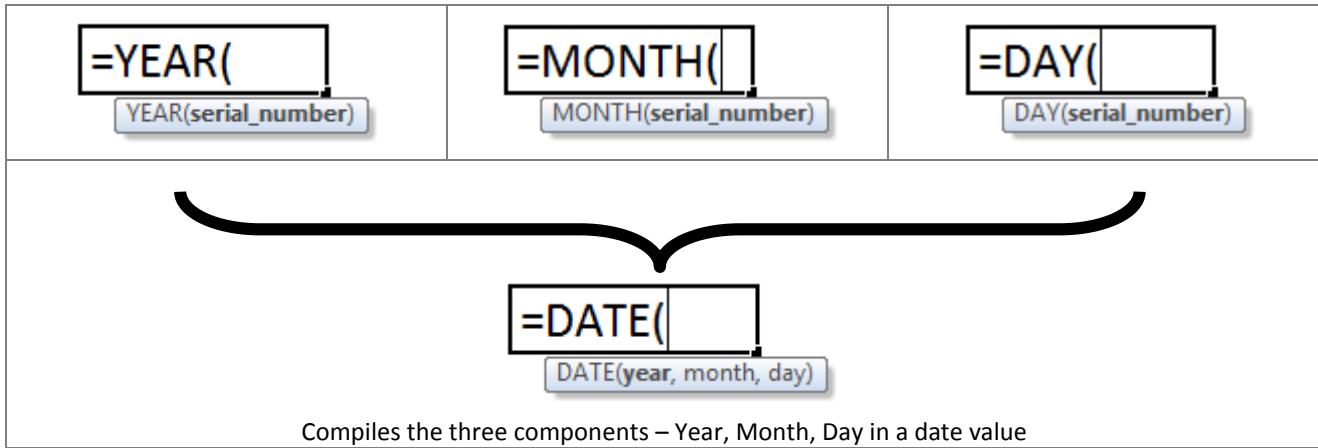
- 2-Jan-1900 is 2 days away from 31-Dec-1899 and hence, read by Excel as 2.0
- Use =ISNUMBER() to detect validity of Dates entered i.e. whether the displayed date is a number
- Use “Format Cells” or Ctrl + 1 to change the “skin” or the display value of the date
 - Use “Comma Style” or “General” to display the number
 - **Ctrl + Shift + 3** will convert a correct date’s display value to dd-mmm-yy format or 22-Jul-2015.
- Microsoft OS: Control Panel > Region & Language > Settings – to change the format of the date input accepted by Excel

**Every valid Date is a Number - being the number of days as counted
from 31-Dec-1899 [system defined cut-off date]**



#0703: Extracting date information through formulas - DAY(), MONTH(), YEAR(), DATE()

	A	B	C	D	E	F
1						© Yoda Learning Solutions
2		=DAY()	=MONTH()	=YEAR()		=DATE()
3	3-Jun-11	3	6	2011		3-Jun-11
4						
5		=DAY(A3)	=MONTH(A3)	=YEAR(A3)		=DATE(E3,D3,C3)



#0704: Extracting date information

- Converts the date into Custom format. E.g. "mmmm-yyyy" will display June-2011
- Important: Resultant answer value is not a date value but a text value. Used for display purposes and not for subsequent formula computations.

	A	B	C	D	E
1					© Yoda Learning Solutions
2				=TEXT()	
3	3-Jun-11			Friday	=TEXT(A3,"dddd")
4	3-Jun-11			Fri	=TEXT(A3,"ddd")
5	3-Jun-11			03	=TEXT(A3,"dd")
6					
7				=TEXT()	
8	3-Jun-11			June	=TEXT(A8,"mmmm")
9	3-Jun-11			Jun	=TEXT(A9,"mmm")
10	3-Jun-11			06	=TEXT(A10,"mm")
11					
12					
13				=TEXT()	
14	3-Jun-11			2011	=TEXT(A14,"yyyy")
15	3-Jun-11			2011	=TEXT(A15,"yyy")
16	3-Jun-11			11	=TEXT(A16,"yy")
...					

#0705: Date Formulas - WEEKDAY(), WORKDAY(), NETWORKDAYS()

=WEEKDAY(<small>WEEKDAY(serial_number, [return_type])</small>	<ul style="list-style-type: none"> Returns a value from 1 to 7, representing day of the week E.g. 1=Sunday, 2=Monday, 7= Saturday Used with IF() to write day based logical formula. E.g. <code>=IF(WEEKDAY(A1)=1,"Holiday","Office Day")</code> Scheduled public holidays can also be excluded
=WORKDAY(<small>WORKDAY(start_date, days, [holidays])</small>	<ul style="list-style-type: none"> Returns the date before or after a specified number of weekdays (weekends excluded). It excludes start date in computing final answer. E.g. If Cell A1 is 30-Dec-2011, then <code>=WORKDAY(A7,5)-1</code> will return 5-Jan-2012. 1-Jan-2012 is a Sunday and hence, excluded. Scheduled public holidays can also be excluded Used to calculate deadline/due date calculations
=NETWORKDAYS(<small>NETWORKDAYS(start_date, end_date, [holidays])</small>	<ul style="list-style-type: none"> Returns the number of weekdays (weekends excluded) between two dates. It includes start date in computing final answer. Scheduled public holidays can also be excluded Used to calculate no. of business days between two dates
<ul style="list-style-type: none"> WORKDAY.INTL() and NETWORKDAY.INTL() have been introduced from v. 2010 onwards. They incorporate the logic that multiple country may have different weekends. Refer Lecture #0706-#0707. 	

#0706: WORKDAY.INTL() for deadline/due date calculations w. custom weekends/holidays

=WORKDAY.INTL(

WORKDAY.INTL(start_date, days, [weekend], [holidays])

Saturday and Sunday are weekend days

- 1 - Saturday, Sunday
- 2 - Sunday, Monday
- 3 - Monday, Tuesday
- 4 - Tuesday, Wednesday
- 5 - Wednesday, Thursday
- 6 - Thursday, Friday
- 7 - Friday, Saturday
- 11 - Sunday only
- 12 - Monday only
- 13 - Tuesday only
- 14 - Wednesday only
- 15 - Thursday only
- 16 - Friday only
- 17 - Saturday only

- Returns the date before or after a specified number of weekdays (weekends excluded). It **excludes start date** in computing final answer
- Scheduled public holidays can also be excluded
- Used to calculate deadline/due date calculations and in Project Management

How is it different from =WORKDAY()

- Allows the user to specify which days are counted as weekends.
- E.g. 7 = Fri/Sat are weekends as followed by Saudi Arabia

#0706: NETWORKDAYS.INTL() for no. of business days calculations w. custom weekends/holidays

=NETWORKDAYS.INTL(

NETWORKDAYS.INTL(start_date, end_date, [weekend], [holidays])

Saturday and Sunday are weekend days

- 1 - Saturday, Sunday
- 2 - Sunday, Monday
- 3 - Monday, Tuesday
- 4 - Tuesday, Wednesday
- 5 - Wednesday, Thursday
- 6 - Thursday, Friday
- 7 - Friday, Saturday
- 11 - Sunday only
- 12 - Monday only
- 13 - Tuesday only
- 14 - Wednesday only
- 15 - Thursday only
- 16 - Friday only
- 17 - Saturday only

- Returns the number of weekdays (weekends excluded) between two dates.
- It **includes start date** in computing final answer
- Scheduled public holidays can also be excluded
- Used to calculate no. of business days between two dates and in Project Management

How is it different from =NETWORKDAYS()

- Allows the user to specify which days are counted as weekends
- E.g. 7 = Fri/Sat are weekends as followed by Saudi Arabia

#0708: Date Formulas - TODAY() and NOW() w. Shortcut

	<ul style="list-style-type: none">Returns the current date as per PC's system clockUpdates every time the file is opened (dynamic)Ctrl + ; and press Enter - for inserting current date (static)
	<ul style="list-style-type: none">Returns the current date and time as per PC's system clockUpdates every time the file is opened (dynamic)Ctrl + Shift + ; and press Enter - for inserting current time (static)

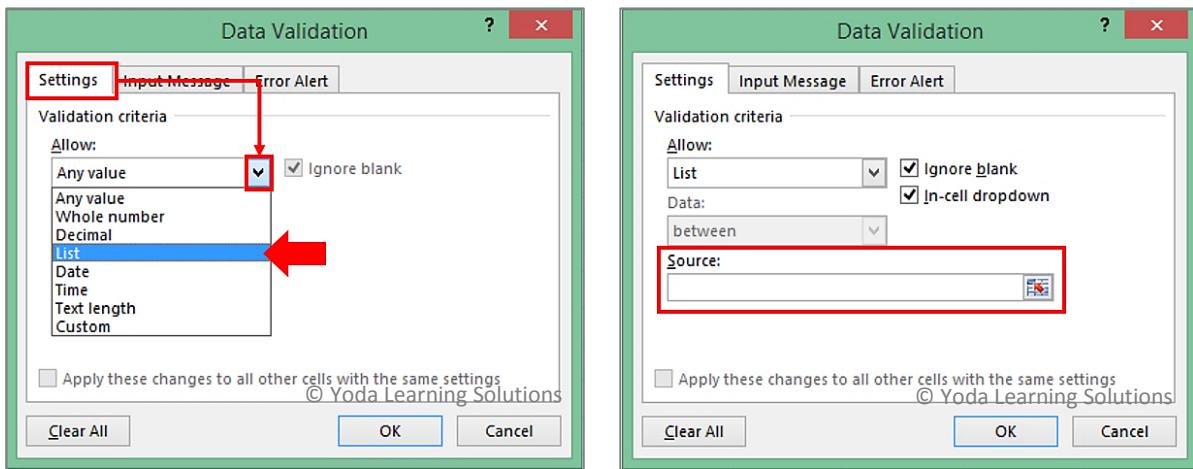
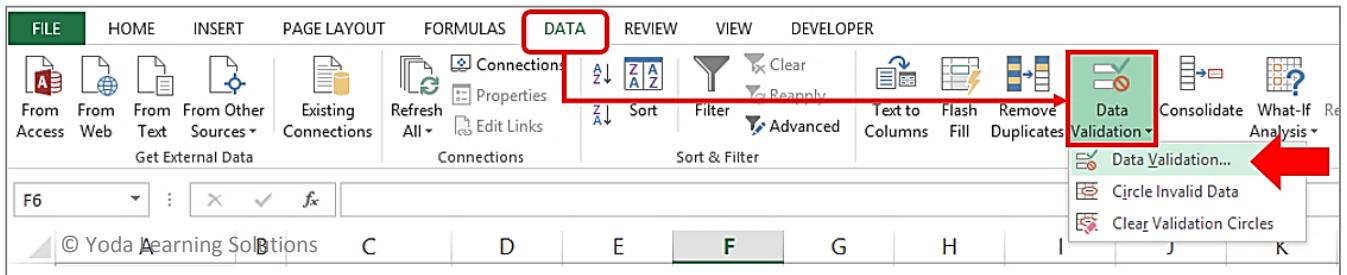
#0709: Date Formulas - EOMONTH() for Financial Modeling, Budgets, Due Dates

	<ul style="list-style-type: none">Returns the last day of the month before or after a specified number of months.Used for due dates computations such as 5th of next month, end of current monthUsed for creating timelines in Budget & Forecast models – MoM, QoQ, YoY
--	---

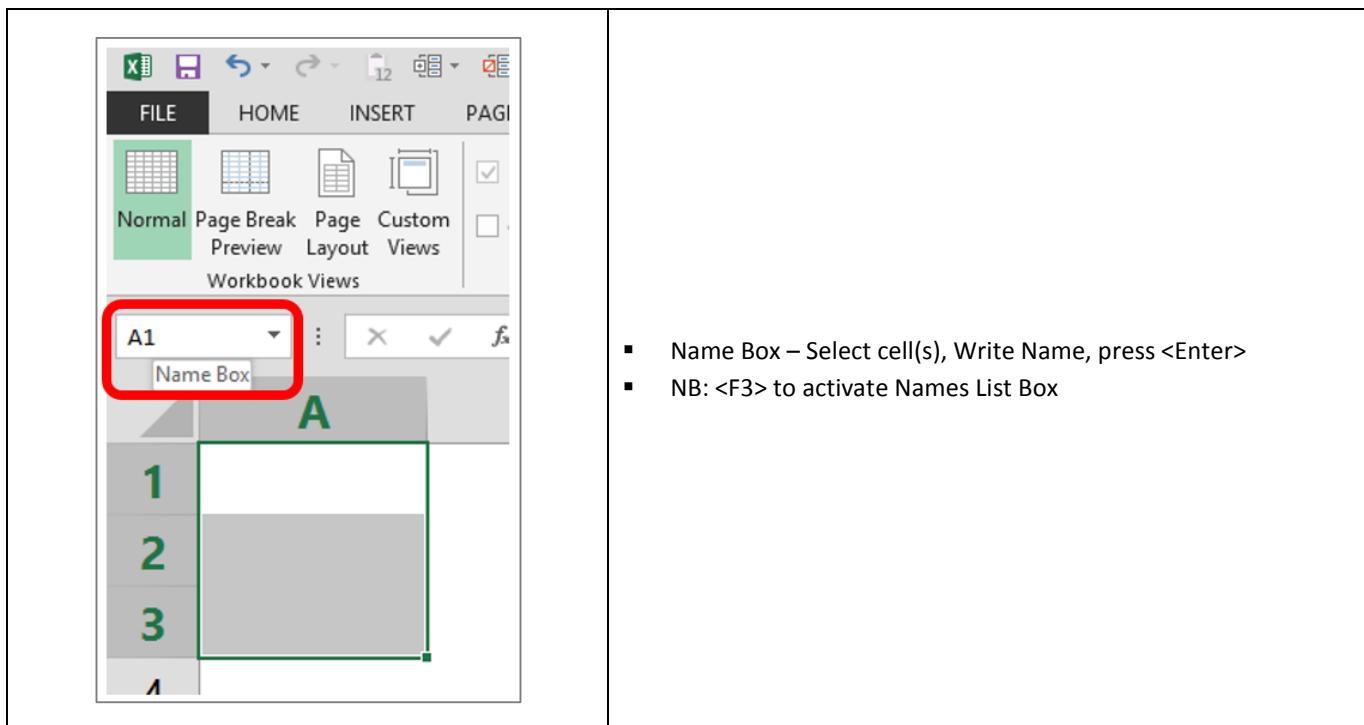
#0710 Date Formulas - EDATE() for Financial Modeling, Budgets, Due Dates

	<ul style="list-style-type: none">Returns the date that represents the indicated number of months before or after the start date. E.g. 60 days vs. 2 monthsUsed for computing 3 months' notice period end date, retirement age, probation period, contract deadline, EMI installment due date
--	--

#0801 – 0802: Data Validation - Drop Down List & Range naming



<p><u>Source:</u></p> <p>Accepted,Rejected</p>	<ul style="list-style-type: none"> Hard-coded values separated by comma
<p><u>Source:</u></p> <p>=S\$1:\$A\$5</p>	<ul style="list-style-type: none"> Cell range containing input values
<p><u>Source:</u></p> <p>=listname</p>	<ul style="list-style-type: none"> Named cell range from same/different worksheet. Refer cell/range Naming via-name Box. The prefix = (equal sign) is important here.
<p>Note: (1) =INDIRECT() w. named ranges and (2) =OFFSET() can also be used to create dynamic ranges.</p>	



- **Name Box** – Select cell(s), Write Name, press <Enter>
- NB: <F3> to activate Names List Box

- **NAME MANAGER:** Cell(s) / Range Naming – Editing / Deleting “names” / “referred range”
- **CREATE FROM SELECTION:** for bulk naming

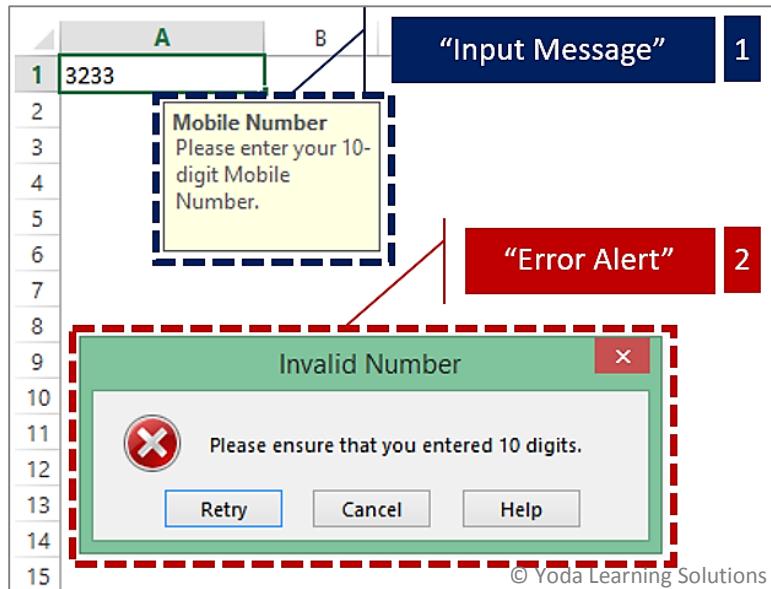
The screenshot shows the Microsoft Excel ribbon with the 'FORMULAS' tab selected. The 'Name Manager' icon in the 'Formulas' tab is highlighted with a red box. A callout bubble with the text 'For bulk-naming' points to the 'Name Manager' icon. Below the ribbon, the formula bar shows 'A1'. The main area of the screen shows a portion of a worksheet with columns D through I. A red box highlights the 'Name Manager' dialog box, which is open and displays two entries: 'feb' and 'jan'. The 'feb' entry has a blue selection bar. The dialog box includes buttons for 'New...', 'Edit...', 'Delete', and 'Filter'.

Name	Value	Refers To	Scope	Comment
feb	("3","3","3","3","3..."	= 'VM 02'!\$H\$31:\$I\$...	Workbook	
jan	("1","1","1","1","1..."	= 'VM 02'!\$C\$29:\$D...	Workbook	

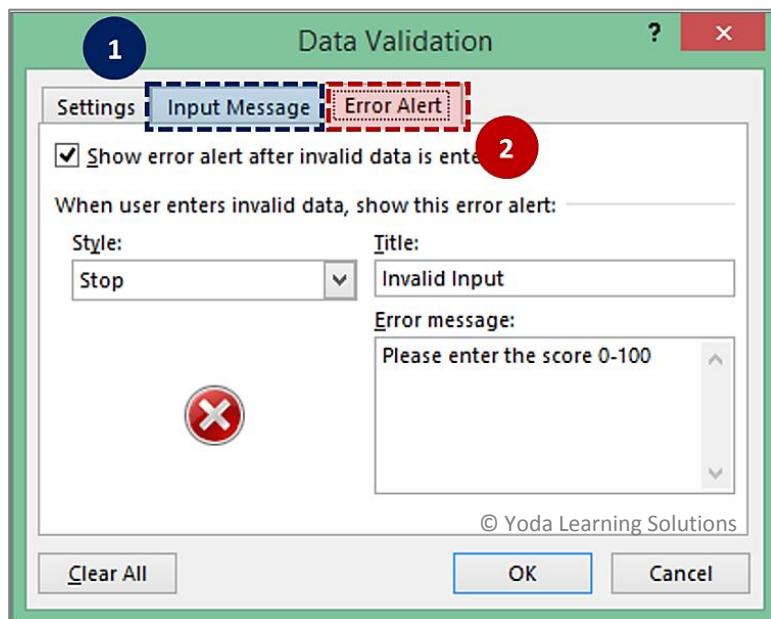
#0803: Data Validation - Numbers w. Error Alert and Input Message

1	Input Message	To display a message <u>when</u> a cell is selected
2	Error Alert	To display an alert if <u>invalid data</u> is entered in a cell

Sample Output



Procedure to activate “Input Message” & “Error Alert”



#0804: Data Validation - Dates w. Error Alert and Circle Invalid Data

A cell with pre-defined data validation logic will accept only those user inputs as validated by the rule. E.g. values as per drop-down list.

However, one can mistakenly **supersede** these rules by copying an invalid data from a different cell and use **Paste Special (Value)** on top of the cell with data validation. This procedure allows the cell with data validation to accept the invalid data. So in order to highlight the cells with invalid values, we use "**Circle Invalid Data**"

The screenshot shows a Microsoft Excel spreadsheet with a table of scores. The first column contains row numbers 1 through 6. The second column contains the word "Score" in row 1, the number "120" in row 3, and the numbers "76" and "87" in rows 4 and 5 respectively. A red circle highlights the cell containing "120". A callout arrow points from this cell to a text box that says "Circled input data is ‘invalid’". The status bar at the bottom right of the Excel window displays the text "© Yoda Learning Solutions".

1 Score should be 0-100

2 Score

3 120

4 76

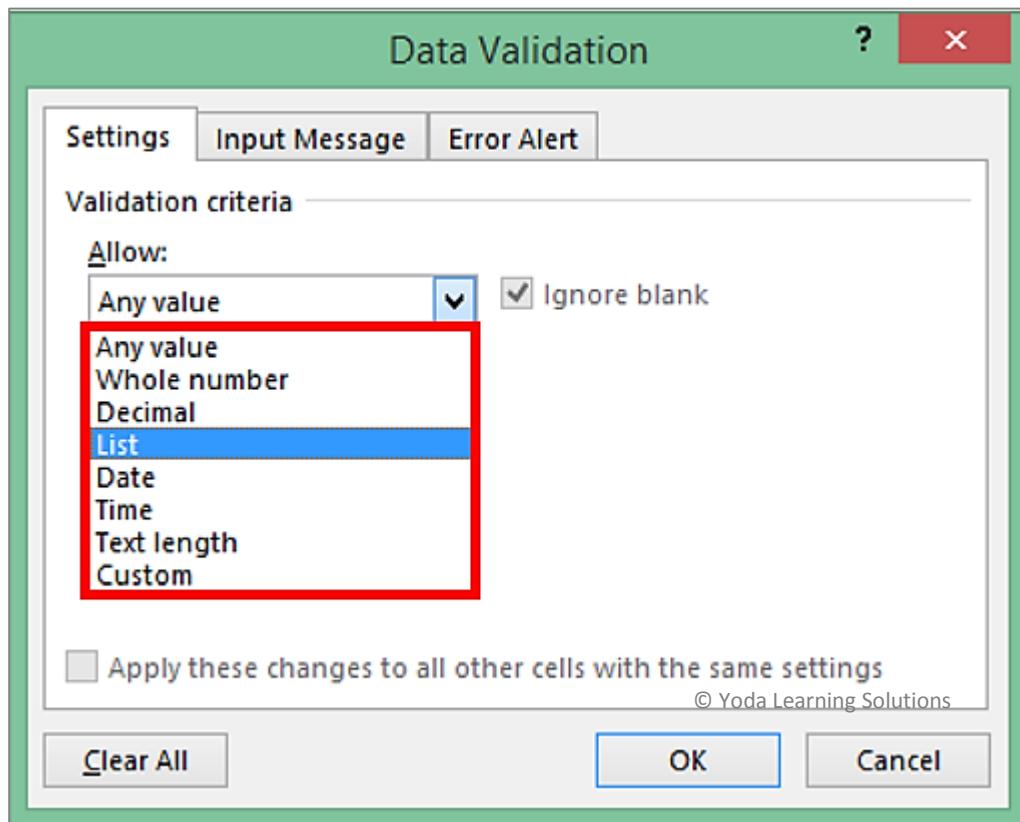
5 87

6

Circled input data is “invalid”

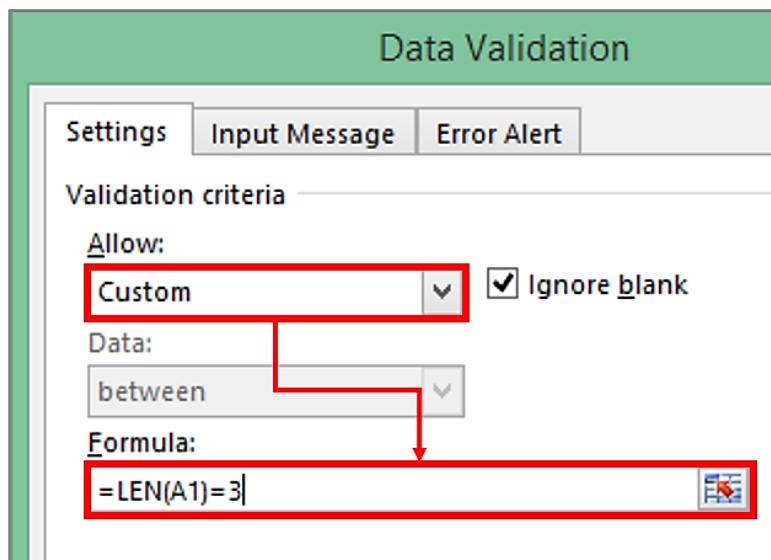
© Yoda Learning Solutions

#0805: Data Validation – Whole number, Text Length, Date (MM/DD/YYYY)



#0806: Data Validation - Custom w. formula logic

The CUSTOM logic should be famed to yield LOGICAL (True/False) result.



