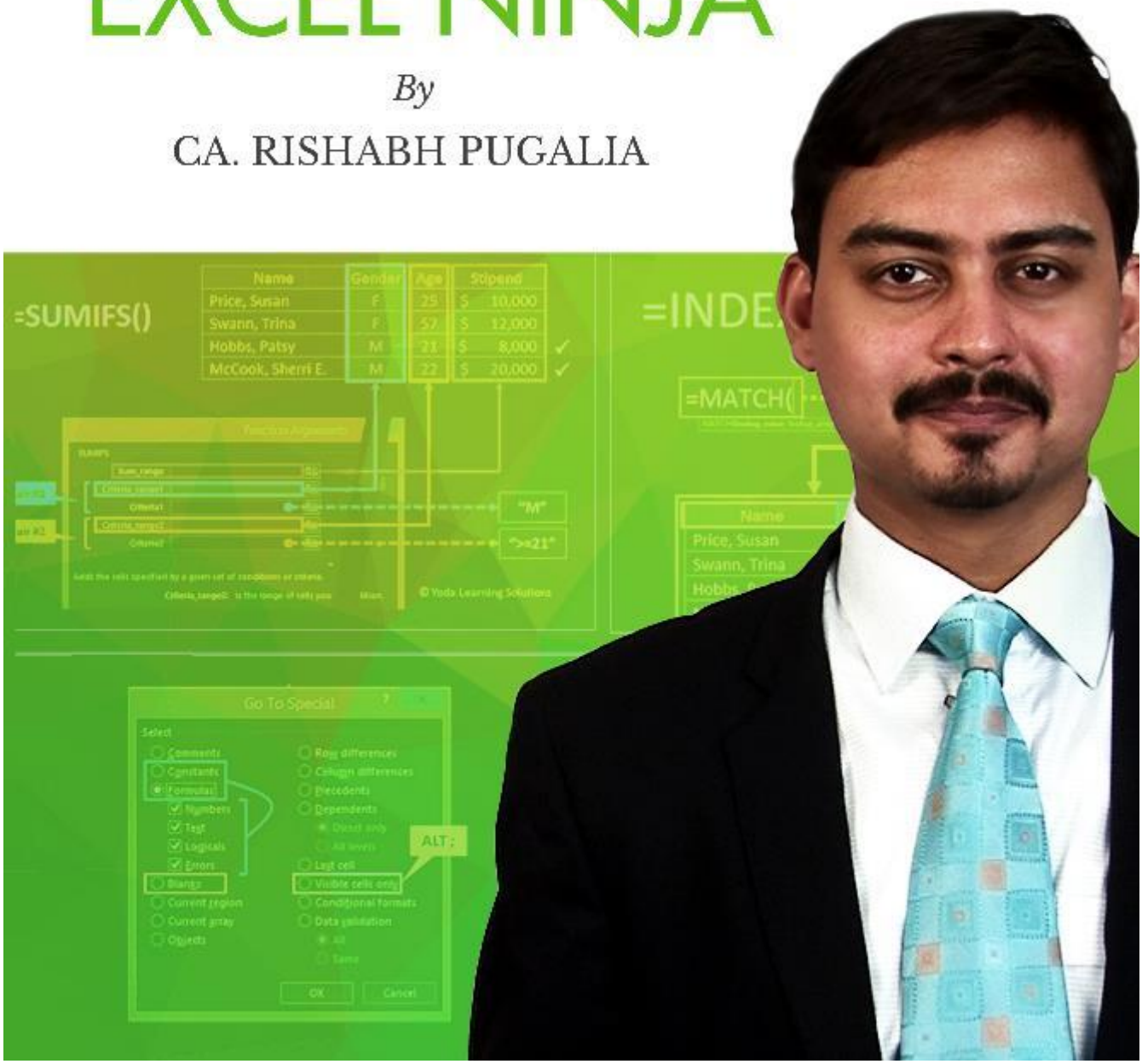
THE ULTIMATE HANDBOOK TO

BECOME AN EXCEL NINJA

By

CA. RISHABH PUGALIA



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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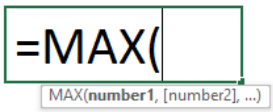
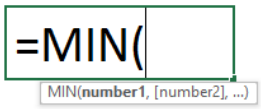
#0101 – 0109: Super Essential Keyboard Shortcuts

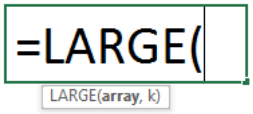
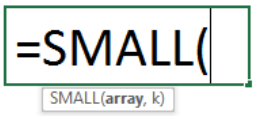
Starters		
1	Alt	Press and release the ALT key to display the *Key Tips* next to each Ribbon command
2	Ctrl C ; Ctrl X ; Ctrl V	Copy ; Cut; Paste
3	Ctrl D	Copies the cell contents down
4	Ctrl R	Copies the cell contents to the right
5	Ctrl Enter	To fill all the selected cells with text/nos./formula
Workbook 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	

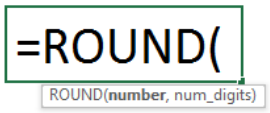
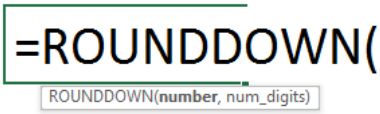
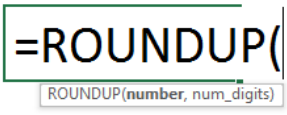
#0201: Used in Financial Modeling and Tax Computation

	▪ 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
	▪ 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)

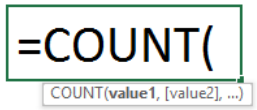
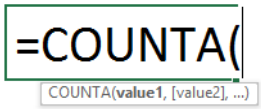
#0202: Used in pricing discovery processes

	▪ **Auction** such as highest bid value, second highest bid value and so on. E.g. H2 will be =LARGE(A1:A5,2)
	▪ **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)

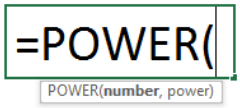
#0203 – 0204: For rounding numbers

	▪ "***num_digits***" 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
	▪ E.g. Cell A1 = 5349.2 ▪ =ROUNDDOWN(A1/10,0)*10 = 5340.0
	▪ E.g. Cell A1 = 5342.2 ▪ =ROUNDUP(A1/10,0)*10 = 5350.0
▪ MROUND() do not work with +/– nos. simultaneously AND it does not accommodate the logic of round up and round down.	

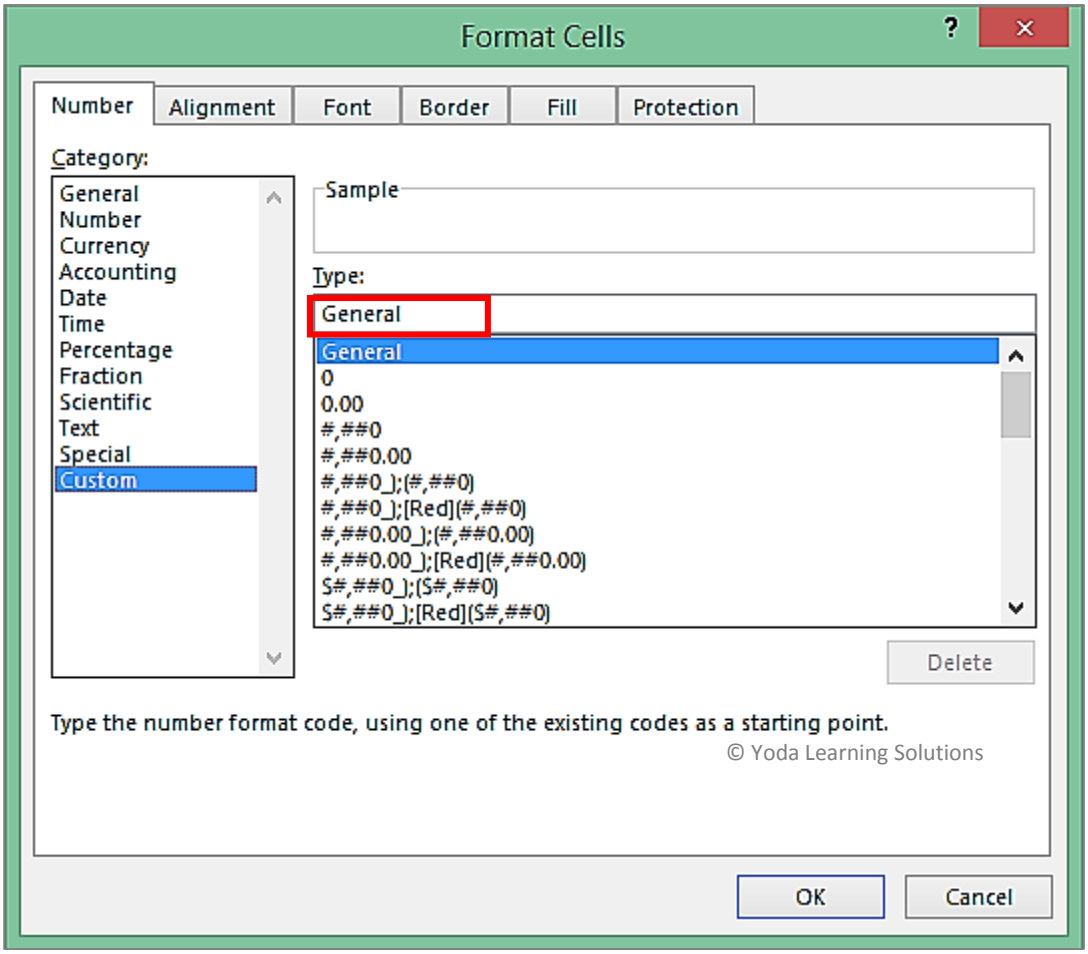
#0205: For Counting

	▪ Counts the number of cells which have numeric value
	▪ Counts the number of cells which IS NOT a blank (i.e. numbers, alphabets, alphanumeric, space)
	▪ Counts the number of cells which IS a blank
▪ 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

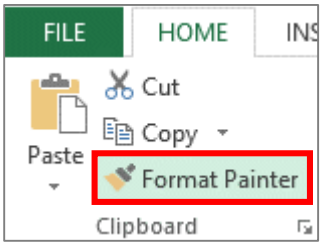
	▪ Multiplies corresponding cells in **two or more ranges** and returns the sum of those products. E.g. =SUMPRODUCT(A1:A2,B1:B2) = (A1*B1) + (A2*B2) ▪ The array arguments must have the **same dimensions.** E.g. =SUMPRODUCT(A1:A2,B1:B3) is invalid ▪ Used with =SUM() for computing **weighted average** ▪ Was used to create condition–based sum logic before SUMIFS() was introduced
	▪ 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]

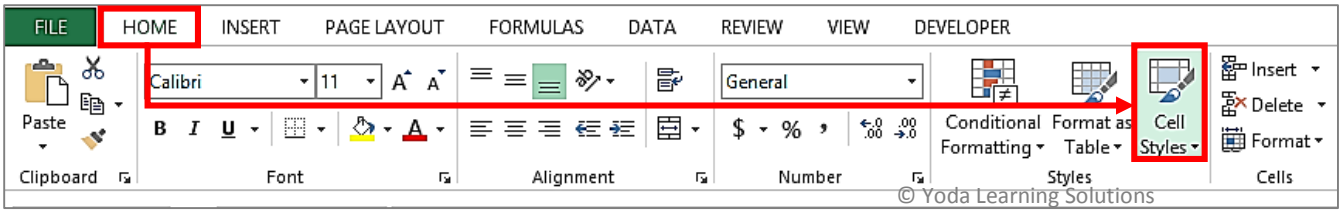


CUSTOM FORMAT	EFFECT
@*.	"Cell width adjusted" trailing full stops
"Rs."	Prefix/Suffix
000000	Self–adjusting Prefix Zeroes (up to 6)

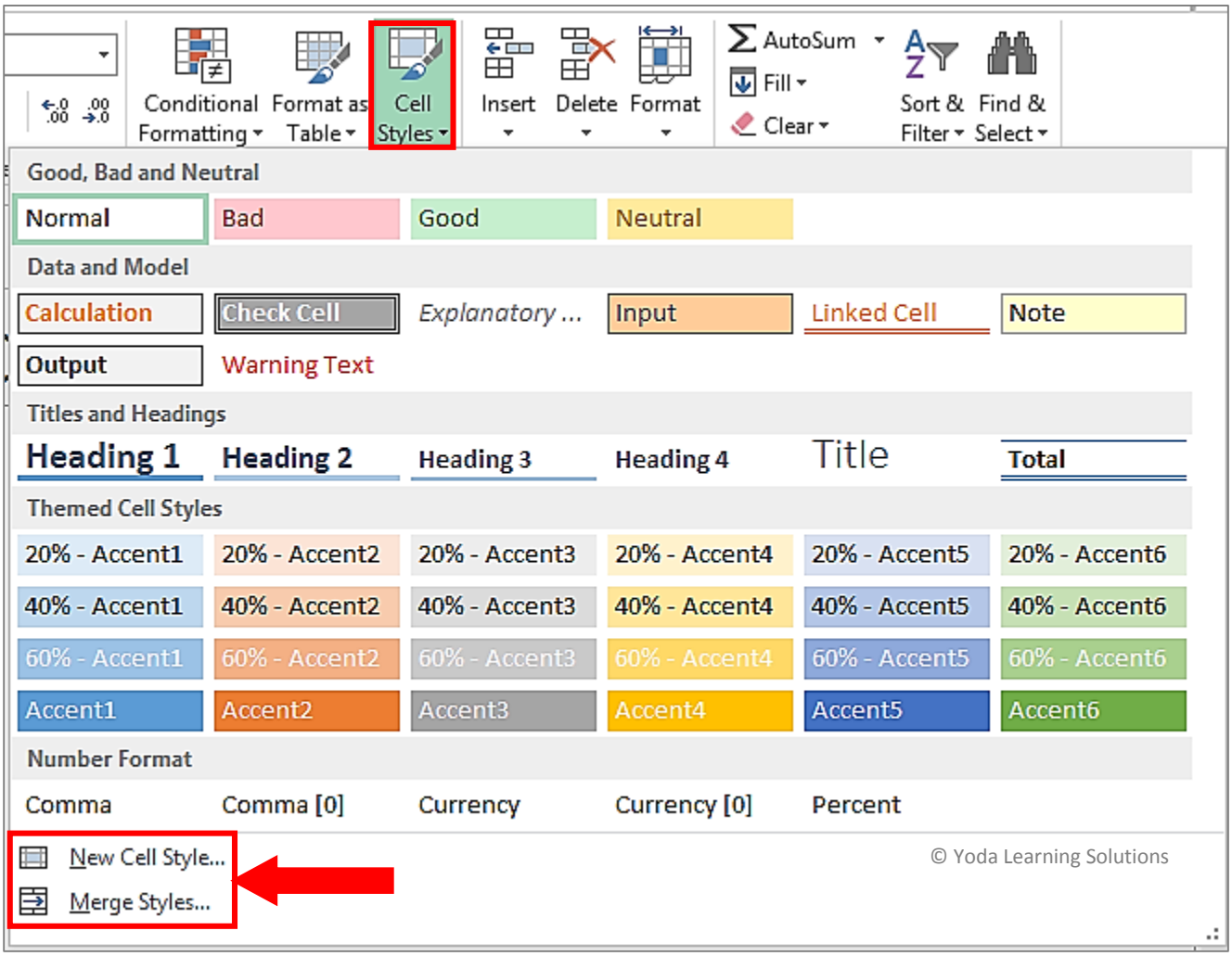
- "Double–click" Format Painter to use it uninterruptedly. Press <Esc> to return escape out of Format Painter mode.



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

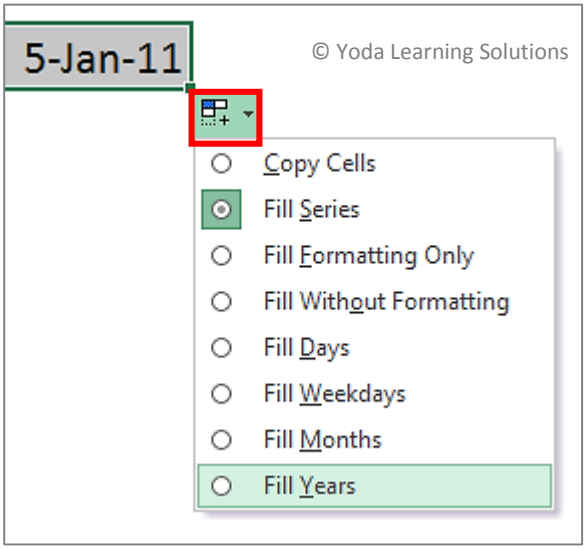


"New Cell Style" lets you create customized cell format which you can apply and re–apply on any worksheet of the workbook. Additionally, if you change the "definition" of any existing cell style, the changes are universal. Thus, **modifying a cell style affects all cells in a workbook that use that cell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

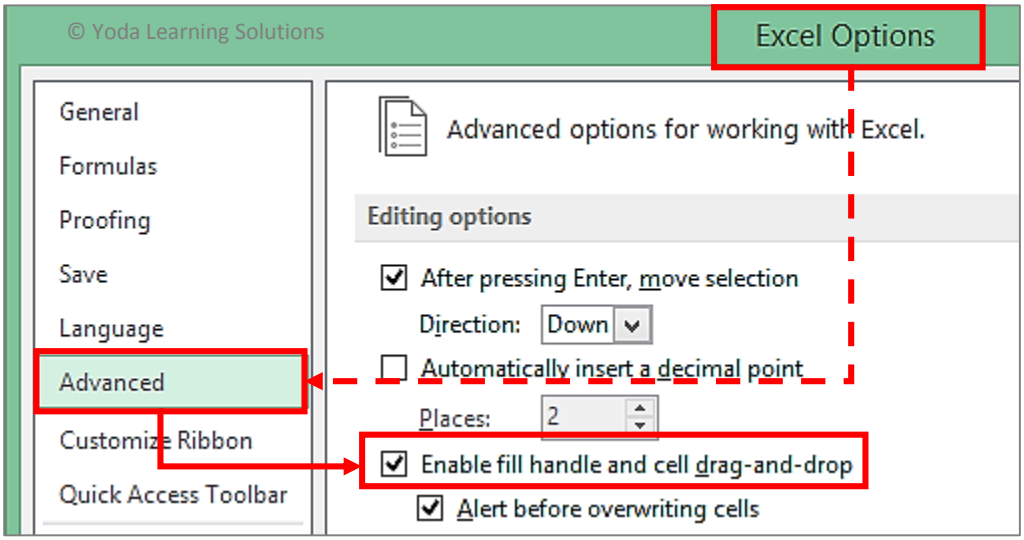


- Right click a cell style to modify or delete it.
- A cell style is stored in the workbook where you create it.
- Open a new workbook and click on "**Merge Styles**" (beneath New Cell Style) to import a cell style (keep the old workbook with the original cell style open).

#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.

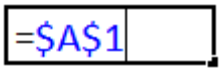
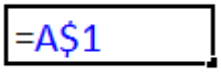
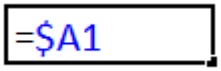


#0308: Paste Special – Transpose vs. TRANSPOSE()

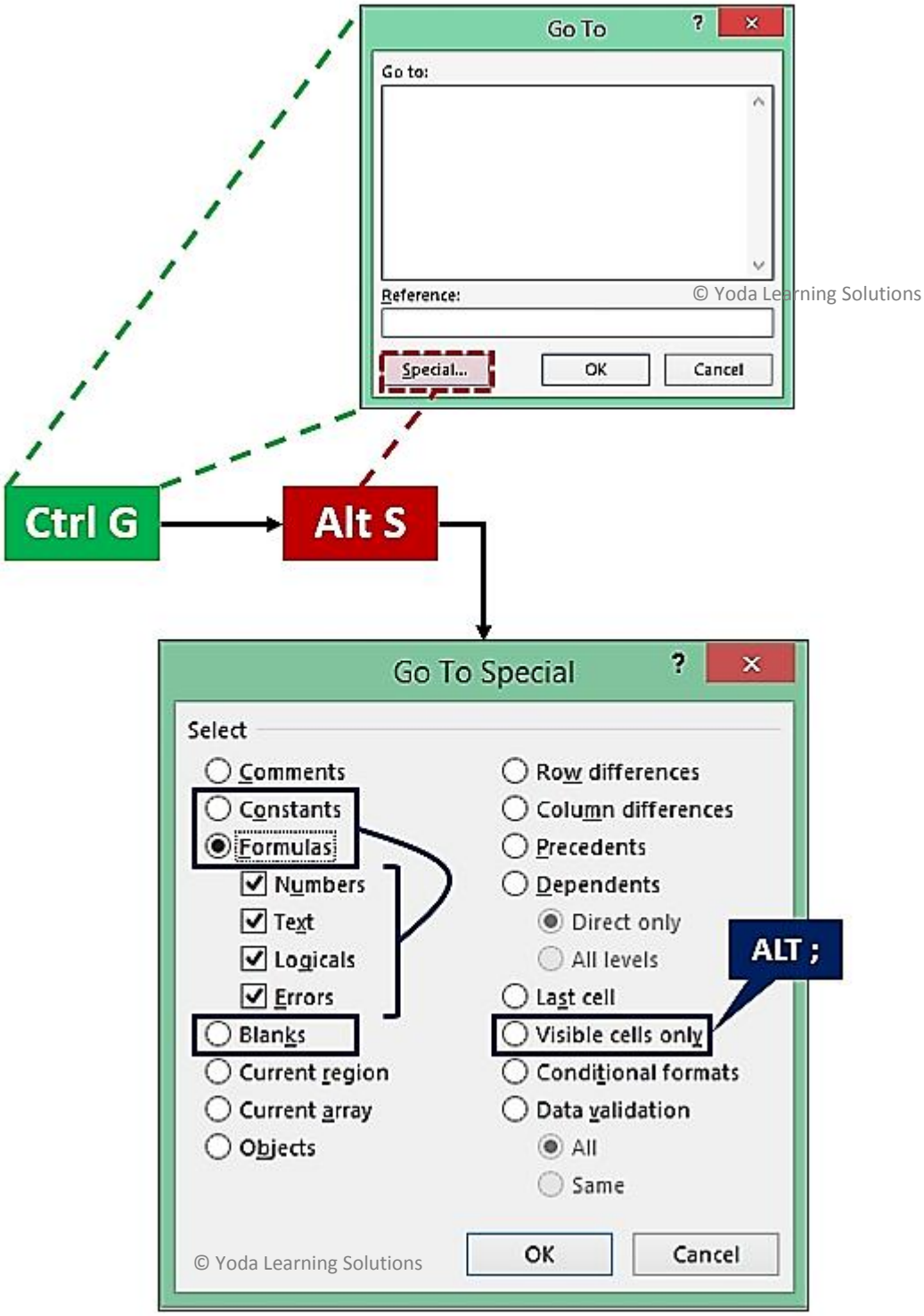
- **Paste Special – Transpose** switches/re–arranges the data in a table from rows and columns to columns and rows, respectively. However, it doesn't create "links" to the original cells. Thus, any change in the original table will not affect the "transposed" table.
- Writing a **=TRANSPOSE() formula** 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):

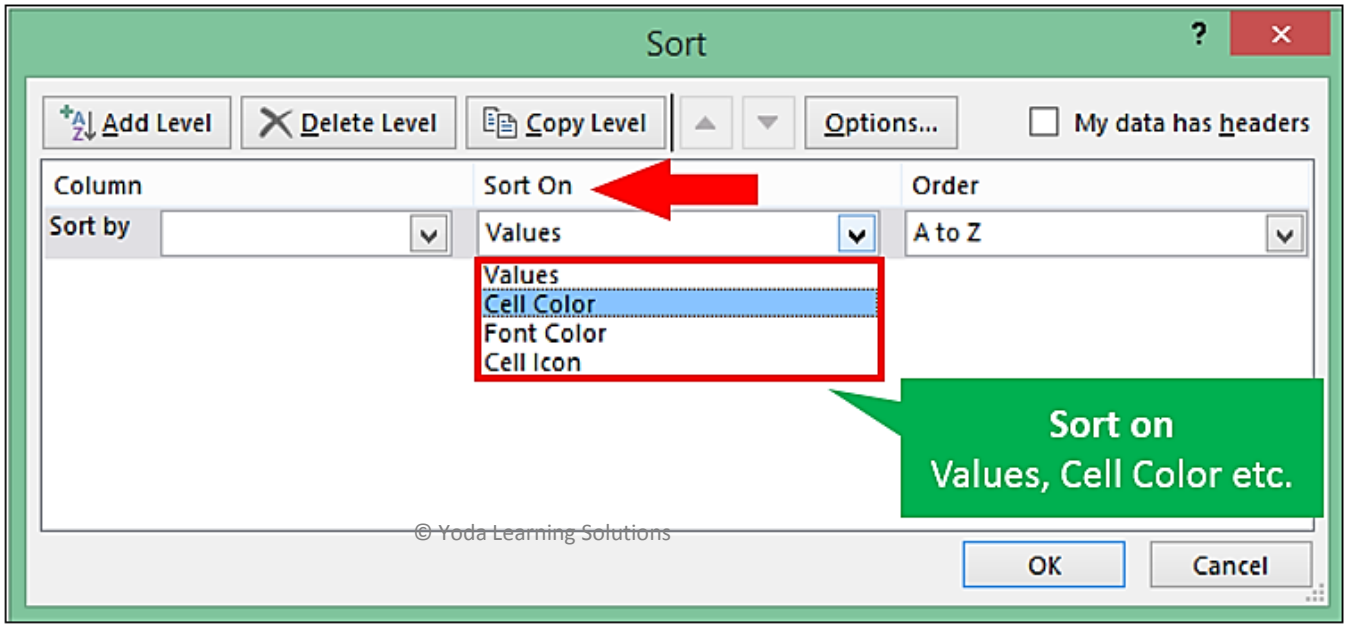
			
–	**Row Fixed&Col Fixed**	**Row Fixed**	**Col Fixed**
A1 becomes B1 if copied **sideways (right)**	$A$1 remains $A$1 if copied **sideways**	A$1 becomes B$1 if copied **sideways (right)**	$A1 remains $A1 if copied **sideways**
A1 becomes A2 if copied **downwards**	$A$1 remains $A$1 if copied **downwards**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

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



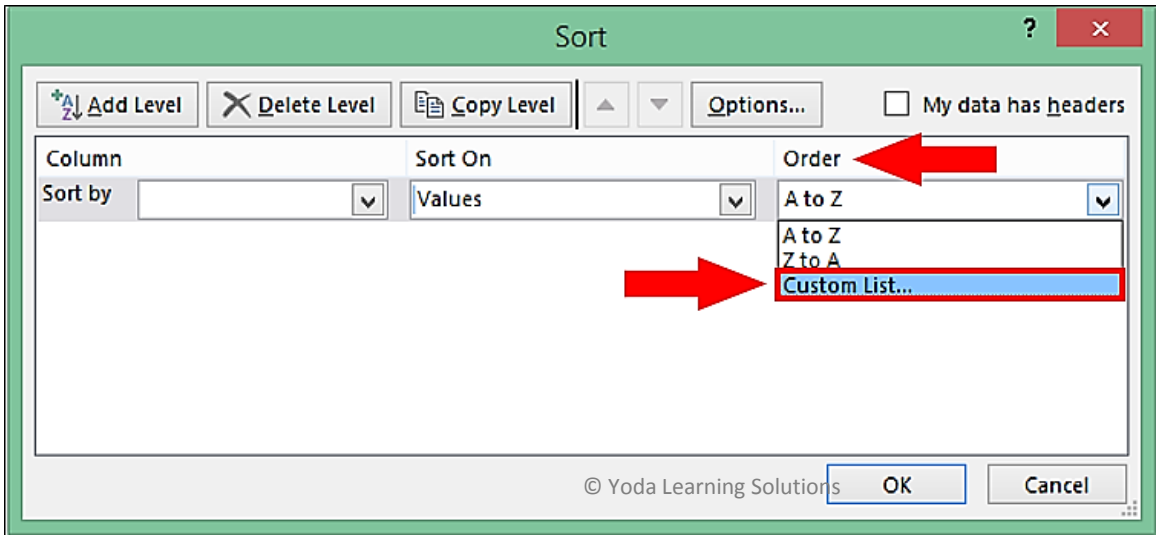
- Often used with **Ctrl+Enter**: With multiple cells selected (can be non-contiguous), this shortcut will enter the same data / formula logic in all cells in the selection at once.

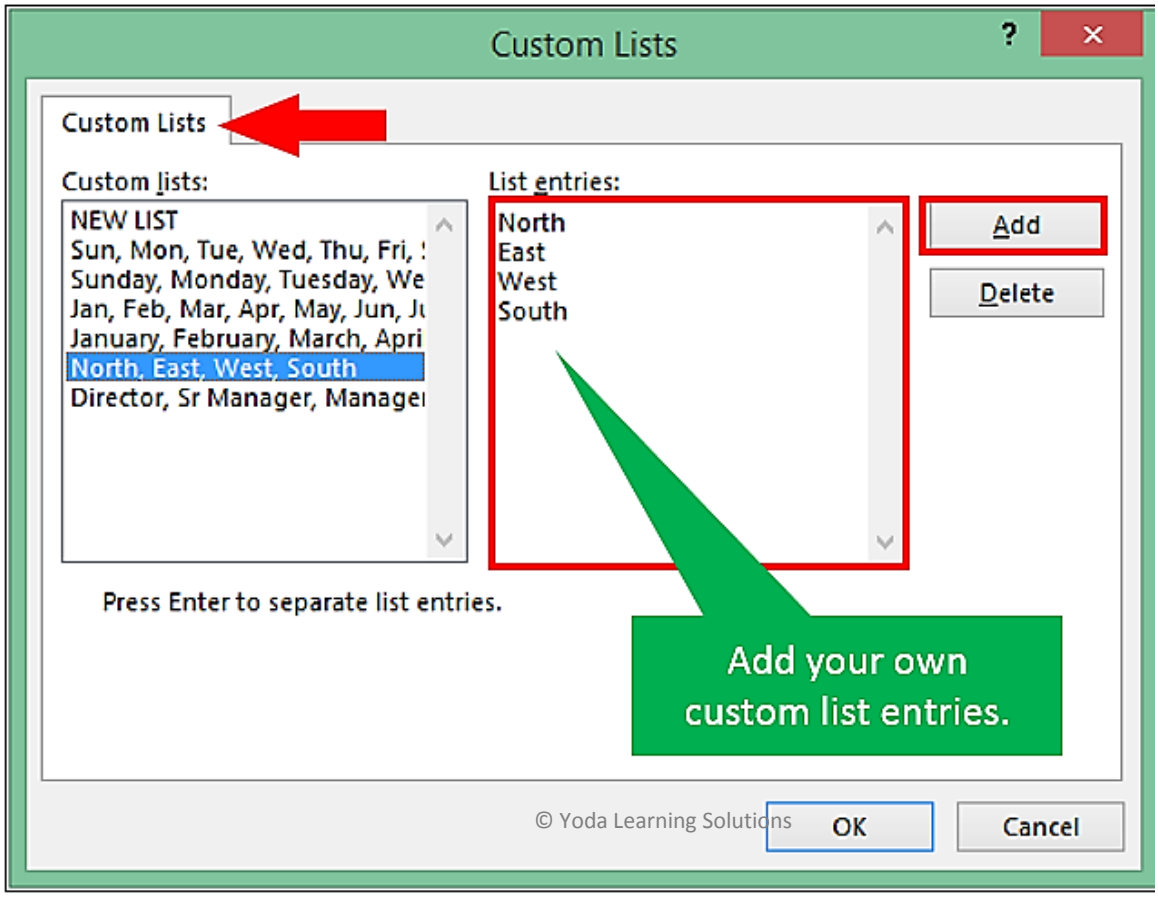
#0601: Vertical Sort - 1-level & 2-level



#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



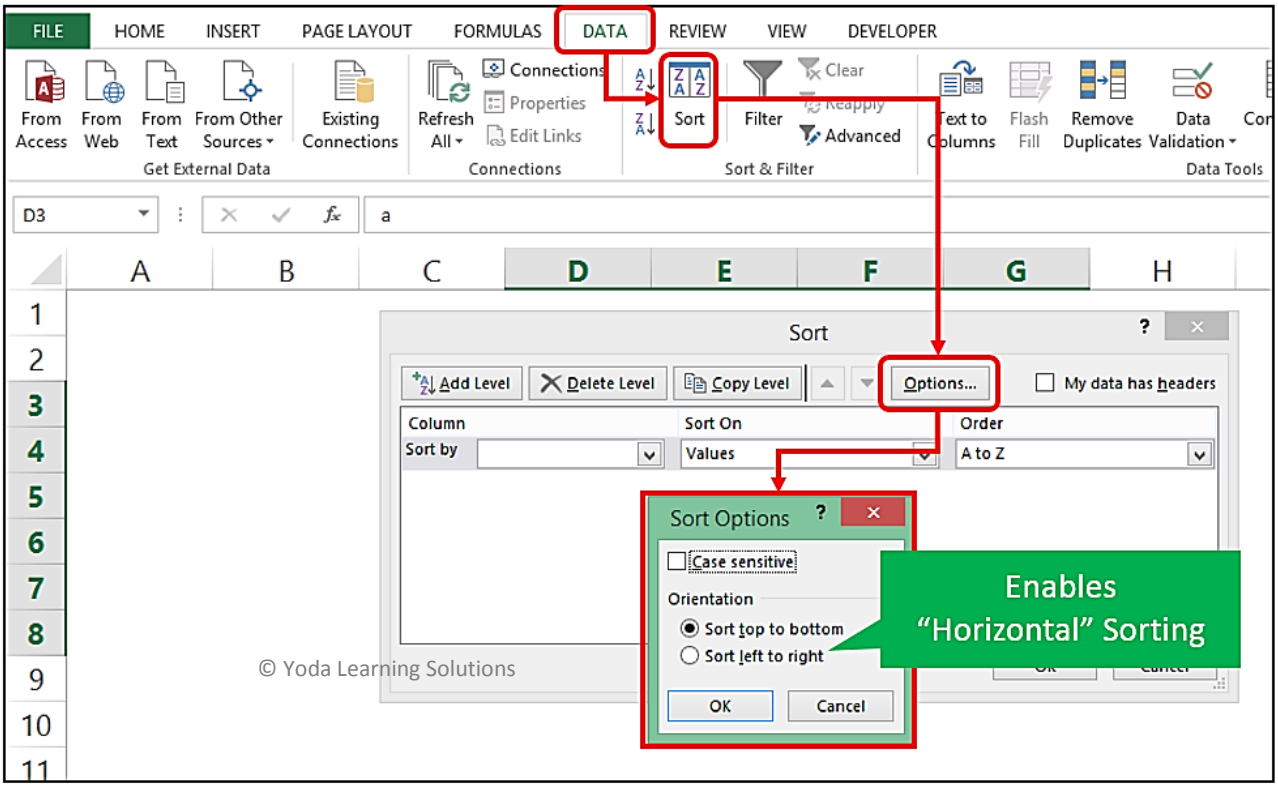


#0603: Sort Trick - add alternate blank rows in-between existing rows

	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

SORT

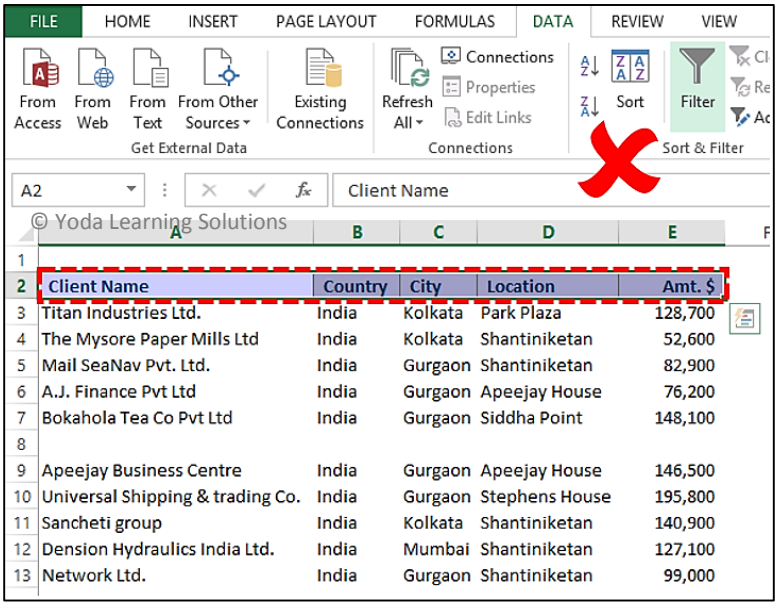
#0604: Horizontal Sorting (Left to Right)



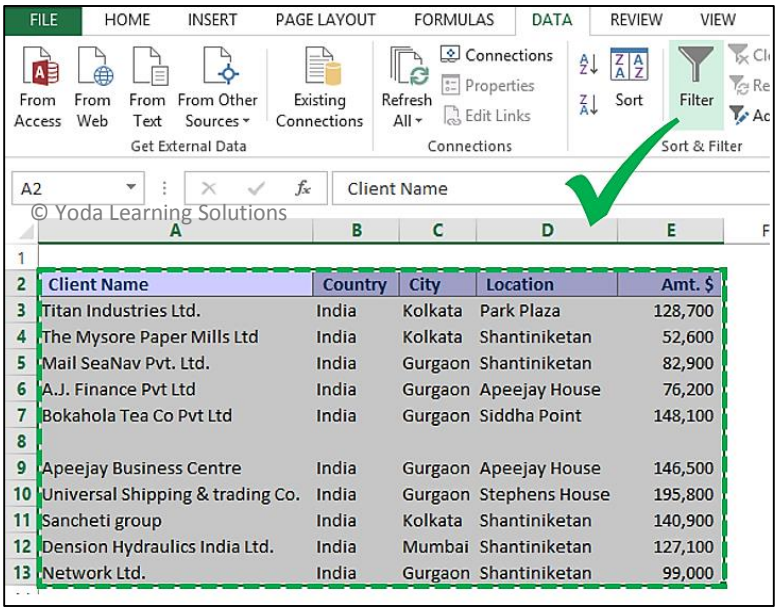
- **"Options" > "Horizontal Sort > Left to Right":** is used to re-arrange the columns – all at once, without using "Cut" & "Insert Cut Cells" for each instance
- Using **synthetic "DUMMY Serial No**." column helps (1) create blank rows in-between and, (2) remember the original sequence of row items

#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.



	A	B	C	D	E
1					
2	Client Name	Country	City	Location	Amt. $
3	Titan Industries Ltd.	India	Kolkata	Park Plaza	128,700
4	The Mysore Paper Mills Ltd	India	Kolkata	Shantiniketan	52,600
5	Mail SeaNav Pvt. Ltd.	India	Gurgaon	Shantiniketan	82,900
6	A.J. Finance Pvt Ltd	India	Gurgaon	Apeejay House	76,200
7	Bokahola Tea Co Pvt Ltd	India	Gurgaon	Siddha Point	148,100
8					
9	Apeejay Business Centre	India	Gurgaon	Apeejay House	146,500
10	Universal Shipping & trading Co.	India	Gurgaon	Stephens House	195,800
11	Sancheti group	India	Kolkata	Shantiniketan	140,900
12	Dension Hydraulics India Ltd.	India	Mumbai	Shantiniketan	127,100
13	Network Ltd.	India	Gurgaon	Shantiniketan	99,000

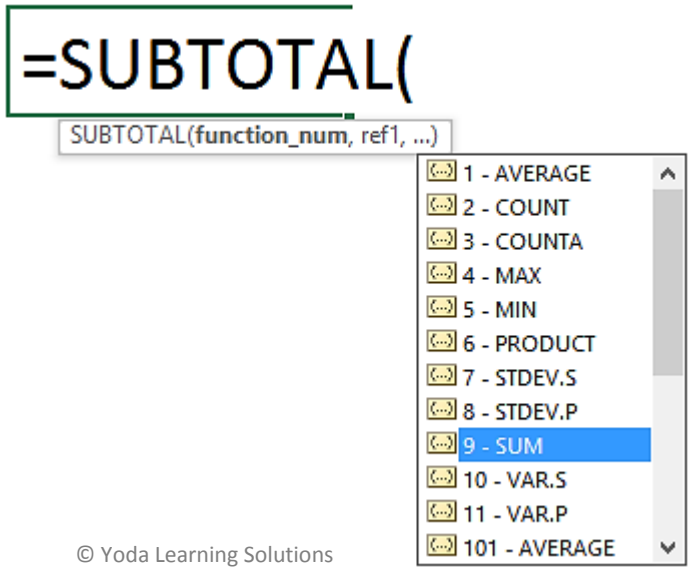


	A	B	C	D	E
1					
2	Client Name	Country	City	Location	Amt. $
3	Titan Industries Ltd.	India	Kolkata	Park Plaza	128,700
4	The Mysore Paper Mills Ltd	India	Kolkata	Shantiniketan	52,600
5	Mail SeaNav Pvt. Ltd.	India	Gurgaon	Shantiniketan	82,900
6	A.J. Finance Pvt Ltd	India	Gurgaon	Apeejay House	76,200
7	Bokahola Tea Co Pvt Ltd	India	Gurgaon	Siddha Point	148,100
8					
9	Apeejay Business Centre	India	Gurgaon	Apeejay House	146,500
10	Universal Shipping & trading Co.	India	Gurgaon	Stephens House	195,800
11	Sancheti group	India	Kolkata	Shantiniketan	140,900
12	Dension Hydraulics India Ltd.	India	Mumbai	Shantiniketan	127,100
13	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

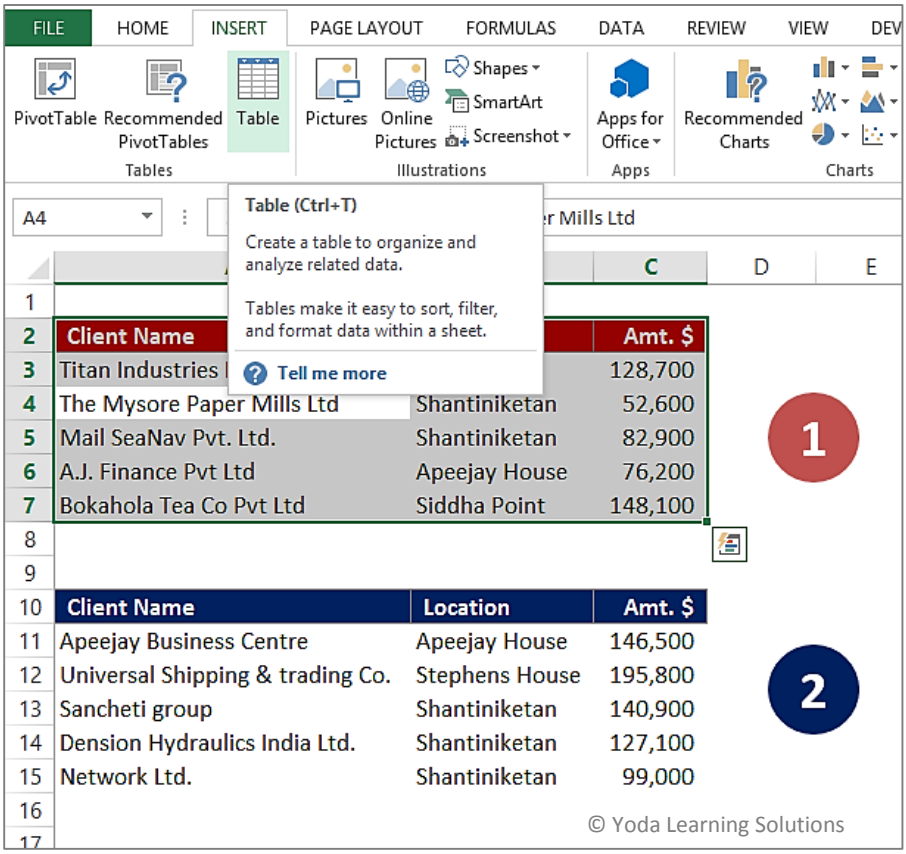
#0608 - 0609: Using =SUBTOTAL() for calculations w. Filtered list.

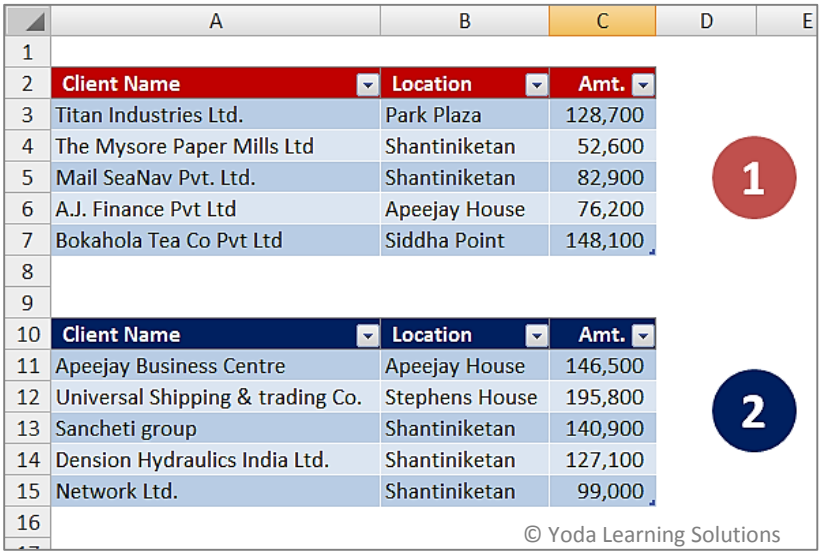


- In filtered lists, SUBTOTAL() always ignores values in hidden rows, regardless of *function_num*. E.g. 1 for AVERAGE, 9 for SUM, 109 for SUM again
- In tables with Filter applied, SUBOTAL() with 109 i.e. SUM will ignore values in the manually hidden rows whereas SUBOTAL() with 9 will not
- Shortcut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

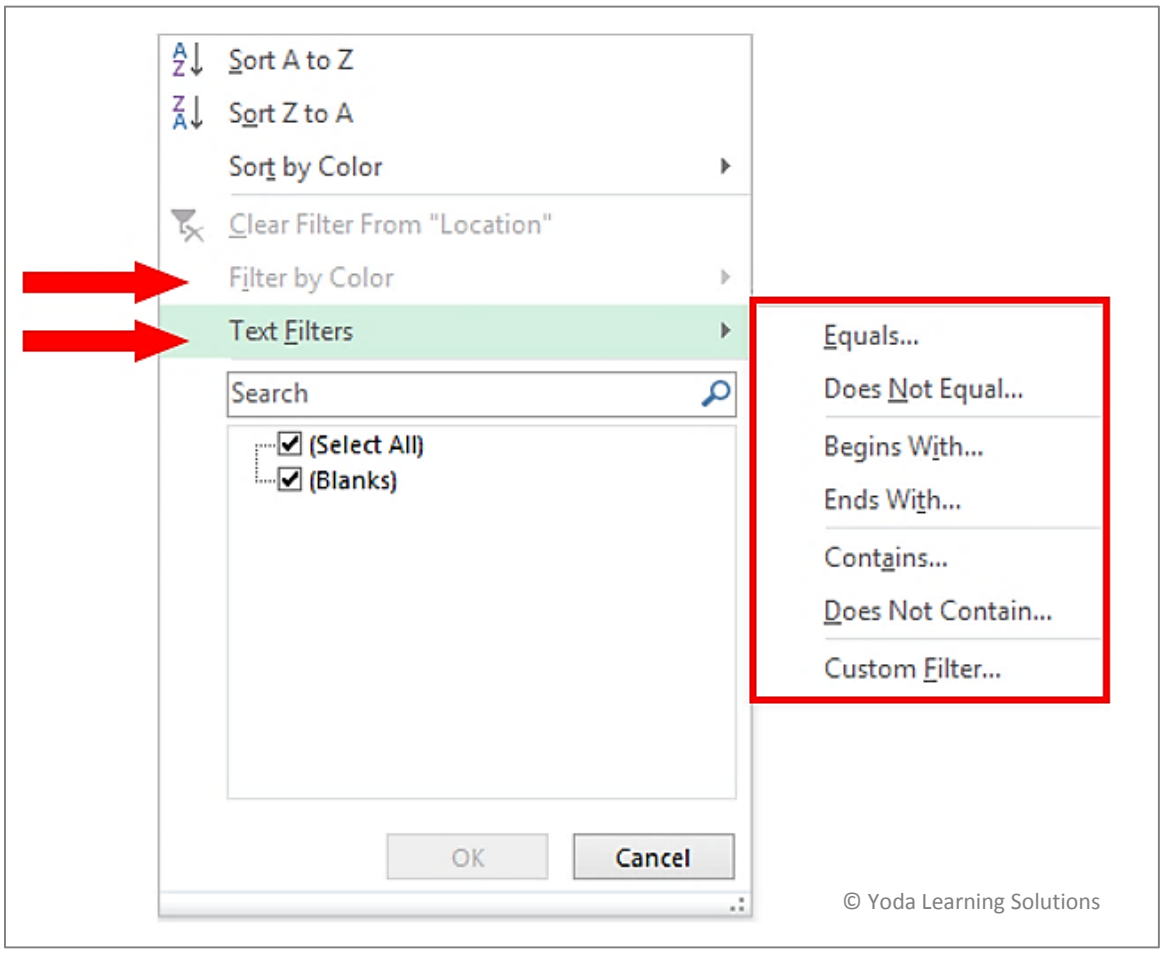
#0610: Filter - Applying 2 or more Filters simultaneously on the same sheet

- 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)



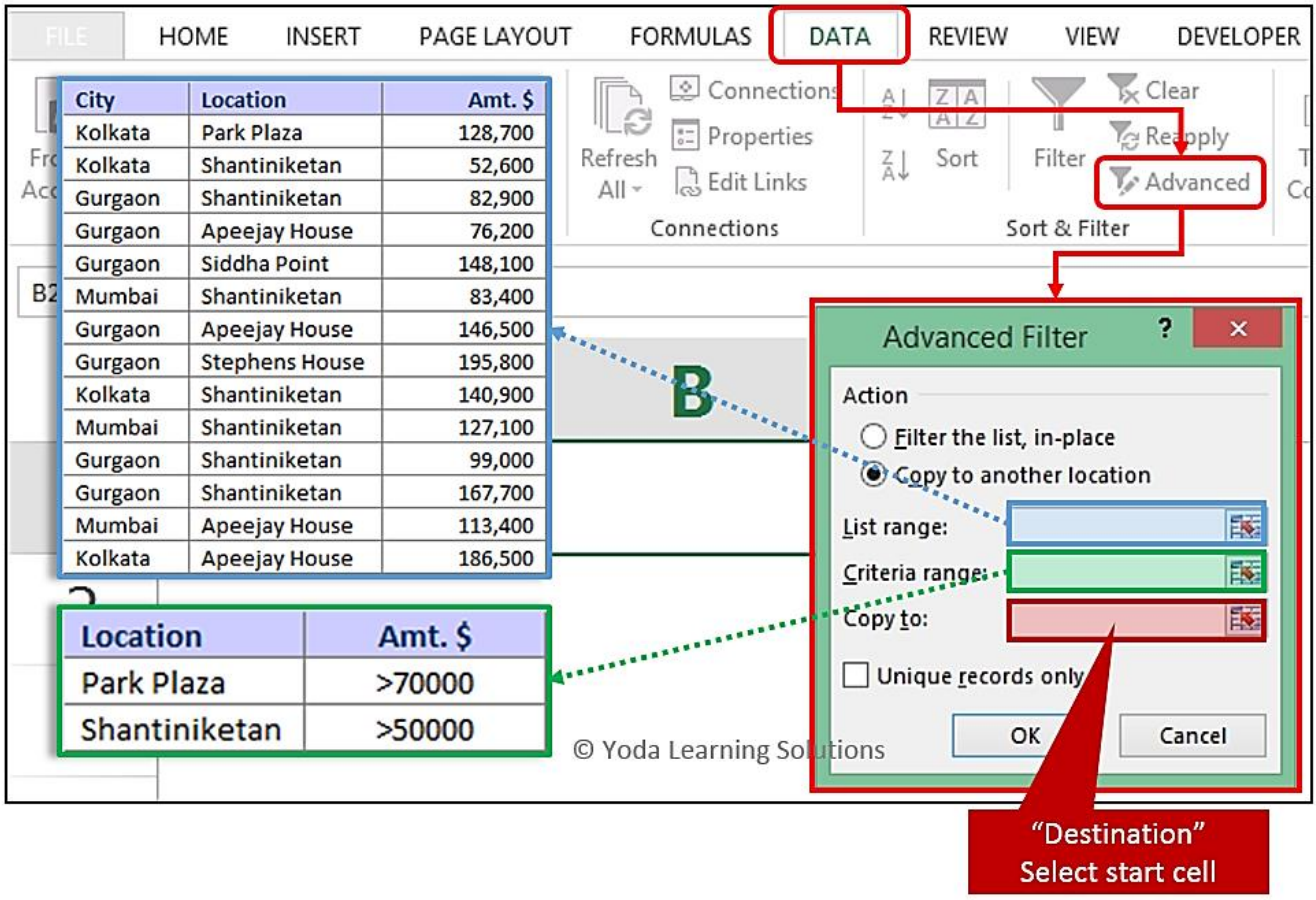


#0611: Filter - Color Filter & Text Filter



#0612 - 0614: Advanced Filter

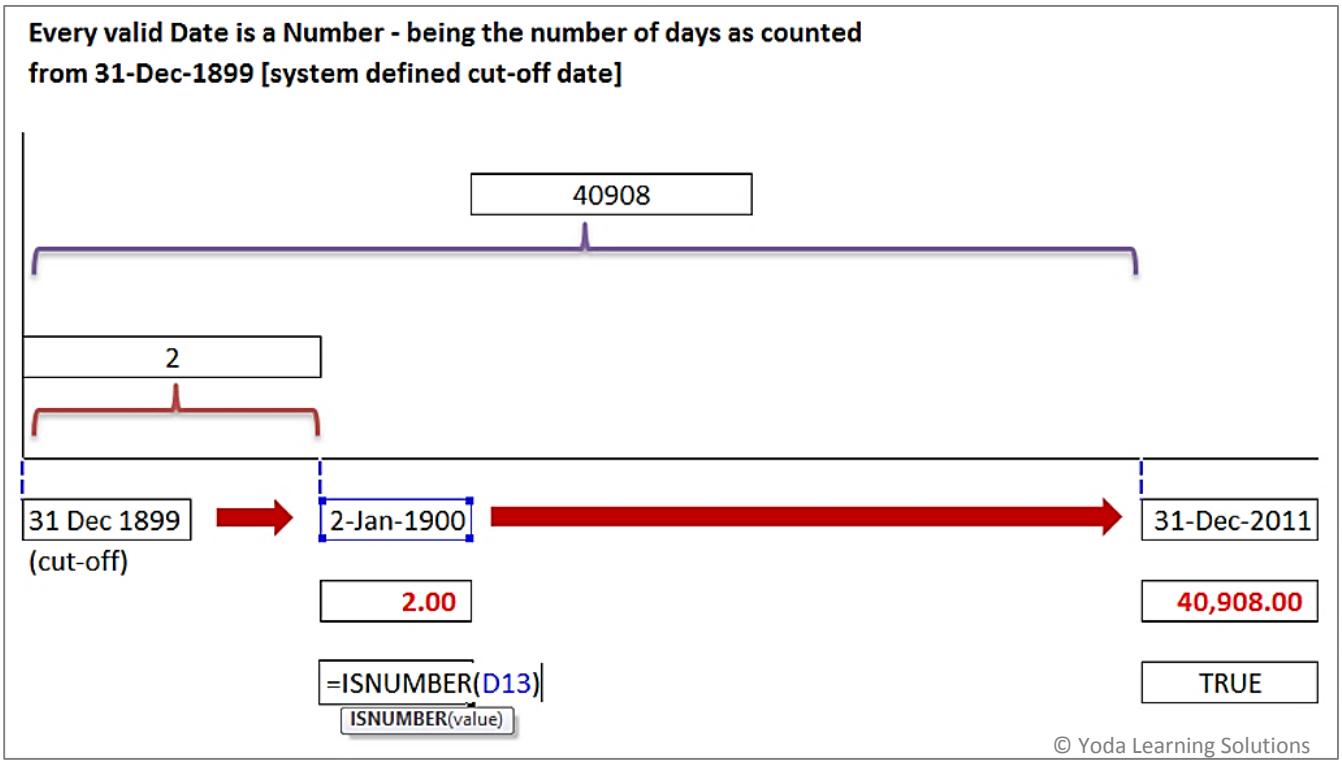
- "Advanced Filter" can simultaneously pick up differential criteria unlike "Filter". E.g. List of clients from "Park Plaza" with amount ">70,000" AND from "Shantiniketan" with amount ">50,000" has to be extracted in one go.