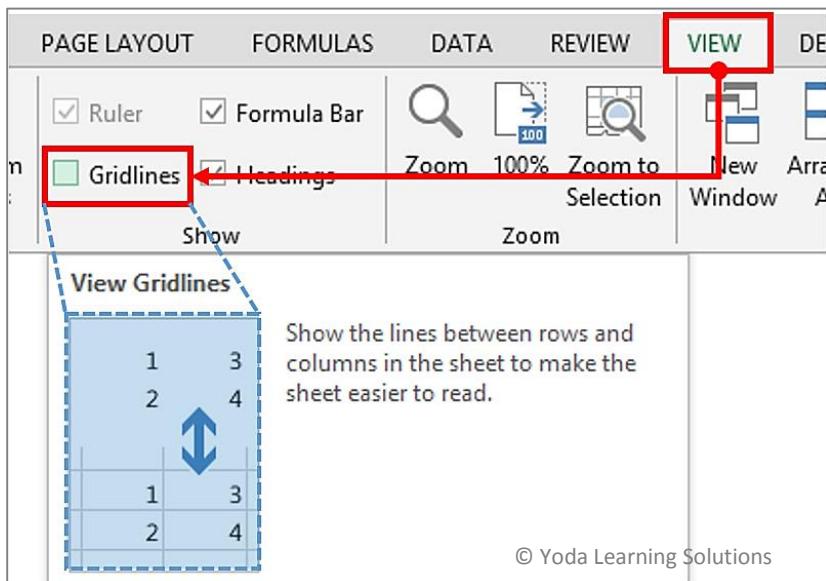
#0901-0902: Grouping/UnGrouping Columns and Rows

The screenshot shows the Microsoft Excel ribbon with the 'DATA' tab selected. In the 'Sort & Filter' section, there is a 'Group' icon (represented by three boxes with arrows) and an 'Ungroup' icon (represented by three boxes with a minus sign). A red box highlights the 'Group' icon, and a red arrow points from it to a callout box titled 'Group (Shift+Alt+Right)'. This callout box shows a hierarchical tree view of grouped data. The data consists of five rows: Row 1 (1), Row 2 (2 A 2), Row 3 (3 B 5), Row 4 (4 C 7), and Row 5 (5 A+B+C 14). The first four rows are grouped under a parent node, and the fifth row is grouped under another parent node. The 'Outline' button in the ribbon is also highlighted with a red box.

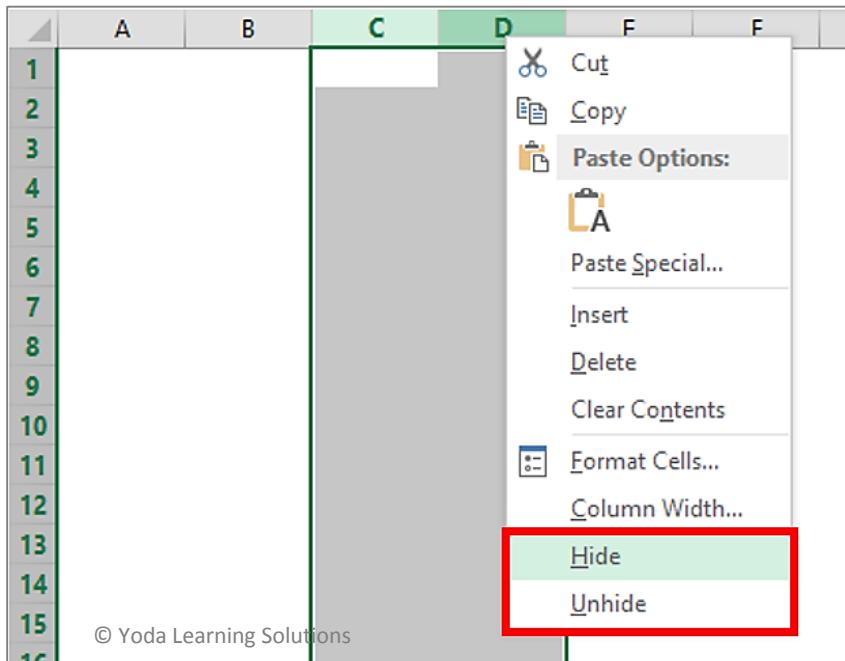
#0903: Grouping Trick: Changing placement of Grouping Button

The screenshot shows the Microsoft Excel ribbon with the 'Outline' button circled in red. A red arrow points from this button to a 'Settings' dialog box. The dialog box is titled 'Settings' and contains a 'Direction' section with three checkboxes: 'Summary rows below detail' (checked), 'Summary columns to right of detail' (checked), and 'Automatic styles' (unchecked). At the bottom of the dialog box are buttons for 'Create', 'Apply Styles', 'OK', and 'Cancel'.

#0904: Cell Gridlines: Turning On/Off



#0905: Hide/Unhide Rows and Columns



#0906: Freeze Panes (incl. both row & column simultaneously)

The screenshot shows the Microsoft Excel ribbon with the 'VIEW' tab selected. A red circle labeled '2' highlights the 'Freeze Panes' button in the 'Panes' group. A red circle labeled '1' highlights cell B4, which is part of the range A4:E10. A context menu is open over this range, with the 'Freeze Panes' option highlighted and its description visible: 'Keep rows and columns visible while the rest of the worksheet scrolls (based on current selection.)'. Other options in the menu include 'Freeze Top Row' and 'Freeze First Column'. The worksheet contains data from rows 3 to 10, with columns A through E. The first three rows have their first three columns frozen. The data includes Supplier Number, Supplier Name, ID, Transaction Amt., and \$.

	Supplier Number	Supplier Name	ID	Transaction Amt.	\$
4	612156	ABC	65667	1,259.00	
5	612156	ABC	65667	3,200.00	
6	612156	ABC	65667	1,369.00	
7	612156	ABC	65667	4,535.00	
8	612156	ABC	65667	10,363.00	
9	612158	JDK	88767	1,711.00	
10	612158	JDK	88767	1,568.00	

Choose the cell the row above which and the column before which needs to be “frozen”. In this case, Column A and Rows 1-3 will be frozen.

#1001 – 1003: Pivot Tables – Pre requisites, How to Create

Pre-requisites:

- Blank/Empty “header” cells not allowed
- “Merged” cells not allowed

The screenshot shows a portion of an Excel spreadsheet with data from rows 1 to 14. Row 1 has columns A, B, C, D, and E. Row 2 contains the headers "Region", "Market", and "Business". Rows 3 through 14 contain data. Two specific errors are highlighted with red boxes and skull-and-crossbones icons:

- Merged Cells:** The cells in row 2, columns B and C ("Region" and "Market"), are merged. This is indicated by a large blue box covering both cells.
- Blank “Header” cells:** The cells in row 2, columns D and E ("Business" and the first column of data), are blank. This is indicated by a large blue box covering both cells.

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Creating a Pivot Table

- Choose the data table. **INSERT > PIVOT TABLE**

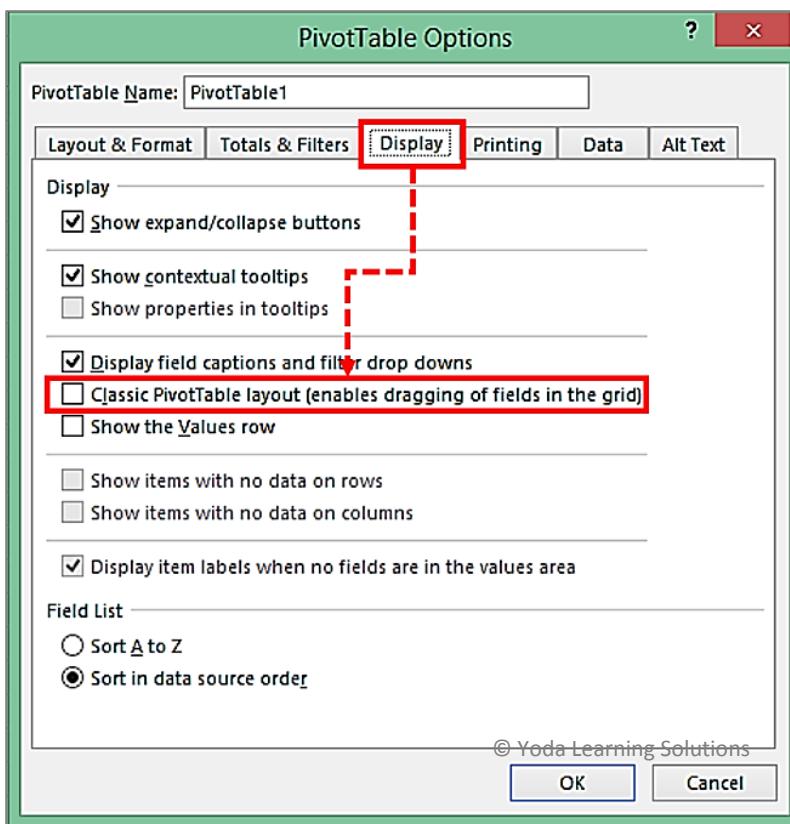
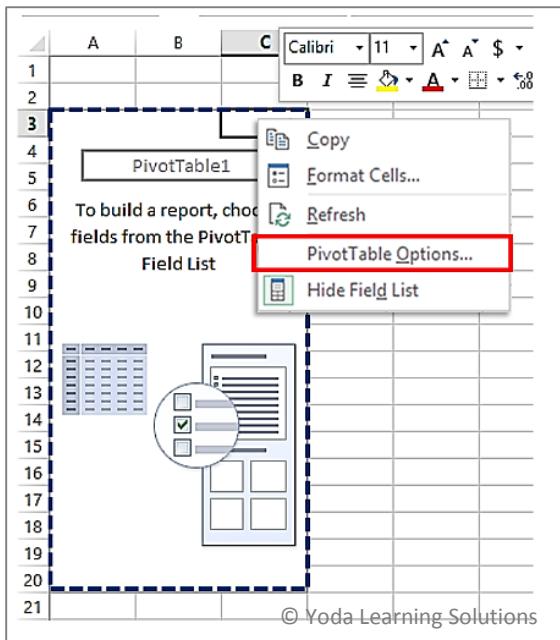
The screenshot shows the Microsoft Excel ribbon with the **INSERT** tab selected. Below the ribbon, a data range from A1 to D19 is selected. A red dashed box highlights the **PivotTable** icon in the **Tables** group of the **Insert** tab.

A **Create PivotTable** dialog box is open, also highlighted with a red box. The dialog box contains the following settings:

- Choose the data that you want to analyze:**
 - Select a table or range: **'Sales Data'!\$A\$1:\$M\$60920**
 - Use an external data source: **Choose Connection...**
- Choose where you want the PivotTable report to be placed:**
 - New Worksheet
 - Existing Worksheet: **Location:** [empty box]
- Choose whether you want to analyze multiple tables:**
 - Add this data to the Data Model

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Changing an essential Setting:



#1004: Pivot Tables – Exploring Pivot Table grid (Fields)

The screenshot shows the Microsoft Excel ribbon with the 'PivotTable Fields' tab selected. The main area displays four primary drop zones:

- FILTERS**: Located at the top left.
- ROWS**: Located on the far left.
- COLUMNS**: Located on the right side.
- VALUES**: Located in the center.

Below these zones, a list of available fields is shown:

- Region
- SubRegion
- Market
- Customer
- Business Segment
- Category
- Model
- Color
- SalesDate

A red dashed box highlights the **ROWS**, **COLUMNS**, and **VALUES** zones. A red arrow points from the **VALUES** zone up towards the **ROWS** zone. The bottom right corner of the highlighted area contains the text "© Yoda Learning Solutions" and "UPDATE".

#1005: Pivot Tables – Value Field Settings for Sum, Average

The screenshot shows a Microsoft Excel spreadsheet with a PivotTable. The PivotTable has 'SalesDate' in the Rows section, 'Years' in the Columns section, and 'Sum of Sales Amount' in the Values section. The 'Sum of Sales Amount' cell is selected, opening the 'Value Field Settings' dialog box. The dialog box shows the 'Source Name' as 'Sales Amount' and the 'Custom Name' as 'Sum of Sales Amount'. Under 'Summarize Values By', the 'Sum' option is selected from a dropdown menu. The dialog also includes 'Number Format' and 'OK/Cancel' buttons.

	A	B	C	D	E	F	G
1		Drop Report Filter Fields Here				© Yoda Learning Solutions	
2							
3	Sum of Sales Amount	Years	2002	2003	2004	Grand Total	
4	SalesDate		713,230	1,318,597	1,670,606	3,702,433	
5	Jan		1,682,318	2,166,151	2,580,937	6,429,407	
6	Feb		1,673,760	1,794,221	2,870,072	5,328,054	
7	Mar		872,56				
8	Apr		2,280,16				
9	May		1,102,02				
10	Jun		2,446,79				
11	Jul		3,615,92				
12	Aug		2,826,44				
13	Sep		1,872,40				
14	Oct		2,939,78				
15	Nov		2,303,43				
16	Dec		24,328,84				
17	Grand Total						
18							
19							
20							
21							
22							
23							

#1006-1007: Pivot Tables – Value Field Settings for % calculations

The screenshot shows a PivotTable with the following data:

	SalesDate	2002	2003	2004	Grand Total
Jan		713,230	1,318,597	1,670,600	3,702,433
Feb		1,682,318	2,166,151	2,269,937	6,429,407
Mar		1,673,760	1,784,231	2,030,073	5,488,064
Apr		872,568	1,829,387	2,168,448	4,870,403
May		2,280,165	2,921,701	3,380,604	8,582,470
Jun		1,102,021	1,932,251	1,536,545	4,570,817
Jul		2,446,798	2,788,963	2,381,202	7,616,962
Aug		3,615,926	4,314,542	1,540,073	9,470,541
Sep		2,826,440	3,980,290	1,136,989	7,943,719
Oct		1,872,402	2,469,944	874,178	5,216,523
Nov		2,939,785	3,327,910	2,268,711	8,536,406
Dec		2,303,436	3,683,548	1,760,483	7,747,467
Grand Total		24,328,849	32,517,515	24,168,846	81,015,212

Calculation	Meaning
1/4	% of Grand Total
1/2	% of Column Total
1/3	% of Row Total

#1008 – 1009: Pivot Tables – Grouping Dates & Numbers (automatic)

The screenshot shows a Microsoft Excel spreadsheet with a column of dates from January 1, 2002, to January 19, 2002. A context menu is open over the date "1-Jan-02". The "Group..." option is highlighted with a green box. A red dashed arrow points from this option to a "Grouping" dialog box. The dialog box has "Starting at: 1/1/2002" and "Ending at: 1/1/2005" checked. In the "By" section, "Months" is selected. Other options like "Seconds", "Minutes", "Hours", "Days", "Quarters", and "Years" are also listed. The "OK" button is visible at the bottom.

The screenshot shows a PivotTable setup. The table structure includes columns for SalesDate (Rows), Months (Columns), and SalesAmount (Values). The "SalesDate" field is selected in the PivotTable Fields pane, which lists various fields like Region, SubRegion, Market, etc., with "SalesDate" checked. The "COLUMNS" section shows "Years" selected. The "ROWS" section shows "SalesDate" selected. The "VALUES" section shows the sum of SalesAmount. The "PivotTable Fields" pane also includes a "Choose fields to add to report:" section with checkboxes for various fields, and a "Drag fields between areas below:" section with FILTERS, ROWS, and VALUES sections.

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

1 Drop Report Filter Fields Here

2

3 Count of Name

4 Salary p.a. (US\$) Age ▾

	19-28	29-38	39-48	49-58	Grand Total
5 1-100000	65	65	32	4	166
6 100001-200000	25	34	9	5	73
7 200001-300000	18	15	15	2	50
8 300001-400000	20	21	11		52
9 400001-500000	11	9	5	1	26
10 500001-600000	4	7	2	2	15
11 600001-700000	7	4	3		14
12 700001-800000	4	5	1		10
13 800001-900000	4	3			7
14 900001-1000000	1	1	2		4
15 Grand Total	159	164	80	14	417
16					

Grouping ? X

Auto

Starting at: 1

Ending at: 990976

By: 100000

OK Cancel

#1010: Pivot Tables – Grouping Text (manual)

A12 : C

Drop Report Filter Fields Here

Count of Name

Division

- ✓ 5 AD
- ✓ 6 CDFD
- ✓ 7 ED
- ✓ 8 HFD
- ✓ 9 LGAD
- ✓ 10 PEMD
- ✓ 11 RAD
- ✓ 12 RDD

Group... Ungroup... Move Remove "Division" Field Settings... PivotTable Options... Hide Field List

Group1

AD ED HFD LGAD RDD CDFD PEMD RAD Grand Total

41 17 112 13 6 48 32 148 417

Group1

CDFD PEMD RAD Grand Total

48 32 148 417

#1011: Pivot Table - Refresh vs. Refresh All, Change Data Source

A screenshot of Microsoft Excel showing the PivotTable Tools ribbon tab. The ANALYZE tab is selected. The Refresh button is highlighted with a red box. A dropdown menu is open from the Refresh button, with 'Refresh All' highlighted with a green box. Other options in the dropdown include 'Refresh' (with a green icon), 'Change Data Source' (with a blue box), and 'Update Source' (with a dark blue box). Below the ribbon, a PivotTable is displayed with data for SalesDate (2002, 2003, 2004) and Months (Jan, Feb, Mar). The formula bar shows 'Sum of Sales Amount'.

#1012: Pivot Table - Auto Refresh

A screenshot of the PivotTable Options dialog box. The Data tab is selected. Under 'PivotTable Data', the checkbox 'Refresh data when opening the file' is highlighted with a red box. Other checkboxes shown are 'Save source data with file' and 'Enable show details'. The dialog also includes tabs for Layout & Format, Totals & Filters, Display, Printing, Alt Text, and a 'PivotTable Options...' button.

#1013: Pivot Table - Pivot Chart Shortcut (F11) and Sparklines

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#1014: Pivot Table - Drill Down option

Double-click on ANY value in the “Value Fields” area where all numbers are displayed to drill-down deeper in the details of the number clicked upon.

	A	B
1	Drop Report Filter Fields Here	
2		
3	Count of Name	
4	Division	Total
5	AD	41
6	CDFD	48
7	ED	17
8	HFD	112
9	LGAD	13
10	PEMD	32
11	RAD	148
12	RDD	6
13	Grand Total	417

	A	B	C	D	E	F
1	DoJ	Name	Salary p.a. (US\$)	Division	Rating	Age
2	4/5/1997	AbduSalaam, Ismael	38261	HFD	3	31
3	1/6/1999	Young, Karen	294272	HFD	1	37
4	10/8/2003	Adams, Jennifer M	24566	HFD	1	23
5	6/6/1998	Yorkey, Alicia	507983	HFD	4	29
6	6/10/1996	Adams, Vanessa Y.	38038	HFD	1	39
7	10/13/1997	Wyckoff, Sandiskie G.	39337	HFD	3	30
8	6/3/2004	Wright, Patricia L.	205976	HFD	3	27
9	3/6/2004	Woods, Bonnie H.	384178	HFD	1	43
10	9/30/1999	Wilson, Vanessa	270844	HFD	3	38
11	7/31/2002	Williams, Andria A.	228421	HFD	1	25
12	9/15/2005	Williams, Alma	82503	HFD	3	28
13	11/13/2012	Welsh, Sandy	63936	HFD	2	19
14	11/28/1996	Weaver, Delores	50045	HFD	5	53

#1015: Pivot Table - Report Filter - Generating 100s of reports in few seconds

PivotTable Fields

Choose fields to add to report:

- Region
- SubRegion
- Market
- Customer
- Business Segment
- Category
- Model
- Color
- SalesDate

Drag fields between areas below:

FILTERS	COLUMNS
SubRegion	Years
ROWS	VALUES
SalesDate	Sum of Sales A...

PivotTable Options

Show Report Filter Pages...

Sum of Sales Amount

	Years	2002	2003	2004	Grand Total
SalesDate	Jan	713,230	1,318,597	1,670,606	3,702,433
	Feb	1,682,318	2,166,151	2,580,937	6,429,407
	Mar	1,673,760	1,784,231	2,870,073	6,328,064
	Apr	872,568	1,829,387	2,168,448	4,870,403
	May	2,280,165	2,921,701	3,380,604	8,582,470
	Jun	1,102,021	1,932,251	1,536,545	4,570,817
	Jul	2,446,798	2,788,963	2,381,202	7,616,962
	Aug	3,615,926	4,314,542	1,540,073	9,470,541
	Sep	2,826,440	3,980,290	1,136,989	7,943,719
	Oct	1,872,402	2,469,944	874,178	5,216,523
	Nov	2,939,785	3,327,910	2,268,711	8,536,406
	Dec	2,303,436	3,683,548	1,760,483	7,747,467
	Grand Total	24,328,849	32,517,515	24,168,848	81,015,212

Australia Canada France Germany United Kingdom United States

#1016: Pivot Table - Slicer vs. Report Filter

Slicers are easy-to-use filtering components that contain a set of buttons that enable you to quickly filter (single / multiple) the data in a PivotTable report, without the need to open drop-down lists to find the items that you want to filter.

The screenshot shows a Microsoft Excel spreadsheet titled "1017 - 1018.xlsx - Microsoft Excel". The ribbon is visible with the "PIVOTTABLE TOOLS" tab selected, specifically the "ANALYZE" tab. A red box highlights the "Insert Slicer" button under the "Data" section of the ribbon. Below the ribbon, a PivotTable is displayed. The table has "SubRegion" in row 1, "SalesDate" in row 4, and "Market" in row 18. The "Market" slicer is shown as a floating window on the right side of the screen, containing a list of markets: Australia, Canada, Central, France, Germany, Northeast, Northwest, and Southeast. The "Market" slicer is also highlighted with a red box. The PivotTable data includes columns for Years (2002, 2003, 2004) and Grand Total, with specific values for each month and year.

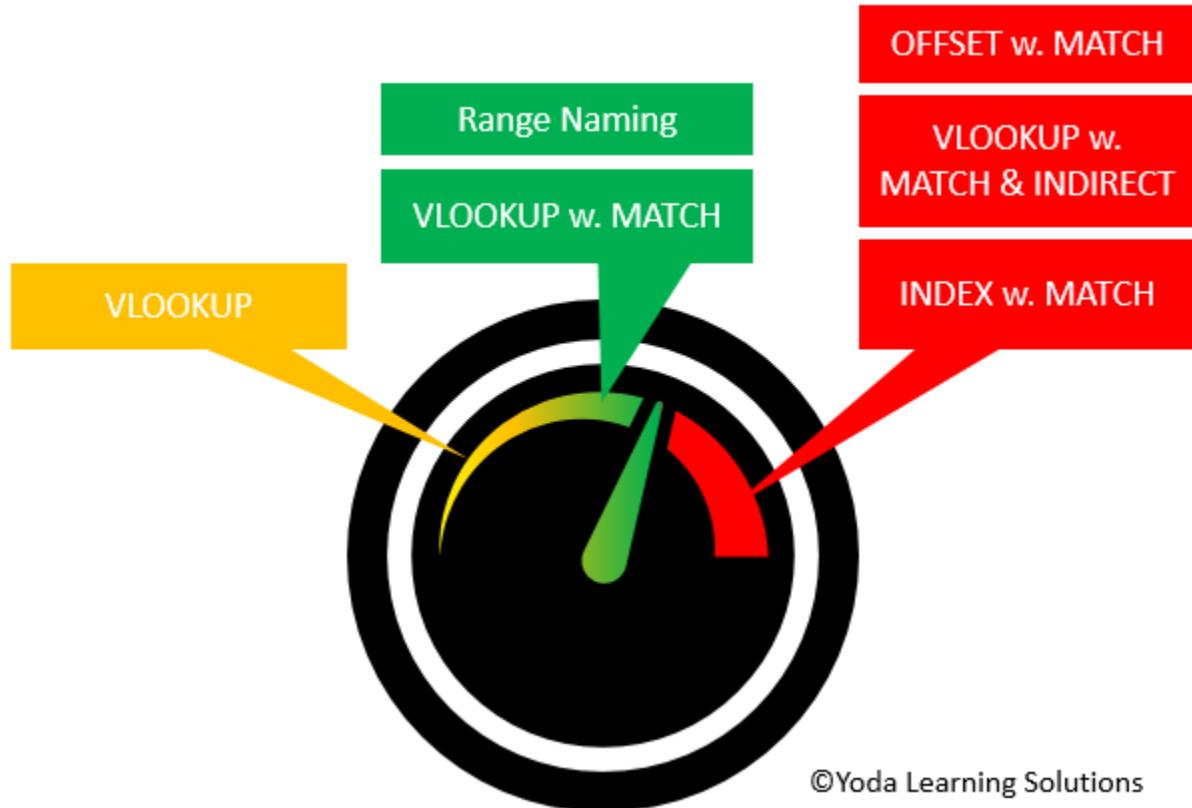
	A	B	C	D	E	F	G	H	I
1	SubRegion	(All)							
2									
3	Sum of Sales Amount	Years	2002	2003	2004	Grand Total			
4	SalesDate		2002	2003	2004	Grand Total			
5	Jan		713,230	1,318,597	1,670,606	3,702,433			
6	Feb		1,682,318	2,166,151	2,580,937	6,429,407			
7	Mar		1,673,760	1,784,231	2,870,073	6,328,064			
8	Apr		872,568	1,829,387	2,168,448	4,870,403			
9	May		2,280,165	2,921,701	3,380,604	8,582,470			
10	Jun		1,102,021	1,932,251	1,536,545	4,570,817			
11	Jul		2,446,798	2,788,963	2,381,202	7,616,962			
12	Aug		3,615,926	4,314,542	1,540,073	9,470,541			
13	Sep		2,826,440	3,980,290	1,136,989	7,943,719			
14	Oct		1,872,402	2,469,944	874,178	5,216,523			
15	Nov		2,939,785	3,327,910	2,268,711	8,536,406			
16	Dec		2,303,436	3,683,548	1,760,483	7,747,467			
17	Grand Total		24,328,849	32,517,515	24,168,848	81,015,212	© Yoda Learning Solutions		
18	Market								
	Australia								
	Canada								
	Central								
	France								
	Germany								
	Northeast								
	Northwest								
	Southeast								

NB - For generating a quick Chart based on Pivot Table report: Select entire Pivot Table report, then Press <F11> for generating default chart

#1017-1019: Pivot Table – Practice Exercises

Refer practice workbooks

Overview of Lookup formulas



=VLOOKUP(

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

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FALSE (0): Exact match
Data need not be sorted

TRUE (1 or omitted):

1. SLABS / RANGE (1st column)
2. \geq or at least or onwards
3. Ascending Order

©Yoda Learning Solutions

- Apply <F4> on *table_array* to lock the position. E.g. **\$C\$12:\$F\$16**
- *lookup_value* should exist in the **FIRST COLUMN (or the left most column)** of the *table_array*

- "lookup_value" should be in the same format as the one stored in the first column of the selected "table_array"
 - Detection techniques: ISNUMBER(), ISTEXT(), LEN()
 - Correction techniques for **nos. stored as text** – VALUE(), Text-to-Columns (Step 3/3) - General
 - Right-Click > Format Cells is NA unless <F2 and Enter> on individual cells

#1102 VLOOKUP w. TRUE vs. FALSE & applications of TRUE

3 conditions (as applicable for Dates & Number):

- SLABS
- >=
- Ascending Order

Better substitute for complex Nested IFs in significant number of cases. Examples:

GRADING	>=	<table border="1"><tr><td>0</td><td>Fail</td></tr><tr><td>40</td><td>Pass</td></tr><tr><td>90</td><td>Distinction</td></tr></table>	0	Fail	40	Pass	90	Distinction	<table border="1"><tr><td>100</td><td>Distinction</td></tr><tr><td>40</td><td>Pass</td></tr><tr><td>89</td><td>Pass</td></tr></table>	100	Distinction	40	Pass	89	Pass	© Yoda Learning Solutions								
0	Fail																							
40	Pass																							
90	Distinction																							
100	Distinction																							
40	Pass																							
89	Pass																							
>=	<table border="1"><tr><td>0</td><td>20,000</td></tr><tr><td>2</td><td>24,000</td></tr><tr><td>5</td><td>30,000</td></tr></table>	0	20,000	2	24,000	5	30,000	<table border="1"><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>20,000</td><td>24,000</td><td>24,000</td><td>24,000</td><td>30,000</td><td>30,000</td><td>30,000</td></tr></table>	1	2	3	4	5	6	7	20,000	24,000	24,000	24,000	30,000	30,000	30,000		
0	20,000																							
2	24,000																							
5	30,000																							
1	2	3	4	5	6	7																		
20,000	24,000	24,000	24,000	30,000	30,000	30,000																		
>=	<table border="1"><tr><td>0</td><td>0-30</td></tr><tr><td>31</td><td>31-60</td></tr><tr><td>61</td><td>61-90</td></tr><tr><td>91</td><td>91-180</td></tr><tr><td>181</td><td>>180</td></tr></table>	0	0-30	31	31-60	61	61-90	91	91-180	181	>180	<table border="1"><tr><td>122</td><td>91-180</td></tr><tr><td>15</td><td>0-30</td></tr><tr><td>76</td><td>61-90</td></tr><tr><td>190</td><td>>180</td></tr><tr><td>54</td><td>31-60</td></tr></table>	122	91-180	15	0-30	76	61-90	190	>180	54	31-60		
0	0-30																							
31	31-60																							
61	61-90																							
91	91-180																							
181	>180																							
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190	>180																							
54	31-60																							
Quarter	>=	<table border="1"><tr><td>0</td><td>Before 2014-15</td></tr><tr><td>1-Apr-14</td><td>Q1 2014-15</td></tr><tr><td>1-Jul-14</td><td>Q2 2014-15</td></tr><tr><td>1-Oct-14</td><td>Q3 2014-15</td></tr><tr><td>1-Jan-15</td><td>Q4 2014-15</td></tr><tr><td>1-Apr-15</td><td>After 2014-15</td></tr></table>	0	Before 2014-15	1-Apr-14	Q1 2014-15	1-Jul-14	Q2 2014-15	1-Oct-14	Q3 2014-15	1-Jan-15	Q4 2014-15	1-Apr-15	After 2014-15	<table border="1"><tr><td>15-Sep-14</td><td>Q2 2014-15</td></tr><tr><td>3-Jun-14</td><td>Q1 2014-15</td></tr><tr><td>1-Jan-15</td><td>After 2014-15</td></tr><tr><td>4-Dec-11</td><td>Before 2014-15</td></tr></table>	15-Sep-14	Q2 2014-15	3-Jun-14	Q1 2014-15	1-Jan-15	After 2014-15	4-Dec-11	Before 2014-15	
0	Before 2014-15																							
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1-Jul-14	Q2 2014-15																							
1-Oct-14	Q3 2014-15																							
1-Jan-15	Q4 2014-15																							
1-Apr-15	After 2014-15																							
15-Sep-14	Q2 2014-15																							
3-Jun-14	Q1 2014-15																							
1-Jan-15	After 2014-15																							
4-Dec-11	Before 2014-15																							
>=																								
>=																								

#1104: HLOOKUP() vs. VLOOKUP()

=VLOOKUP(

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

=HLOOKUP(

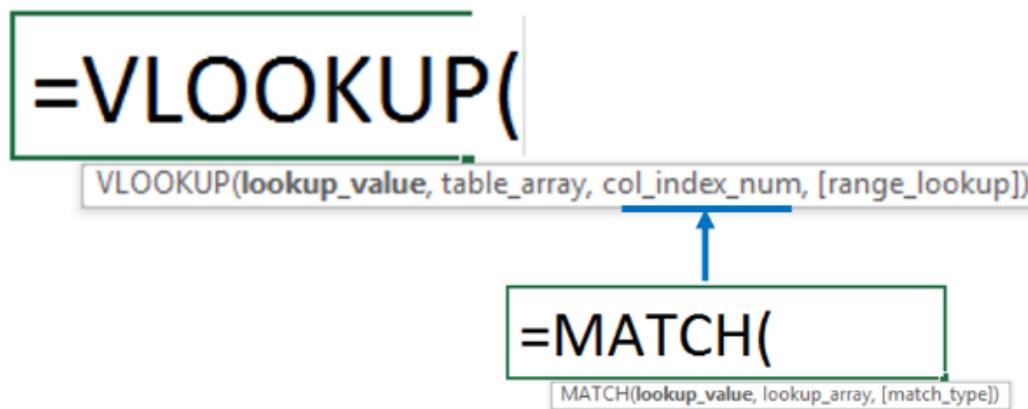
HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup])

#1105 – 1106: MATCH() – Basics & match_type: -1 vs. 0 vs. 1

	A	B	C	D	E	F	G
1							
2							
3		Black		6			
4							
5		Company name					
6		Orange					
7		Red					
8		Blue					
9		Pink					
10		Black					
11							

[MATCH helps count the **position number** (1st, 2nd, 3rd...) in a **one-dimensional data range**]

MATCH() with 1	MATCH() with -1
<ul style="list-style-type: none"> ▪ Slab ▪ with values in ascending order ▪ Greater than equal to (\geq) 	<ul style="list-style-type: none"> ▪ Slab ▪ with values in descending order ▪ Less than equal to (\leq)



VLOOKUP()

captures the entire *table_array* and hence, referred as the **SENIOR**

A red arrow points downwards from the 'SENIOR' text to a table. The table has a green header row with columns: Emp ID, Name, Gender, and Age. Below the header, there are four data rows:

Emp ID	Name	Gender	Age
9780960142	Price, Susan	F	25
9831012345	Swann, Trina	F	57
9821181333	Hobbs, Patsy	M	21
9830021207	McCook, Sherri E.	M	22

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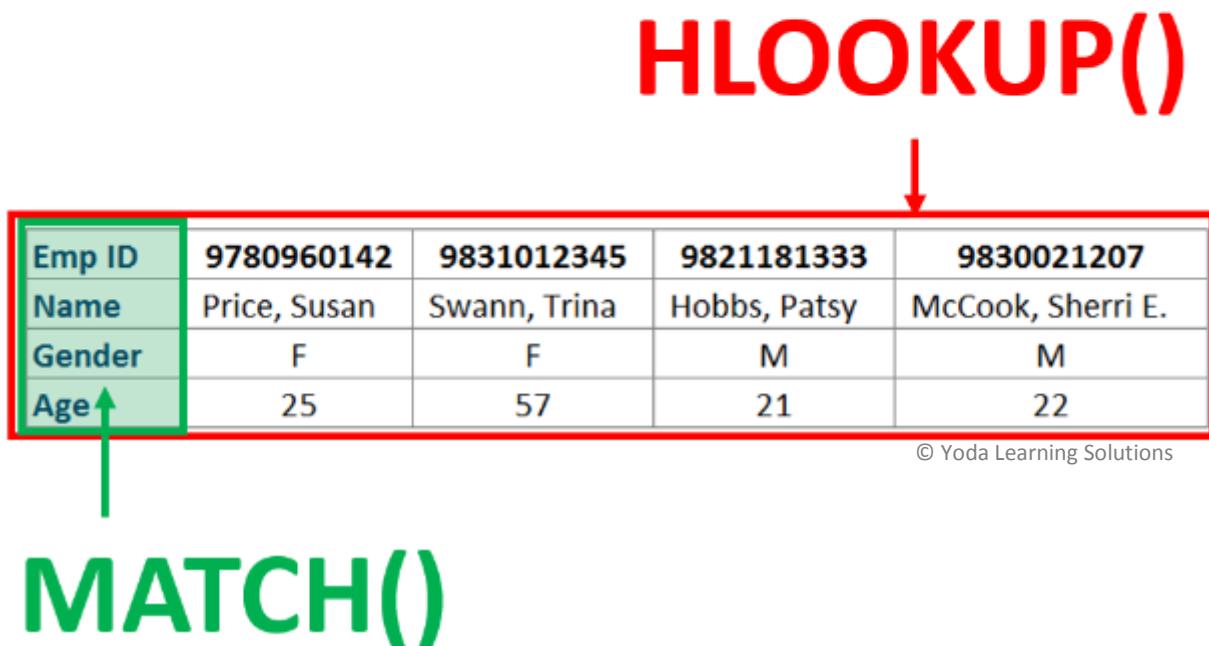
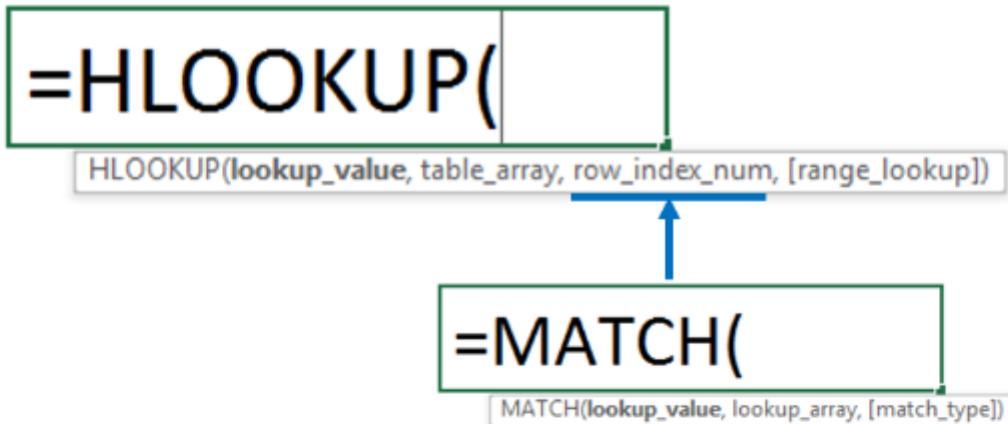
MATCH()

captures only the *header* or the *lookup_array* and hence, referred as the **JUNIOR**. It will count the *col_index_number* for VLOOKUP

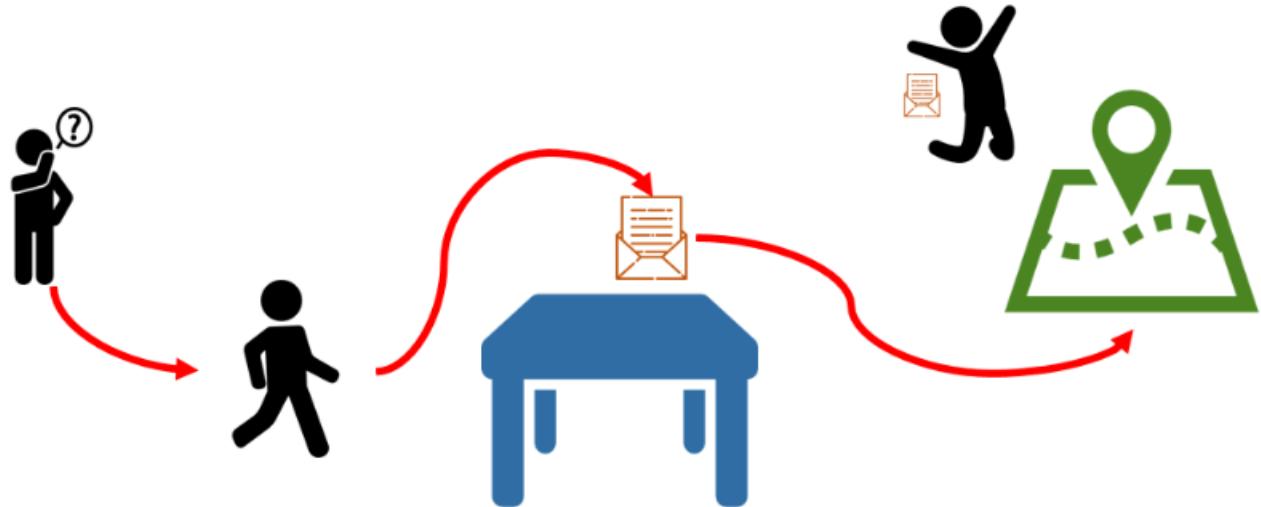
VLookup + Match is used in dataset with 2-variables as placed in the given format.
The two defines the answer which is placed inside the table.



#1112: 2-D Lookup (Horizontal + Vertical) - HLOOKUP w. MATCH



#1113 – 1114: INDIRECT() – Basics along with Range Naming – Applications [“RE-DIRECTION”]



INDIRECT() w. cell reference			INDIRECT() w. named range																																																														
<table border="1"> <thead> <tr> <th></th><th>A</th><th>B</th><th>C</th></tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr style="background-color: #008000; color: white;"><td>4</td><td></td><td>A5</td><td>=INDIRECT(B3)</td></tr> <tr><td>5</td><td>Blue</td><td></td><td></td></tr> <tr><td>6</td><td>Black</td><td></td><td></td></tr> </tbody> </table>				A	B	C	1				2				3				4		A5	=INDIRECT(B3)	5	Blue			6	Black			<table border="1"> <thead> <tr> <th></th><th>A</th><th>B</th><th>C</th></tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr style="background-color: #008000; color: white;"><td>4</td><td></td><td>color1</td><td>=INDIRECT(B3)</td></tr> <tr><td>5</td><td>Blue</td><td></td><td></td></tr> <tr><td>6</td><td>Black</td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td></tr> </tbody> </table>				A	B	C	1				2				3				4		color1	=INDIRECT(B3)	5	Blue			6	Black			7			
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5	Blue																																																																
6	Black																																																																
7																																																																	
Solution in cell B4 is <u>Blue</u>																																																																	

Note:

- Use INDIRECT when you want to change the reference to a cell within a formula without changing the formula itself.
- Named Cell/Range can be used as an input for INDIRECT
- Often used to create 3D Lookup formulas along with VLookup + Match
- INDIRECT() is used for references within the SAME workbook. Cross-linking different workbooks is best avoided as it works only when all relevant workbooks are open - Yields a #REF! error if not done so.

Example:

	A	B	C
10			
11	JAN	FEB	MAR
12	1	3	5
13	2	4	6
14			
15	FEB	=SUM(INDIRECT(A15))	
16			

#1115 – 1116: 3-D Lookup - VLOOKUP() w. MATCH() w. INDIRECT()

=VLOOKUP(F5,INDIRECT(D5),MATCH(C5,INDIRECT(E5),0),0)

Computation of Bonus

Name	Salary \$	Division	Region	Jr.	Rating	BONUS
AbduSalaam, Ismael	38,261	HFD	APAC	APACH	3	=VLOOKUP(F5,INDIRECT(D5),MATCH(C5,INDIRECT(E5),0),0)
Abney, Jeffery	82,135	RAD	APAC	APACH	4	5.0%
Adams, Jennifer M	24,568	HFD	ROW	ROWh	1	VLOOKUP(lookup_value, table_name, col_index_num, [range_lookup])
Adams, Sally	15,097	CDFD	ROW	ROWh	5	20.0%
Adams, Vanessa Y.	38,038	HFD	APAC	APACH	3	45.0%
Alexander, Amy H.	72,682	RAD	APAC	APACH	4	15.0%
Allen, Rebecca	353,556	ED	APAC	APACH	5	5.0%
Allen, Sharon	55,089	RAD	APAC	APACH	2	35.0%
Allen, William Brent	265,746	CDFD	APAC	APACH	1	100.0%
Alligood, Cynthia	98,527	RDD	APAC	APACH	2	17.0%
Andrews, Darryl	20,337	CDFD	APAC	APACH	1	100.0%
Applegate, Mary Alice	18,158	CDFD	APAC	APACH	3	60.0%
Ashcraft, Lynn F.	67,602	RDD	APAC	APACH	4	22.0%
Avina III, Ross J.	161,229	CDFD	ROW	ROWh	5	20.0%
Baker, Jacalyn L.	58,614	HFD	APAC	APACH	3	25.0%
Ball, Ruth Ann	50,056	HFD	APAC	APACH	4	45.0%
Barber, Eva	121,317	RAD	APAC	APACH	5	15.0%
Barden, Nicky E.	932,149	RAD	ROW	ROWh	2	38.5%
Barrett, Stephen	28,455	HFD	APAC	APACH	4	35.0%

Rating-wise and Division-wise & Region-wise Bonus %

Rating	HFD	RAD	CDFD	ED	RDD	AD	PEMD	LGAD
1	45.0%	55.0%	100.0%	25.0%	32.0%	22.0%	42.0%	50.0%
2	35.0%	35.0%	80.0%	20.0%	27.0%	17.0%	32.0%	46.0%
3	25.0%	15.0%	60.0%	15.0%	22.0%	12.0%	22.0%	36.0%
4	15.0%	5.0%	40.0%	10.0%	17.0%	7.0%	12.0%	26.0%
5	5.0%	0.0%	20.0%	5.0%	12.0%	2.0%	2.0%	16.0%

Division-wise Bonus %

Rating	HFD	RAD	CDFD	ED	RDD	AD	PEMD	LGAD
1	45.2%	50.3%	110.0%	27.3%	33.2%	24.2%	45.2%	51.0%
2	38.5%	38.5%	88.0%	22.0%	29.7%	18.7%	35.2%	50.6%
3	27.5%	16.5%	66.0%	16.5%	24.2%	13.2%	24.2%	39.6%
4	16.5%	5.5%	44.0%	11.0%	18.7%	7.7%	13.2%	28.6%
5	5.5%	0.0%	22.0%	5.5%	13.2%	2.2%	2.2%	17.6%

VLOOKUP()

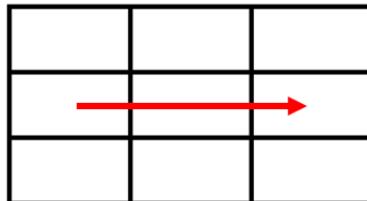
MATCH()

Important Note: Using =INDIRECT() with Naming for 3-D Lookup. E.g. APAC (Sr.) and APACH (Jr.)

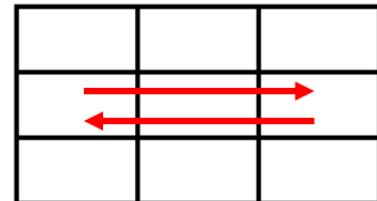
#1117 – 1119: 3 Reverse Lookup - INDEX() w. MATCH()

IMM vs VM: Both VM and IMM approaches are useful for pulling data from any 2x2 data matrix. However, IMM is useful for reverse Lookup. Unlike VM, IMM doesn't require the common link values to be in the left-most column of the database.