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	

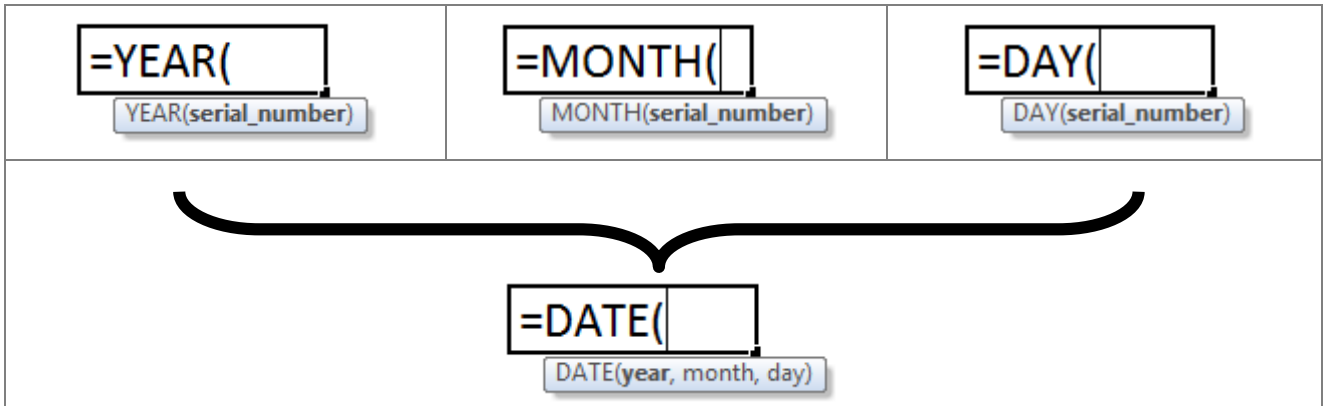
#0701 - 0702: Every valid date (i.e. date that can be understood by Excel) is a number

- 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



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

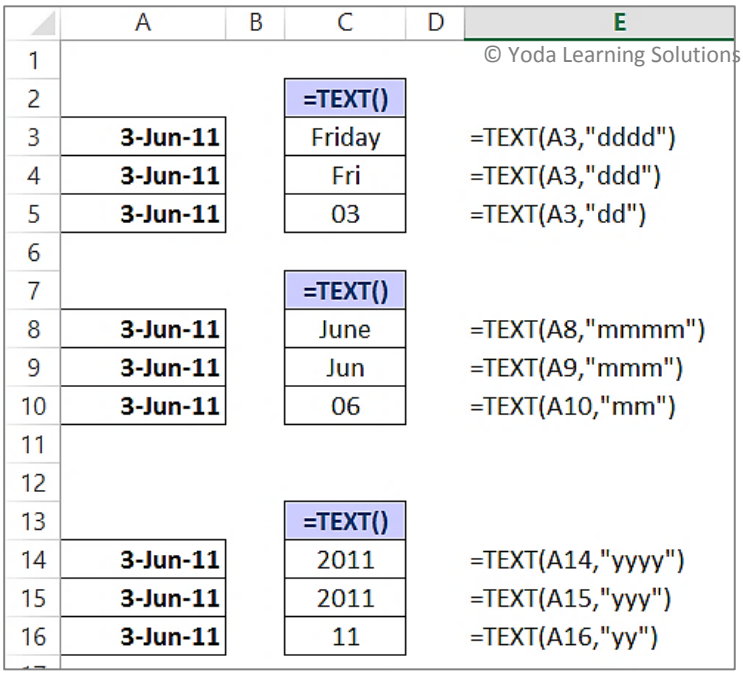
	A	B	C	D	E	F	© Yoda Learning Solutions
1							
2			=DAY()	=MONTH()	=YEAR()		=DATE()
3	3-Jun-11		3	6	2011		3-Jun-11
4							
5			=DAY(A3)	=MONTH(A3)	=YEAR(A3)		=DATE(E3,D3,C3)



Compiles the three components – Year, Month, Day in a date value

#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")

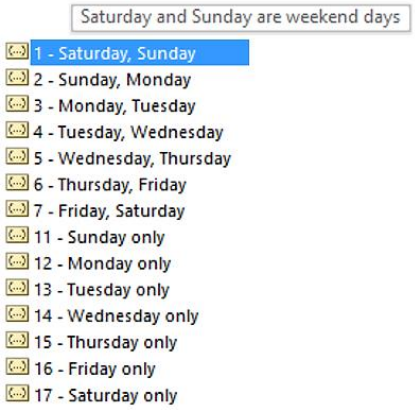
#0705: Date Formulas - WEEKDAY(), WORKDAY(), NETWORKDAYS()

=WEEKDAY(WEEKDAY(**serial_number**, [return_type])	▪ 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. *=IF(WEEKDAY(A1)=1,”Holiday”,”Office Day”)* ▪ Scheduled public holidays can also be excluded
=WORKDAY(WORKDAY(**start_date**, days, [holidays])	▪ 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 *=WORKDAY(A7,5)-1* 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(NETWORKDAYS(**start_date**, end_date, [holidays])	▪ 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
▪ 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])



- 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

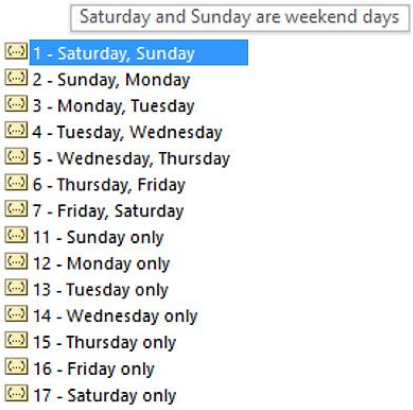
How is it different from =WORKDAY()

- 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])

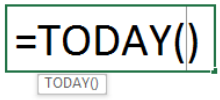
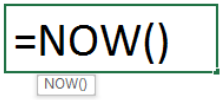


- Returns the number of weekdays (weekends excluded) between two dates.
- It **includes start date** in computing final answer
- Scheduled public holidays can also be excluded
- Used to calculate no. of business days between two dates and in Project Management

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

	▪ Returns the current date as per PC's system clock ▪ Updates every time the file is opened (dynamic) ▪ **Ctrl + ;** and press **Enter -** for inserting current date (static)
	▪ Returns the current date and time as per PC's system clock ▪ Updates every time the file is opened (dynamic) ▪ **Ctrl + Shift + ;** and press **Enter -** for inserting current time (static)

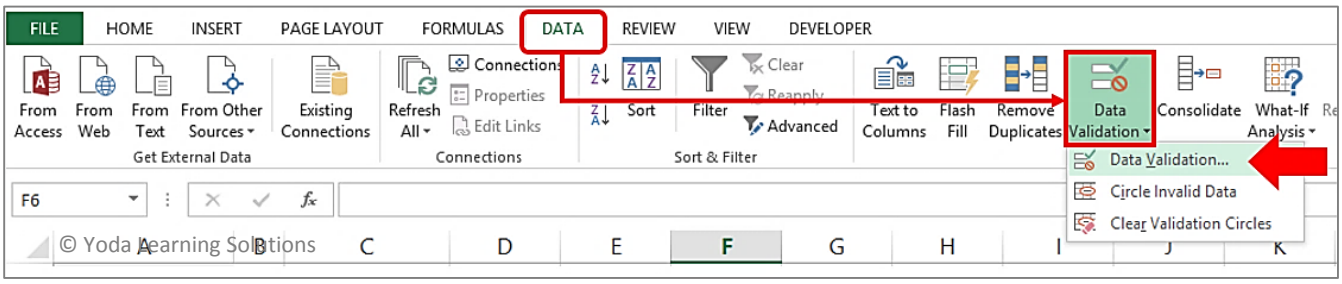
#0709: Date Formulas - EOMONTH() for Financial Modeling, Budgets, Due Dates

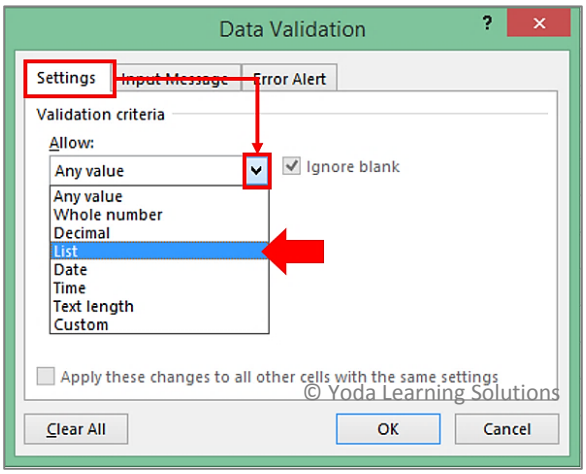
	▪ Returns the **last day of the month** before or after a specified number of months. ▪ Used for due dates computations such as 5th of next month, end of current month ▪ Used for creating timelines in Budget & Forecast models – MoM, QoQ, YoY

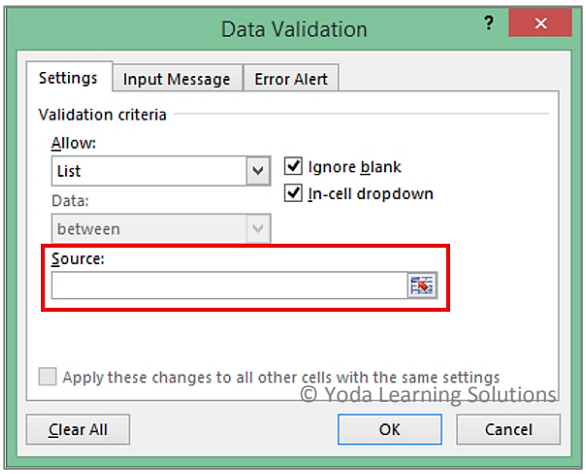
#0710 Date Formulas - EDATE() for Financial Modeling, Budgets, Due Dates

	▪ Returns the date that represents the indicated number of months before or after the start date. E.g. 60 days vs. 2 months ▪ Used for computing 3 months' notice period end date, retirement age, probation period, contract deadline, EMI installment due date

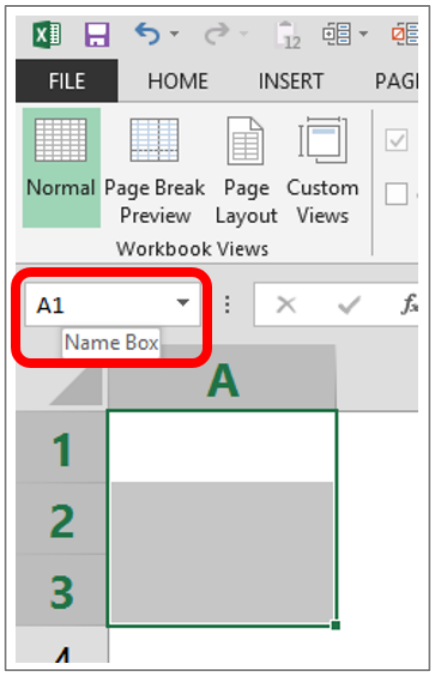
#0801 – 0802: Data Validation - Drop Down List & Range naming





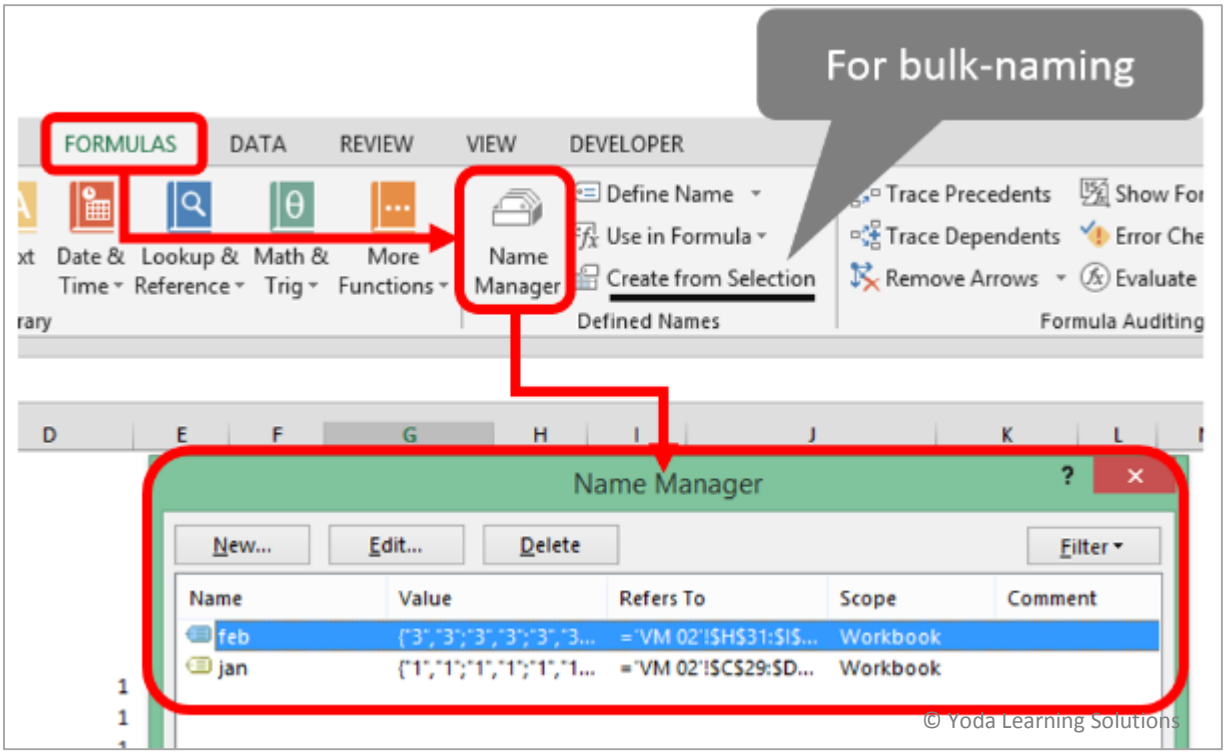


Source: Accepted,Rejected	▪ Hard-coded values separated by comma
Source: =$A$1:$A$5	▪ Cell range containing input values
Source: =listname	▪ Named cell range from same/different worksheet. Refer cell/range Naming via-name Box. The prefix **= (equal sign)** is important here.
Note: (1) **=INDIRECT() w. named ranges** and (2) **=OFFSET()** can also be used to create dynamic ranges.	



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

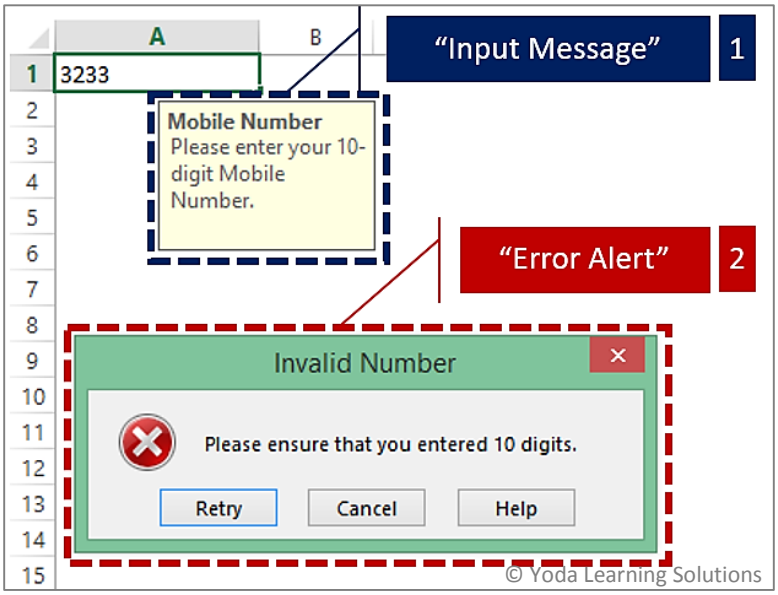
- **NAME MANAGER:** Cell(s) / Range Naming – Editing / Deleting "names" / "referred range"
- **CREATE FROM SELECTION:** for bulk naming



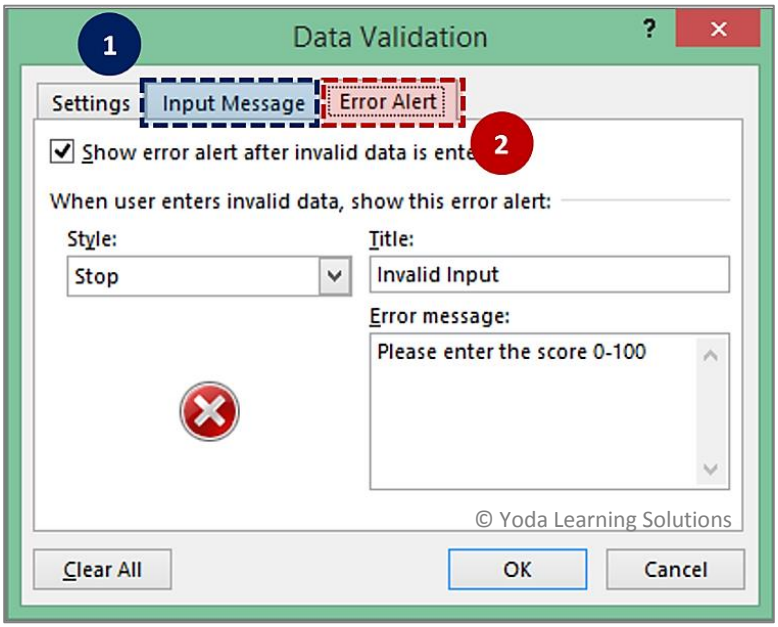
#0803: Data Validation - Numbers w. Error Alert and Input Message

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

Sample Output



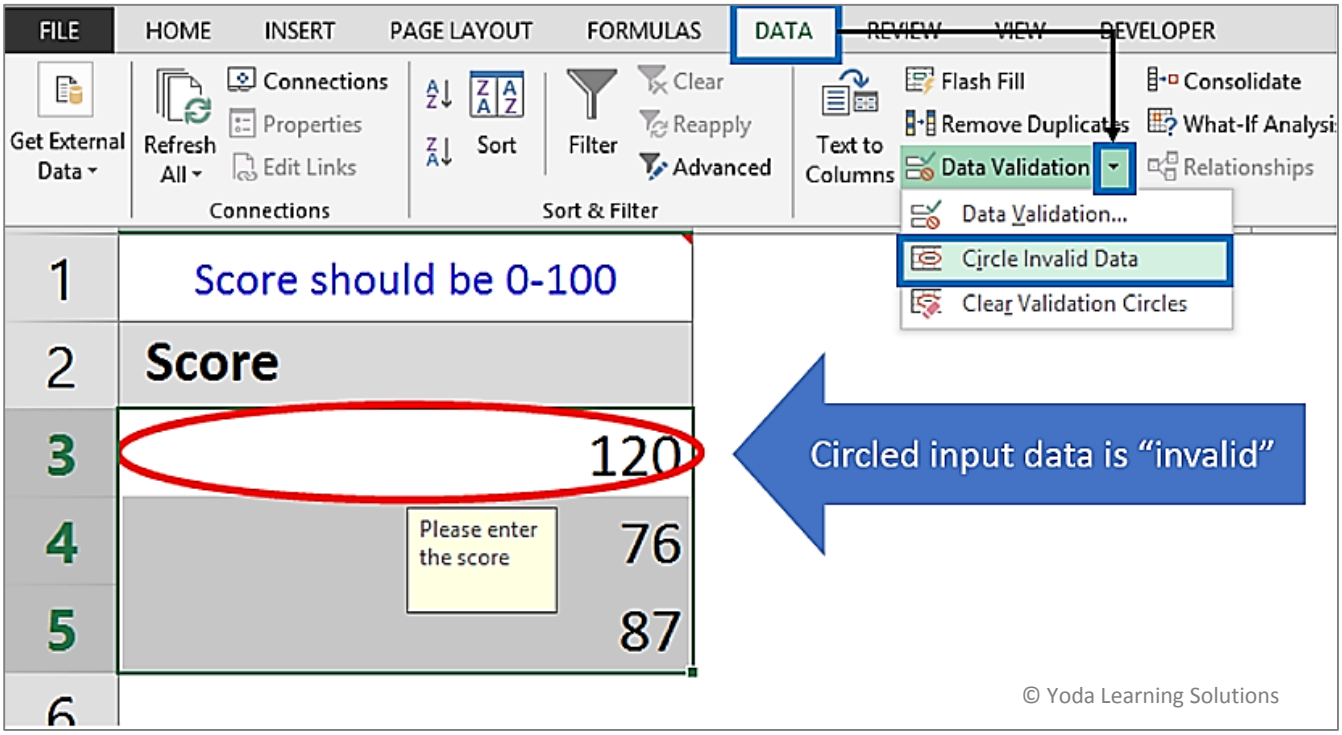
Procedure to activate "Input Message" & "Error Alert"



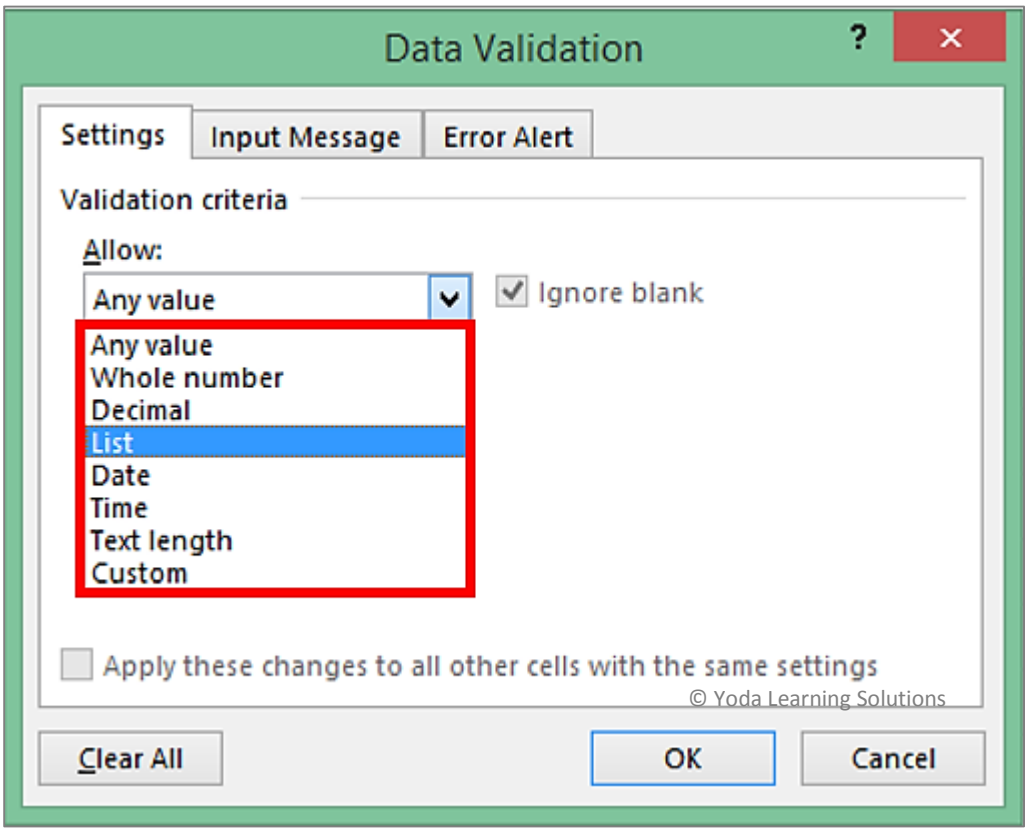
#0804: Data Validation - Dates w. Error Alert and Circle Invalid Data

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 rule 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**"

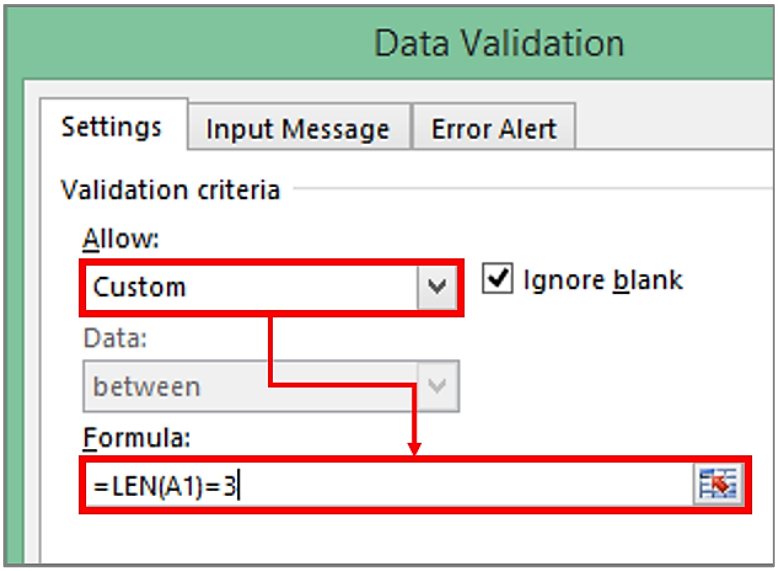


#0805: Data Validation – Whole number, Text Length, Date (MM/DD/YYYY)

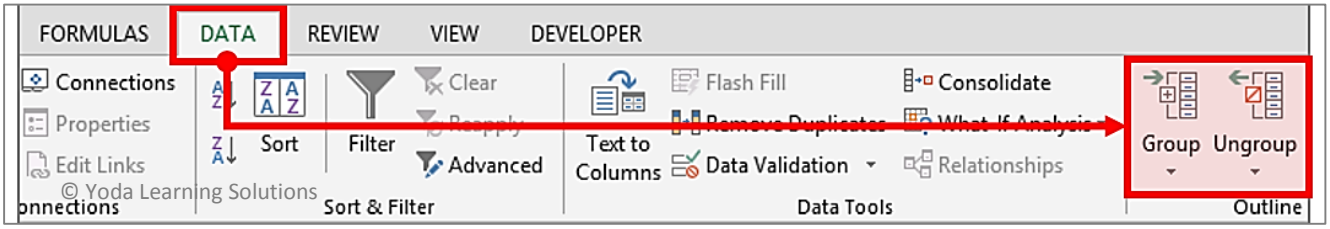


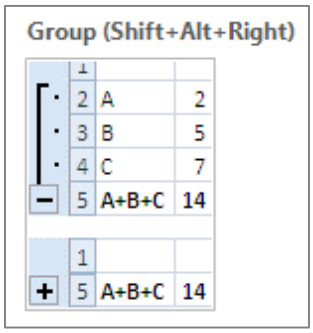
#0806: Data Validation - Custom w. formula logic

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

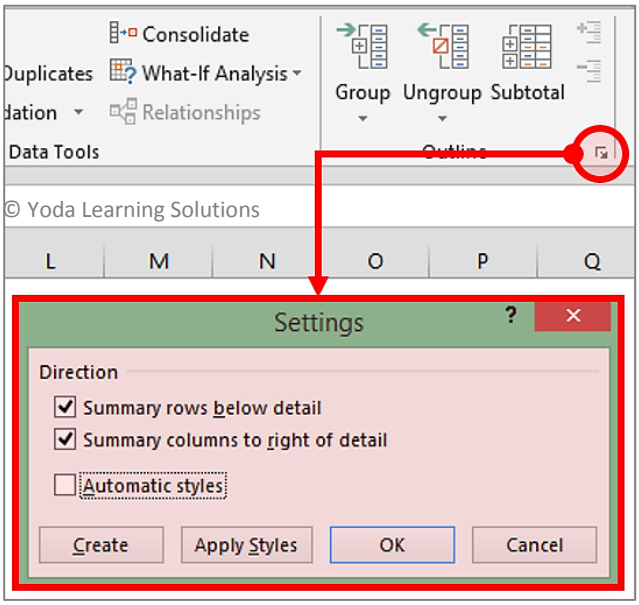


#0901-0902: Grouping/UnGrouping Columns and Rows

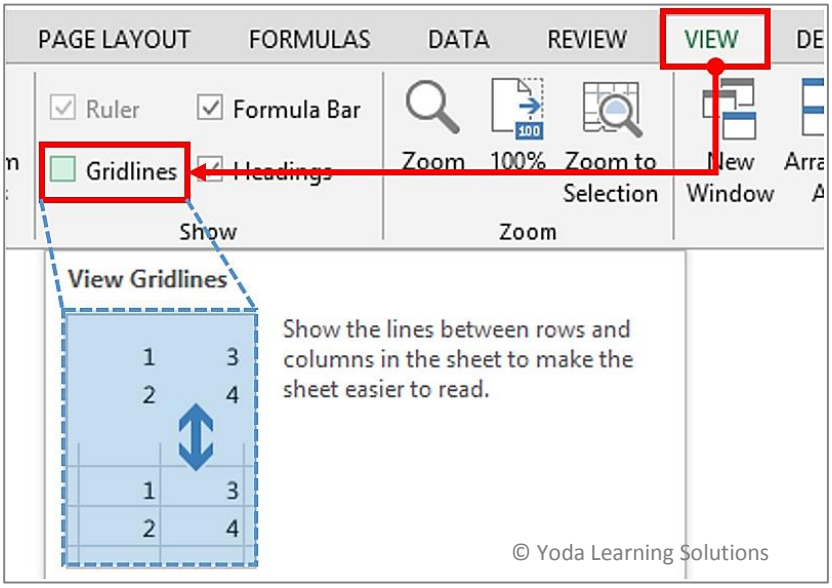




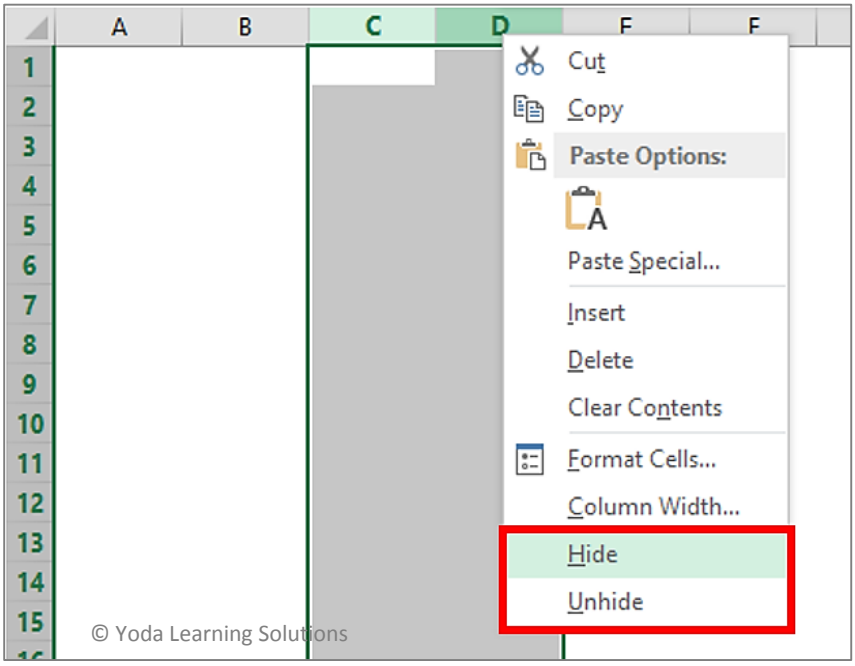
#0903: Grouping Trick: Changing placement of Grouping Button