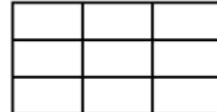
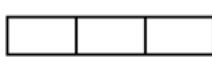
VLOOKUP

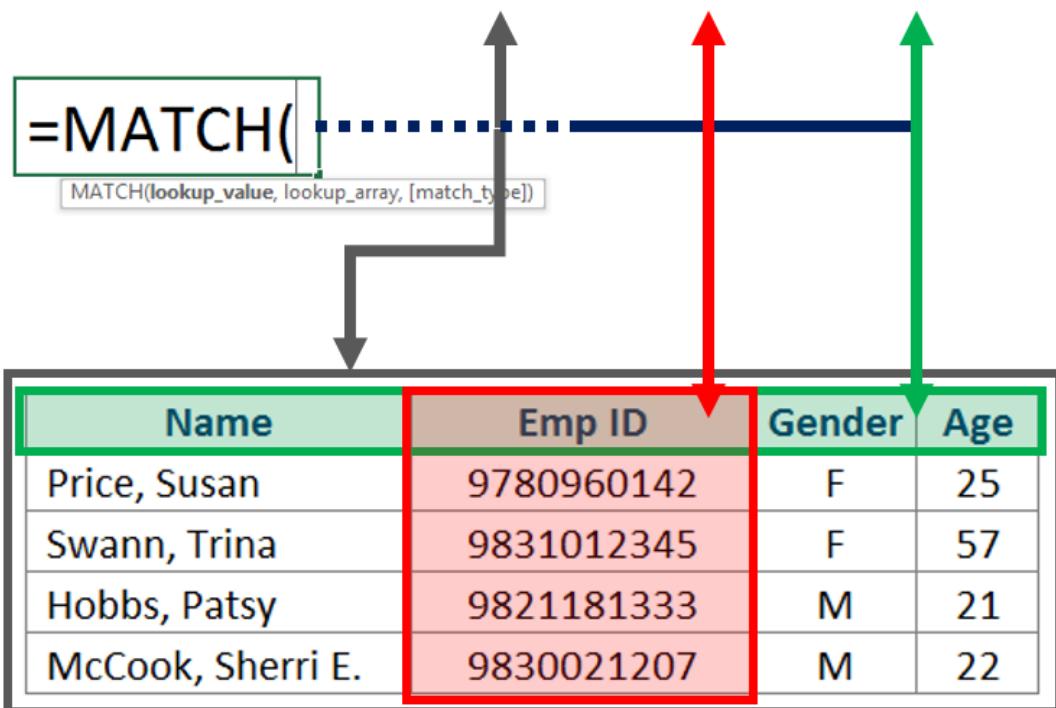


INDEX



array row_num col_num

=INDEX( ,  , )



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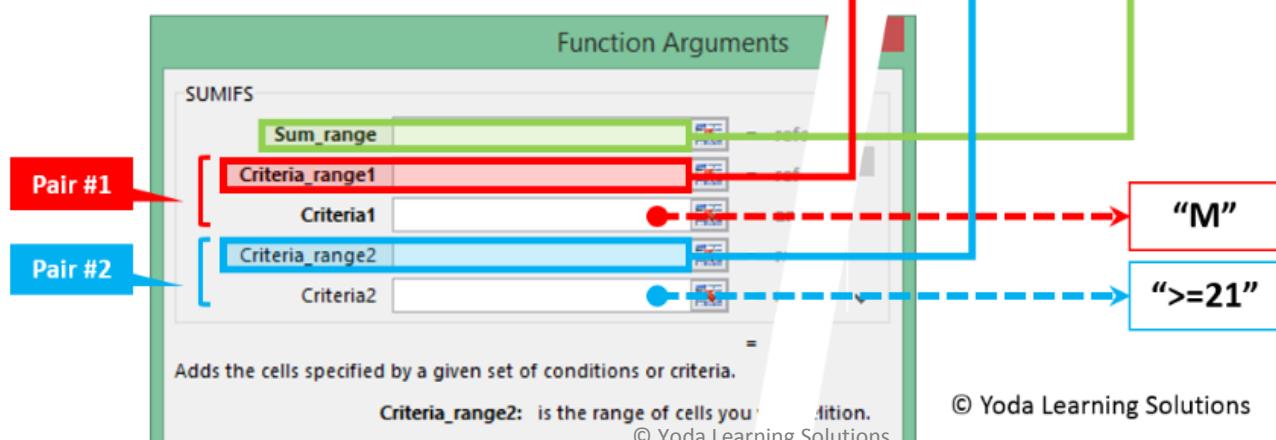
#1120 – 1121: SUMIFS(): Conditional Summation

=SUMIFS()

Name	Gender	Age	Stipend
Price, Susan	F	25	\$ 10,000
Swann, Trina	F	57	\$ 12,000
Hobbs, Patsy	M	21	\$ 8,000
McCook, Sherri E.	M	22	\$ 20,000

✓

✓



- Solution: 28,000

Note:

- (1) Use <F4> to lock *Criteria_range* & *Sum_range*
- (2) Maintain SAME HEIGHT of RANGES
- (3) SUMIFS can accept multiple criteria (127 !) whereas SUMIF can accept only one

#1122: SUMIFS(): Conditional Summation (3 criteria) w. date range

- If cell A1 contains "21-May-2001", then the *Criteria_1* can be " $>=&A1$ " indicating date 21-May-2001 onwards. The operators ($>$ $<$ etc.) has to be enclosed in a pair of double-quotes and concatenated (&) with the cell reference containing valid date(s).

#1123: SUMIFS(): Condition based Selective Cumulative Running Total

=SUMIFS(\$C\$1:C1,\$B\$1:B1,A1)

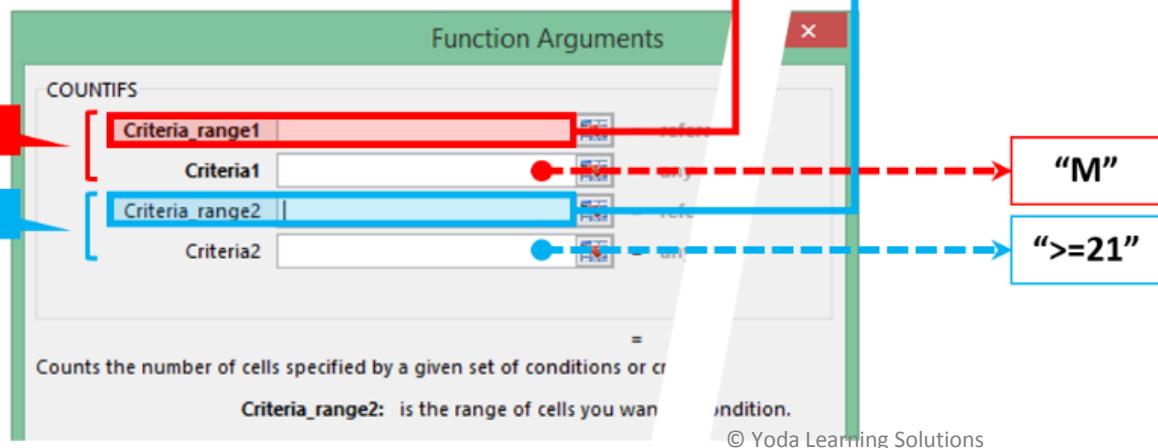
SUMIFS(sum_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)

- Careful use of relative references (\$) can help yield **differential cumulative running total**

=COUNTIFS()

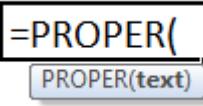
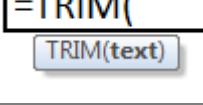
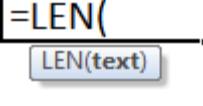
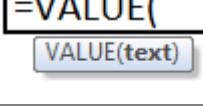
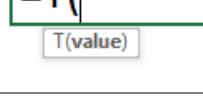
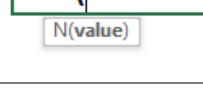
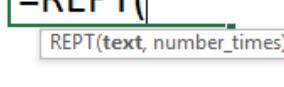
Name	Gender	Age	Stipend
Price, Susan	F	25	\$ 10,000
Swann, Trina	F	57	\$ 12,000
Hobbs, Patsy	M	21	\$ 8,000
McCook, Sherri E.	M	22	\$ 20,000

✓
✓



- Solution: 2
- Used for 2-way list-reconciliation, duplicate count E.g. =COUNTIFS(\$A\$1:\$A\$100,A1)
- Used for Instance No./Occurrence No. =COUNTIFS(\$A\$1:A1,A1)

#1201 – 1206: Text Formulas – UPPER(), PROPER() & LOWER(); TRIM(), VALUE(), T(), N(), REPT()

 =PROPER(PROPER(text)	<ul style="list-style-type: none"> Capitalizes the first letter in each word of a text value E.g. Converts “<u>the man eats</u>” or “<u>THE MAN EATS</u>” TO “<u>The Man Eats</u>”
 =UPPER(UPPER(text)	<ul style="list-style-type: none"> Converts text to uppercase E.g. Converts “<u>the man eats</u>” or “<u>The Man Eats</u>” TO “<u>THE MAN EATS</u>”
 =LOWER(LOWER(text)	<ul style="list-style-type: none"> Converts text to lowercase E.g. Converts “<u>The Man Eats</u>” or “<u>THE MAN EATS</u>” TO “<u>the man eats</u>”
 =TRIM(TRIM(text)	<ul style="list-style-type: none"> Removes excess spaces from text. Removes all leading & trailing spaces. However, multiple spaces inside the sentences are replaced with a single space. E.g. Converts “<u> HSBC Inc. </u>” TO “<u>HSBC Inc.</u>”
 =LEN(LEN(text)	<ul style="list-style-type: none"> Returns the number of characters in a text string E.g. AK 47 =LEN(____) = 5
 =VALUE(VALUE(text)	<ul style="list-style-type: none"> Converts “a number stored as text” to a number “a number stored as text” is recognized as 0 for computations
 =T(T(value)	<ul style="list-style-type: none"> If value is or refers to text, T returns value. If value does not refer to text, T returns “” (empty text).
 =N(N(value)	<ul style="list-style-type: none"> Converts a Value to a Number in Excel. For text, it yields zero. Used to leave in-cell comments. E.g. =SUM(B1:B2) + N("This is my comment – Hello World")
 =REPT(REPT(text, number_times)	<ul style="list-style-type: none"> Repeats a string / character specified no. of times E.g. =REPT("X",3) will yield XXX

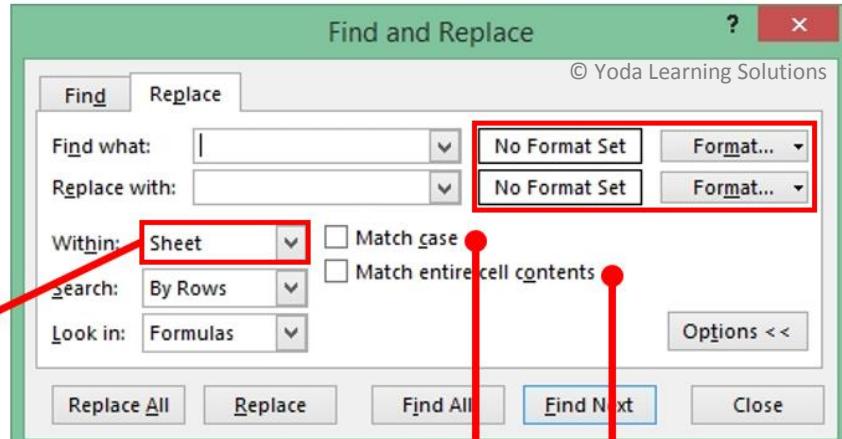
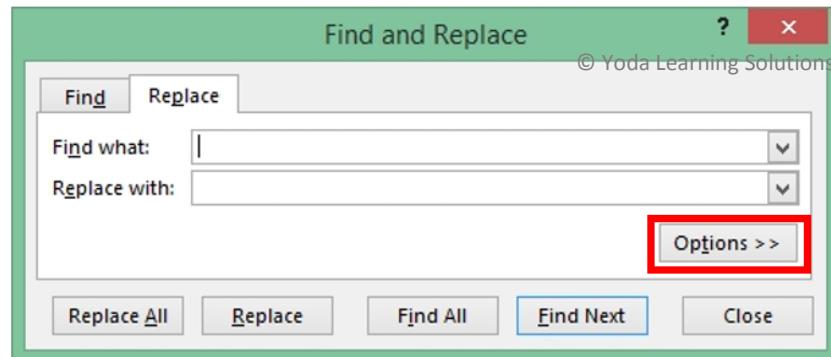
#1207: Joining data strings using CONCATENATE, &

	A	B	C	D	E
1					© Yoda Learning Solutions
2	AK7	2332	AK7-2332	=A2&"- "&B2	
3					
4	AK7	2332	AK7-2332	=CONCATENATE(A4,"-",B4)	

Note:

- Both of the above approaches yield the SAME output
- Any external text, number, symbol must be enclosed in a pair of double quotations. E.g. “ ”
- =TEXT() may be used if combining Dates. E.g. ="Today's date is " & TEXT(A2,"dd-mmm-yy")

Ctrl H



make the search
Case Sensitive

a search of "apple" will
pick up only "apple" and
not "apple pie"

#1208 – 1209: Find & Replace – Using Wildcard characters (* ?)

*

Asterisk (*) : Any number of characters

The screenshot shows a Microsoft Word window with a list of names and email addresses on the left. A 'Find and Replace' dialog box is open over the list. The 'Find what:' field contains the text '/*' with a red circle highlighting the asterisk. The 'Replace with:' field is empty. Below the dialog are buttons for 'Replace All', 'Replace', 'Find All', 'Find Next', and 'Close'. A large orange arrow points from the 'Find what:' field in the dialog to the list of names on the left, indicating the search scope.

Email

Ismael Abdusalaam/IN/TRS/PwD@ASIAPAC-IN
Jeff Abney/IN/Adv/PwD@LATAM-IN
Jennifer Adams/IN/M&C/PwD@AMERICAS-IN
Cindy Alligood/IN/M&C/PwD@LATAM-IN
Darryl Andrews/IN/FAS/PwD@AMERICAS-IN
Maryalice Applegate/IN/TRS/PwD@EMEA-IN
Lynn Ashcraft/IN/M&C/PwD@AMERICAS-IN
Ross Avina/IN/M&C/PwD@AMERICAS-IN
Jacalyn Baker/IN/TRS/PwD@EMEA-IN

© Yoda Learning Solutions

Find and Replace

Find what: /*
Replace with:

Replace All Replace Find All Find Next Close

Email

Ismael Abdusalaam
Jeff Abney
Jennifer Adams
Cindy Alligood
Darryl Andrews
Maryalice Applegate
Lynn Ashcraft
Ross Avina
Jacalyn Baker

#1208 – 1209: Find & Replace – Using Wildcard characters (* ?)

?

Question (?) : Any one character (single)

Email

Ismael Abdusalaam/IN/TRS/PwD@ASIAPAC-IN
Jeff Abney/IN/Adv/PwD@LATAM-IN
Jennifer Adams/IN/M&C/PwD@AMERICAS-IN
Cindy Alligood/IN/M&C/PwD@LATAM-IN
Darryl Andrews/IN/FAS/PwD@AMERICAS-IN
Maryalice Applegate/IN/TRS/PwD@EMEA-IN
Lynn Ashcraft/IN/M&C/PwD@AMERICAS-IN
Ross Avina/IN/M&C/PwD@AMERICAS-IN
Jacalyn Baker/IN/TRS/PwD@EMEA-IN

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Find and Replace

Find what: /???

Replace with: /XXX/

Replace All Replace Find All Find Next Close



Email

Ismael Abdusalaam/IN/XXX/PwD@ASIAPAC-IN
Jeff Abney/IN/XXX/PwD@LATAM-IN
Jennifer Adams/IN/XXX/PwD@AMERICAS-IN
Cindy Alligood/IN/XXX/PwD@LATAM-IN
Darryl Andrews/IN/XXX/PwD@AMERICAS-IN
Maryalice Applegate/IN/XXX/PwD@EMEA-IN
Lynn Ashcraft/IN/XXX/PwD@AMERICAS-IN
Ross Avina/IN/XXX/PwD@AMERICAS-IN
Jacalyn Baker/IN/XXX/PwD@EMEA-IN

#1210: Find & Replace – Neutralising Wildcard characters to remove them from data

Important: Wildcard characters can be neutralized by pre-fixing tilde sign (~) which is placed above the TAB key:

Ismael Abdusalaam
Jeff Abney*****
Jennife**r Adams
Cindy Alligood
Darryl *****Andrews
Maryalice Applegate
Lynn ****Ashcraft
Ross Avina
*****Jacalyn Baker

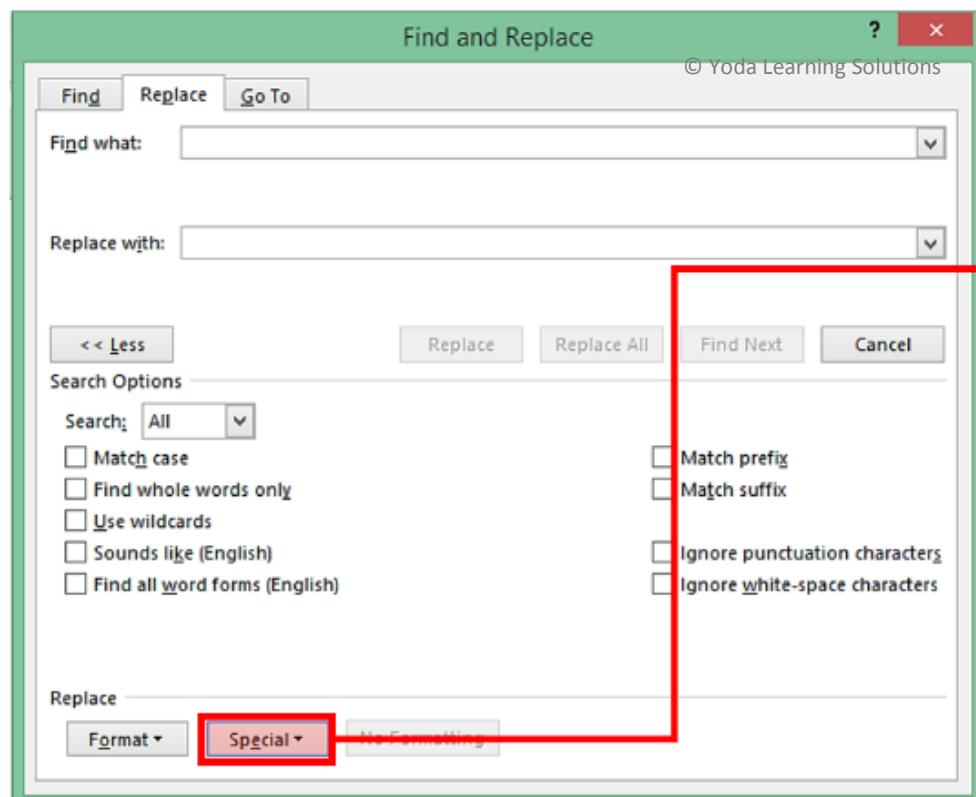
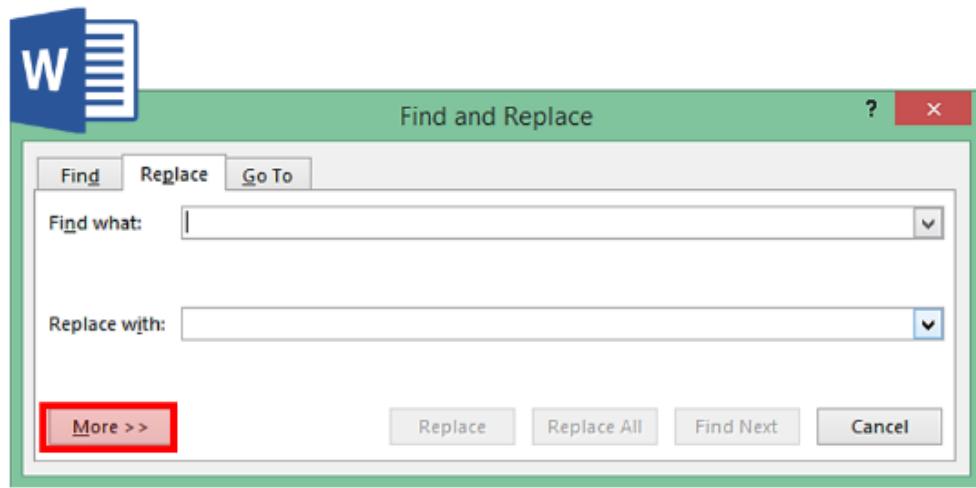
Find and Replace

Find what: ~*

Replace with:

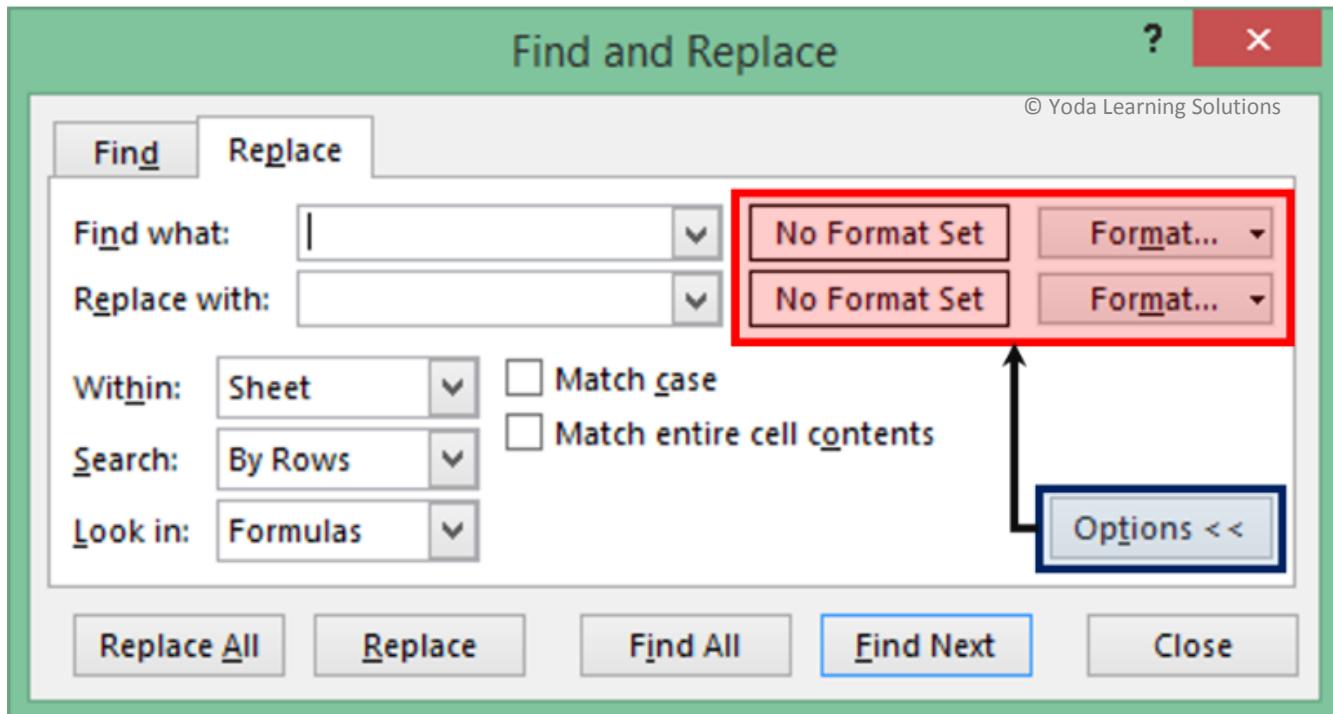
Replace All Replace Find All Find Next Close

#1211: Find & Replace – Word vs. Excel



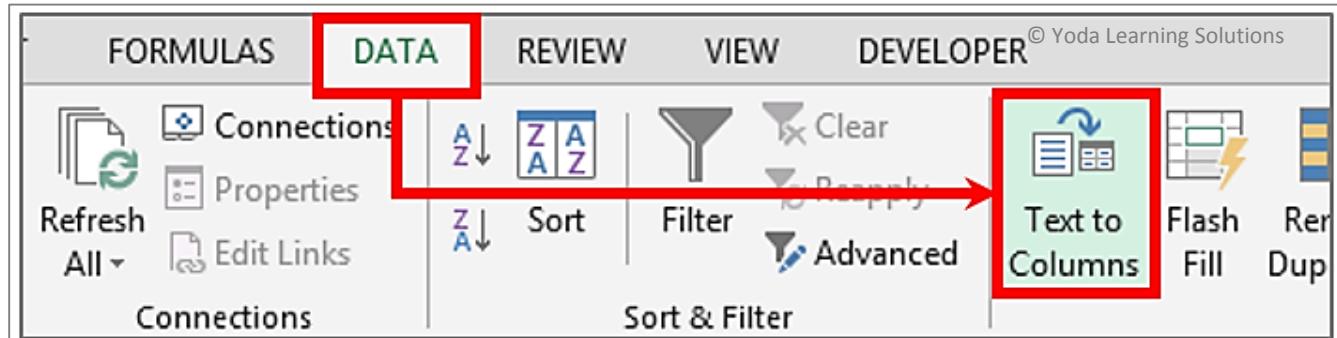
Paragraph Mark
Tab Character
Any Character
Any Digit
Any Letter
Caret Character
§ Section Character
¶ Paragraph Character
Column Break
Em Dash
En Dash
Endnote Mark
Field
Footnote Mark
Graphic
Manual Line Break
Manual Page Break
Nonbreaking Hyphen
Nonbreaking Space
Optional Hyphen
Section Break
White Space

#1212: Find & Replace – Cell Format



- FIND WHAT: Specify the **source** format
- REPLACE WITH: Specify the **target** format

#1213-1214: Text to Columns – Delimited vs. Fixed Width



	A	B	[Delimited]
1	Separate Name from Surname		
2			
3	Surname, Name	Surname	Name
4	AbduSalaam, Ismael		
5	Abney, Jeffery		
6	Adams, Jennifer M		
7	Adams, Sally		
8	Adams, Vanessa Y.		

	A	B	C	[Fixed Width]
1				
2	Transfer 1 column data into 4 columns			
3				
4	Fixed Assets (excerpts)	Account No.	Item No.	Item No. Check Asset Desc.
5	25900 814392 00814392 MOULD REPRG CHARGES			
6	25900 816400 00816400 WIRE HOLDER 3 PIN			
7	25900 816401 00816401 WIRE HOLDER 5 PIN			
8	25900 816460 00816460 MOULD FOR WORD MARK			
9	25900 816410 00816410 MOULD FOR CONTROL K			

#1214: Text to Columns – Tricks

Trick 1: Ensuring a pre-defined format for exported data @ Step 3 of 3. Applications:

- Numbers stored as text to “General” format – refer VLookup discussion
- Dates cleaning
- Retaining prefix zeroes in cases of Credit Card & bank Account nos., ID Codes

Prefix zeroes must be retained

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	Account No.	Item Description
3		
4	Fixed Assets (excerpts)	
5	25900 814392 00814392 MOULD REPRG CHARGES	
6	25900 816400 00816400 WIRE HOLDER 3 PIN	
7	25900 816401 00816401 WIRE HOLDER 5 PIN	
8	25900 816460 00816460 MOULD FOR WORD MARK	
9	25900 816410 00816410 MOULD FOR CONTROL K	
10	25900 816430 00816430 MOULD FOR FRONT COV	
11	25900 816440 00816440 MOULD FOR BACK COVE	
12	25900 816470 00816470 MOULD FOR FRONT CAB	
13	25900 816480 00816480 MOULD FOR BACK CABI	
14	25900 816490 00816490 MOULD FOR TOP COVER	
15	25900 816500 00816500 MOULD FOR BOTTOM CO	
16	25900 816580 00816580 MOULD FOR SIDE AV BKT	
17	25900 816520 00816520 MOULD FOR SIDE AV BKT	
18	25900 812071 00812071 FRAME TUNER	
19	25900 816640 00816640 FAN MOUNTING BKT	
20	25900 464606 00464606 REAR CABINET	

- For keeping intact a number string with Zeroes at the beginning (prefix): In Step 3 of 3, select the relevant “Column” under “Data preview” section → Column will blacken out → Choose “Text” radio button to store the output column in text form

#1215 – 1216: Text to Columns – Cleaning up numbers w. trailing minus sign; replacing Dr/Cr w. +/-

The screenshot shows a Microsoft Excel spreadsheet and the 'Text to Columns Wizard - Step 3 of 3' dialog box.

Excel Spreadsheet Data:

A	B
1 Text to Columns - Tips & Tricks	
2	
3 Trailing MINUS	
5 (-) Sign to be the prefix	Final Output
6 3789-	-3789
7 3629-	-3629
8 5006	5006
9 4161-	-4161
12 Dr/Cr	Final Output
13 3789Cr	-3789
14 3629Cr	-3629
15 5006Dr	5006
16 4161Cr	-4161
17 [Hint: Ctrl+H to replace Dr/Cr with +/-]	
19 End	

Text to Columns Wizard - Step 3 of 3 Dialog:

- This screen lets you select each column and set the Data Format.
- Column data format:
 - General (radio button selected)
 - Text
 - Date: MDY
 - Do not import column (skip)
- Destination: \$A\$6
- Data preview: Shows 'General' format with the input data: '3789-' and '3629-'.
- Advanced... button (highlighted with a red box).

Advanced Text Import Settings Dialog (highlighted with a green border):

- Settings used to recognize numeric data:
 - Decimal separator: .
 - Thousands separator: ,
- Note: Numbers will be displayed using the numeric settings specified in the Regional Settings control panel.
- Reset, OK, Cancel, Back, Next >, Finish buttons.
- Trailing minus for negative numbers (highlighted with a red box).

- Text-to-Columns is also used to rectify Numbers with **trailing negative (-) signs**. E.g. From 212- to -212

#1217 – 1218: Text to Columns – Correcting invalid Dates

The screenshot shows a Microsoft Excel spreadsheet titled "Correcting dates in invalid formats". The table has two columns: "Invalid Date Input" and "Final Output". The "Invalid Date Input" column contains dates like "24.05.2007", "04.08.2007", etc. The "Final Output" column shows the corrected dates. Below the table, the "Convert Text to Columns Wizard - Step 3 of 3" dialog box is open. It shows the "Column data format" set to "Date" with "MDY" selected. The "Data preview" section shows the converted dates. The "Destination" dropdown is set to "New Worksheet".

A	B	C
1	Correcting dates in invalid formats	
2	[TEXT-TO-COLUMNS]	
3		
4	Case 1:	
5		
6	Invalid Date Input	Final Output
7	24.05.2007	24-May-07
8	04.08.2007	4-Aug-07
9	09.05.2008	9-May-08
10	26.06.2008	26-Jun-08
11	27.07.2008	27-Jul-08
12	24.11.2008	24-Nov-08
13	28.11.2008	28-Nov-08
14		
15		
22		
23		
30		
31		

- **For Correcting Dates** – Apply “Confession Box”. Choose the mistake or the current sequence of date components
- E.g. “DMY” – 29.10.2009 and “YMD” for 20091031

#1219-1221: LEFT(), RIGHT(), MID()

=LEFT(<small>LEFT(text, [num_chars])</small>	<ul style="list-style-type: none"> Extract specified no. of characters from left, right or mid 																
=RIGHT(<small>RIGHT(text, [num_chars])</small>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">A</th> <th style="text-align: center;">B</th> <th style="text-align: center;">C</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>AJCPP1312N</td> <td style="text-align: center;">AJ</td> <td>=LEFT(A1,2)</td> </tr> <tr> <td style="text-align: center;">2</td> <td>AJCPP1312N</td> <td style="text-align: center;">2N</td> <td>=RIGHT(A2,2)</td> </tr> <tr> <td style="text-align: center;">3</td> <td>AJCPP1312N</td> <td style="text-align: center;">P</td> <td>=MID(A3,4,1)</td> </tr> </tbody> </table>		A	B	C	1	AJCPP1312N	AJ	=LEFT(A1,2)	2	AJCPP1312N	2N	=RIGHT(A2,2)	3	AJCPP1312N	P	=MID(A3,4,1)
	A	B	C														
1	AJCPP1312N	AJ	=LEFT(A1,2)														
2	AJCPP1312N	2N	=RIGHT(A2,2)														
3	AJCPP1312N	P	=MID(A3,4,1)														
=MID(<small>MID(text, start_num, num_chars)</small>																	

=LEN <small>LEN</small> Returns the number of characters in a text string	<ul style="list-style-type: none"> "characters" Includes space
---	---

#1219-1221: SEARCH() vs. FIND()

<ul style="list-style-type: none"> Yield the starting position of the criteria 													
=SEARCH(<small>SEARCH(find_text, within_text, [start_num])</small>	<ul style="list-style-type: none"> Case Sensitive? – No Can use wild characters in search terms? - Yes 												
=FIND(<small>FIND(find_text, within_text, [start_num])</small>	<ul style="list-style-type: none"> Case Sensitive? – Yes Can use wild characters in search terms? - No 												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">A</th> <th style="text-align: center;">B</th> <th style="text-align: center;">C</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>user@yodalearning.com</td> <td style="text-align: center;">6</td> <td>=SEARCH("YO*",A1)</td> </tr> <tr> <td style="text-align: center;">2</td> <td>123456.....21</td> <td></td> <td></td> </tr> </tbody> </table>		A	B	C	1	user@yodalearning.com	6	=SEARCH("YO*",A1)	2	123456.....21			
	A	B	C										
1	user@yodalearning.com	6	=SEARCH("YO*",A1)										
2	123456.....21												

#1301: Logical formulas - generally used with IF()

=ISBLANK



Checks whether a reference is to an empty cell, and returns TRUE or FALSE

=ISNUMBER



Checks whether a value is a number, and returns TRUE or FALSE

[Used to check the validity of dates as technically every valid date in Excel is a “number”]

=ISTEXT



Checks whether a value is text, and returns TRUE or FALSE

=ISERROR



Checks whether a value is an error (#N/A, #VALUE!, #REF!, #DIV/0!, #NUM!, #NAME?, or #NULL!), and returns TRUE or FALSE

=ISFORMULA



Checks whether a reference is to a cell containing a formula, and returns TRUE or FALSE

Others: ISNA(), ISREF(), ISERR()

#1302-1304: Logical formulas – AND(), OR(), IF()

=AND



Checks whether all arguments are TRUE, and returns TRUE if all arguments are TRUE

=OR



Checks whether any of the arguments are TRUE, and returns TRUE or FALSE. Returns FALSE only if all arguments are FALSE

=IF(

IF(logical_test, [value_if_true], [value_if_false])

Examples:

	A	B	C	D	E	G
8	Name	Salary p.a. (US\$)	Division	Rating	Rating 1-3 AND Division "CDFD" AND Salary < 50K	© Yoda Learning Solutions
9	AbduSalaam, Ismael	38,261	HFD	3	=AND(D9<4,C9="CDFD",B9<50000)	
426					AND(logical1, [logical2], [logical3], [logical4], ...)	

[FALSE because Division is not equal to "CDFD"]

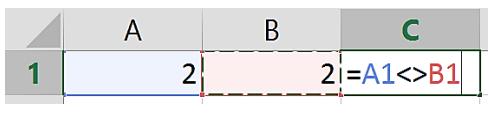
	A	B	C	D	F	G
8	Name	Salary p.a. (US\$)	Division	Rating	Rating 1-3 AND Division "CDFD" AND Salary < 50K	© Yoda Learning Solutions
9	AbduSalaam, Ismael	38,261	HFD	3	=OR(D9<4,C9="CDFD",B9<50000)	
426					OR(logical1, [logical2], [logical3], [logical4], ...)	

[TRUE because at least one of three conditions is TRUE]

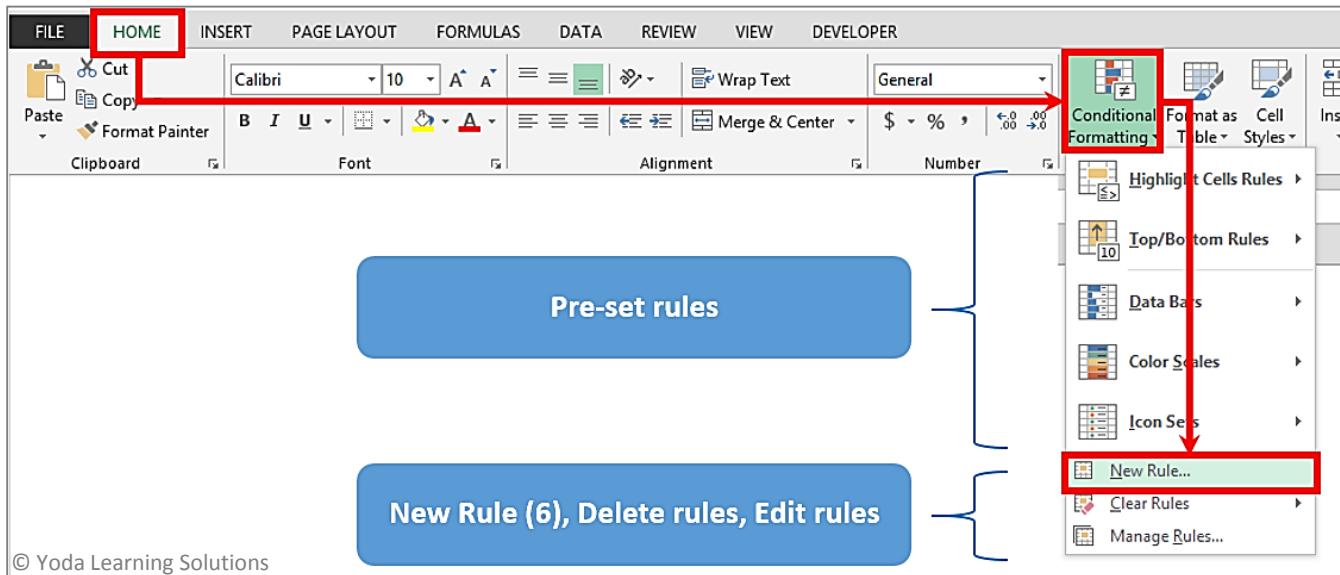
	A	B	C	D	F	G	H	I
8	Name	Salary p.a. (US\$)	Division	Rating	Rating 1-3 AND Division "CDFD" AND Salary < 50K			
9	AbduSalaam, Ismael	38,261	HFD	3	=IF(OR(D9<4,C9="CDFD",B9<50000),"Bonus","No Bonus")			

[Bonus]

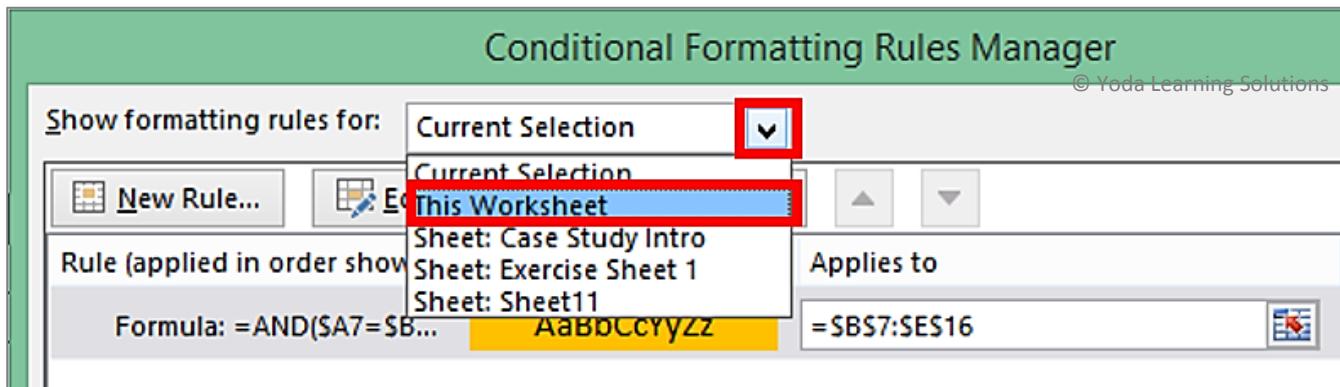
$=IFERROR($ <small>IFERROR(value, value_if_error)</small>	<ul style="list-style-type: none"> =IFERROR(VLOOKUP(), "Data Not Available") =IFERROR(VLOOKUP(), IFERROR(VLOOKUP(), "Data Not Available")) =IFERROR(VLOOKUP(), VLOOKUP())
<ul style="list-style-type: none"> Prior to v. 2007 i.e. before IFERROR() was introduced, users used $=IF(ISERROR(VLOOKUP()), VLOOKUP(), "Data Not Available")$ instead of $=IFERROR(VLOOKUP(), "Data Not Available")$ 	

	<ul style="list-style-type: none"> Not equal is referred by \neq Answer = FALSE
---	--

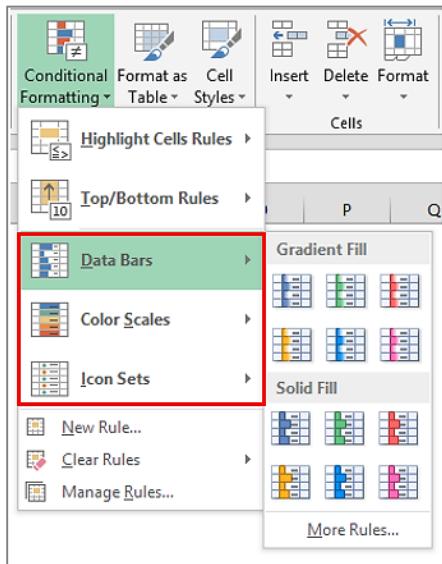
#1401-1403: Conditional Formatting



Manage Rules

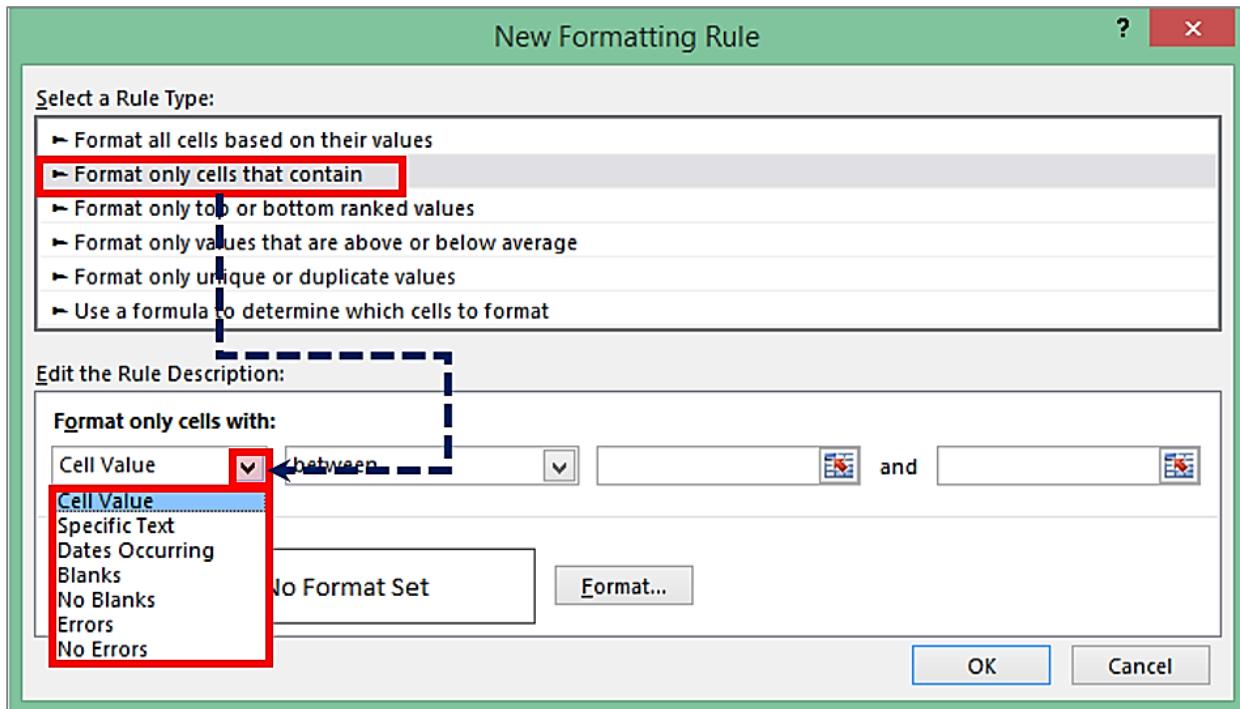


#1403: Conditional Formatting: Data Bars, Color Scales, Icon Sets



#1404: Conditional Formatting: Blanks, Errors, Values, Duplicates

Most commonly used “Rule”:



#1405-1407: Conditional Formatting: Formula based

The screenshot shows a Microsoft Excel spreadsheet titled "MIS Report". The data starts at row 7, with columns A, B, C, and D labeled. Row 7 contains the headers: "Name", "Salary p.a. (USS)", "Division", and "Rating". Rows 8 through 27 contain data for various employees. The cell B3 (Division Name) is highlighted with a red border, and the cell C8 (RAD) is highlighted with a yellow border. To the right of the spreadsheet, the "Edit Formatting Rule" dialog box is open. In the "Select a Rule Type:" section, the option "Use a formula to determine which cells to format" is selected, indicated by a green checkmark. In the "Format values where this formula is true:" field, the formula `= B3 = $C8` is entered. The "Preview" section shows the text "AaBbCcYyZz". At the bottom of the dialog box are "OK" and "Cancel" buttons.