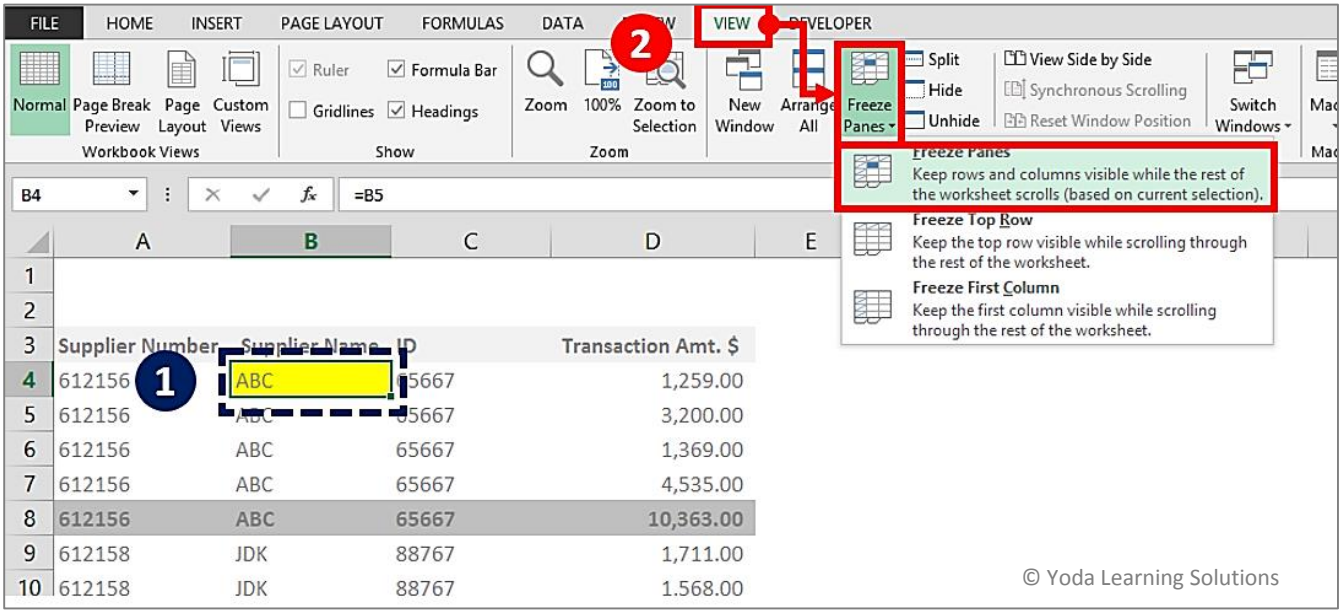
#0904: Cell Gridlines: Turning On/Off



#0905: Hide/Unhide Rows and Columns



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

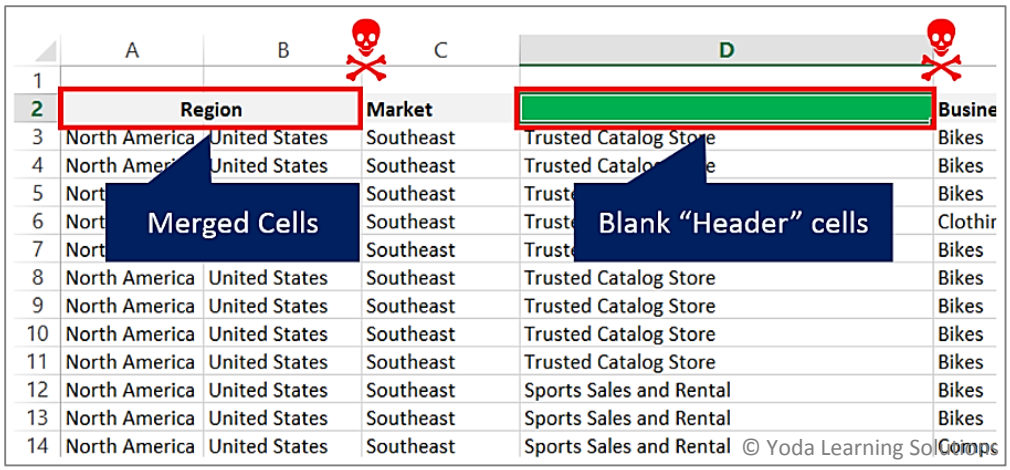


Choose the cell the row above which and the column before which needs to be "frozen". In this case, Column A and Rows 1-3 will be frozen.

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

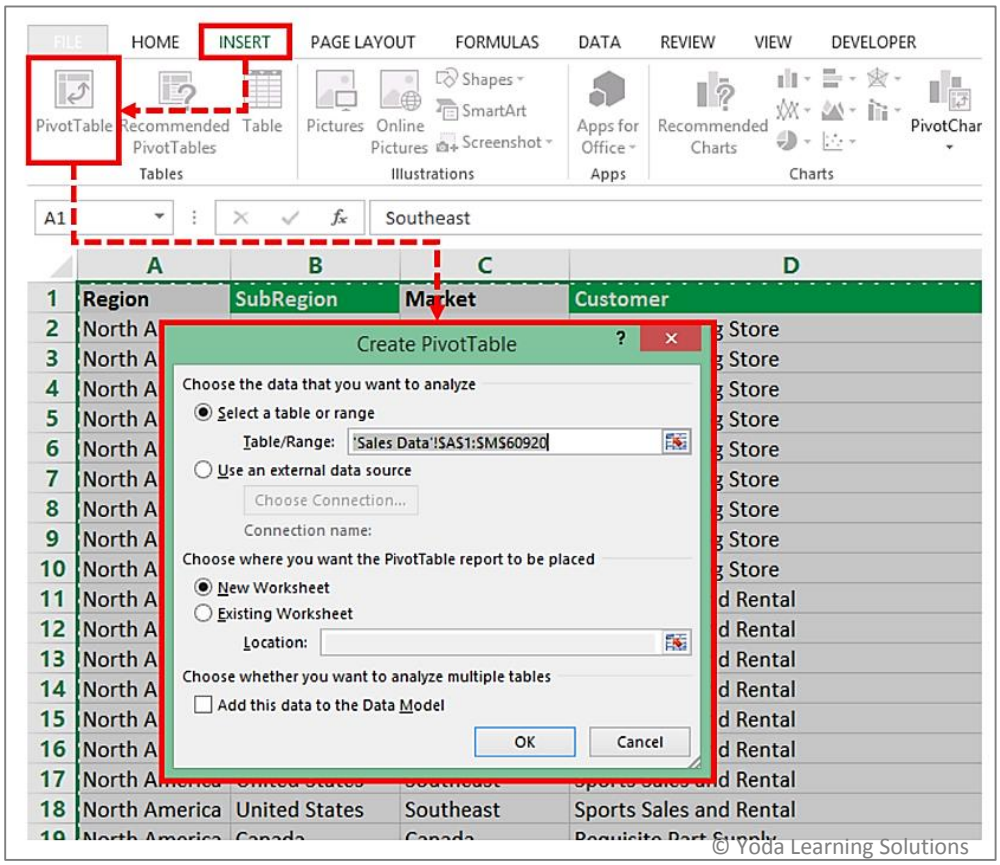
Pre-requisites:

- Blank/Empty "header" cells not allowed
- "Merged" cells not allowed

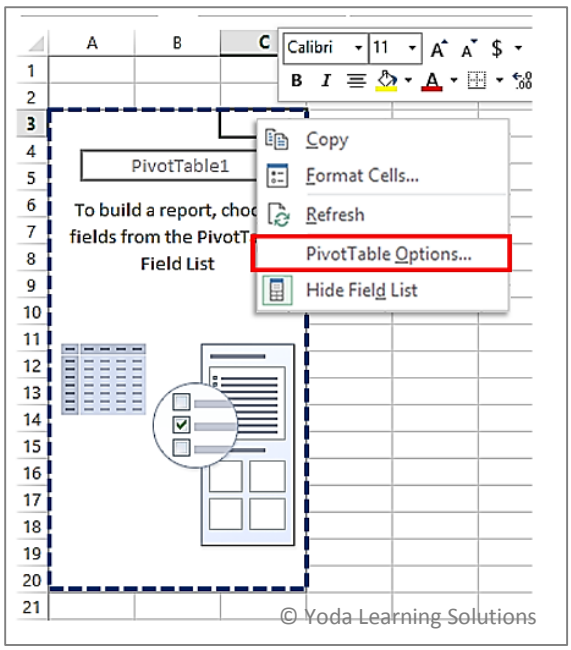


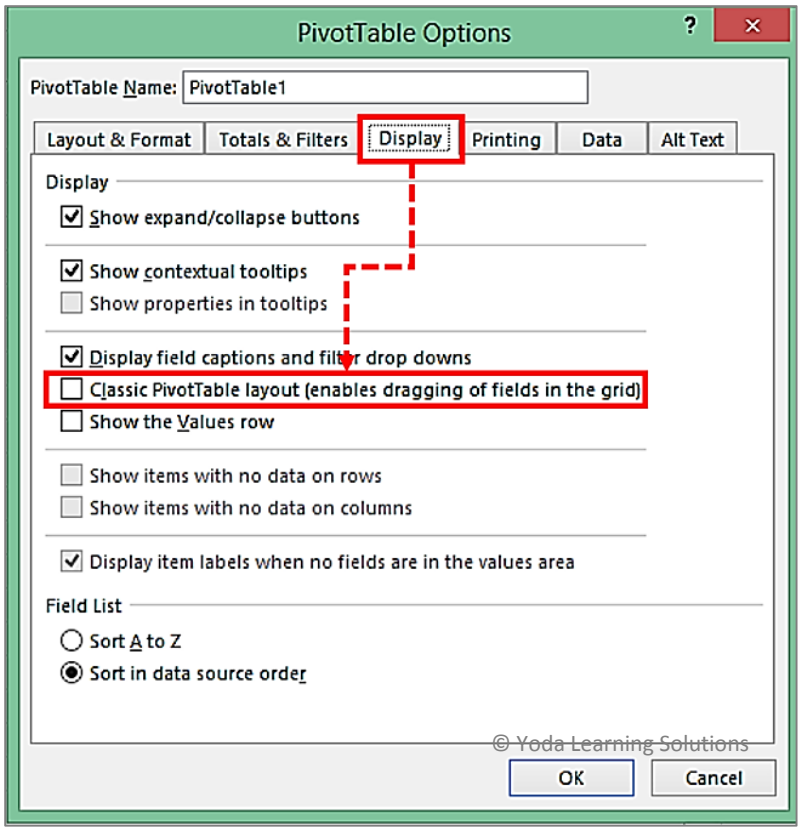
Creating a Pivot Table

- Choose the data table. INSERT > PIVOT TABLE

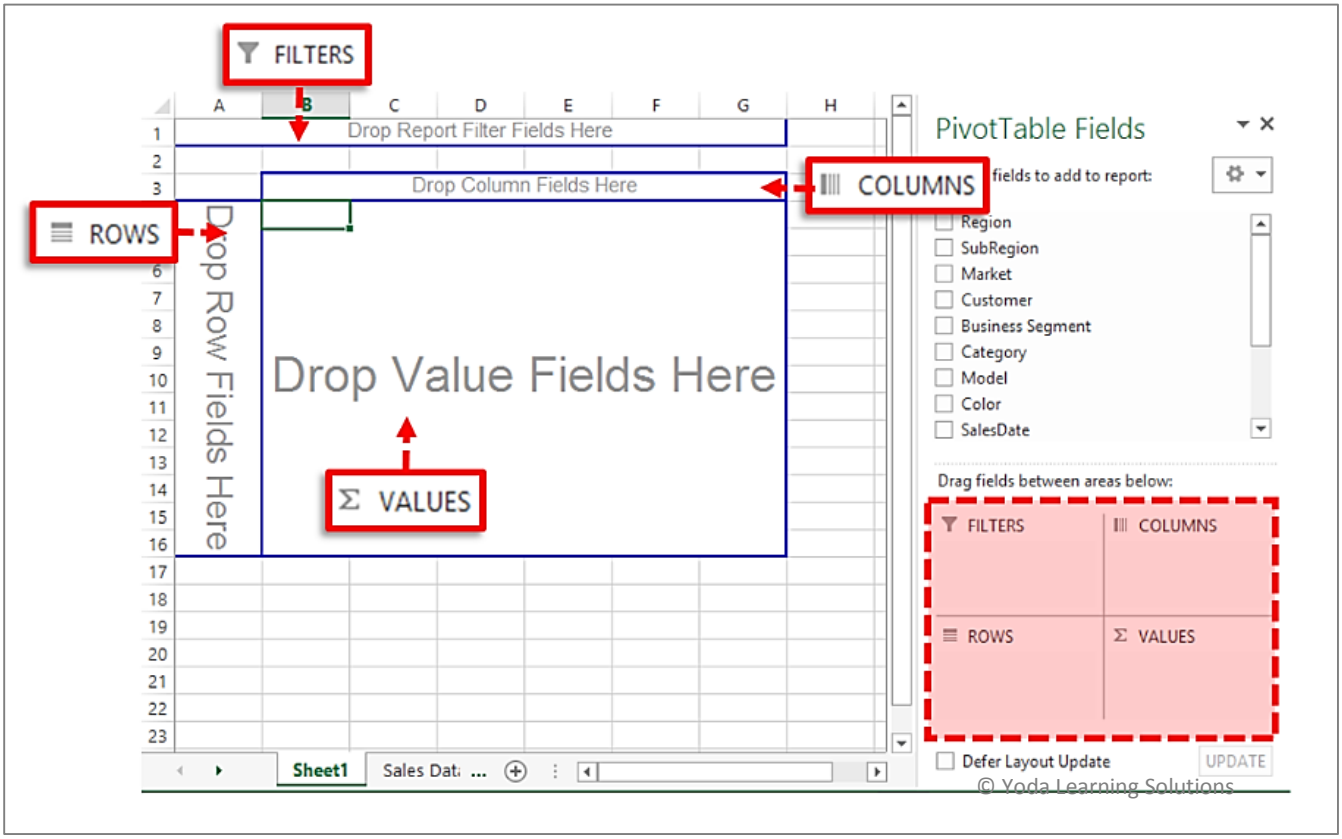


Changing an essential Setting:

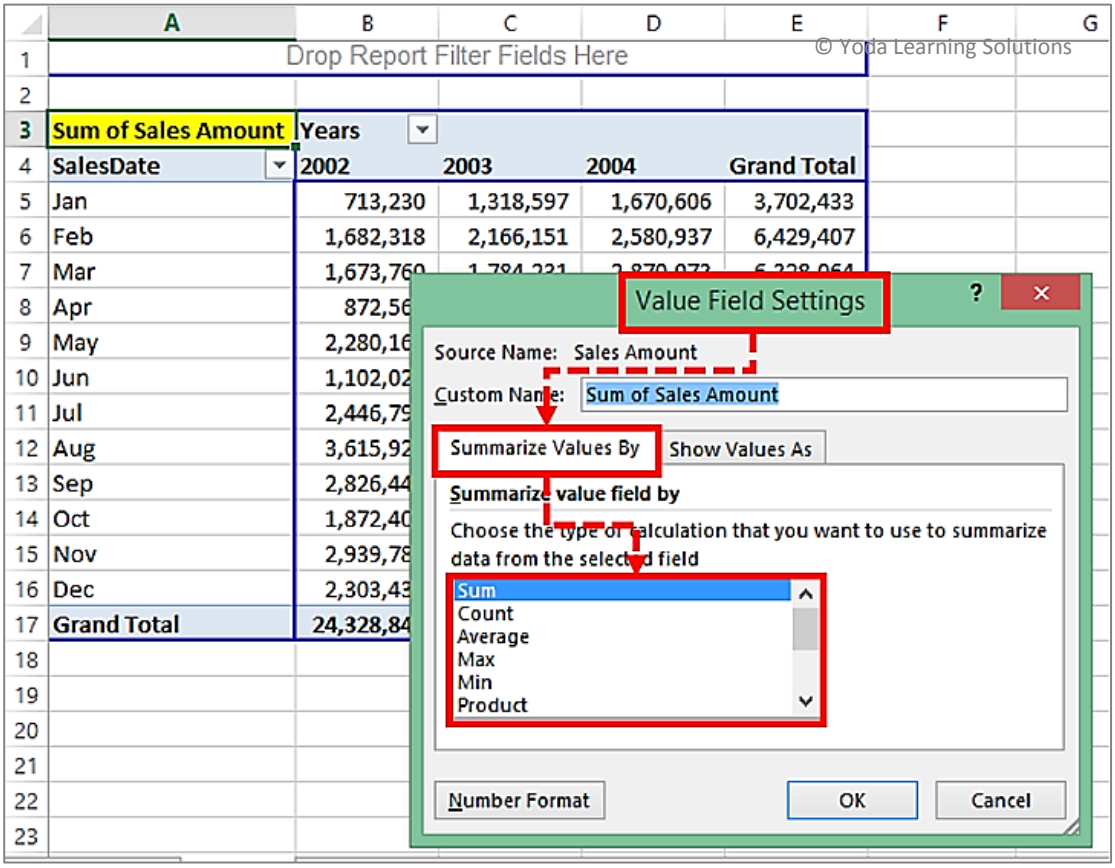




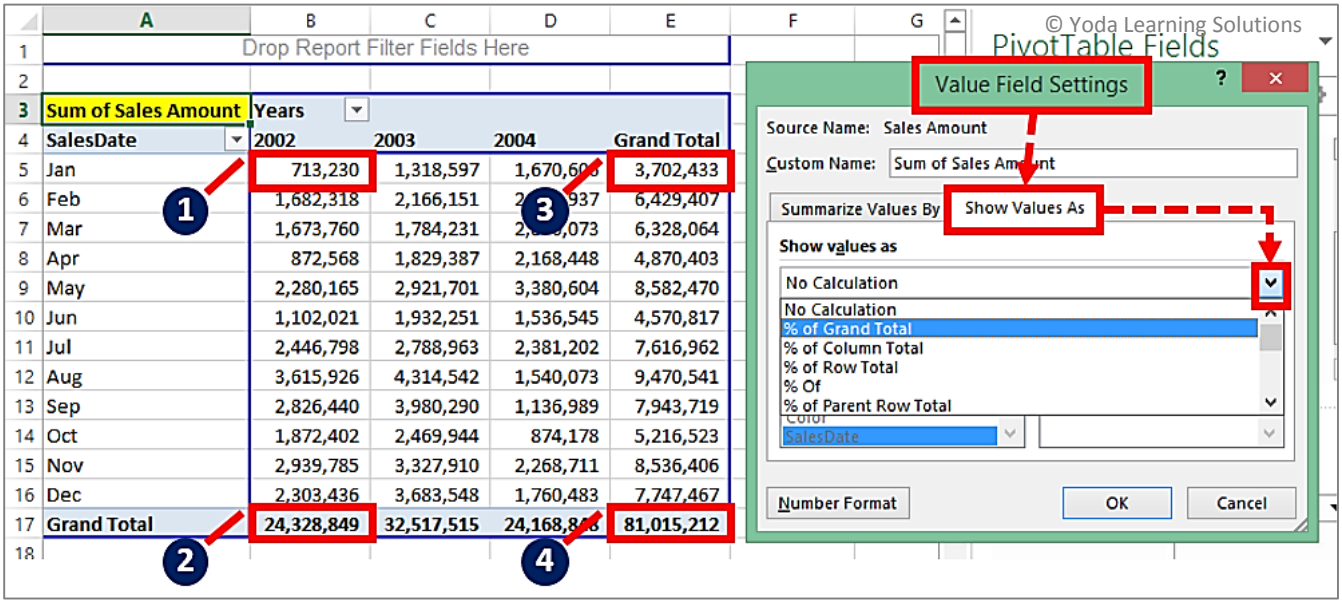
#1004: Pivot Tables – Exploring Pivot Table grid (Fields)



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

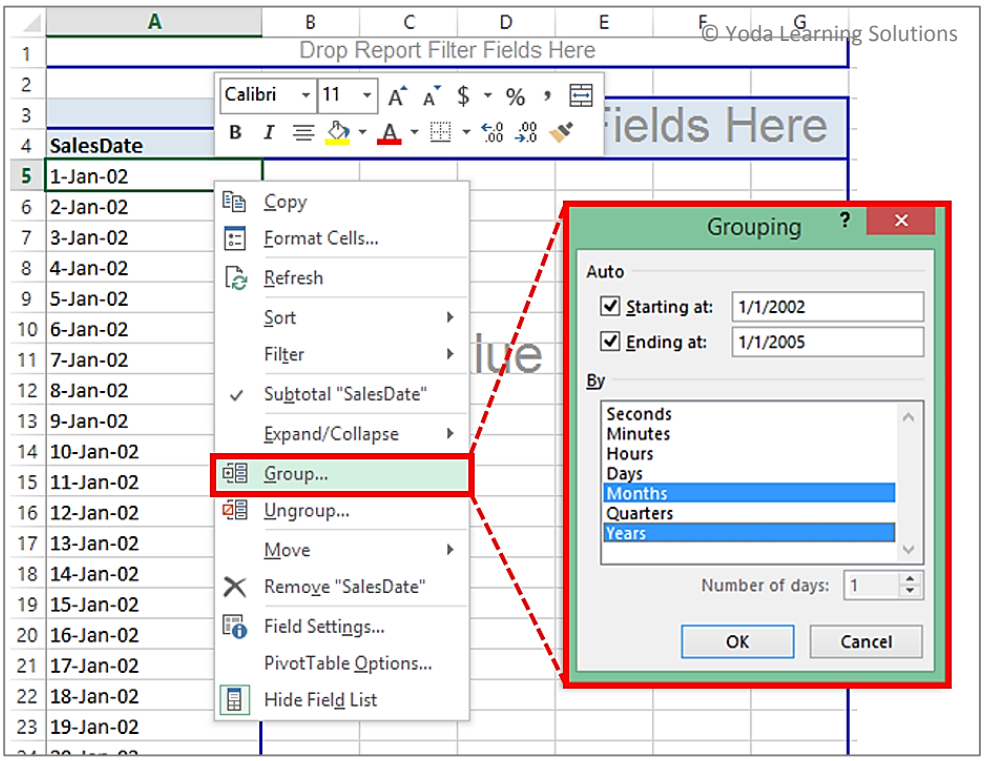


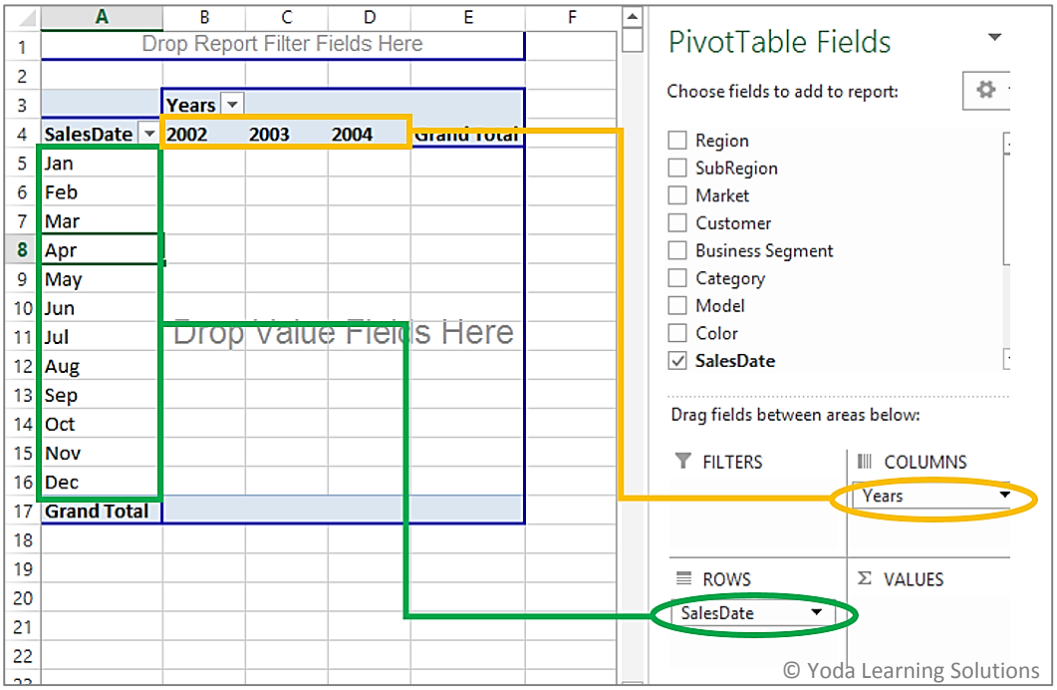
#1006-1007: Pivot Tables – Value Field Settings for % calculations

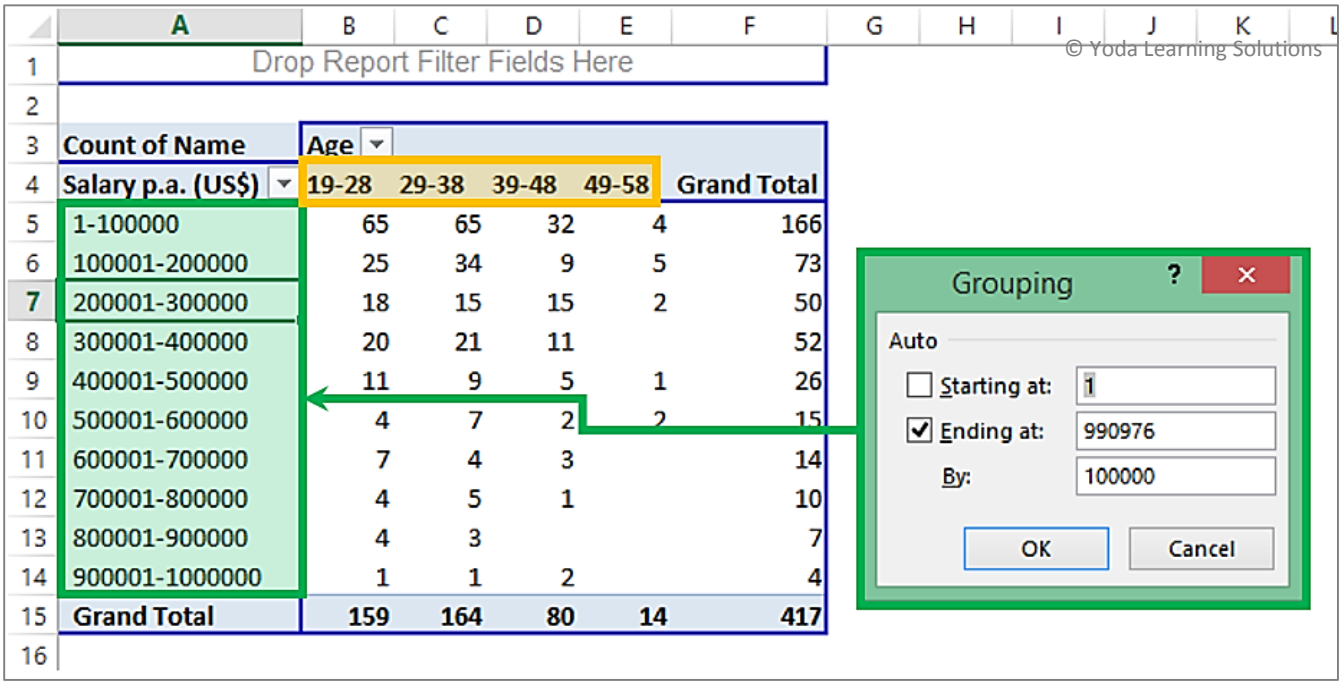


Calculation	Meaning
1/4	% of Grand Total
1/2	% of Column Total
1/3	% of Row Total