	A	B	C	D
1	MIS Report			
2				
3	Division Name	RAD		
4				
5				
6				
7	Name	Salary p.a. (USS)	Division	Rating
8	AbduSalaam, Ismael	38,261	HFD	3
9	Abney, Jeffery	82,135	RAD	4
10	Adams, Jennifer M	24,566	HFD	1
11	Adams, Sally	15,097	CDFD	5
12	Adams, Vanessa Y.	38,038	HFD	1
13	Alexander, Amy H.	72,682	RAD	3
14	Allen, Rebecca	353,556	ED	5
15	Allen, Sharon	55,089	RAD	2
16	Allen, William Brent	265,746	CDFD	1
17	Alligood, Cynthia	98,527	RDD	4
18	Andrews, Darryl	20,337	CDFD	1
19	Applegate, Mary Alice	18,158	CDFD	3
20	Ashcraft, Lynn F.	67,602	RDD	3
21	Avina III, Ross J.	161,229	CDFD	3
22	Baker, Jacalyn L.	58,614	HFD	3
23	Ball, Ruth Ann	50,056	HFD	1
24	Barber, Eva	121,317	RAD	3
25	Barden, Nicky E.	932,149	RAD	2
26	Barrett, Stephen	28,455	HFD	2
27	Barrv. Sheila C.	32,449	HFD	5

Important:

- Formula should yield TRUE or FALSE as an answer
- Relative references (\$). E.g. \$C8
- Formula in line with selection of data range. E.g. \$C8 because selection of data range starts from the 8th row

	A	B	C	D	E	F	G	M	N
1	Branch Name	Branch 6							© Yoda Learning Solutions
2	Quarter	Q1 06							
3		243							
4									
5									
6	Branch Name	Q1 06	Q2 06	Q3 06	Q4 06				
7	Branch 1	(378)	179	601	992				
8	Branch 2	(331)	252	383	770				
9	Branch 3	46	363	343	(713)				
10	Branch 4	135	474	885	659				
11	Branch 5	193	779	165	944				
12	Branch 6	243	243	992	43				
13	Branch 7	398	85	534	951				
14	Branch 8	491	127	363	83				
15	Branch 9	605	594	288	363				
16	Branch 10	670	849	1,028	1,028				
17									
18									
19									
20									
21									

Edit Formatting Rule ? X

Select a Rule Type:

- Format all cells based on their values
- Format only cells that contain
- Format only top or bottom ranked values
- Format only values that are above or below average
- Format only unique or duplicate values
- Use a formula to determine which cells to format ✓

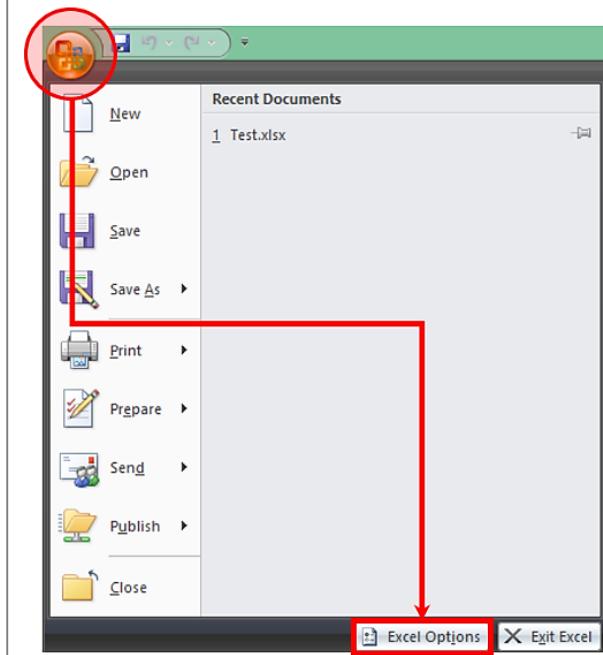
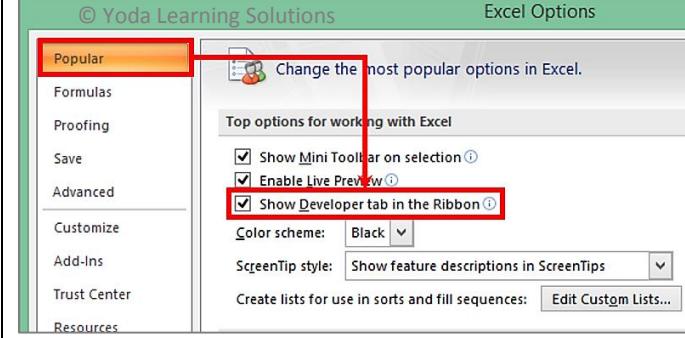
Edit the Rule Description:

Format values where this formula is true:

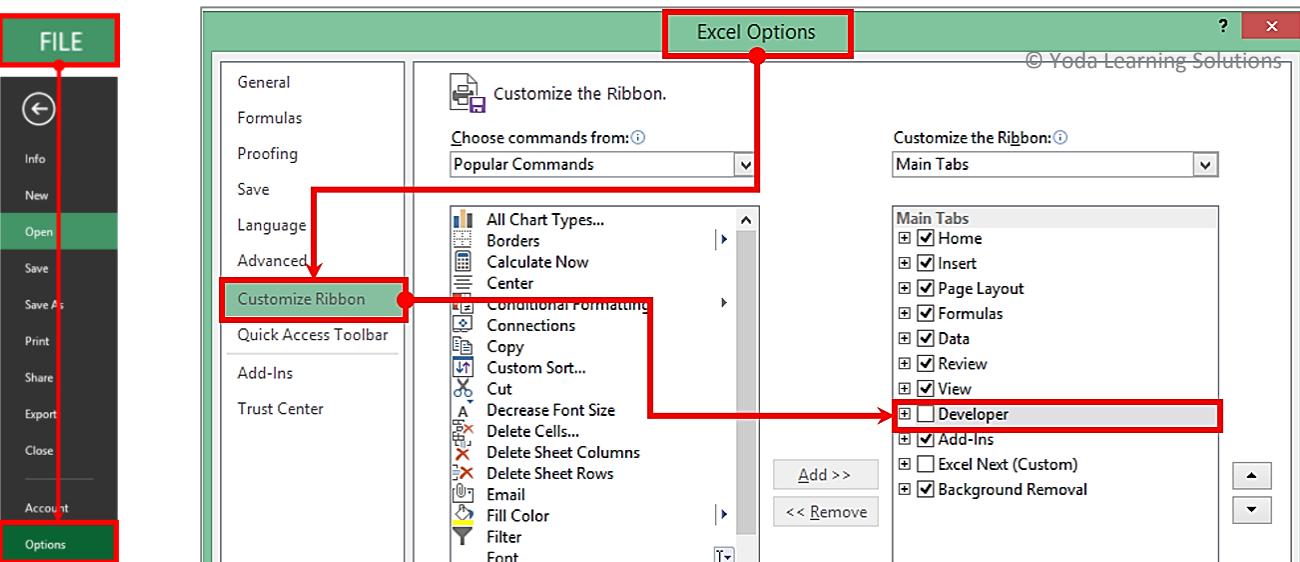
$=AND($A7=B1, $B6=$B$2)$

Preview: AaBbCcYyZz

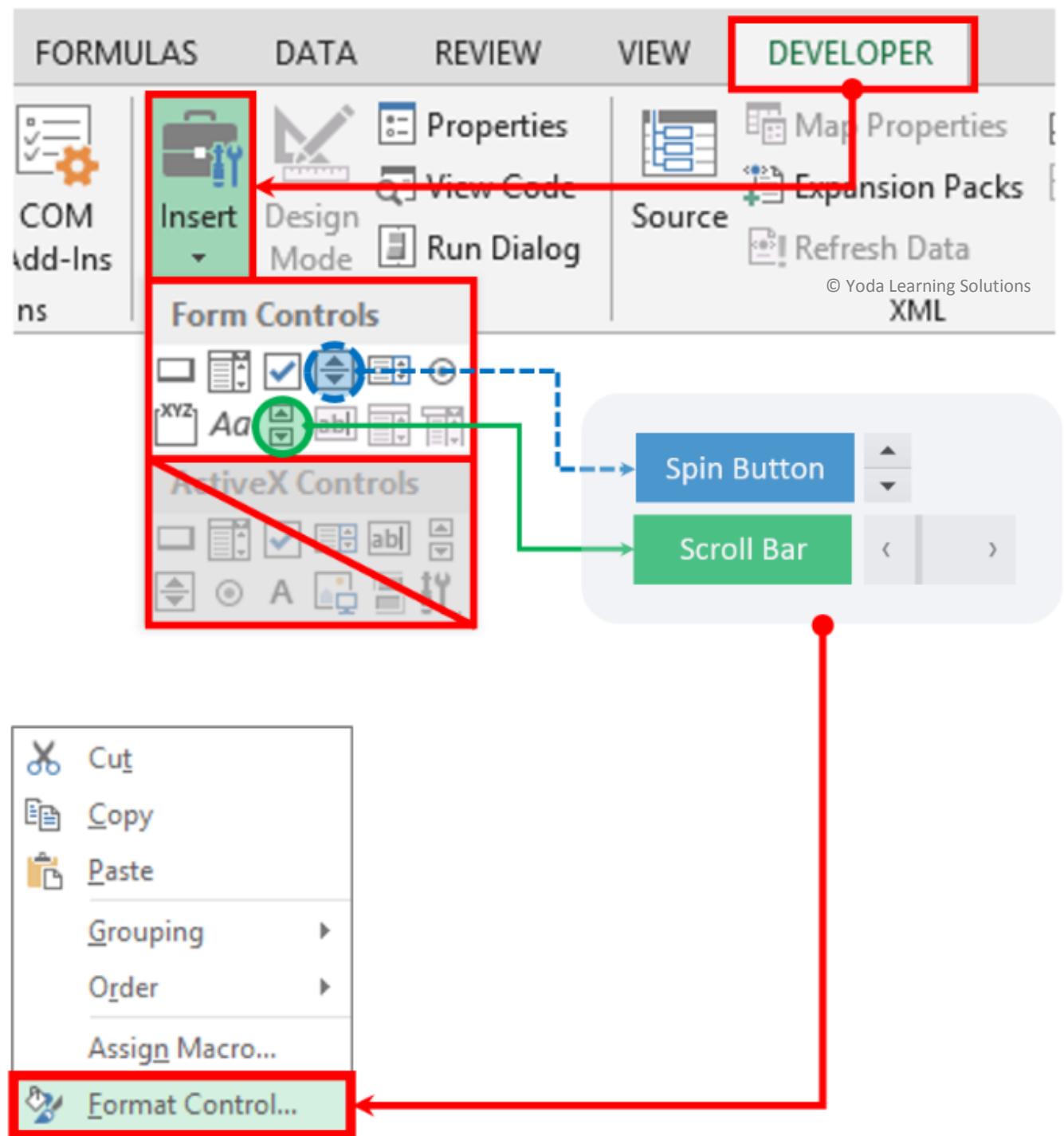
#1501: Activating Developer tab in v. 2007

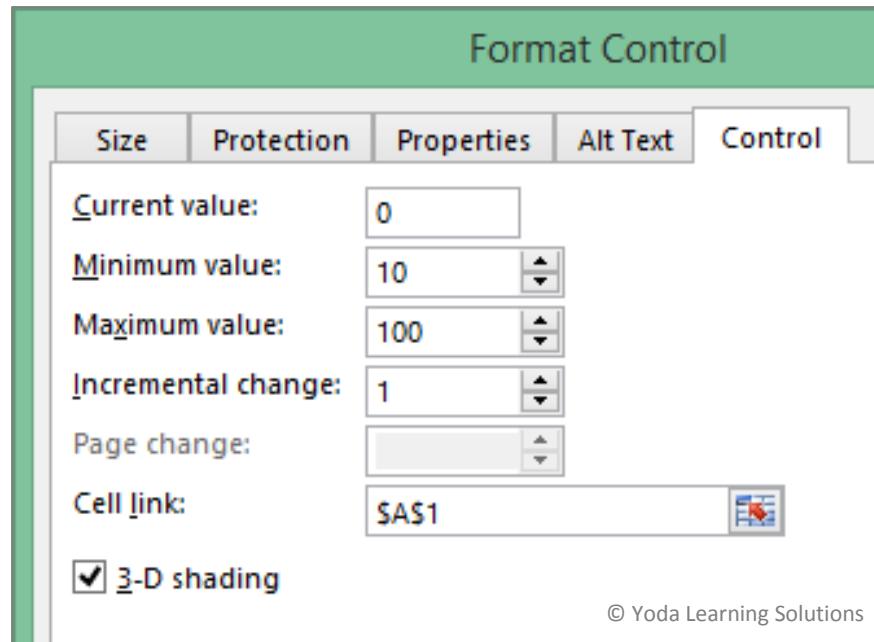
OFFICE BUTTON > EXCEL OPTIONS	POPULAR > Show Developer tab in the Ribbon
	

#1501: Activating Developer tab in v. 2010-13



#1501-1502: Using Form Control Buttons from Developer Tab (Spin Bar, Scroll Bar) + Limitations

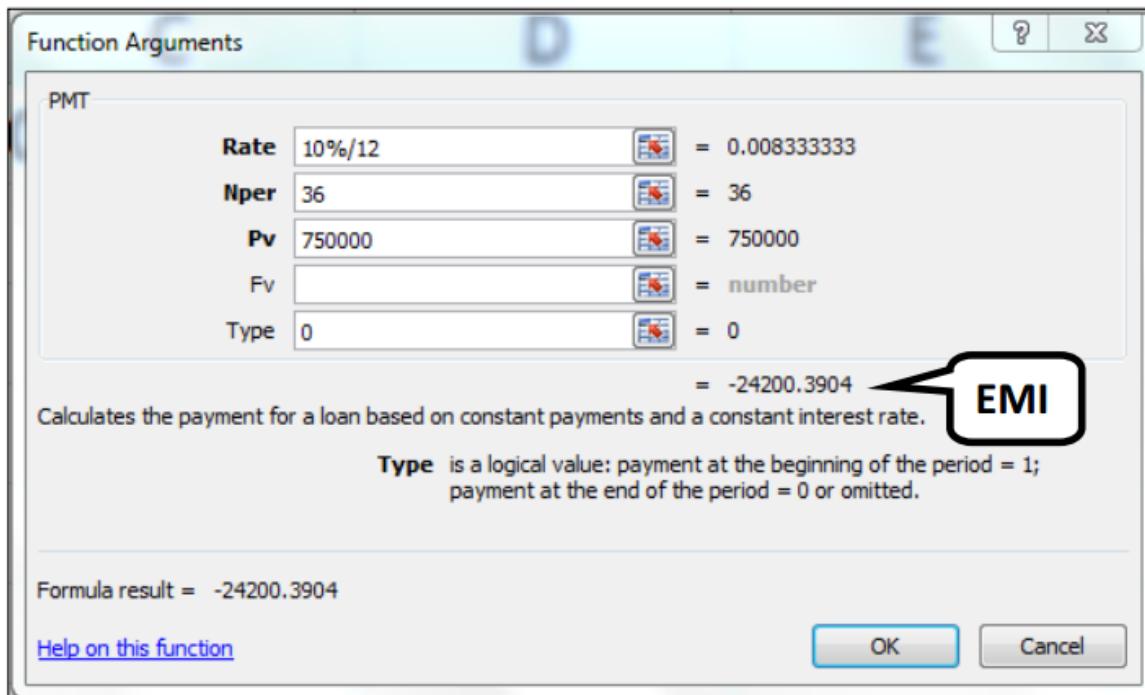




NB: The feature is used to change the input values (assumptions) at the click of a button. The referred "Form Control" buttons cannot accommodate decimal values, % values or a value outside 0-30,000 range.

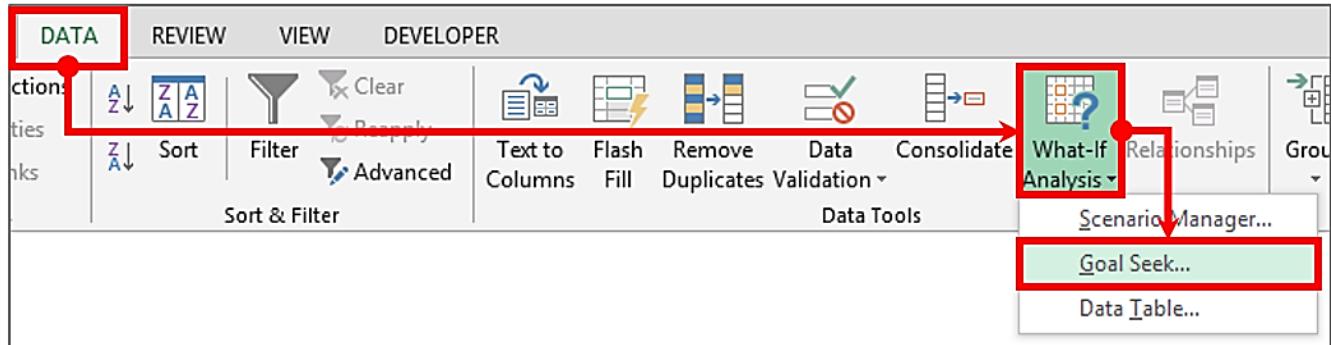
#1504: PMT

=PMT()



#1504: What IF Analysis – Goal Seek

Goal Seek helps back calculate input based on pre-defined target answer.



Here it's targeting an EMI of Rs. 20,000 and is trying to back calculate what can be the loan amount given the fixed duration and interest %.

	A	B	C	D
1				
2	Loan Amt. Rs.	500,000.0		
3	Interest % p.a.	13.0%		
4	Duration (Yrs.)	2.0		
5				
6				
7	EMI (Rs.) using PMT	(23,771)		
8		=PMT(B3/12,B4*12,B2)		

	A	B
1		
2	Loan Amt. Rs.	420,682.2
3	Interest % p.a.	13.0%
4	Duration (Yrs.)	2.0
5		
6		
7	EMI (Rs.) using PMT	(20,000)
8		=PMT(B3/12,B4*12,B2)

#1505-1506: What IF Analysis – Data Tables (Sensitivity Analysis)

Price & Quantity leads to revenue. Cost component includes Fixed & Variable component. Comparing Revenue vs. Cost yields Profit.

A	B	© Yoda Learning Solutions
1	DATA TABLES	
2		
3	Sample Revenue-Cost Model	
4		
5	Price (Rs.)	15.00
6	Quantity sold	2,000
7	Revenue	30,000
8		
9	Variable Cost (Cost of Material, Labor)	15,000
10	Fixed Cost (Rent, Salary etc)	20,000
11	Total Cost	35,000
12		
13	Profit= Revenue less Total Cost	(5,000)
14		
15		
16	Assumption: Variable cost as a % of Revenue	50.0
17		

Step 1: Set the layout with up to 2 variables

A	E	F	G	H	I	J	
1							© Yoda Learning Solutions
2							
3		1500	2000	2500	3000	3500	
4							
5	10						
	=E4+1						
6	12						
7	13						
8	14						
9	15						
10							
11							

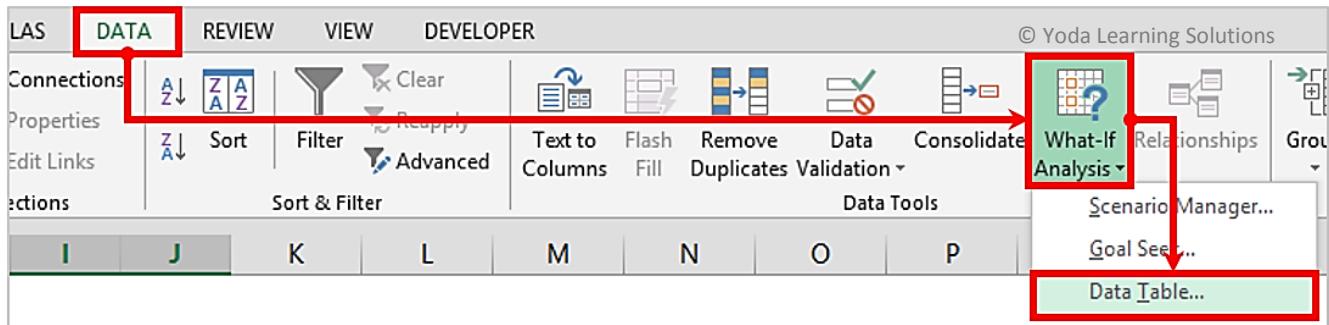
Step 2: At the intersection of the 2-variables (top-left of the table), point the cell to the cell containing formula for effect value. E.g. C13 refers to Profit

A	B	C	D	E	F	G	H	I	J	
1	DATA TABLES									
2										
© Yoda Learning Solutions										
3	Sample Revenue-Cost Model				C13	1500	2000	2500	3000	3500
4					10					
5	Price (Rs.)		15.00		11					
6	Quantity sold		2,000		12					
7	Revenue		30,000		13					
8					14					
9	Variable Cost (Cost of Material, Labor)		15,000		15					
10	Fixed Cost (Rent, Salary etc)		20,000							
11	Total Cost		35,000							
12										
13	Profit= Revenue less Total Cost		(5,000)							
14										
15										
16	Assumption: Variable cost as a % of Revenue		50.0							
17										

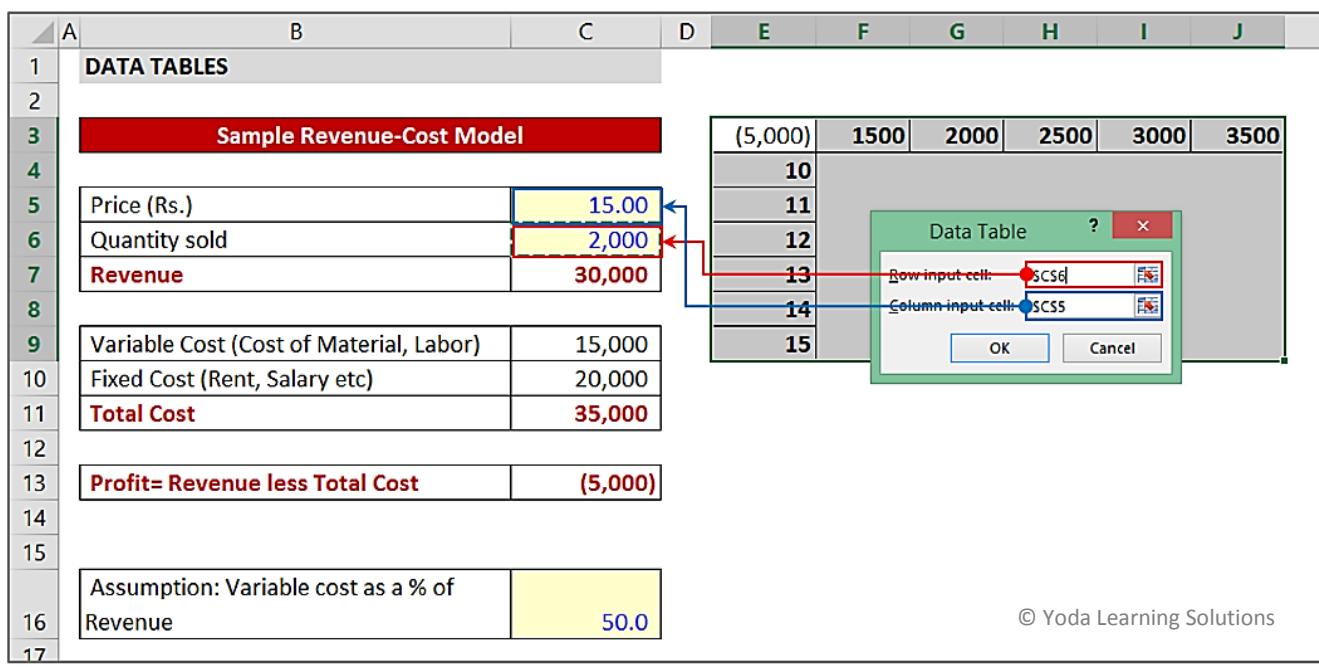
Step 3: Choose the table area (not more not less)

A	E	F	G	H	I	J
1						
2						
3	(5,000)	1500	2000	2500	3000	3500
4	10					
5	11					
6	12					
7	13					
8	14					
9	15					
10						

Step 4: Go to “Data Table”



Step 4: Row Input Cell & Column Input Cell (single cell reference each)



VC	Vertical data (Say Prices)	Column Input Cell (\$C\$5)
HR	Horizontal data (say Qty Sold)	Row Input Cell (\$C\$6)

Result: Generated Output – 2-variable sensitivity analysis

	A	E	F	G	H	I	J
1	(5,000)	1500	2000	2500	3000	3500	
2	10	-12500	-10000	-7500	-5000	-2500	
3	11	-11750	-9000	-6250	-3500	-750	
4	12	-11000	-8000	-5000	-2000	1000	
5	13	-10250	-7000	-3750	-500	2750	
6	14	-9500	-6000	-2500	1000	4500	
7	15	-8750	-5000	-1250	2500	6250	
8	16						
9	17						
10	18						

NB: Conditional Formatting can be applied to apply green / red colors for positive / negative nos.

#1507-1508: Data Tables (Sensitivity Analysis) - 2 Inputs & multiple Output

Step 1: Drop-Down list

Drop-Down list of "Impact" or output variables

A	E	F	I	J		
1	Revenue					
2	Revenue					
3	(5,000)	1500	2000	2500	3000	3500
4	10	-12500	-10000	-7500	-5000	-2500
5	11	-11750	-9000	-6250	-3500	-750
6	12	-11000	-8000	-5000	-2000	1000
7	13	-10250	-7000	-3750	-500	2750
8	14	-9500	-6000	-2500	1000	4500
9	15	-8750	-5000	-1250	2500	6250
10						© Yoda Learning Solutions

Step 2: Output cells "named" using Name Box – same names used as list values of drop-down

revenue : Name Box =C5*C6 © Yoda Learning Solutions

A B C

DATA TABLES

Sample Revenue-Cost Model

Price (Rs.)	15.00
Quantity sold	2,000
Revenue	30,000 = revenue

Variable Cost (Cost of Material, Labor)	15,000
Fixed Cost (Rent, Salary etc)	20,000
Total Cost	35,000

Profit= Revenue less Total Cost (5,000) = profit

Step 3: Using INDIRECT() in the Data Table – pointing to the cell containing drop-down list

	A	E	F	G	H	J
1		Revenue				© Yoda Learning Solutions
2						
3		=INDIRECT(E1)	2000	2500	3000	3500
4		INDIRECT(ref_text, [a1])	0000	25000	30000	35000
5	11	16500	22000	27500	33000	38500
6	12	18000	24000	30000	36000	42000
7	13	19500	26000	32500	39000	45500
8	14	21000	28000	35000	42000	49000
9	15	22500	30000	37500	45000	52500
10						

NB: Form Control Buttons (Developer > Insert > Form Controls) can applied to control input numbers

#1601-1604A: Category wise SubTotal with Groupings

Supplier Names have been “Grouped” in clusters along with a “Subtotal” at the end of the list.

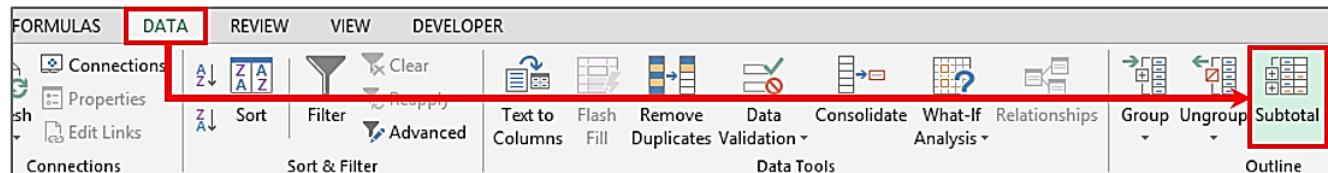


A B C		
1	Vendor details	(excerpts)
2		
3	Supplier Number	Supplier Name
4	707256	D.C. Power System
5	707256	D.C. Power System
6	707256	D.C. Power System
7	707256	D.C. Power System
8	712157	ATMA Tele Power Limited..
9	712157	ATMA Tele Power Limited..
10	712157	ATMA Tele Power Limited..
11	712158	ANZ Tele Power Ltd
12	712158	ANZ Tele Power Ltd
13	712158	ANZ Tele Power Ltd
14	712158	ANZ Tele Power Ltd
15	712158	ANZ Tele Power Ltd
16	777826	Agile Technologies
17	777826	Agile Technologies
		Transaction Amt. Rs.
4		125,279
5		32,090
6		136,529
7		45,305
8		408,411
9		171,781
10		156,918
11		74,676
12		110,210
13		20,866
14		48,500
15		193,193
16		111,433
17		56,903

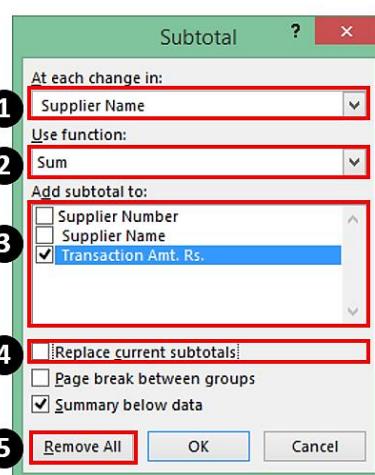
A B C		
1	Vendor details	(Excerpts)
2		
3	Supplier Number	Supplier Name
4	707256	D.C. Power System
5	707256	D.C. Power System
6	707256	D.C. Power System
7	707256	D.C. Power System
8	707256	D.C. Power System Total
9	712157	ATMA Tele Power Limited.. Total
10	712158	ANZ Tele Power Ltd Total
11	777826	Agile Technologies Total
12	228612	K Jindal. Total
13	220976	M/s. D.P. Tron Pvt Ltd. Total
14	477072	KK MONDAL Total
15	258967	ABC CORPORATE Total
16	50	586,199
17	410297	BBK Inc Total
18	744088	428,493
19	744088	SAM TELECOM Total
20	744088	2,626,186
21	64	6,644,952
		Grand Total

Step 1: SORT the data set with respect to the column heading on whose basis the Subtotal shall be generated. E.g. Supplier Name.

Step 2: DATA tab > SUBTOTAL



Step 3:

	<ol style="list-style-type: none"> 1. Choose the column name which has been sorted 2. SUM, MAX, AVERAGE etc. 3. Choose column(s) under which Subtotal is needed 4. For multi-level Subtotal, multi-level SORT is needed. Plus, tick away “Replace current subtotals” 5. For removing Subtotal, select entire data set and use “Remove All” button (bottom-left) from the Subtotal main box
---	---

NB: Use **<Ctrl + G>** - Visible Cells to highlight subtotal rows [Shortcut – ALT ;]

#1605-1606: Consolidate - 2 & 3 Dimensions

Screenshot of the Microsoft Excel ribbon showing the "DATA" tab selected. A red box highlights the "Connections" icon under the "Connections" group. Another red box highlights the "Consolidate" icon under the "Data Tools" group.

The main area displays three tables:

- Water Purifier (Basic)** (Sheet 1):

	Jan	Feb	Mar	Apr	May	Jun
Jacob	750	-	100	1,500	450	1,000
Martha	1,200	1,200	1,450	400	1,000	1,200
Rama	-	1,300	1,050	450	200	1,050
Louis	750	1,400	1,000	1,350	600	650
Jack	200	200	1,000	450	850	50
- Water Purifier RO (Reverse Osmosis)** (Sheet 2):

	Jan	Feb	Mar	Apr	May	Jun
Jack	250	1,150	-	200	1,050	150
Jacob	1,450	1,450	1,450	1,150	550	150
Louis	1,300	200	1,350	100	1,200	550
Rama	600	500	1,100	1,400	200	1,000
Sherley	100	150	500	1,300	1,200	1,400
Sharon	-	600	900	800	500	900
- Water Purifier (Latest)** (Sheet 3):

	Jan	Feb	Mar	Apr	May	Jun
Jacob	-	150	550	1,150	850	100
Martha	1,250	600	150	500	150	750
Rama	1,000	1,000	250	1,400	200	500
Louis	600	350	750	150	-	450
Jack	50	-	1,300	1,150	600	850

A callout arrow points from the "Consolidate" icon in the ribbon to the "Consolidate" dialog box. The dialog box shows the following settings:

- Function:** Sum (marked with 1)
- Reference:** 'Water Purifier RO'!\$A\$3:\$G\$9 (marked with 2)
- All references:** 'Water Purifier Basic'!\$A\$4:\$G\$9
'Water Purifier Latest'!\$A\$4:\$G\$9
'Water Purifier RO'!\$A\$3:\$G\$9 (marked with 2)
- Use labels in:**
 - Top row (marked with 3)
 - Left column
 - Create links to source data

1 Function to be used for Consolidation: SUM, MAX, MIN, AVERAGE etc.

2 Source of data should be selected and “added”

3 Required for “Labels” and “Links to Source data”

Result:

The screenshot shows a Microsoft Excel spreadsheet with a grouped table. The table has columns for Month (Jan, Feb, Mar, Apr, May, Jun) and Product Name (Water Purifier Basic, Water Purifier Latest, Water Purifier RO). The rows are grouped by customer name (Jacob, Martha, Rama, Louis, Jack, Sherley, Sharon) and color-coded by product type.

Grouped: A red callout points to the grouped rows on the left.

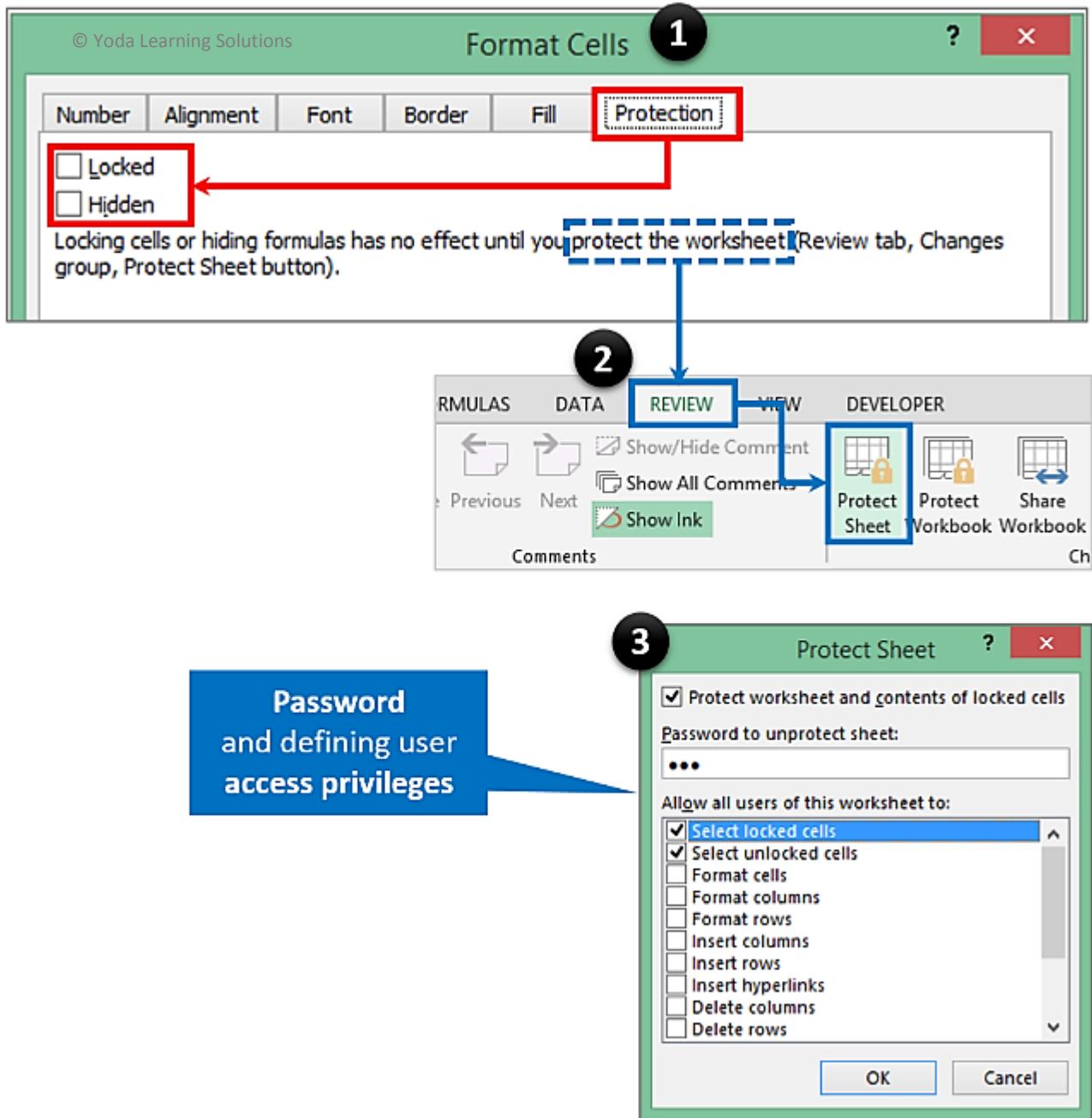
Sheet Names implying Product Names can be extracted using "Text-to-Columns" (Delimited): A blue callout points to the formula in cell F5, which uses the sheet name "Water Purifier Basic" to reference cell B5.

Linked Formula: A purple callout points to the formula in cell F5, which uses the sheet name "Water Purifier Basic" to reference cell B5.

Selective row coloring using ALT ; (Select VISIBLE CELLS): A grey callout points to the header row, which is highlighted in green.

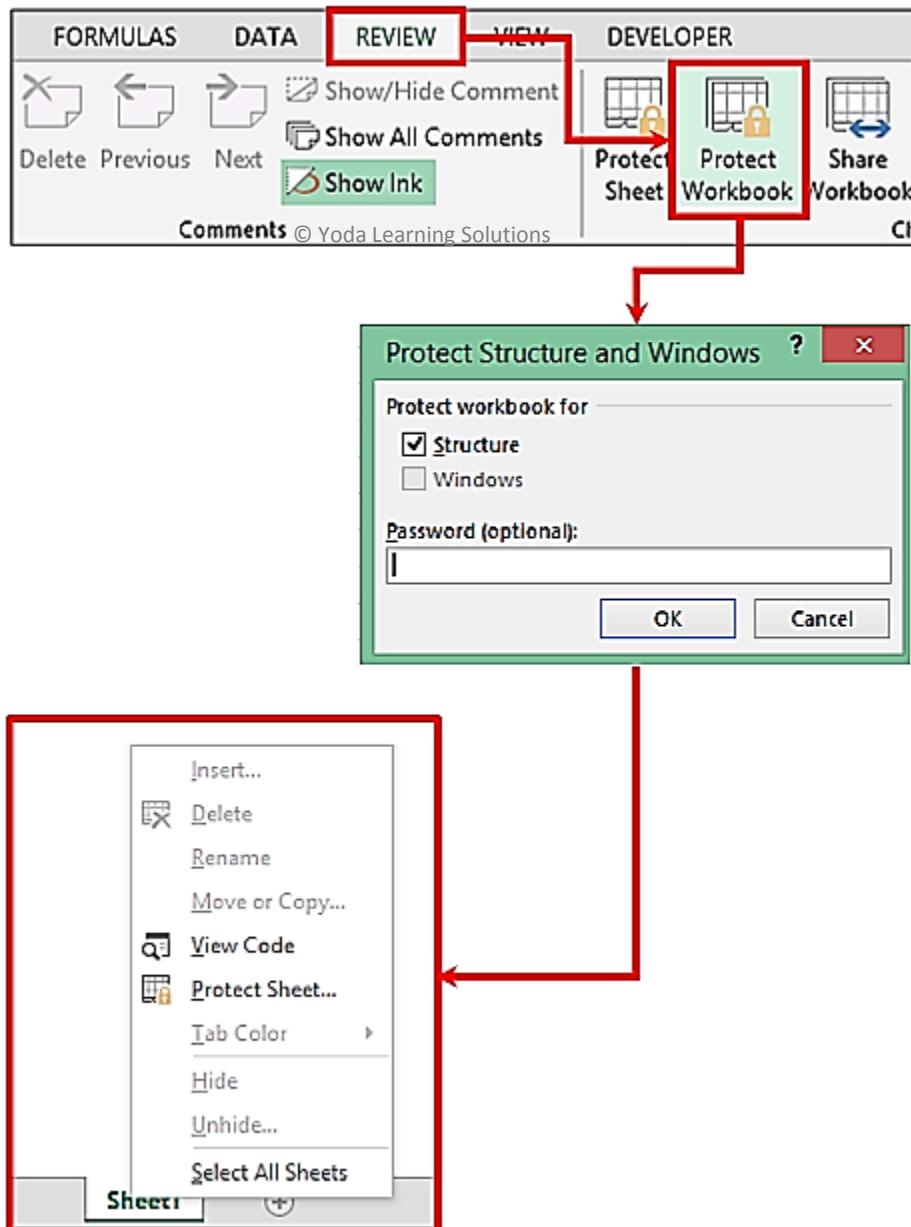
		A	B	C	D	E	F	G	H	I
1	2						© Yoda Learning Solutions			
3		Jacob	Water Purifier Basic	="Water Purifier Basic"!\$B\$5			1,500	450	1,000	
4			Water Purifier Latest		-	150	550	1,150	850	100
5			Water Purifier RO		1,450	1,450	1,450	1,150	550	150
6		Martha			2,200	1,600	2,100	3,800	1,850	1,250
7			Water Purifier Basic		1,200	1,200	1,450	400	1,000	1,200
8			Water Purifier Latest		1,250	600	150	500	150	750
9			Water Purifier RO		2,450	1,800	1,600	900	1,150	1,950
10		Rama			-	1,300	1,050	450	200	1,050
11			Water Purifier Basic		1,000	1,000	250	1,400	200	500
12			Water Purifier Latest		600	500	1,100	1,400	200	1,000
13			Water Purifier RO		1,600	2,800	2,400	3,250	600	2,550
14		Louis			750	1,400	1,000	1,350	600	650
15			Water Purifier Basic		600	350	750	150	-	450
16			Water Purifier Latest		1,300	200	1,350	100	1,200	550
17			Water Purifier RO		2,650	1,950	3,100	1,600	1,800	1,650
18					200	200	1,000	450	850	50
19			Water Purifier Basic		50	-	1,300	1,150	600	850
20			Water Purifier Latest		250	1,150	-	200	1,050	150
21		Jack	Water Purifier RO		500	1,350	2,300	1,800	2,500	1,050
22					100	150	500	1,300	1,200	1,400
23		Sherley	Water Purifier RO		100	150	500	1,300	1,200	1,400
24					-	600	900	800	500	900
25		Sharon	Water Purifier RO		-	600	900	800	500	900
26										

#1701-1702: Cell level Security

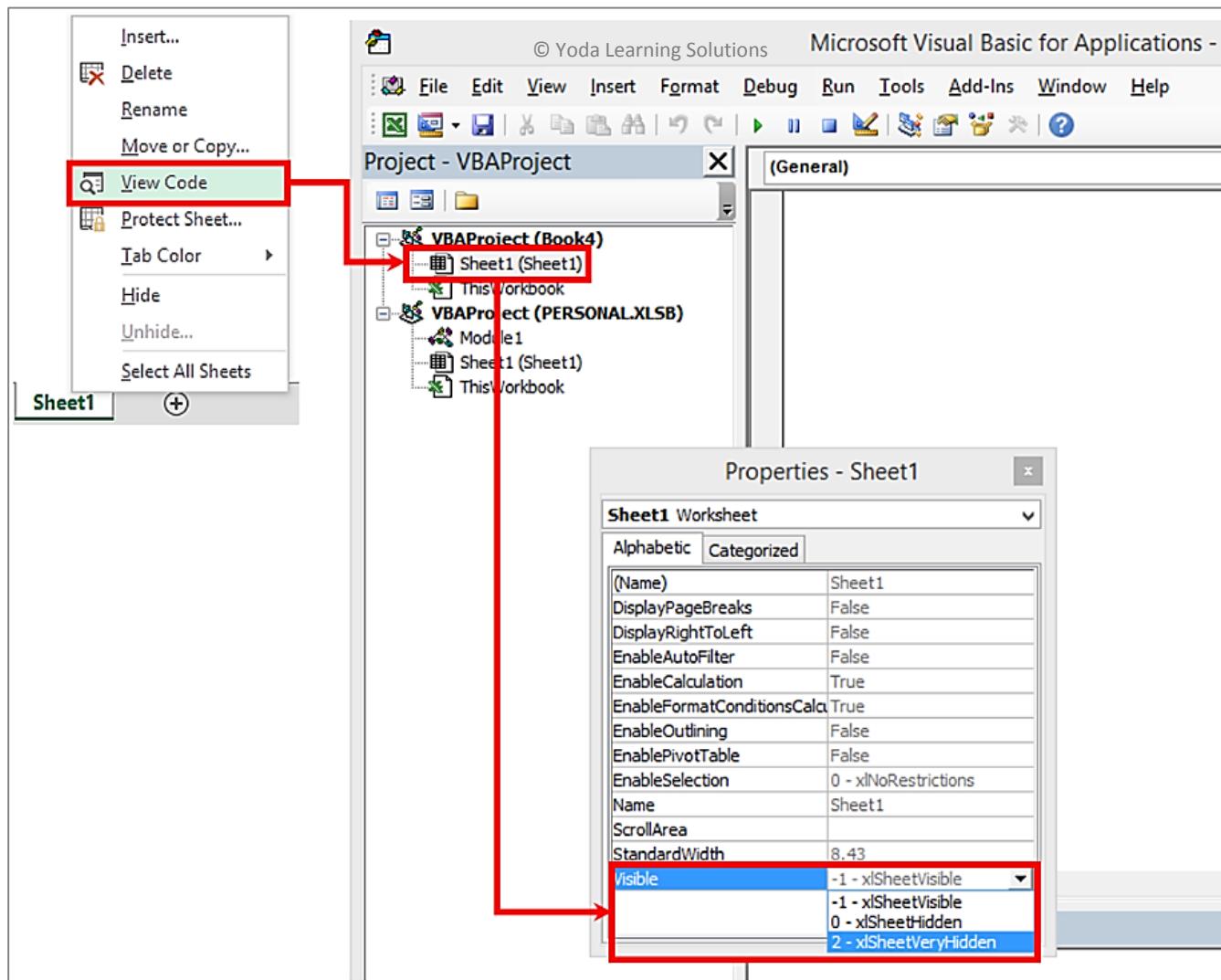


Note: By default, ALL cells are "Locked" (identified for protection). Ensure that ALL cells in the sheet are "Unlocked" and only chosen ones are "Locked". Else ALL cells will be locked and no changes can be made.