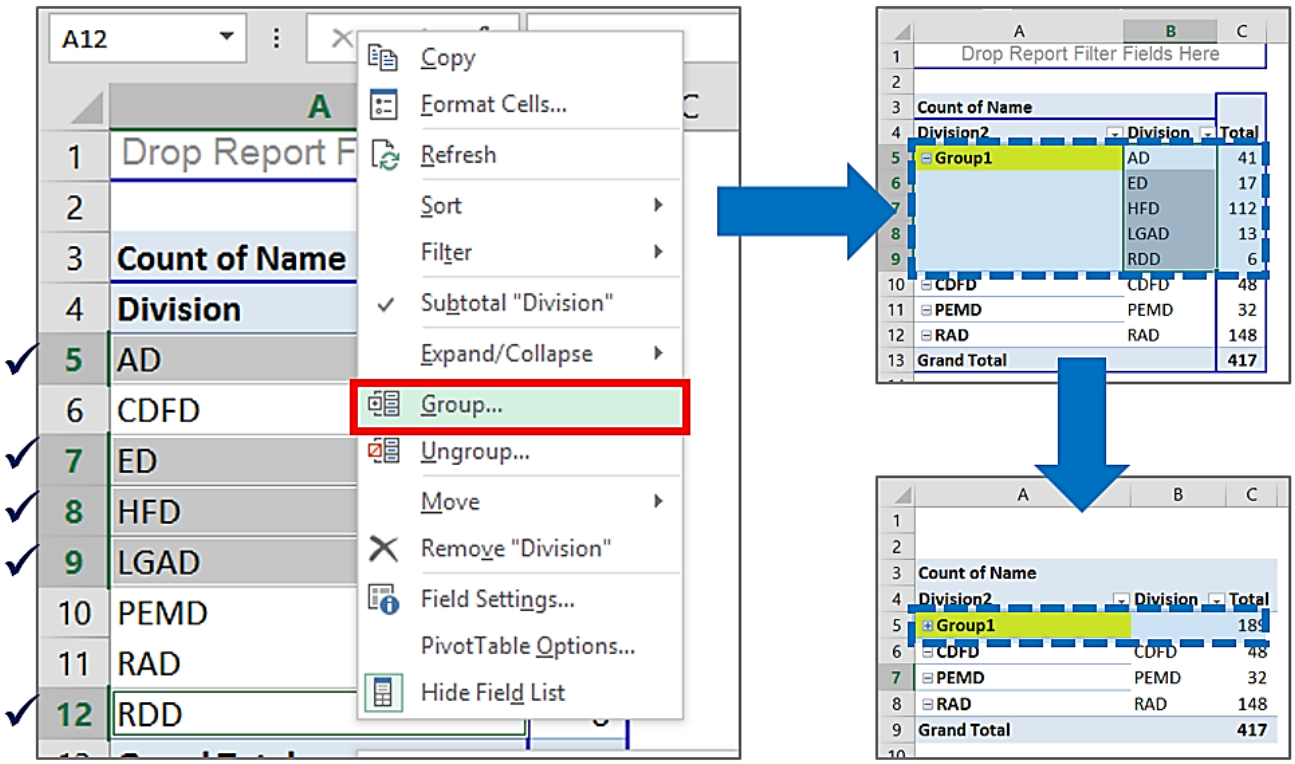
#1008 – 1009: Pivot Tables – Grouping Dates & Numbers (automatic)



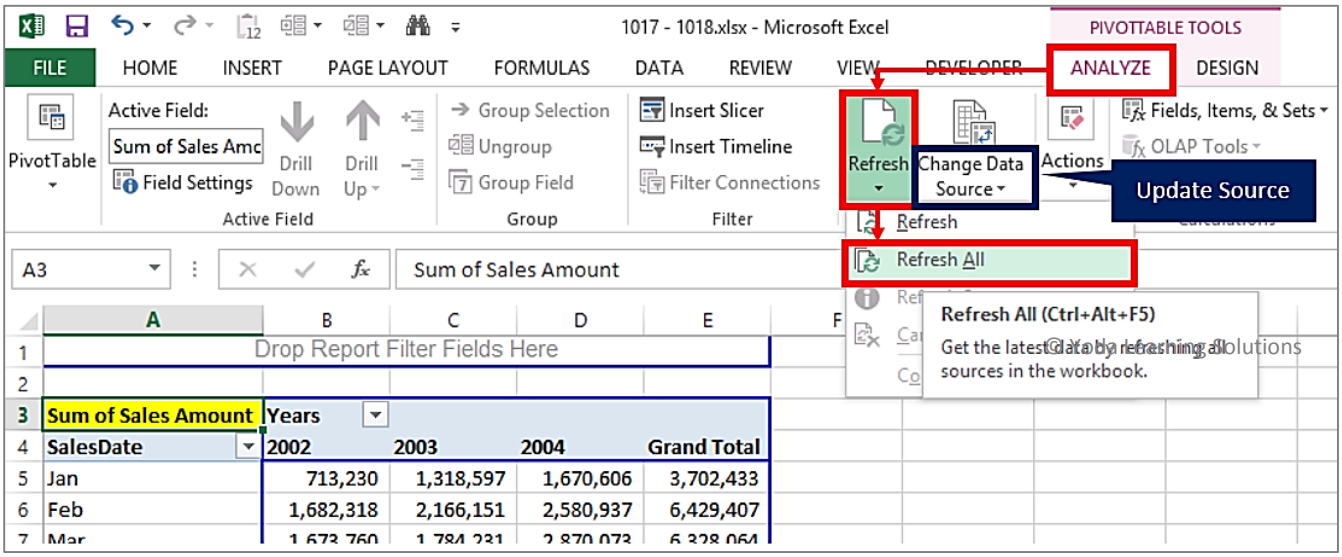




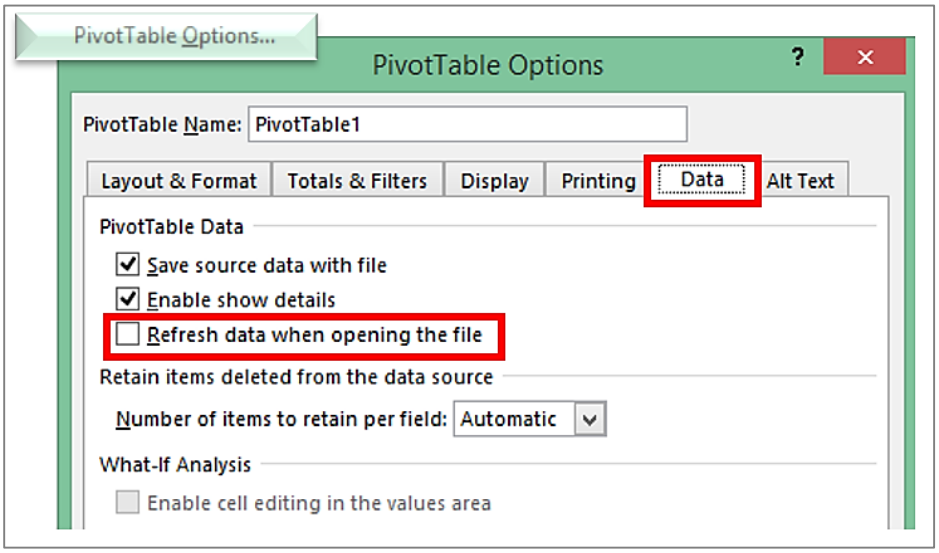
#1010: Pivot Tables – Grouping Text (manual)



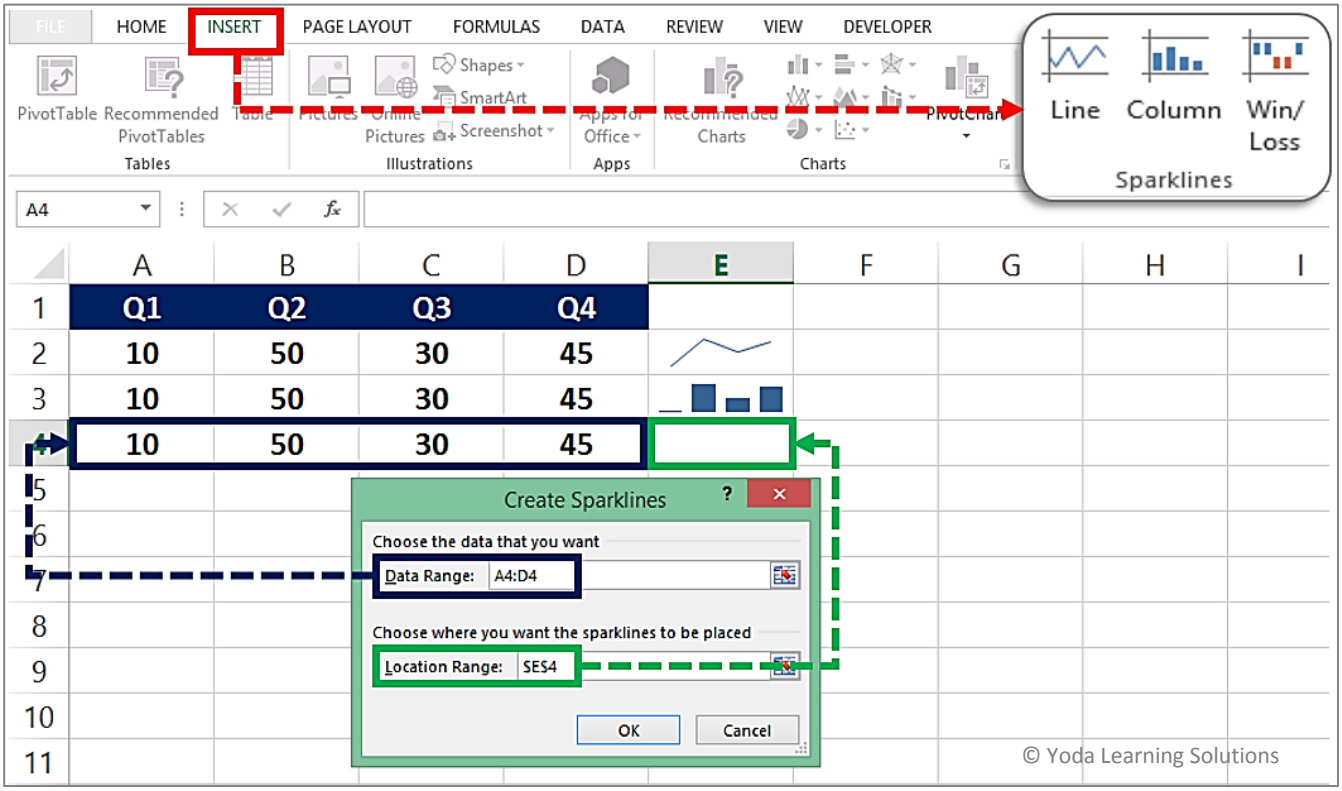
#1011: Pivot Table - Refresh vs. Refresh All, Change Data Source



#1012: Pivot Table - Auto Refresh

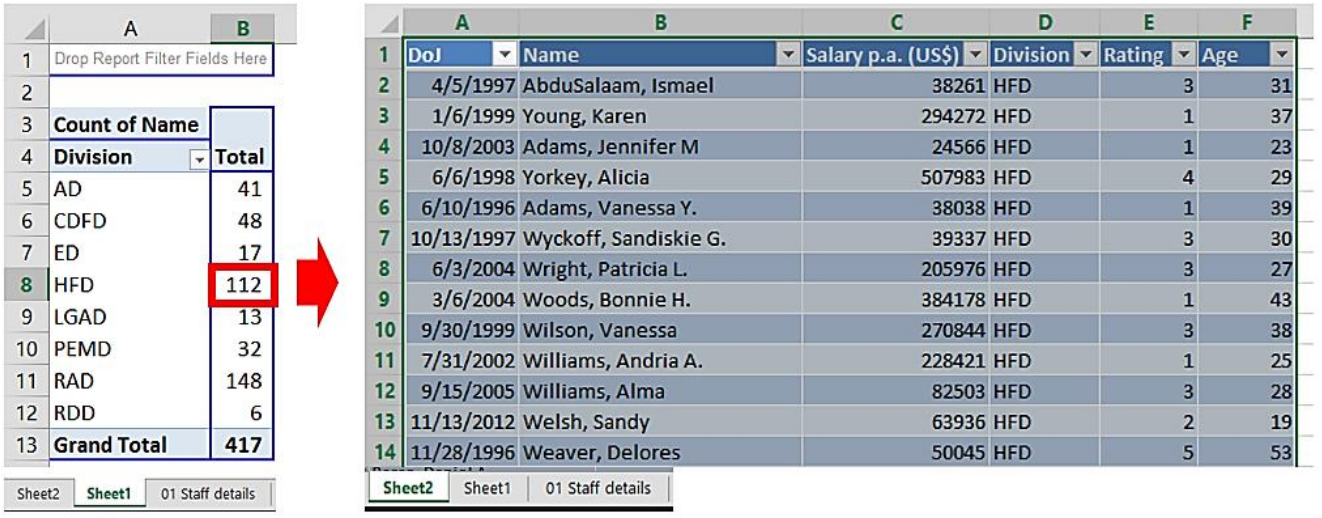


#1013: Pivot Table - Pivot Chart Shortcut (F11) and Sparklines



#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.



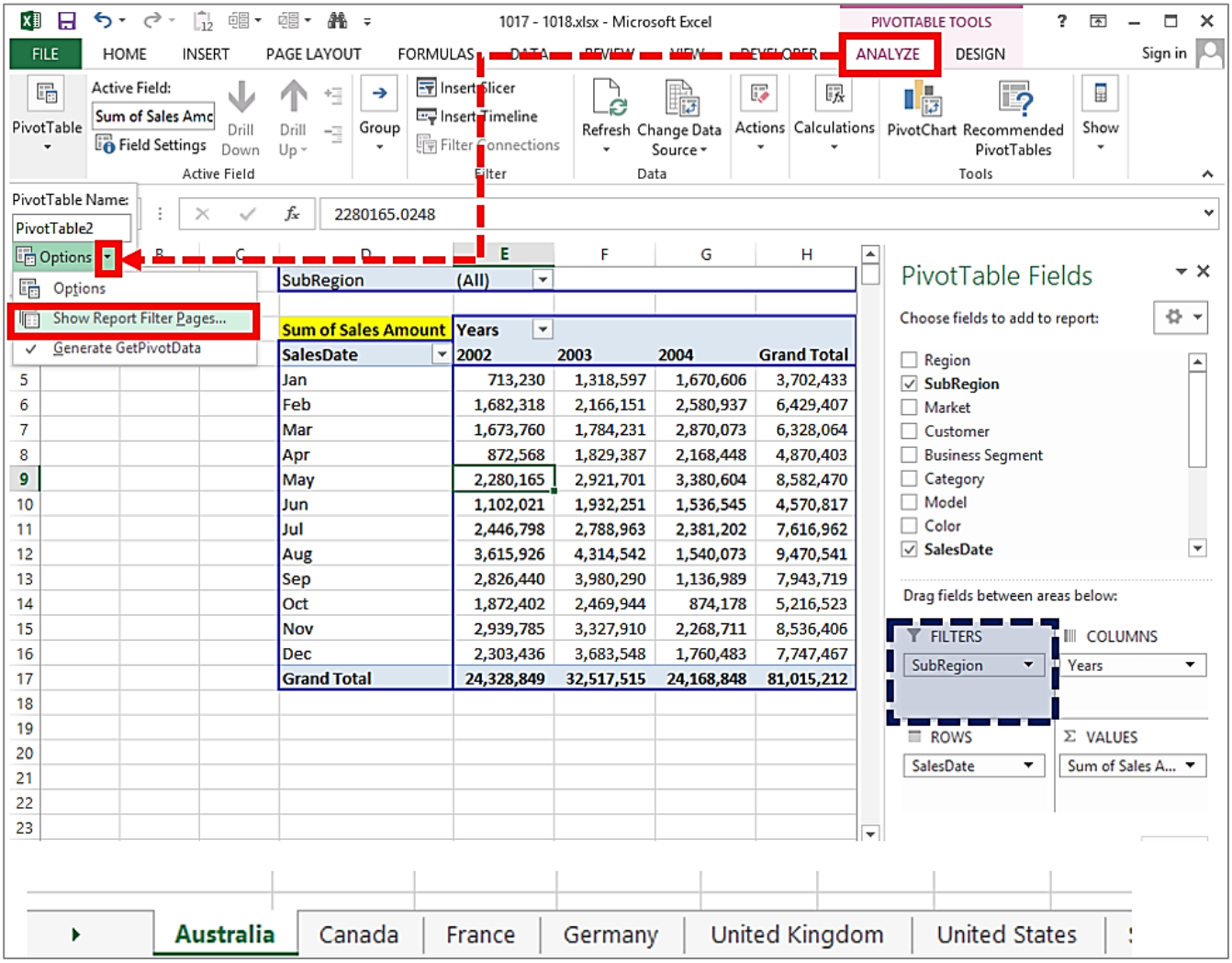
Drop Report Filter Fields Here	
Count of Name	
Division	Total
AD	41
CDFD	48
ED	17
HFD	112
LGAD	13
PEMD	32
RAD	148
RDD	6
Grand Total	417

Sheet2 | Sheet1 | 01 Staff details

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

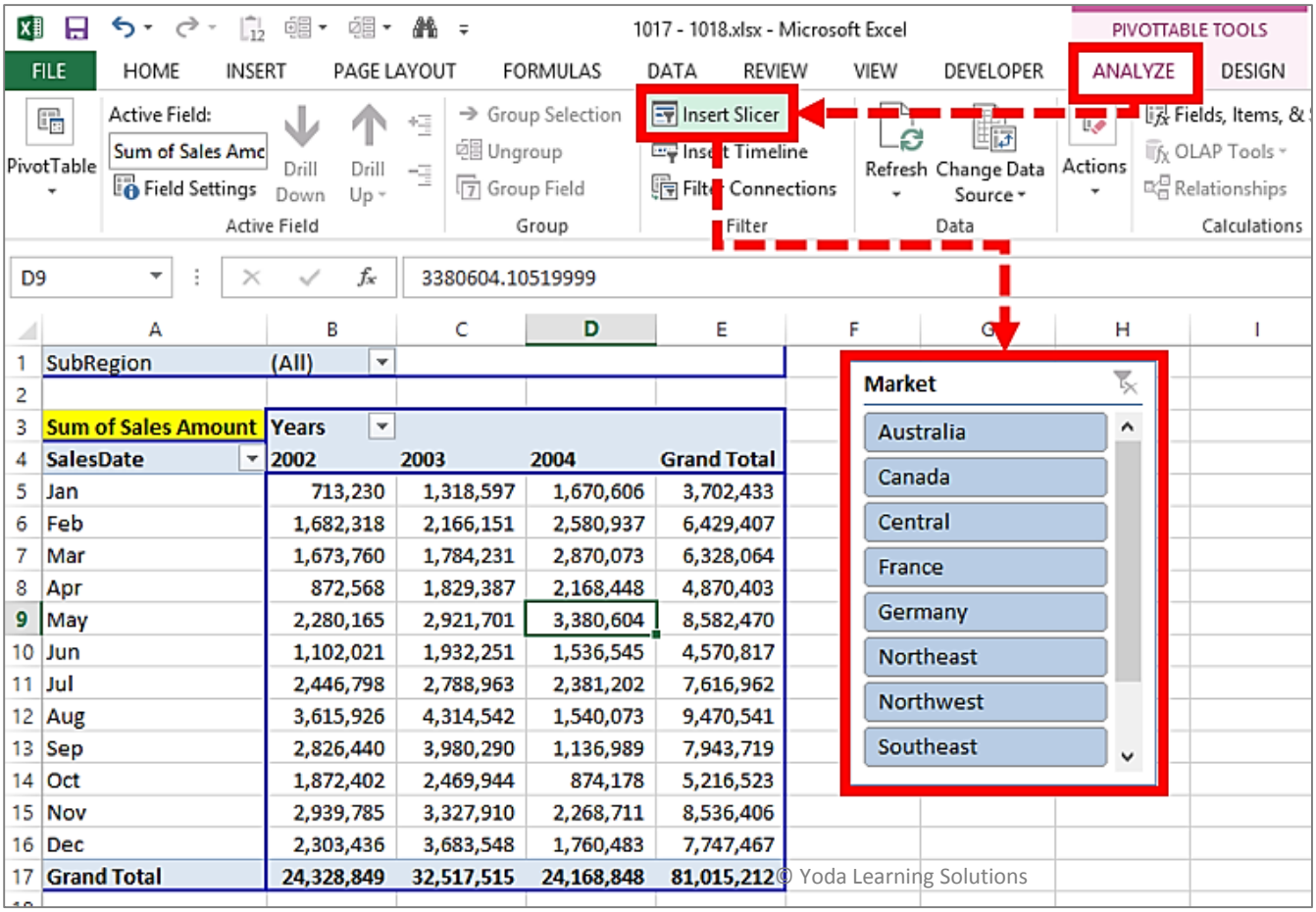
Sheet2 | Sheet1 | 01 Staff details

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



#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.

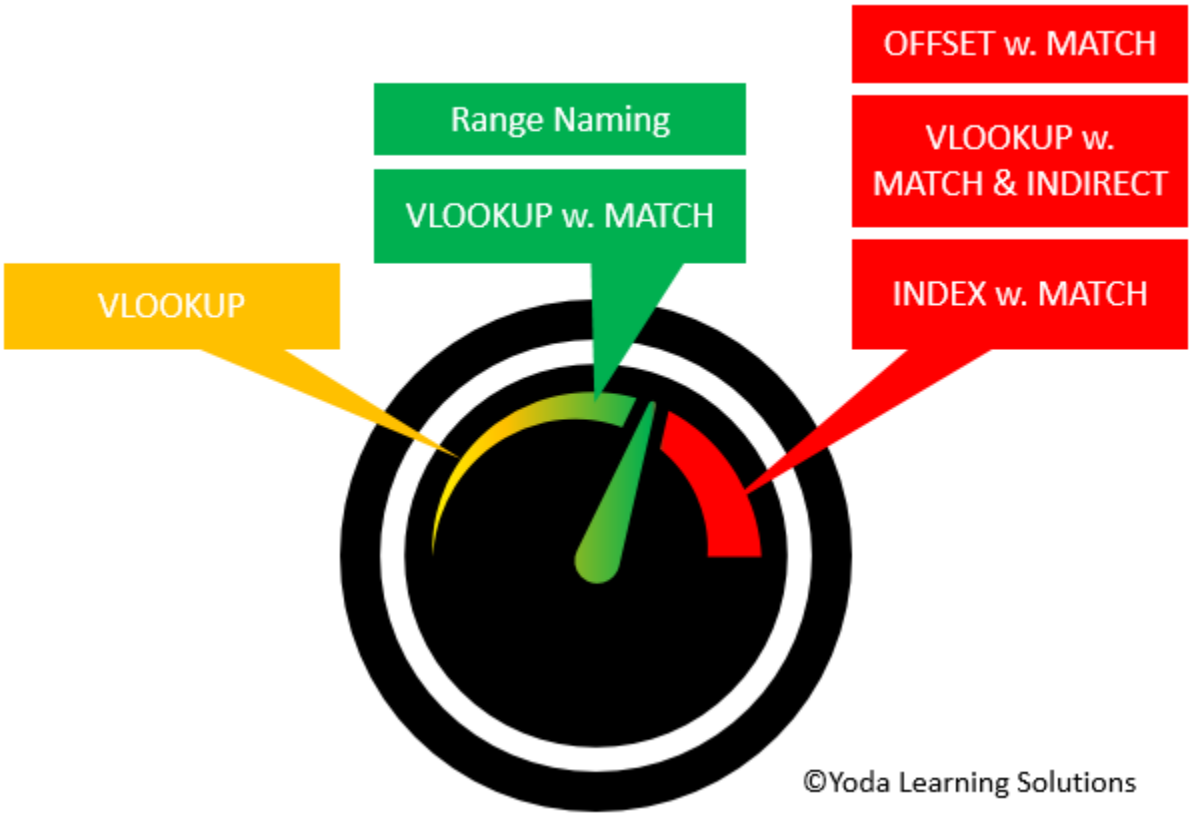


NB - For generating a quick Chart based on Pivot Table report: Select entire Pivot Table report, then Press **<F11>** for generating default chart

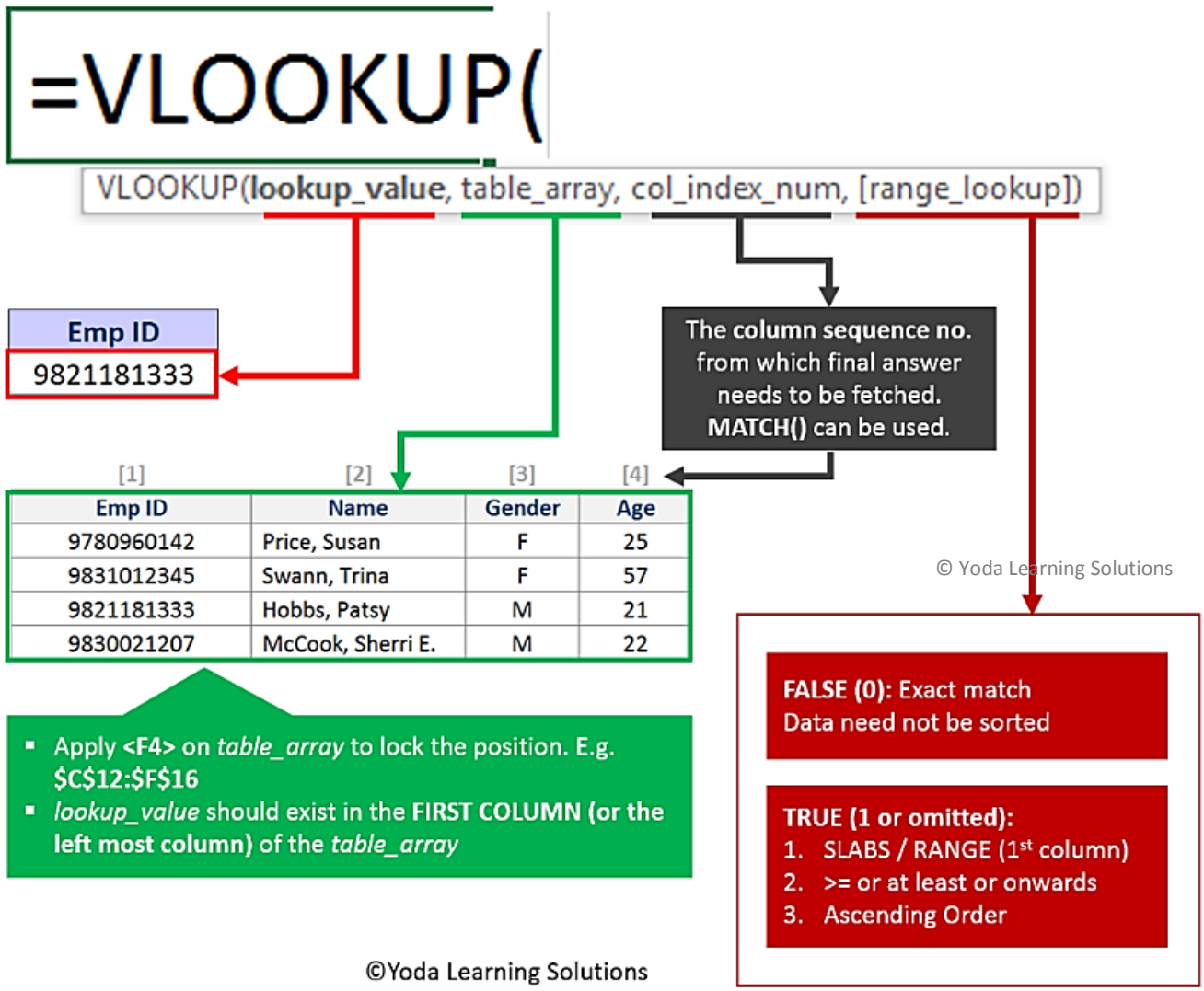
#1017-1019: Pivot Table – Practice Exercises