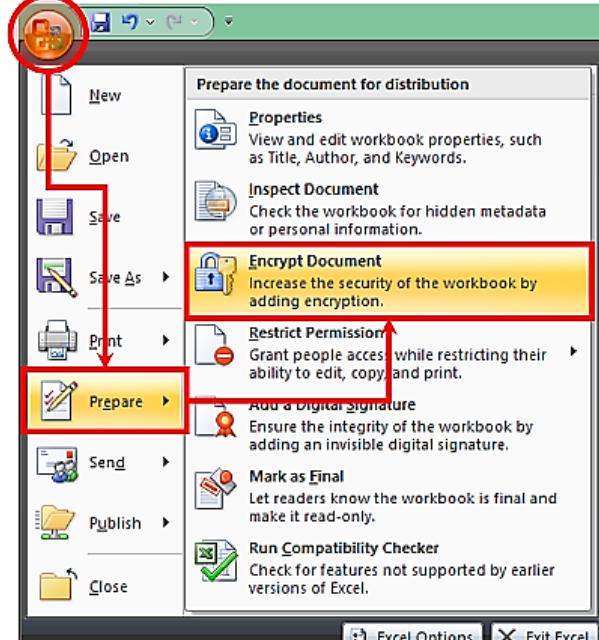
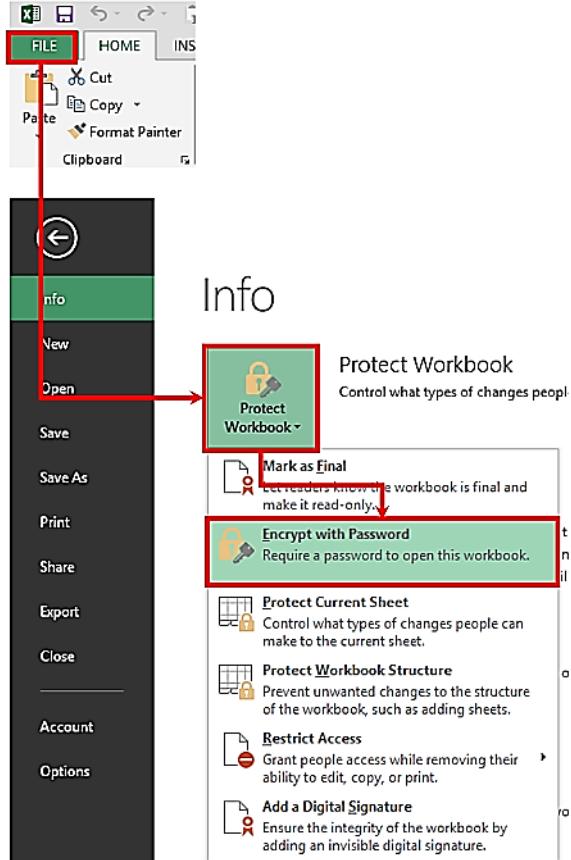
#1703: Sheet level Security [Protect Workbook Structure]



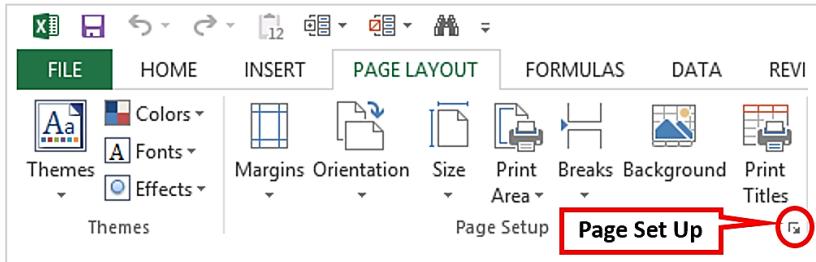
#1703: Sheet level Security [Sheet Properties – “Very Hidden”]



#1704: File level Security

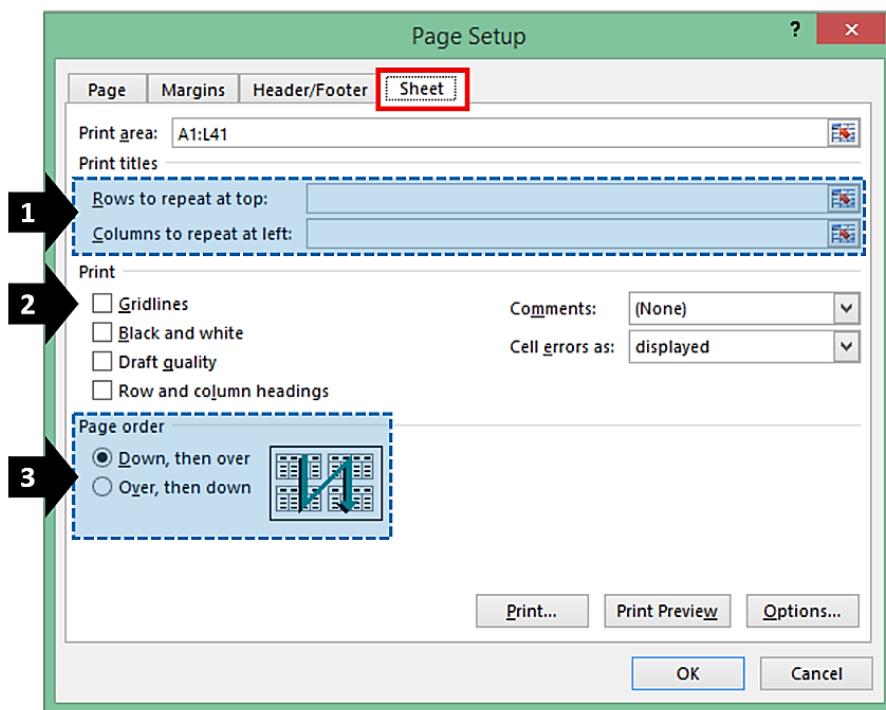
Excel v. 2007	Excel v. 2010/2013
 <p>The screenshot shows the Excel 2007 ribbon. The 'FILE' tab is selected. In the 'Prepare' section of the ribbon, the 'Encrypt Document' option is highlighted with a red box. A red arrow points from the 'Encrypt Document' option to its corresponding entry in the 'Info' ribbon.</p>	 <p>The screenshot shows the Excel 2010/2013 ribbon. The 'FILE' tab is selected. In the 'Info' ribbon, the 'Protect Workbook' button is highlighted with a red box. A red arrow points from the 'Encrypt Document' option in the Excel 2007 screenshot to this button.</p>

#1801: Page Set Up



SN	Shortcut Key / Path	Objective
1	ALT, P, S, P	Page Set Up
2	CTRL + F2	Print Preview

#1801, 1802, 1804: Print Tricks

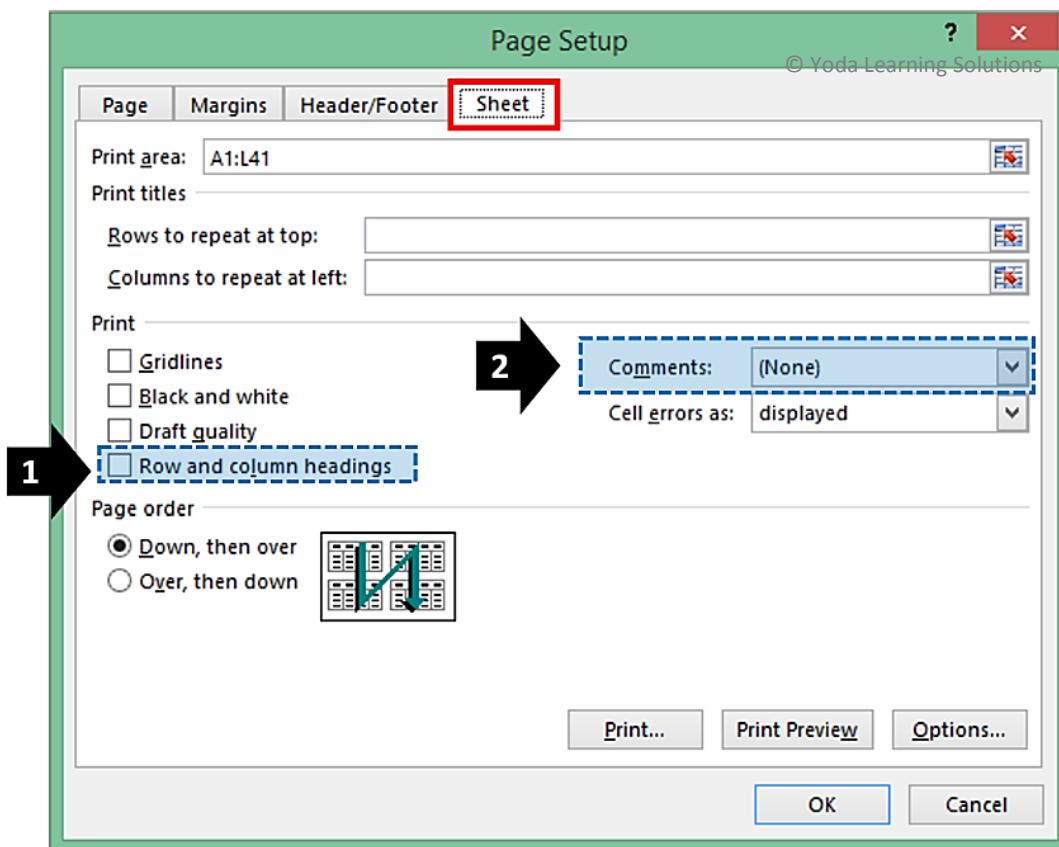


1	Rows to repeat at top	For headers to appear on every page print out. E.g. ID, Name, Description, Amount
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2	Gridlines	Switches on/off the dotted-cell border while printing																																																
	<table border="1"> <thead> <tr> <th colspan="3">US\$ Bond issues from High Grade Companies in US (Mar-09) -</th> </tr> <tr> <th>Issue Date</th> <th>Issue Type</th> <th>Issuer</th> </tr> </thead> <tbody> <tr> <td>03/02/2009</td> <td>CORP</td> <td>CONSUMERS ENERGY COMPANY</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>FPL GROUP CAPITAL INC</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>ANADARKO PETROLEUM CORP</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>ANADARKO PETROLEUM CORP</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>PITNEY BOWES INC</td> </tr> <tr> <td>03/03/2009</td> <td>CORP</td> <td>MISSISSIPPI POWER CO</td> </tr> </tbody> </table> <p style="font-size: 2em; margin-left: 100px;">[vs.]</p>	US\$ Bond issues from High Grade Companies in US (Mar-09) -			Issue Date	Issue Type	Issuer	03/02/2009	CORP	CONSUMERS ENERGY COMPANY	03/02/2009	CORP	FPL GROUP CAPITAL INC	03/02/2009	CORP	ANADARKO PETROLEUM CORP	03/02/2009	CORP	ANADARKO PETROLEUM CORP	03/02/2009	CORP	PITNEY BOWES INC	03/03/2009	CORP	MISSISSIPPI POWER CO	<table border="1"> <thead> <tr> <th colspan="3">US\$ Bond issues from High Grade Companies in US (Mar-09) -</th> </tr> <tr> <th>Issue Date</th> <th>Issue Type</th> <th>Issuer</th> </tr> </thead> <tbody> <tr> <td>03/02/2009</td> <td>CORP</td> <td>CONSUMERS ENERGY COMPANY</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>FPL GROUP CAPITAL INC</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>ANADARKO PETROLEUM CORP</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>ANADARKO PETROLEUM CORP</td> </tr> <tr> <td>03/02/2009</td> <td>CORP</td> <td>PITNEY BOWES INC</td> </tr> <tr> <td>03/03/2009</td> <td>CORP</td> <td>MISSISSIPPI POWER CO</td> </tr> </tbody> </table>	US\$ Bond issues from High Grade Companies in US (Mar-09) -			Issue Date	Issue Type	Issuer	03/02/2009	CORP	CONSUMERS ENERGY COMPANY	03/02/2009	CORP	FPL GROUP CAPITAL INC	03/02/2009	CORP	ANADARKO PETROLEUM CORP	03/02/2009	CORP	ANADARKO PETROLEUM CORP	03/02/2009	CORP	PITNEY BOWES INC	03/03/2009	CORP	MISSISSIPPI POWER CO
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3	Page Order - Vertical vs. Horizontal										For worksheets with print area extending to multiple pages – both horizontally and vertically, users can decide the page order of print out.														
4	A	B	C	D	E	F	G	H	I	J	K	L	4	A	B	C	D	E	F	G	H	I	J	K	L
5	A	B	C	D	E	F	G	H	I	J	K	L	5	A	B	C	D	E	F	G	H	I	J	K	L
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7	2	3	4	5	6	7	8	9	10	11	12	13	14	2	3	4	5	6	7	8	9	10	11	12	
8	3	4	5	6	7	8	9	10	11	12	13	14	15	3	4	5	6	7	8	9	10	11	12	13	
9	4	5	6	7	8	9	10	11	12	13	14	15	16	4	5	6	7	8	9	10	11	12	13	14	
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11	6	7	8	9	10	11	12	13	14	15	16	17	18	6	7	8	9	10	11	12	13	14	15	16	
12	7	8	9	10	11	12	13	14	15	16	17	18	19	7	8	9	10	11	12	13	14	15	16	17	
13	8	9	10	11	12	13	14	15	16	17	18	19	20	8	9	10	11	12	13	14	15	16	17	18	
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41	36	37	38	39	40	41	42	43	44	45	46	47	48	36	37	38	39	40	41	42	43	44	45	46	

#1805 - 1806: Print Tricks for Financial Analysts - Check underlying formulas



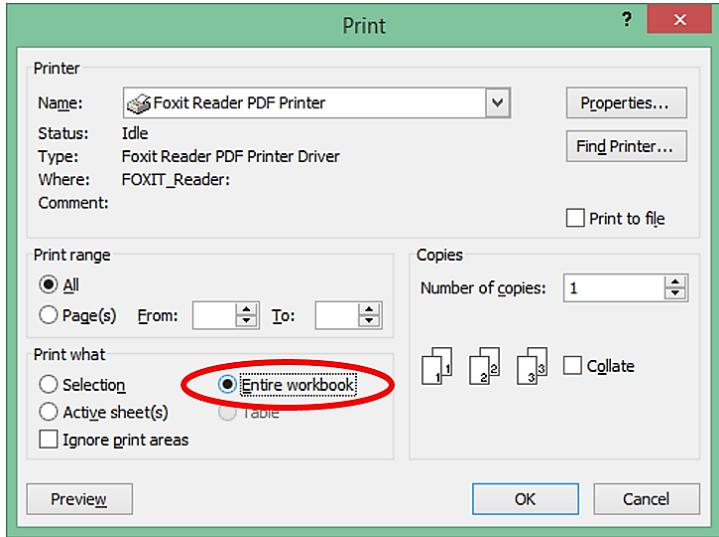
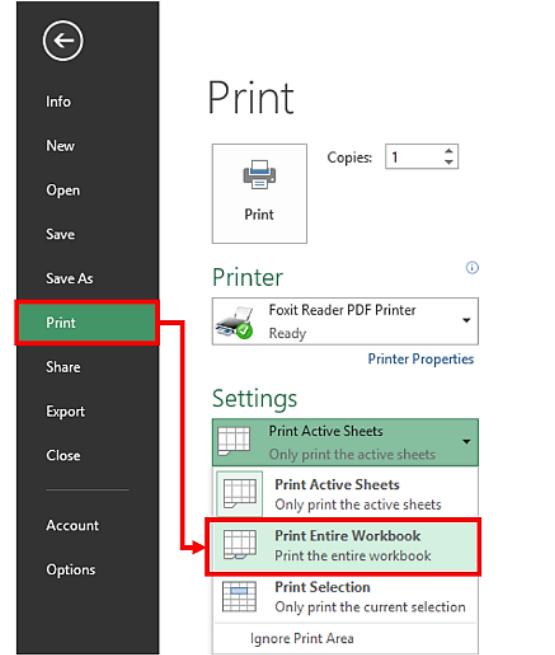
1	Row and Column headings	Displays the row headings (1, 2, 3 ...) and column headings (A, B, C ...) in the print out. To be used after activating the below mentioned shortcut key: ▪ Ctrl ` (the special character key above the TAB key) - Displays all formulas of the worksheet																																																																																										
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Audit Trick: Press Ctrl ` to “Show all formulas” and then “Print” with “Row & Column headings”

	A	B	C	D
1				
2	CAB Pvt		Reported	Reported
3	Financial	39538		39903
4				
5				
6	<i>Assume</i>			
7	Sales growth		NA	0.05
8	Costs as % of Sales	=C12/C11		=D12/D11
9				
10	<i>Income</i>			
11	Sales (A)	1201	780	
12	Costs (B)	802	511	
13	Profit (C=A-B)	=C11-C12		=D11-D12
14				
15	Profit as % of Sales (C/A)	=C13/C11		=D13/D11
16				

2	Comments	Entire worksheet's comments can be displayed at the end of the worksheet along with cell reference. Useful to keep a track of all the in-cell comments that are scattered on the worksheet.
		<div style="border: 1px solid black; padding: 10px;"> <p>Cell: C8 Comment: Roy Jr.: Refer email dtd 21-Apr-2009</p> <p>Cell: E11 Comment: Yoda Learning: Annual Report Pg 21</p> </div>

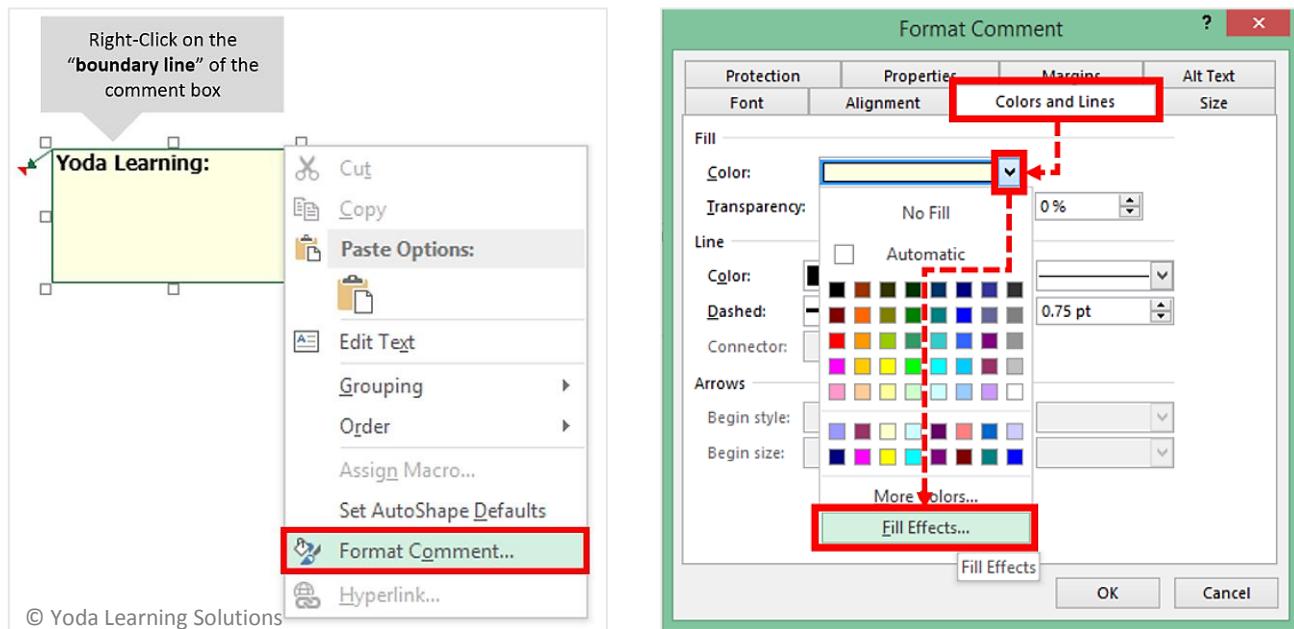
#1807: Print Entire Workbook

Excel v. 2007	Excel v. 2010/2013
 <p>The Print dialog box for Excel 2007. The 'Print what' section shows the 'Entire workbook' radio button is selected. A red oval highlights this selection.</p>	 <p>The ribbon interface for Excel 2010/2013. The 'Print' tab is selected. In the 'Settings' section, the 'Print Active Sheets' option is highlighted with a red box. A red arrow points from the 'Print' tab in the ribbon to the 'Print Active Sheets' option in the settings list.</p>

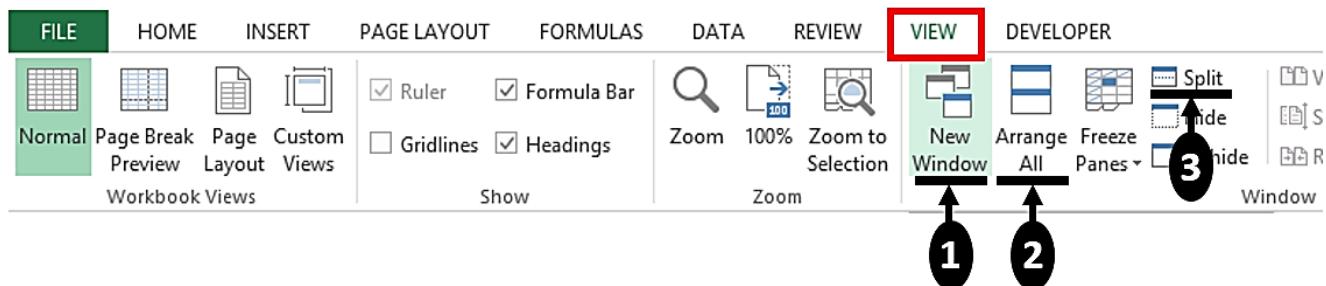
#1901: Comments - Shortcuts, Inserting Picture in Comment Box)

SN	Shortcut Key / Path	Objective
1	Shift + F2	Insert/Edit Comment
2	ALT, R, A	Show All Comment
3	Ctrl + Shift + O	Go To (Special) -> Comment
4	Ctrl + Alt + V -> Comment	Paste Special -> Comment

Inserting a Picture in the comment box:



#1902: Split Windows, Viewing multiple Windows - Simultaneously working with different workbooks, worksheets & scattered cell ranges simultaneously

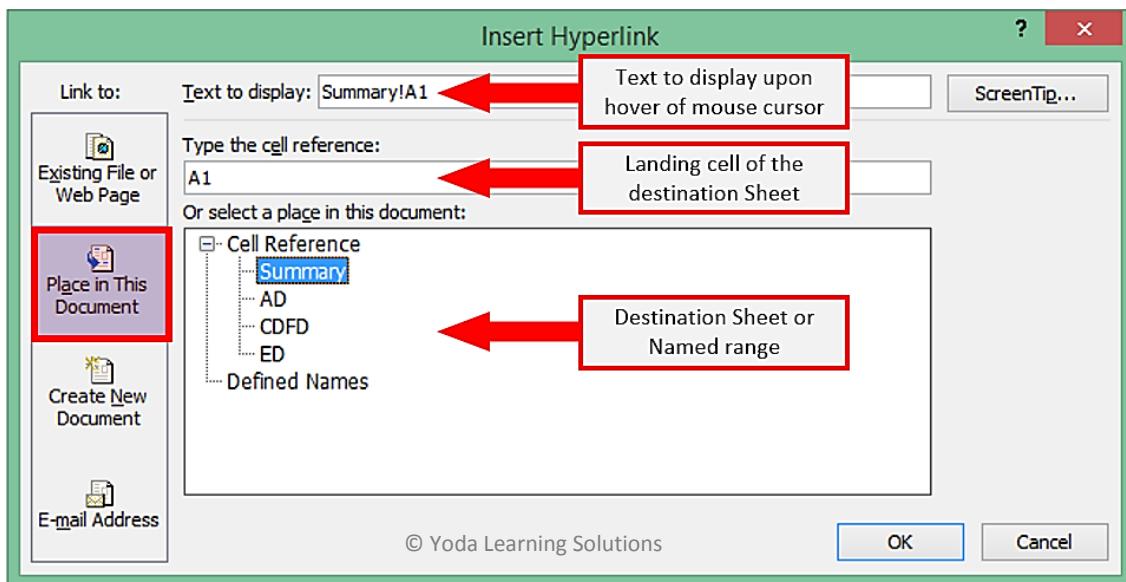


1	NEW WINDOW	Opens another instance (window) of the active workbook, thus, allowing you to <u>work on different worksheets of the same/different workbook simultaneously</u> . "Arrange All" feature will help arrange the open windows side-by-side (horizontal / vertical).
	Book1:1 - Microsoft Excel Book1:2 - Microsoft Excel	This is how the names of the two instances of the workbook (Book1) will be displayed - Book1:1 and Book1:2

2	ARRANGE ALL	Helps stack / arrange open windows side-by-side
		<p>Important: If multiple workbooks are open and you wish to stack "windows" of a specific workbook side-by-side, use the last checkbox – "Windows of active workbook". If not chosen, the "Arrange Windows" feature will stack ALL the windows of all open workbook side-by-side thus, creating a temporary screen clutter.</p>

3	SPLIT	<ol style="list-style-type: none"> 6. Divides/"Splits" the window into different panes that each scroll differently. It is ideal if you want to <u>work simultaneously on different areas of the SAME worksheet of the workbook</u>. 7. Unlike "New Window", it doesn't allow you to work on different worksheets of the same workbook simultaneously.
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#1903: Hyperlinking (Ctrl + K)



Quick Tip: New function in v. 2013

=HYPERLINK(

HYPYERLINK(link_location, [friendly_name])

- Example: = HYPERLINK("http://www.yodalearning.com", "Click here for Excel Tricks")
- For more details, refer Microsoft Excel help