Refer practice workbooks

Overview of Lookup formulas



#1101: VLOOKUP() for Starters



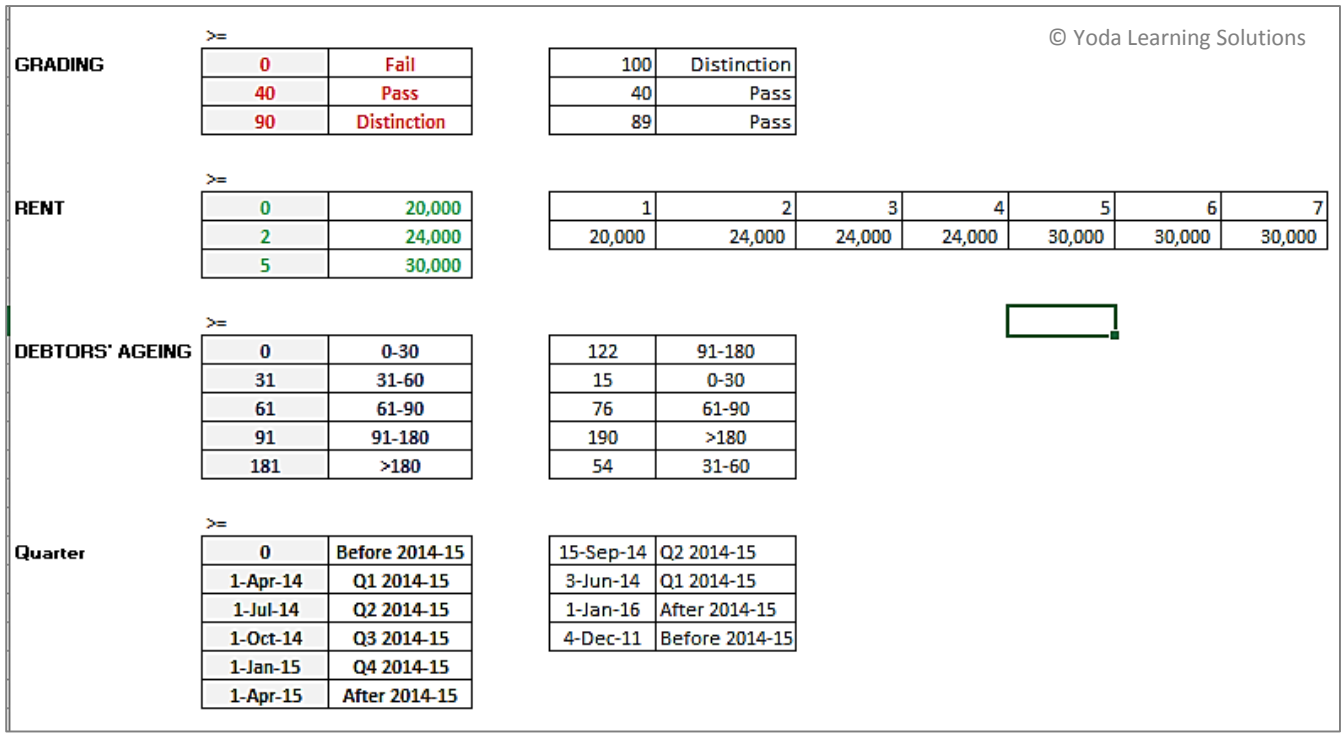
- "lookup_value" should be in the same format as the one stored in the first column of the selected "table_array"
  - Detection techniques: ISNUMBER(), ISTEXT(), LEN()
  - Correction techniques for **nos. stored as text** – VALUE(), Text-to-Columns (Step 3/3) - General
  - Right-Click > Format Cells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

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

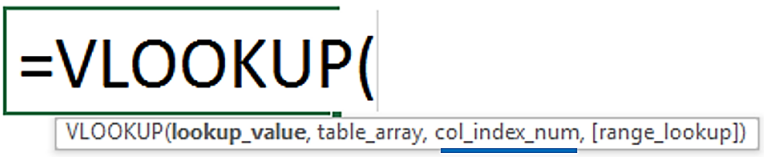
3 conditions (as applicable for **Dates & Number):**

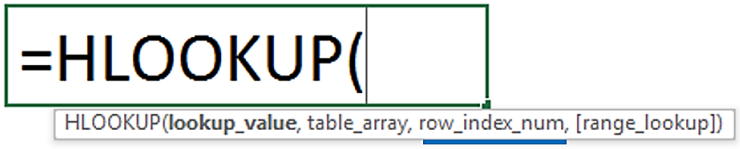
- SLABS
- >=
- Ascending Order

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

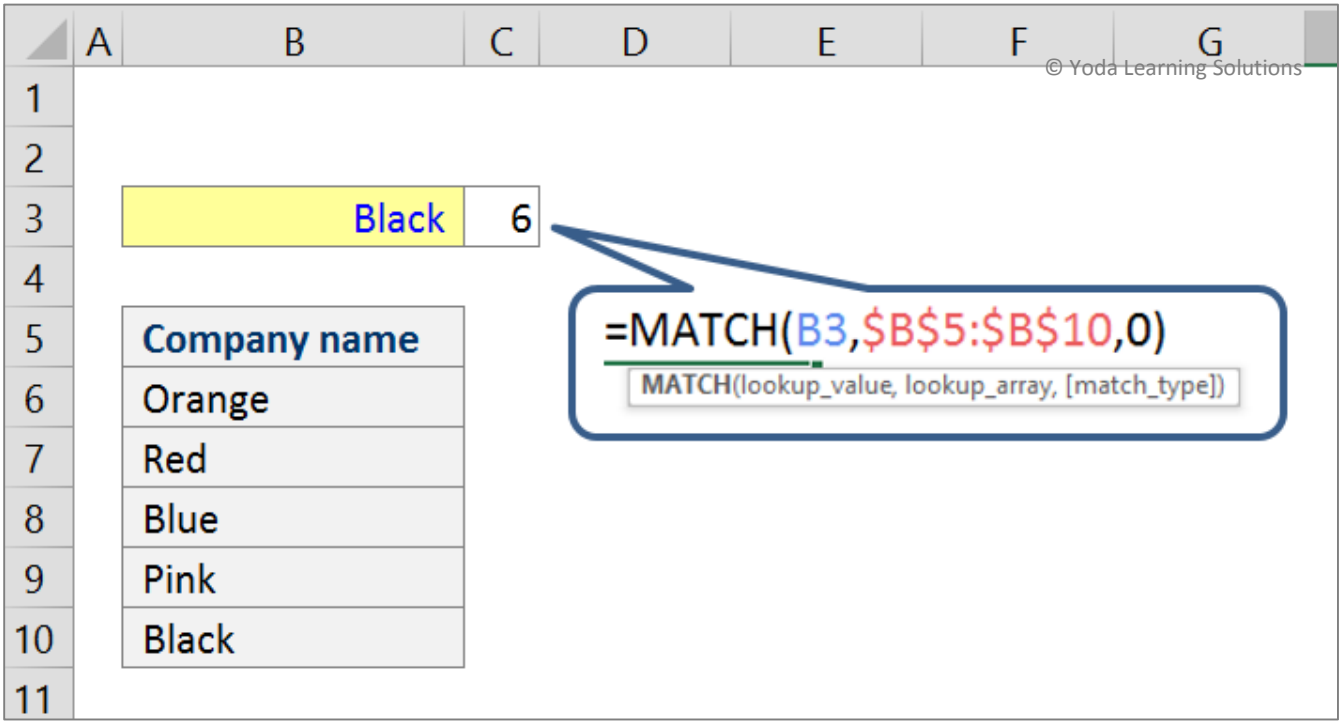


#1104: HLOOKUP() vs. VLOOKUP()





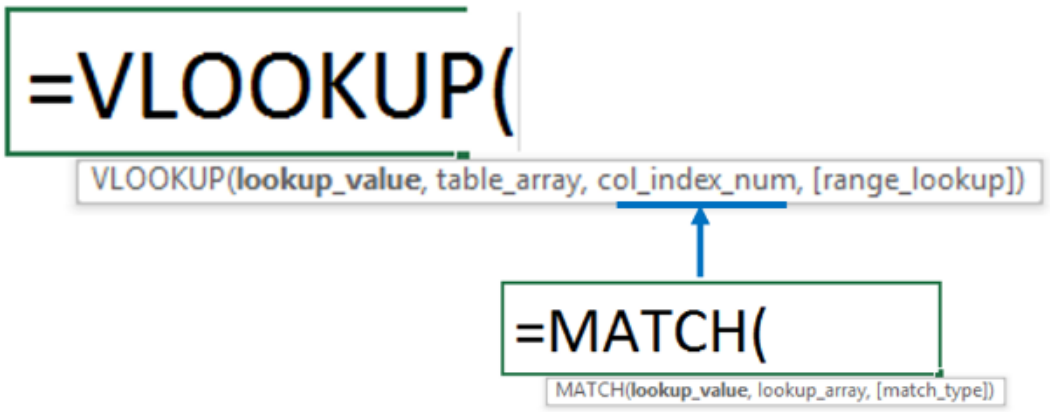
#1105 – 1106: MATCH() – Basics & match_type: -1 vs. 0 vs. 1



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

MATCH() with 1	MATCH() with -1
▪ Slab ▪ with values in ascending order ▪ Greater than equal to (>=)	▪ Slab ▪ with values in descending order ▪ Less than equal to (<=)

#1107 – 1111: 2-D Lookup (Vertical + Horizontal) - VLOOKUP w. MATCH



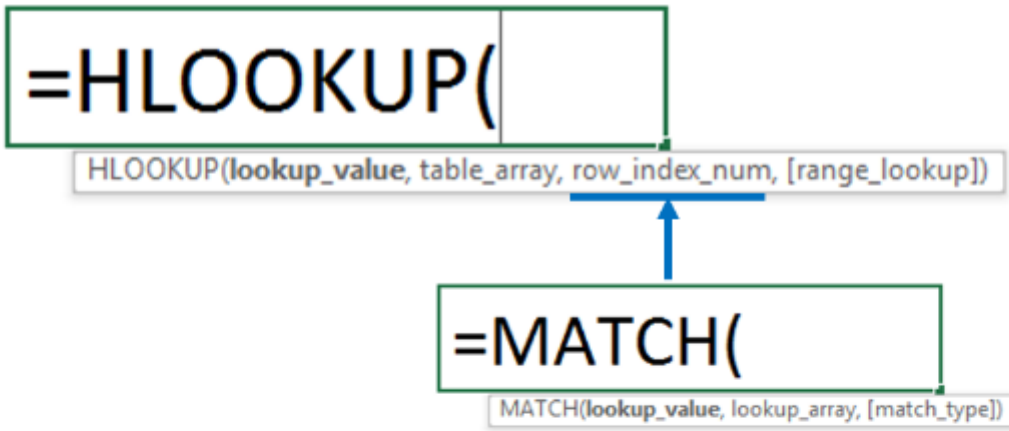
VLOOKUP() captures the entire *table_array* and hence, referred as the **SENIOR**

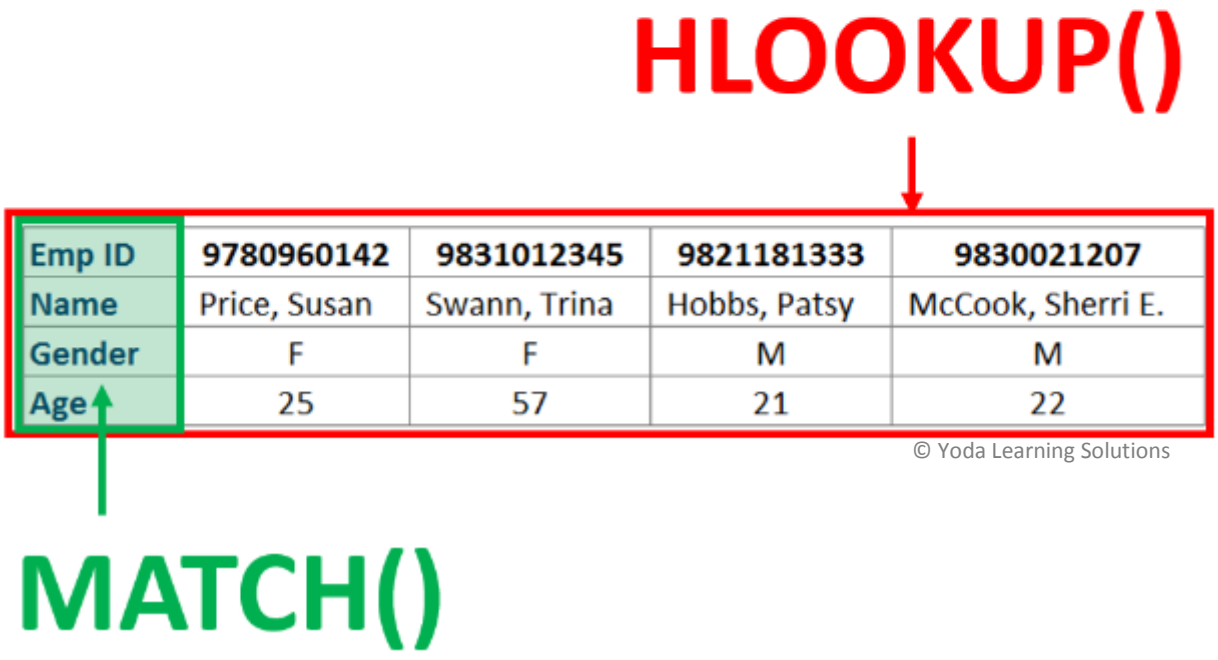
Emp ID	Name	Gender	Age
9780960142	Price, Susan	F	25
9831012345	Swann, Trina	F	57
9821181333	Hobbs, Patsy	M	21
9830021207	McCook, Sherri E.	M	22

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

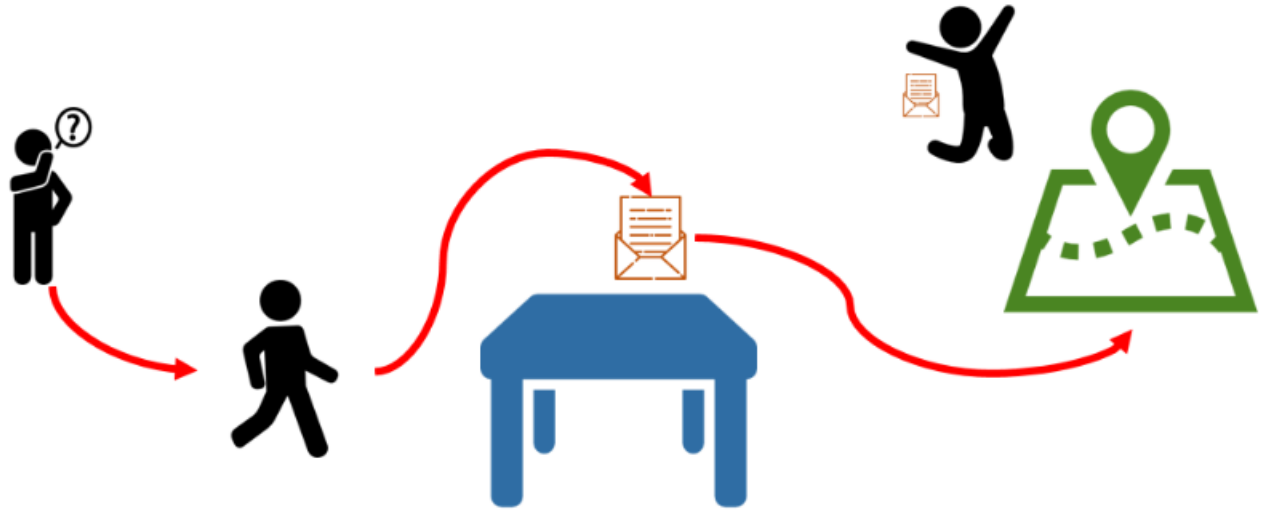
VLookup + Match is used in dataset with 2-variables as placed in the given format. The two defines the answer which is placed inside the table.	

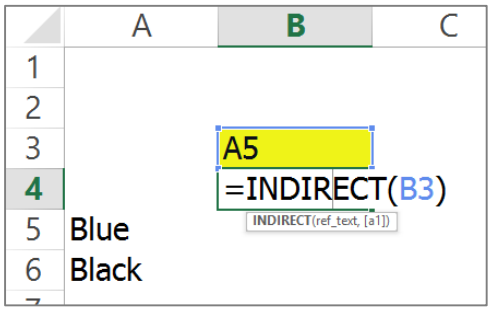
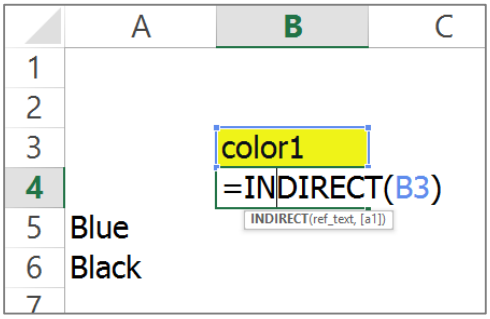
#1112: 2-D Lookup (Horizontal + Vertical) - HLOOKUP w. MATCH





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

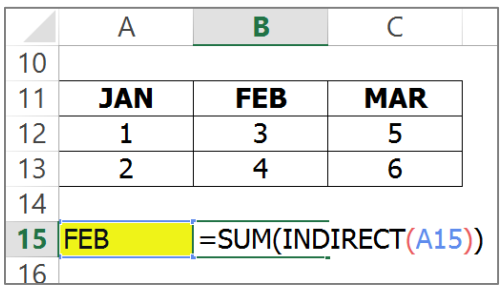


INDIRECT() w. cell reference	INDIRECT() w. named range
	
Solution in cell B4 is Blue	

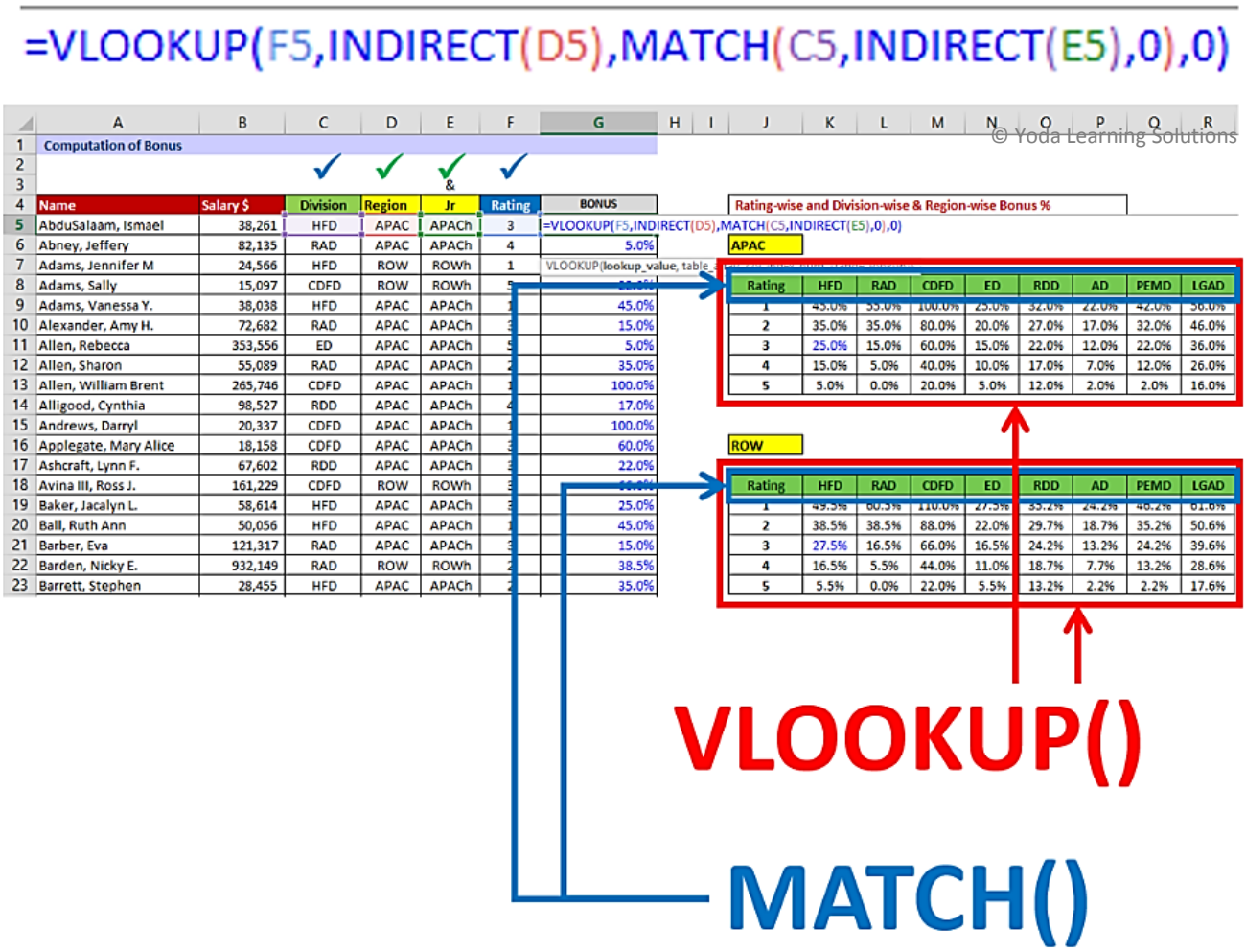
Note:

- 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 workbook is best avoided as it works only when all relevant workbooks are open - Yields a #REF! error if not done so.

Example:



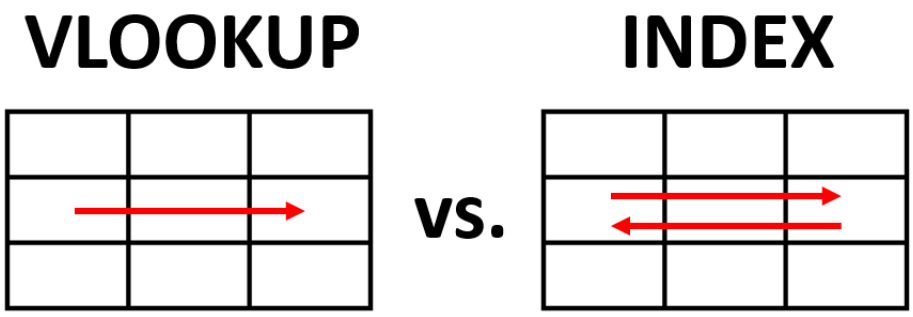
#1115 – 1116: 3-D Lookup - VLOOKUP() w. MATCH() w. INDIRECT()

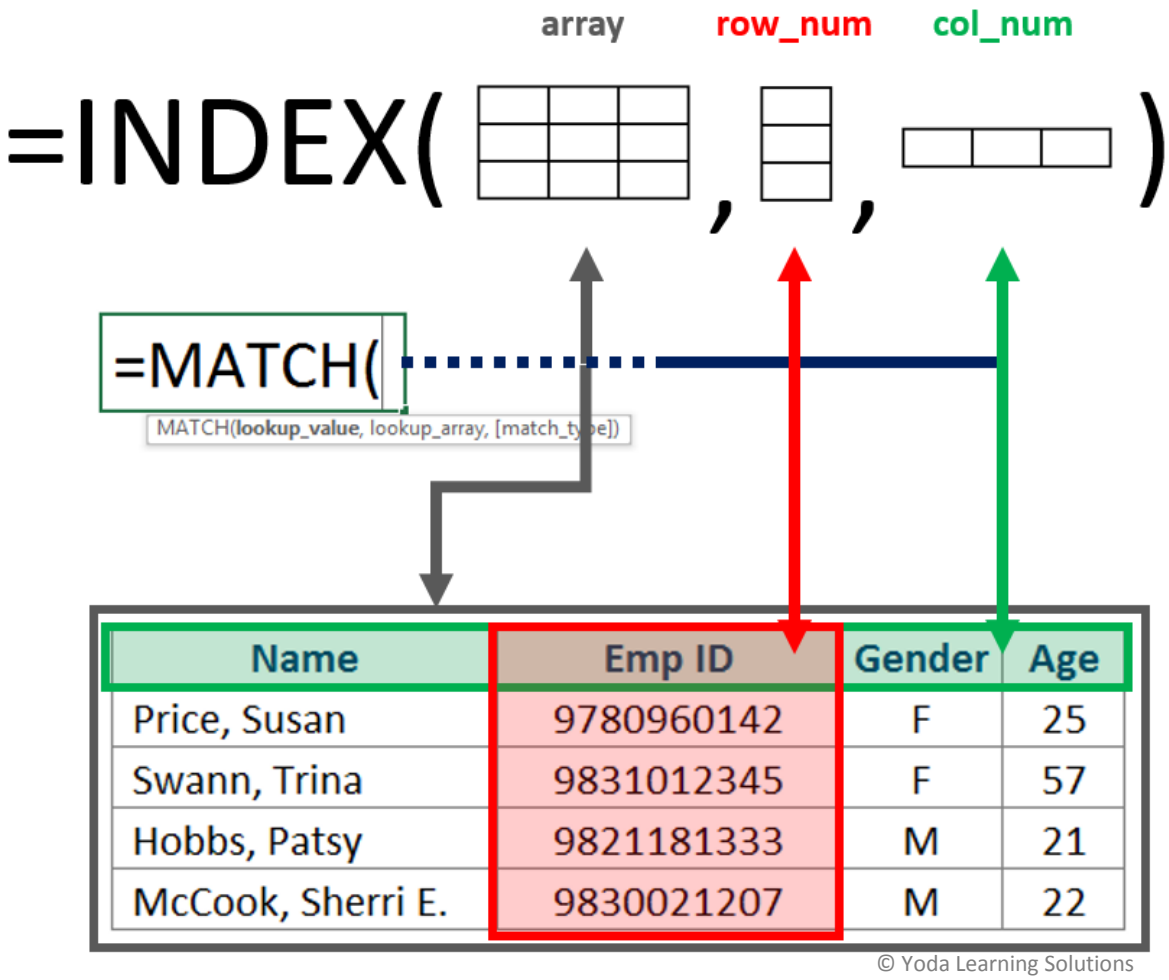


Important Note: Using =INDIRECT() with Naming for 3-D Lookup. E.g. APAC (Sr.) and APACH (Jr.)

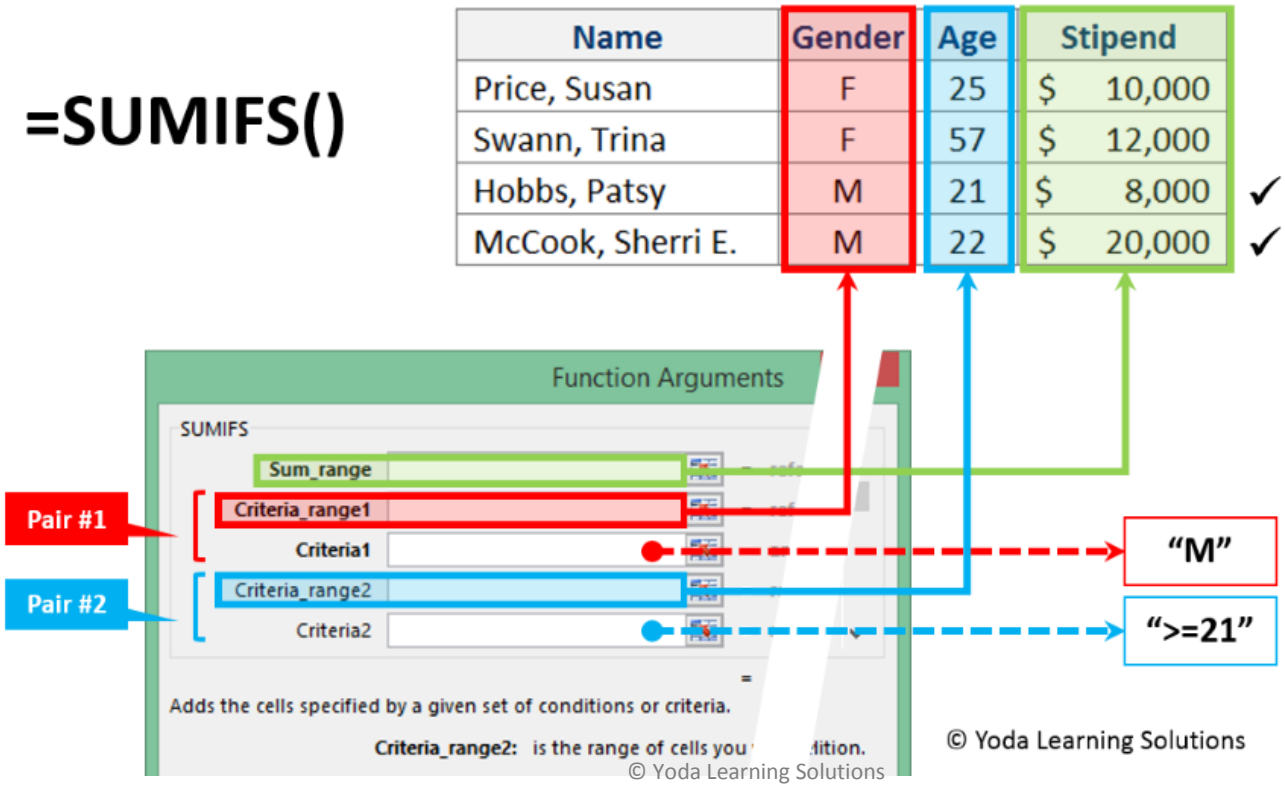
#1117 – 1119: 3 Reverse Lookup - INDEX() w. MATCH()

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.





#1120 – 1121: SUMIFS(): Conditional Summation



- Solution: 28,000

Note:

(1) Use <F4> to lock *Criteria_range* & *Sum_range*

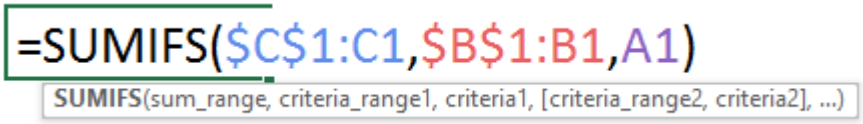
(2) Maintain SAME HEIGHT of RANGES

(3) SUMIFS can accept multiple criteria (127 !) whereas SUMIF can accept only one

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

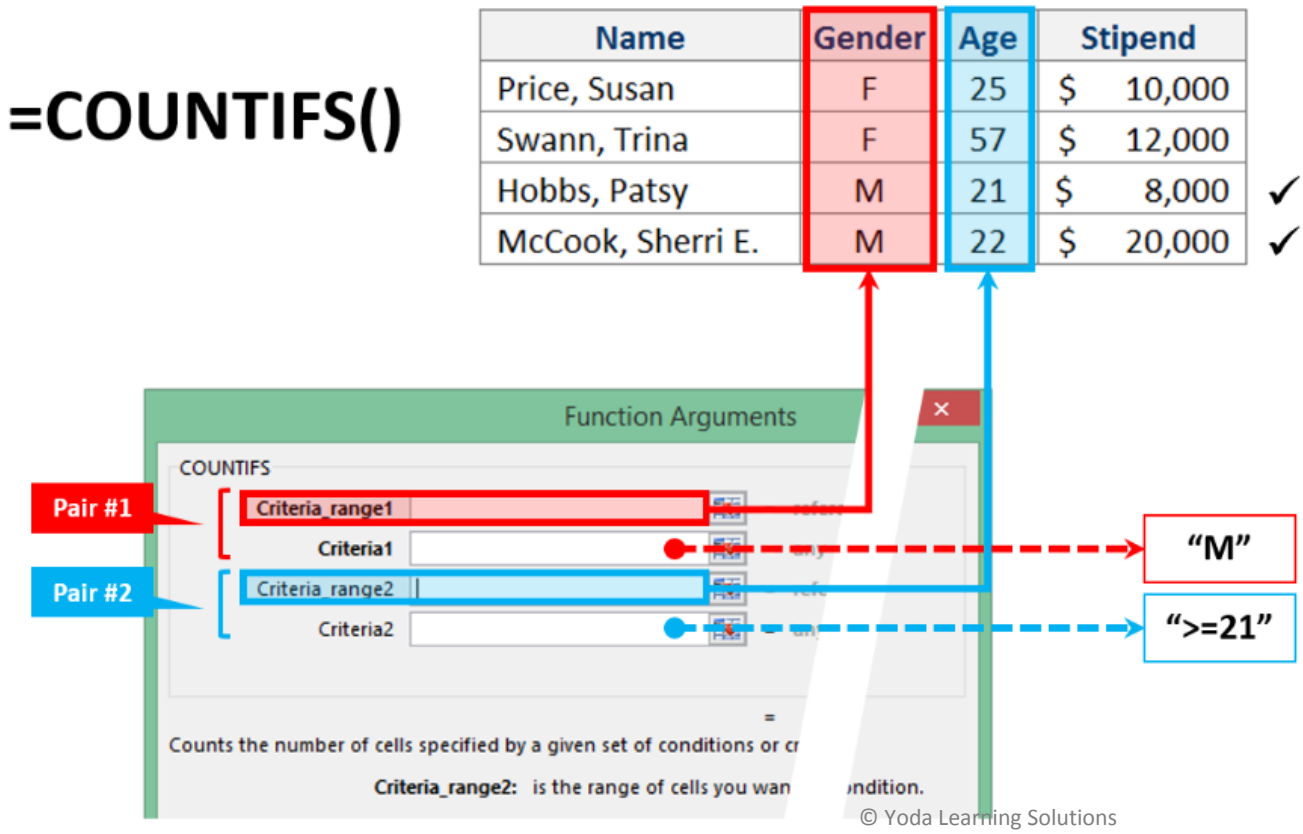
- If cell A1 contains "21-May-2001", then the *Criteria_1* can be **">="&A1** indicating date 21-May-2001 onwards. The operators (> < = etc.) has to be enclosed in a pair of double-quotes and concatenated (&) with the cell reference containing valid date(s).

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



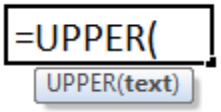
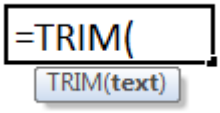
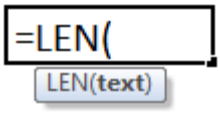
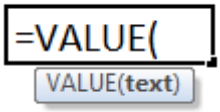
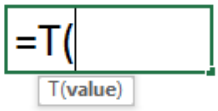
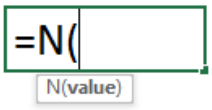
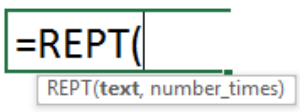
- Careful use of relative references ($) can help yield **differential cumulative running total**

#1124: COUNTIFS() - Single/Multiple Criteria: Duplicate Count, Instance No.

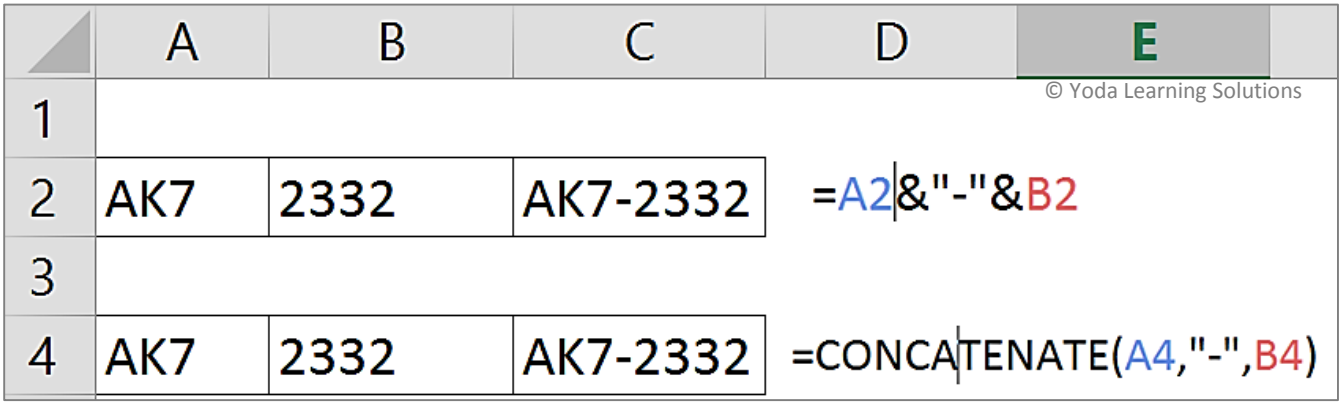


- Solution: 2
- Used for 2-way list-reconciliation, duplicate count E.g. **=COUNTIFS($A$1:$A$100,A1)**
- Used for Instance No./Occurrence No. **=COUNTIFS($A$1:A1,A1)**

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

	• Capitalizes the **first letter in each word** of a text value • E.g. Converts **"the man eats"** or **"THE MAN EATS"** TO **"The Man Eats"**
	• Converts text to uppercase • E.g. Converts **"the man eats"** or **"The Man Eats"** TO **"THE MAN EATS"**
	• Converts text to lowercase • E.g. Converts **"The Man Eats"** or **"THE MAN EATS"** TO **"the man eats"**
	• 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 " **HSBC Inc.** " **TO** "**HSBC Inc.**"
	• Returns the number of characters in a text string • E.g. AK 47 =LEN(___) = 5
	• Converts "a number stored as text" to a number • "a number stored as text" is recognized as 0 for computations
	• If value is or refers to text, T returns value. If value does not refer to text, T returns "" (empty text).
	• 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")
	• Repeats a string / character specified no. of times • E.g. =REPT("X",3) will yield XXX

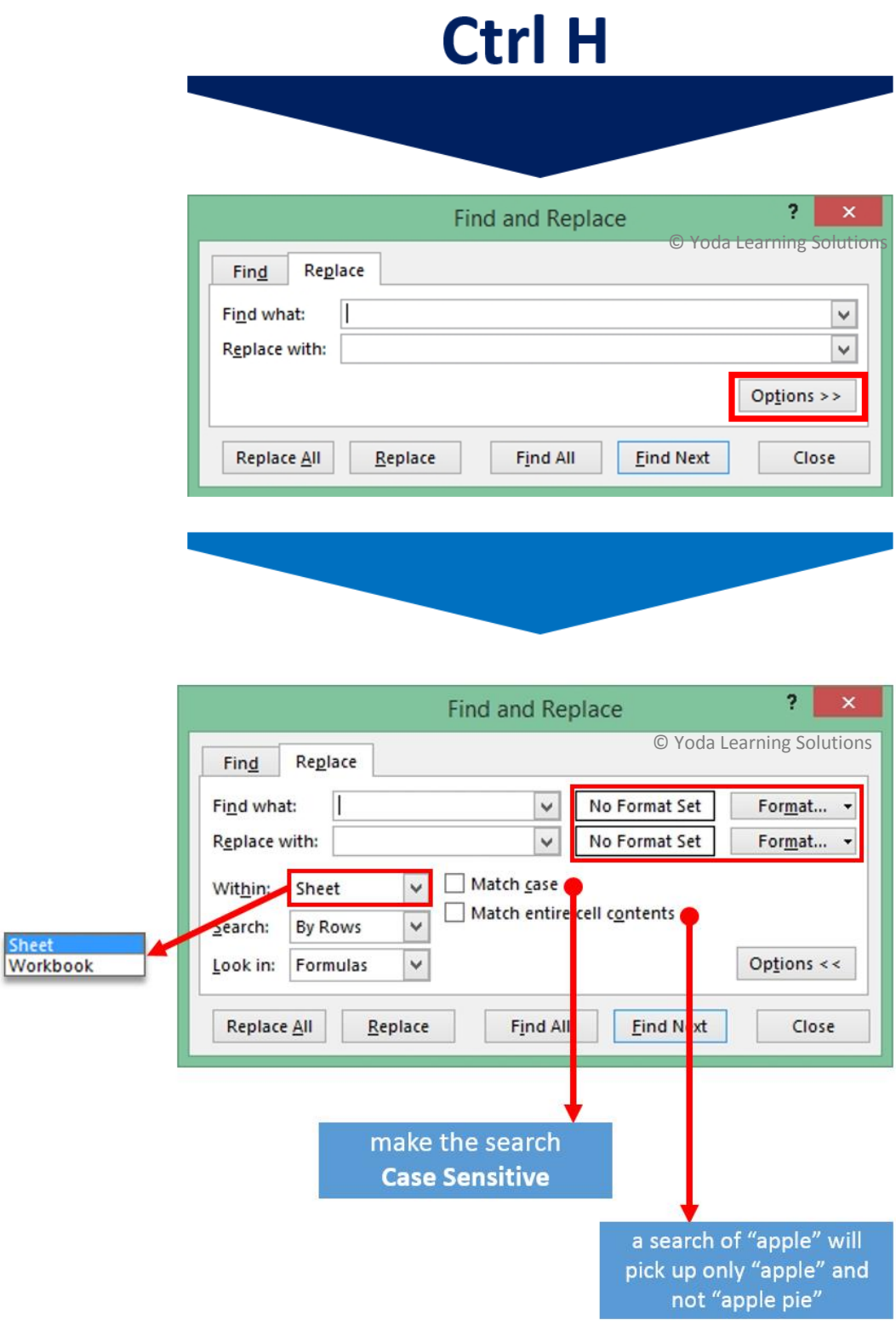
#1207: Joining data strings using CONCATENATE, &



Note:

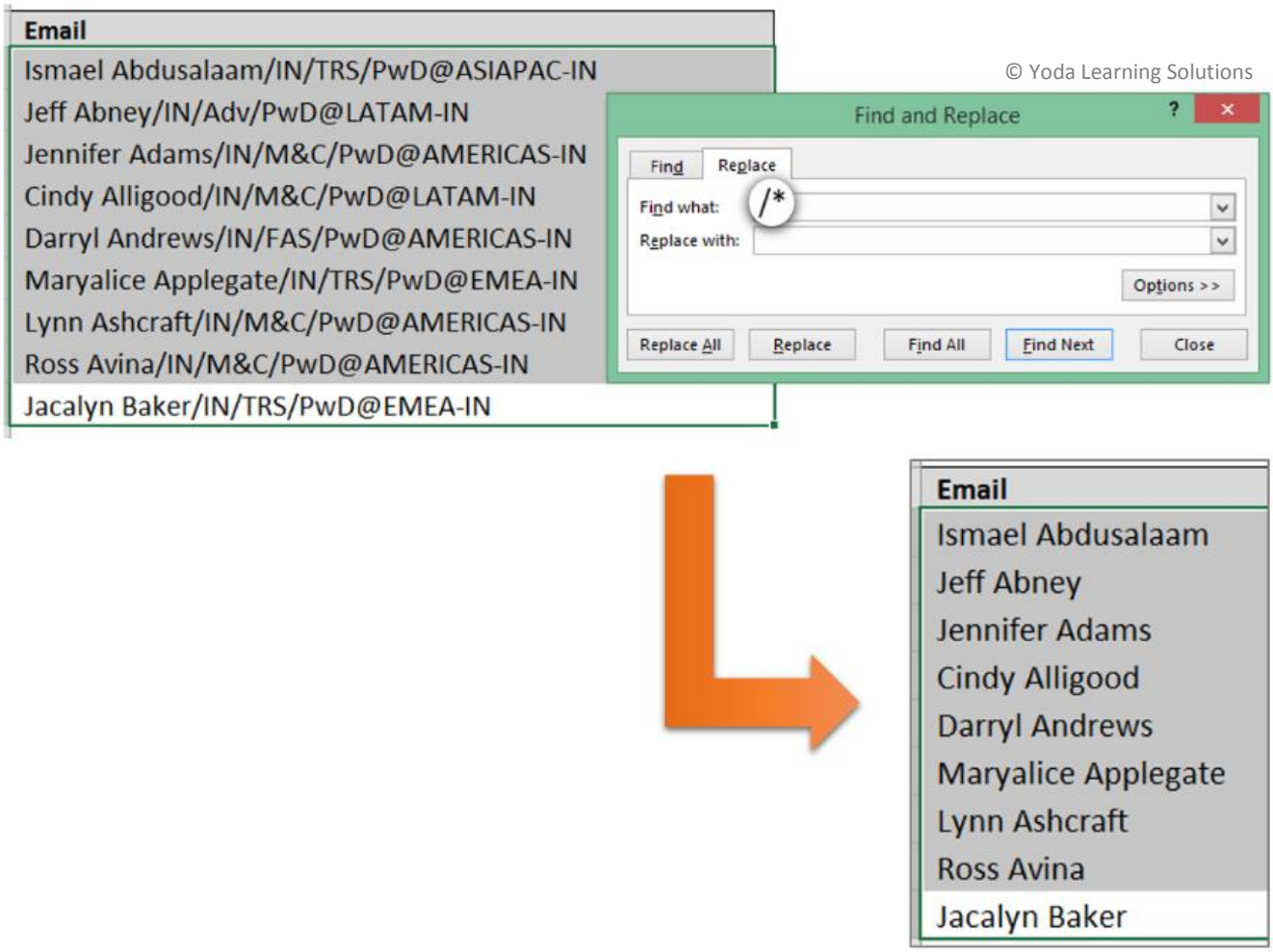
- Both of the above approaches yield the SAME output
- Any external text, number, symbol must be enclosed in a pair of double quotations. E.g. " "
- =TEXT() may be used if combining Dates. E.g. ="Today's date is " **&** TEXT(A2,"dd-mmm-yy")

#1208 – 1209: Find & Replace – Basics



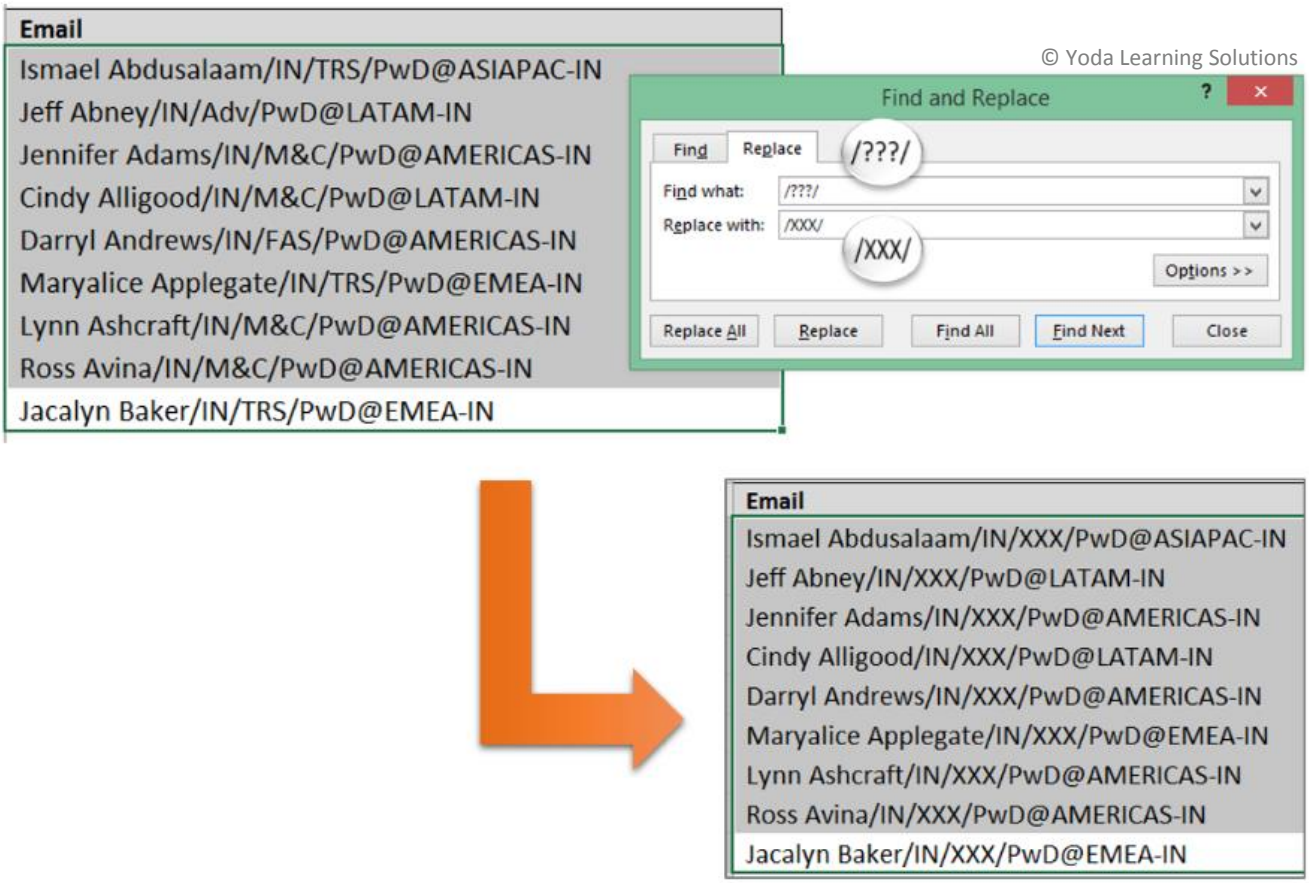
#1208 – 1209: Find & Replace – Using Wildcard characters (* ?)

*	Asterisk (*) : Any number of characters



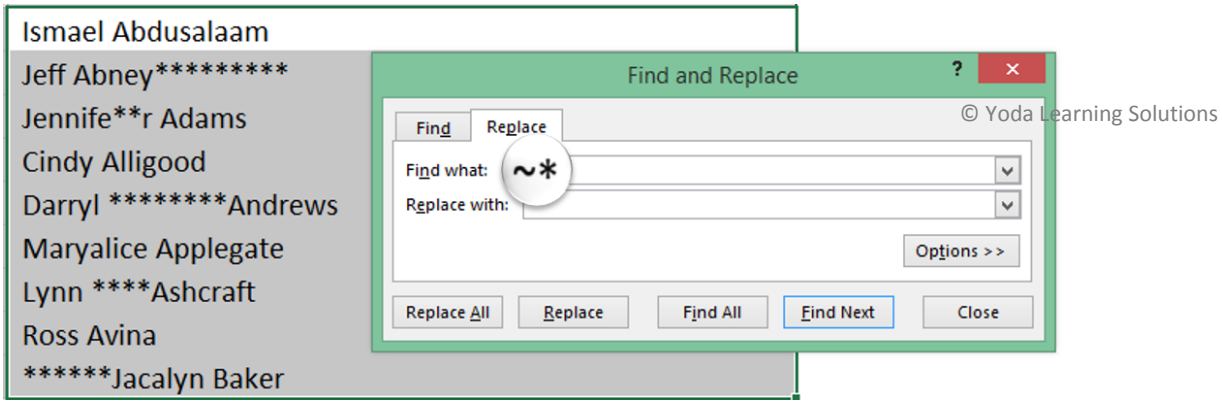
#1208 – 1209: Find & Replace – Using Wildcard characters (* ?)

?	Question (?) : Any one character (single)

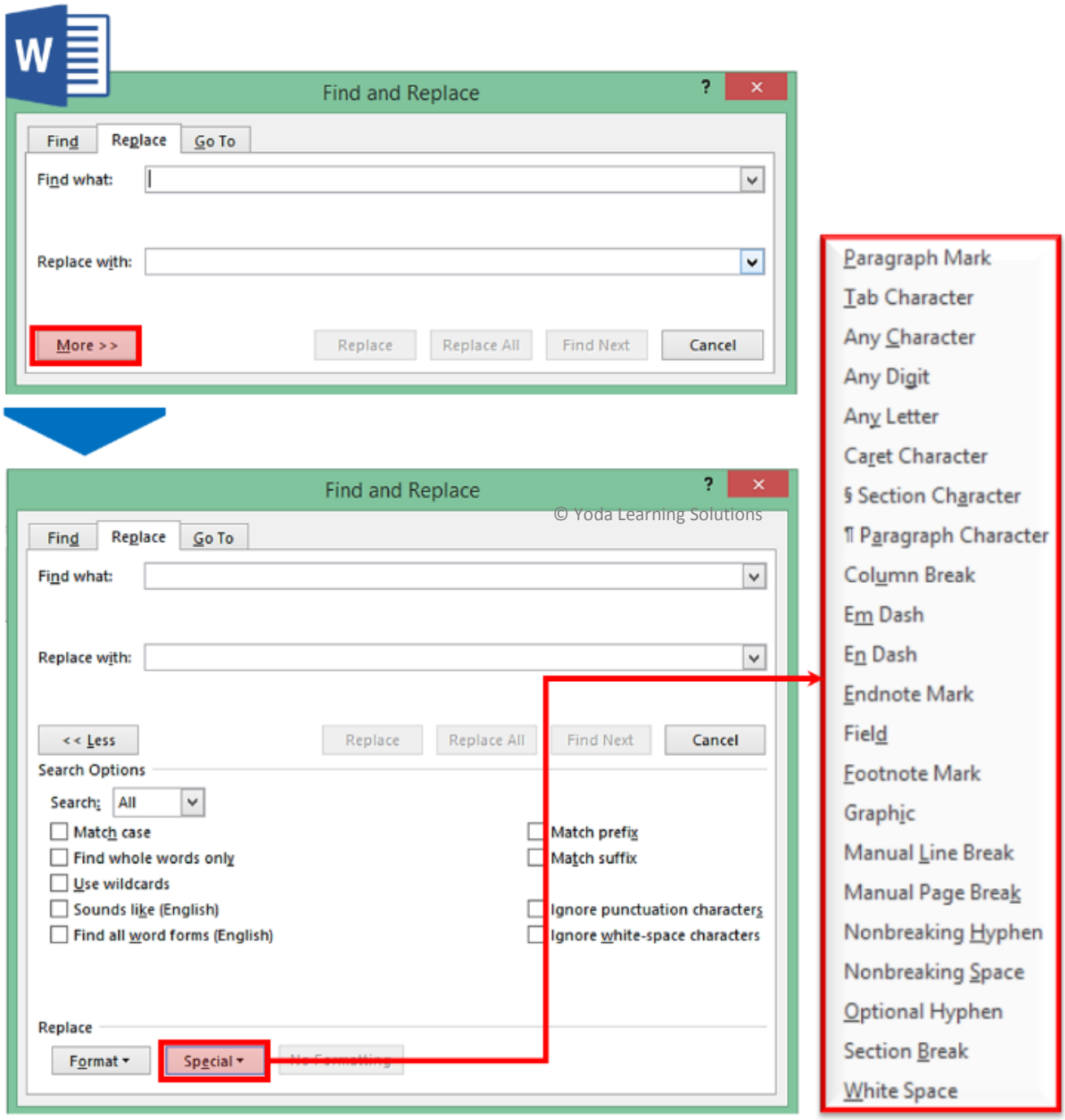


#1210: Find & Replace – Neutralising Wildcard characters to remove them from data

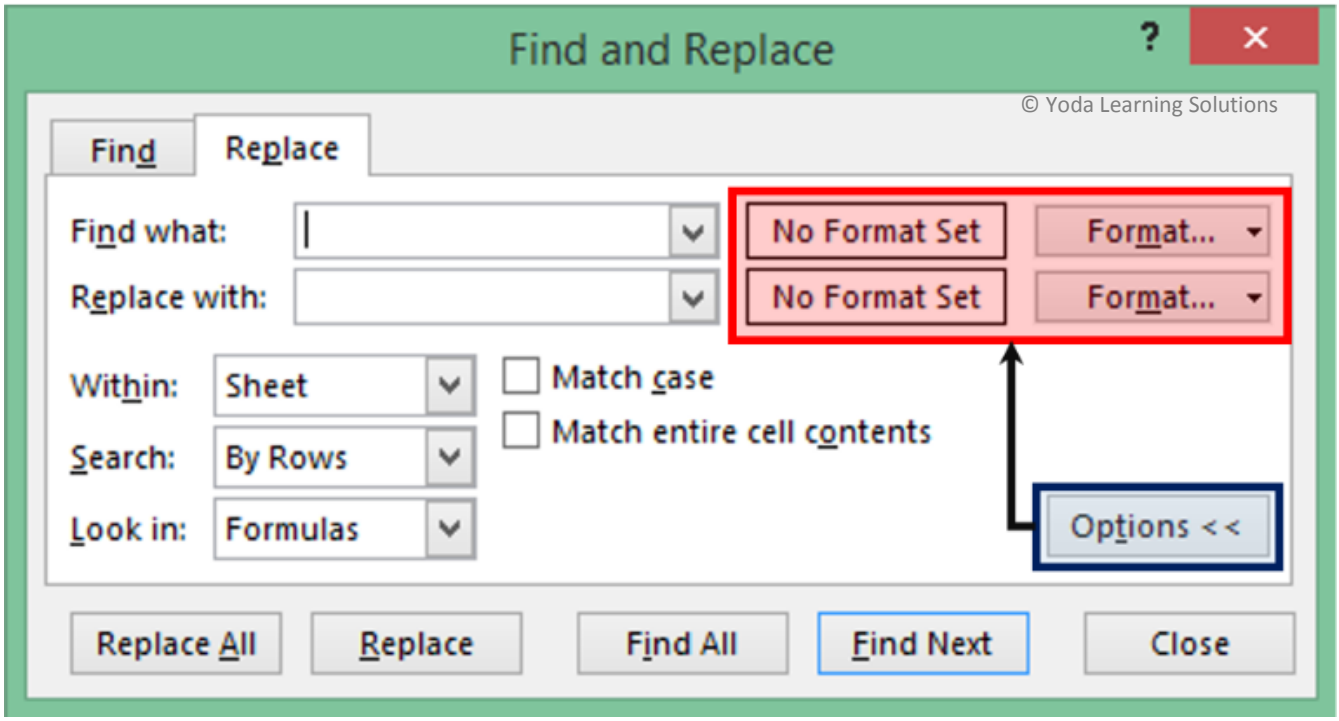
Important: Wildcard characters can be neutralized by pre-fixing tilde sign (~) which is placed above the TAB key:



#1211: Find & Replace – Word vs. Excel

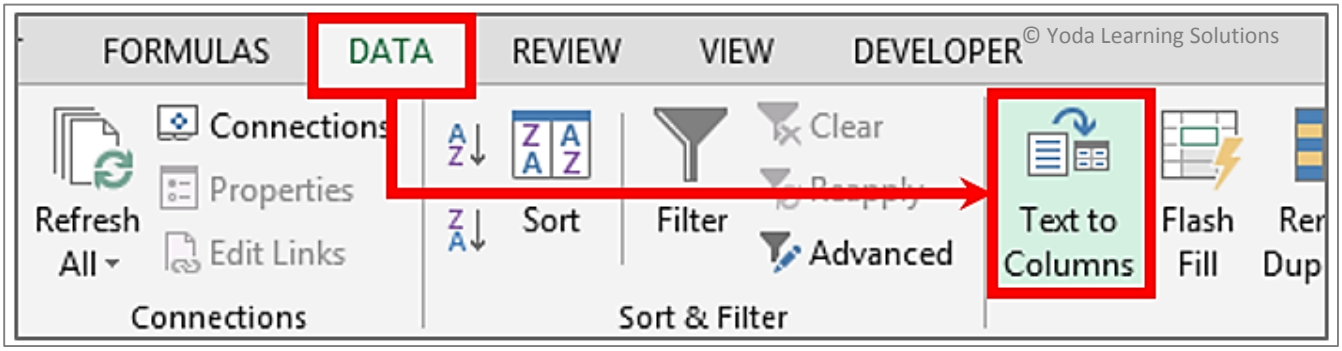


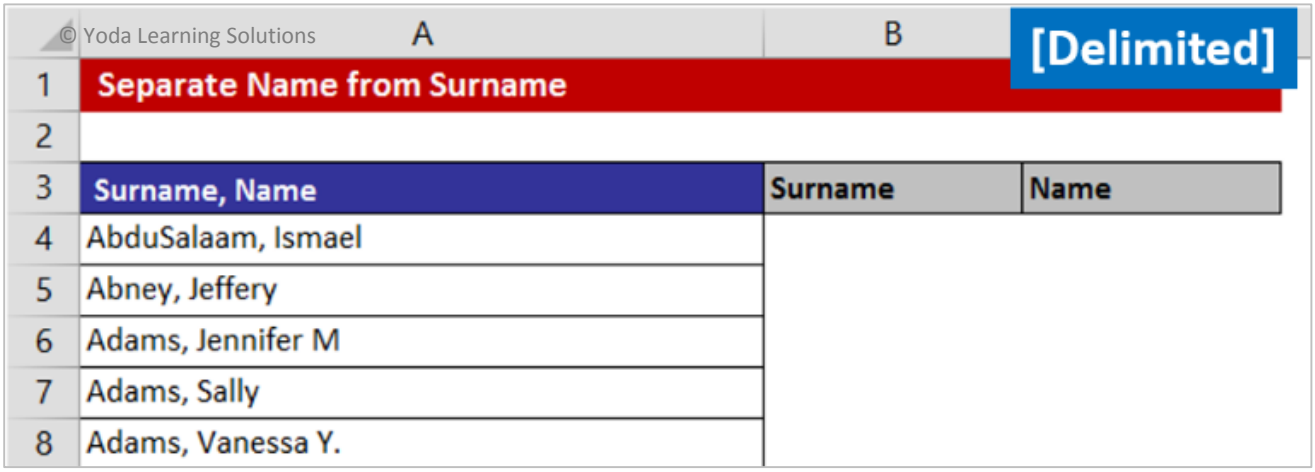
#1212: Find & Replace – Cell Format

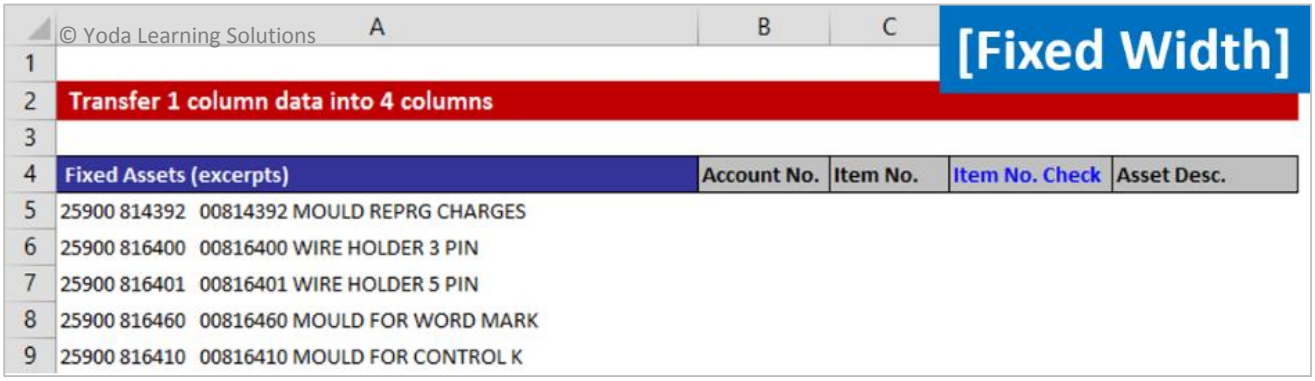


- FIND WHAT: Specify the **source** format
- REPLACE WITH: Specify the **target** format

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



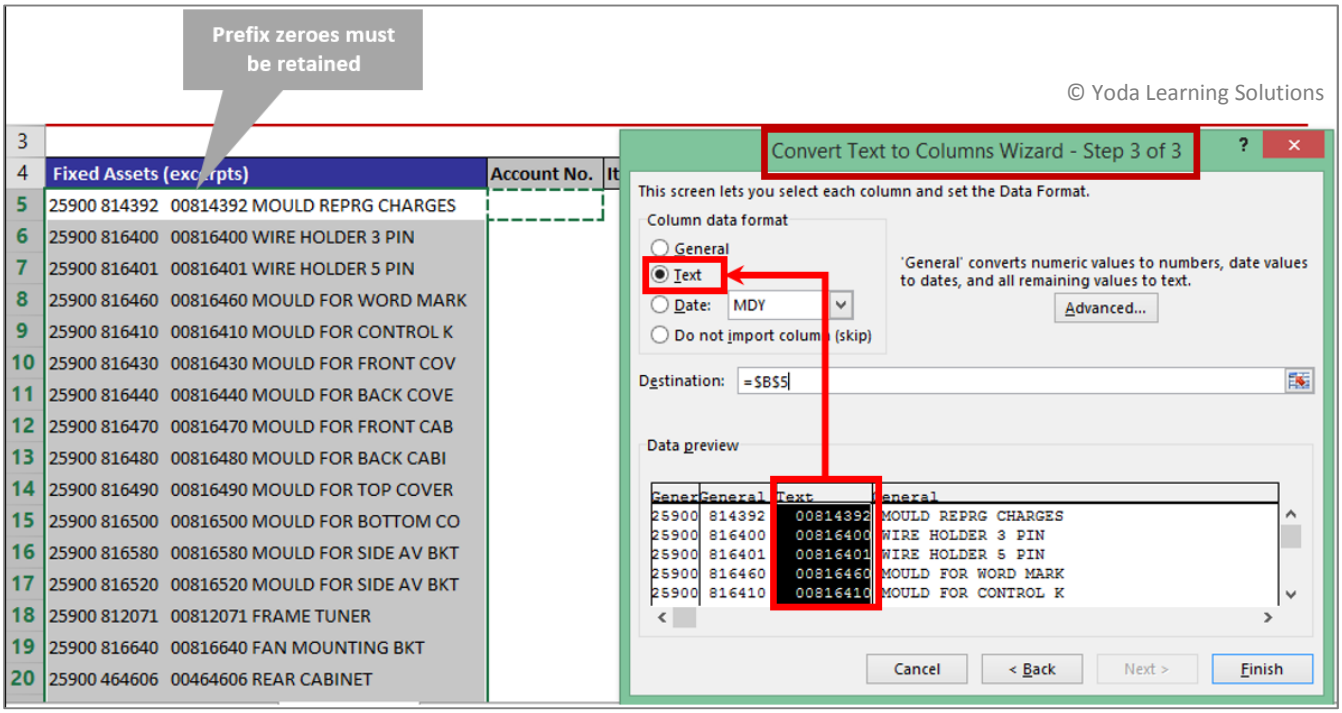




#1214: Text to Columns – Tricks

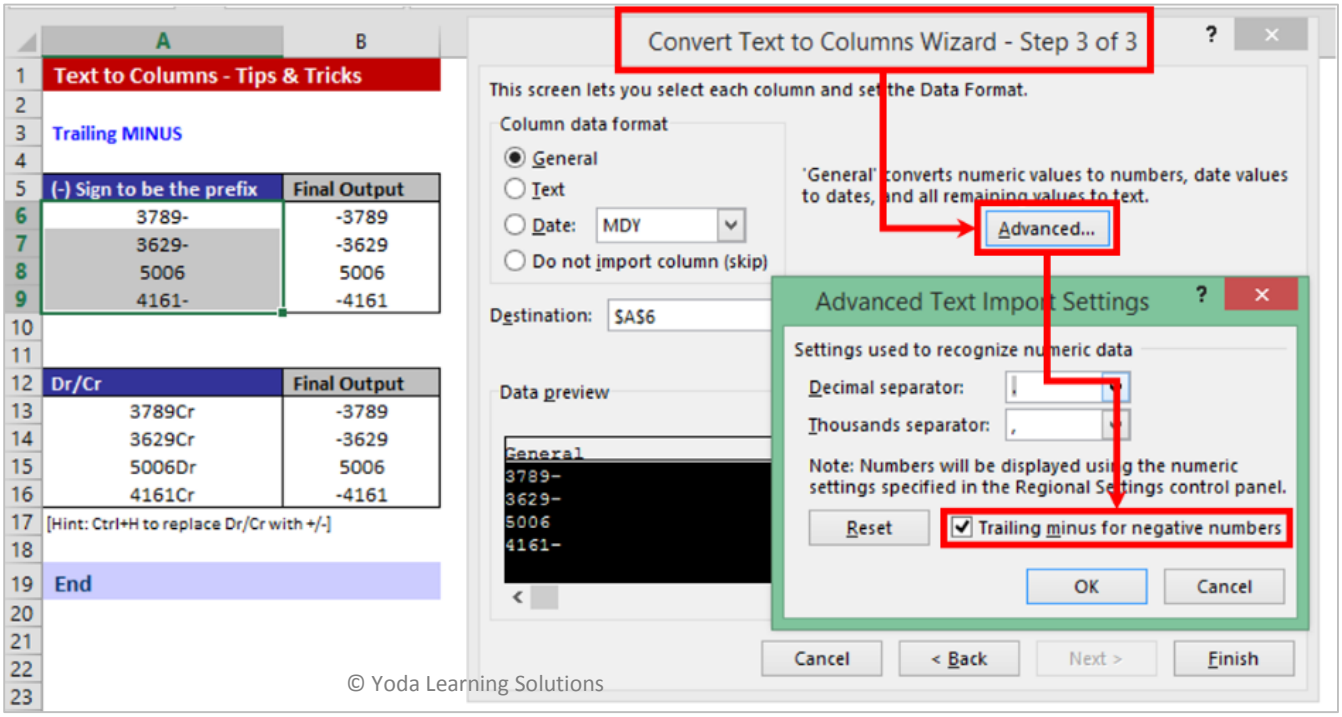
Trick 1: Ensuring a pre-defined format for exported data @ Step 3 of 3. Applications:

- 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



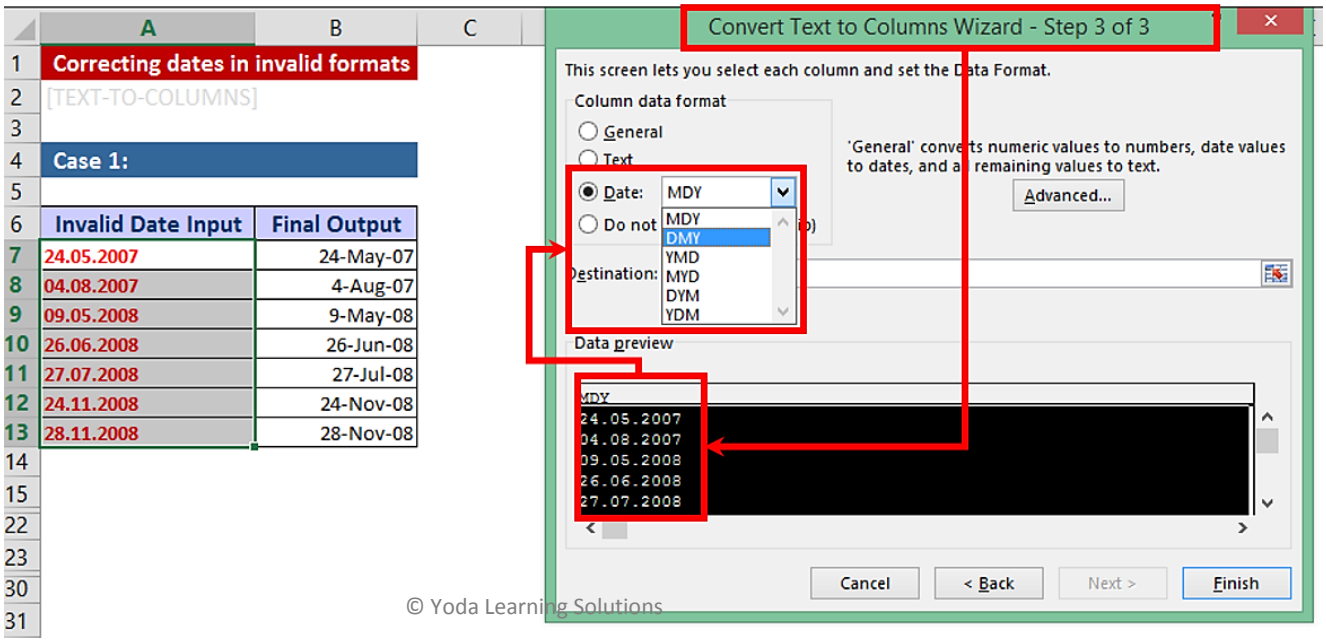
- For keeping intact a number string with Zeroes at the beginning (prefix): In Step 3 of 3, select the relevant "Column" under "Data preview" section → Column will blacken out → Choose "Text" radio button to store the output column in text form

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



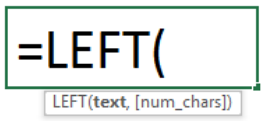
- Text-to-Columns is also used to rectify Numbers with **trailing negative (-) sign**s. E.g. From 212- to -212

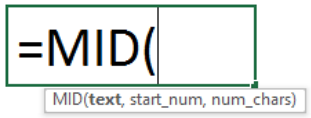
#1217 – 1218: Text to Columns – Correcting invalid Dates



- **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

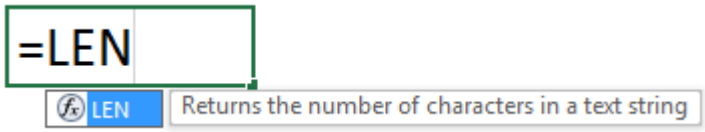
#1219-1221: LEFT(), RIGHT(), MID()





- Extract specified no. of characters from left, right or mid

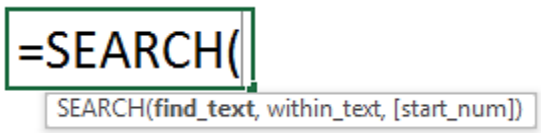
	A	B	C
1	AJCPP1312N	AJ	=LEFT(A1,2)
2	AJCPP1312N	2N	=RIGHT(A2,2)
3	AJCPP1312N	P	=MID(A3,4,1)



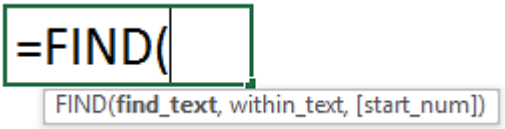
- "characters" Includes space

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

- Yield the starting position of the criteria



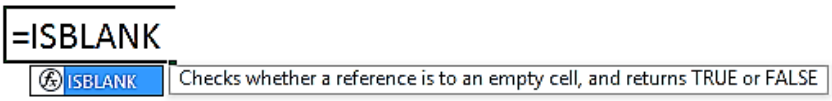
- Case Sensitive? – No
- Can use wild characters in search terms? - Yes

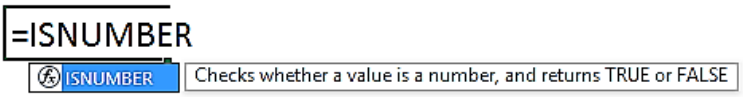


- Case Sensitive? – Yes
- Can use wild characters in search terms? - No

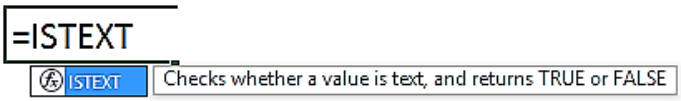
	A	B	C
1	user@yodalearning.com	**6**	=SEARCH("YO*",A1)
2	123456.....21		

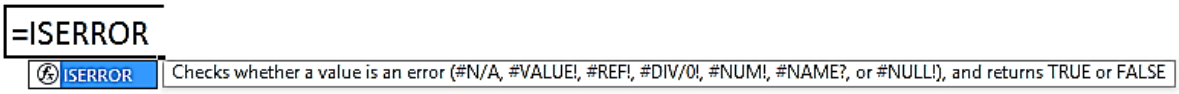
#1301: Logical formulas - generally used with IF()

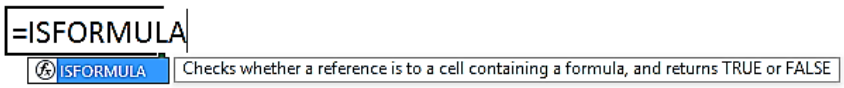




[Used to check the validity of dates as technically every valid date in Excel is a "number"]

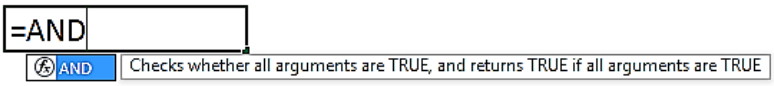


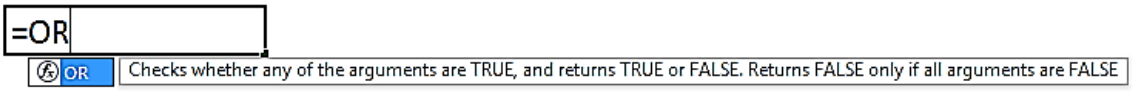


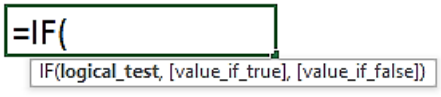


Others: ISNA(), ISREF(), ISERR()

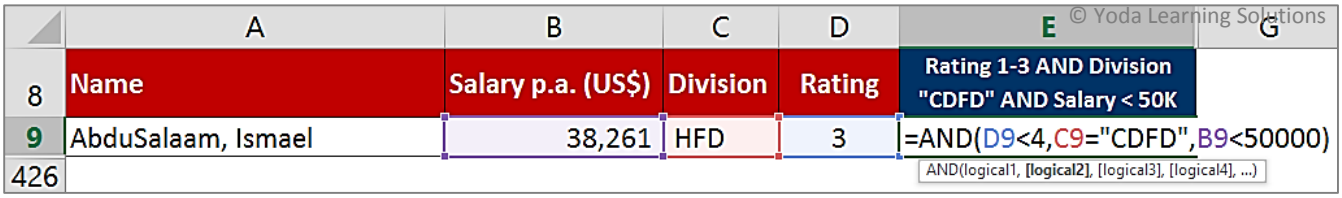
#1302-1304: Logical formulas – AND(), OR(), IF()



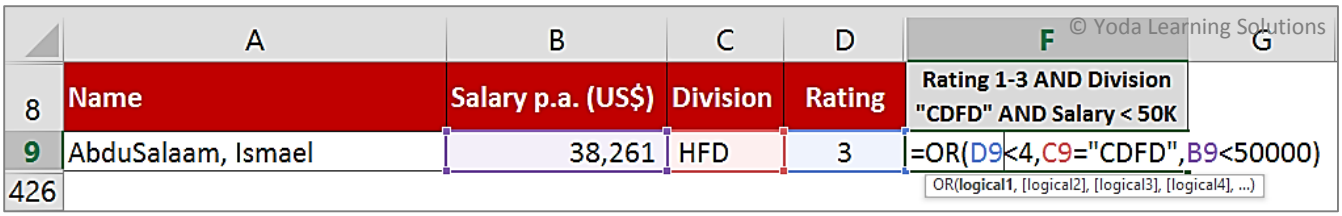




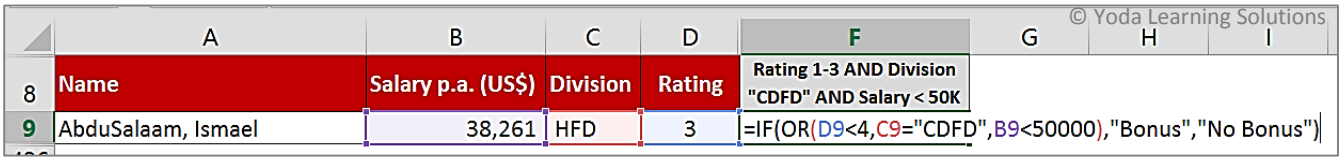
Examples:



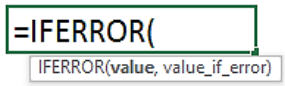
[FALSE because Division is not equal to "CDFD"]

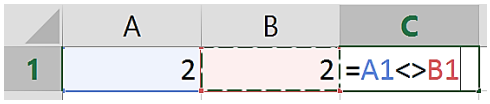


[TRUE because at least one of three conditions is TRUE]

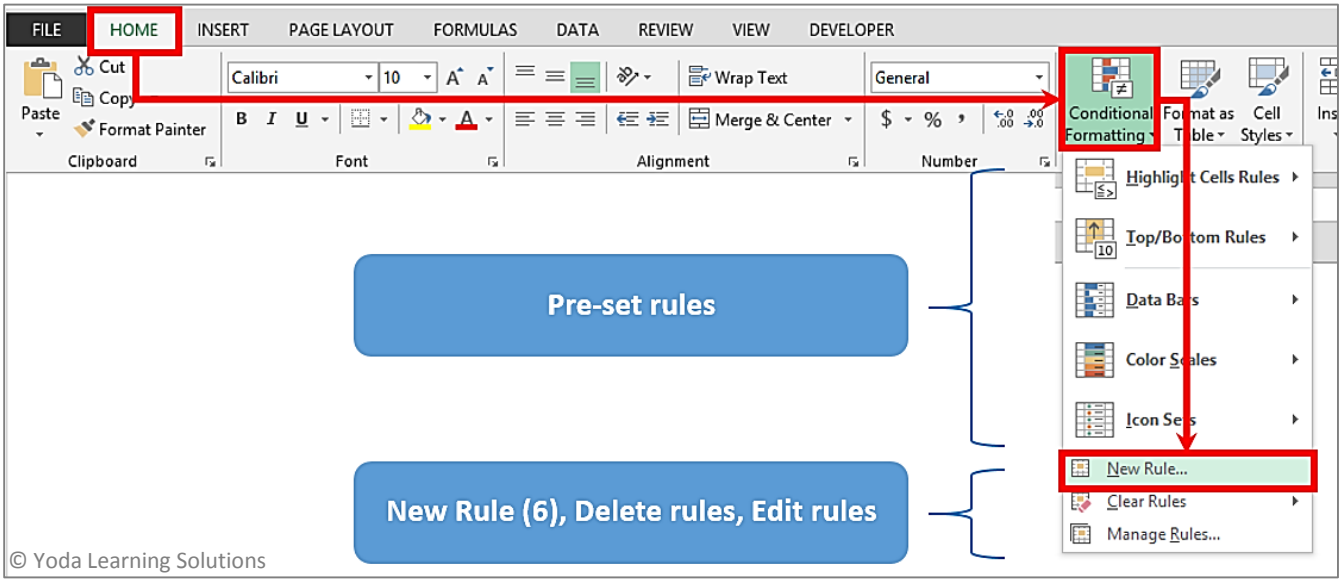


[Bonus]

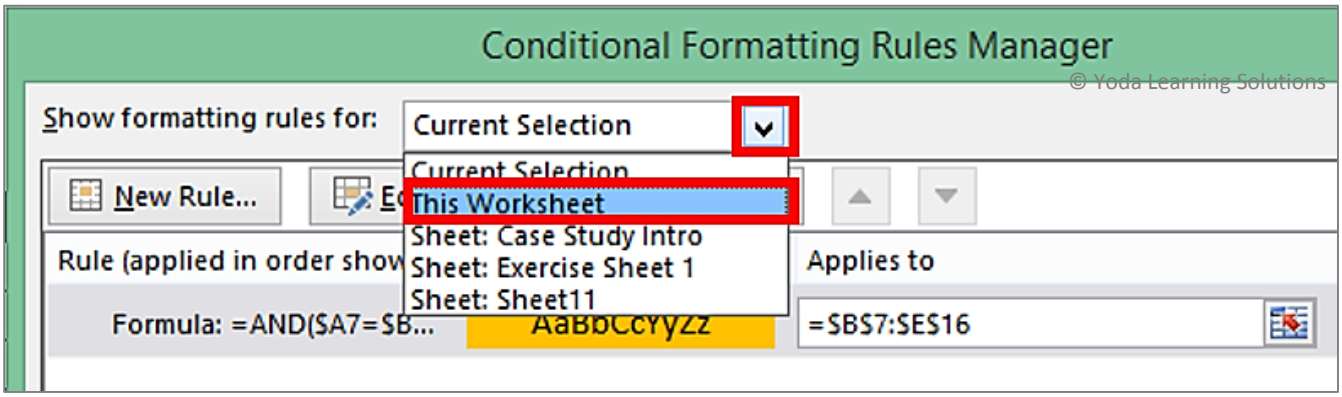
	▪ =IFERROR(VLOOKUP() , "Data Not Available") ▪ =IFERROR(VLOOKUP() , IFERROR(VLOOKUP() , "Data Not Available")) ▪ =IFERROR(VLOOKUP() , VLOOKUP())
▪ Prior to v. 2007 i.e. before IFERROR() was introduced, users used =IF(ISERROR(VLOOKUP()), VLOOKUP() , "Data Not Available") instead of =IFERROR(VLOOKUP() , "Data Not Available")	

	▪ Not equal is referred by <> ▪ Answer = FALSE

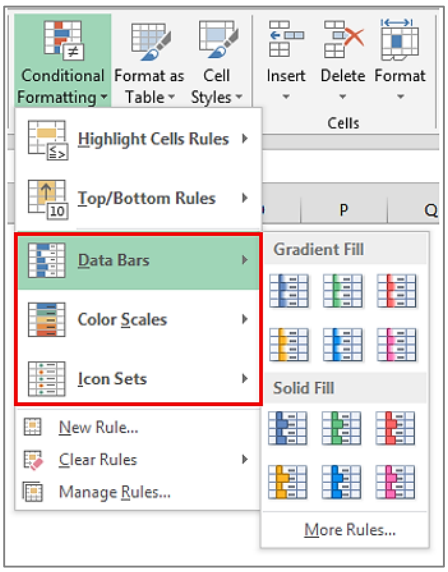
#1401-1403: Conditional Formatting



Manage Rules

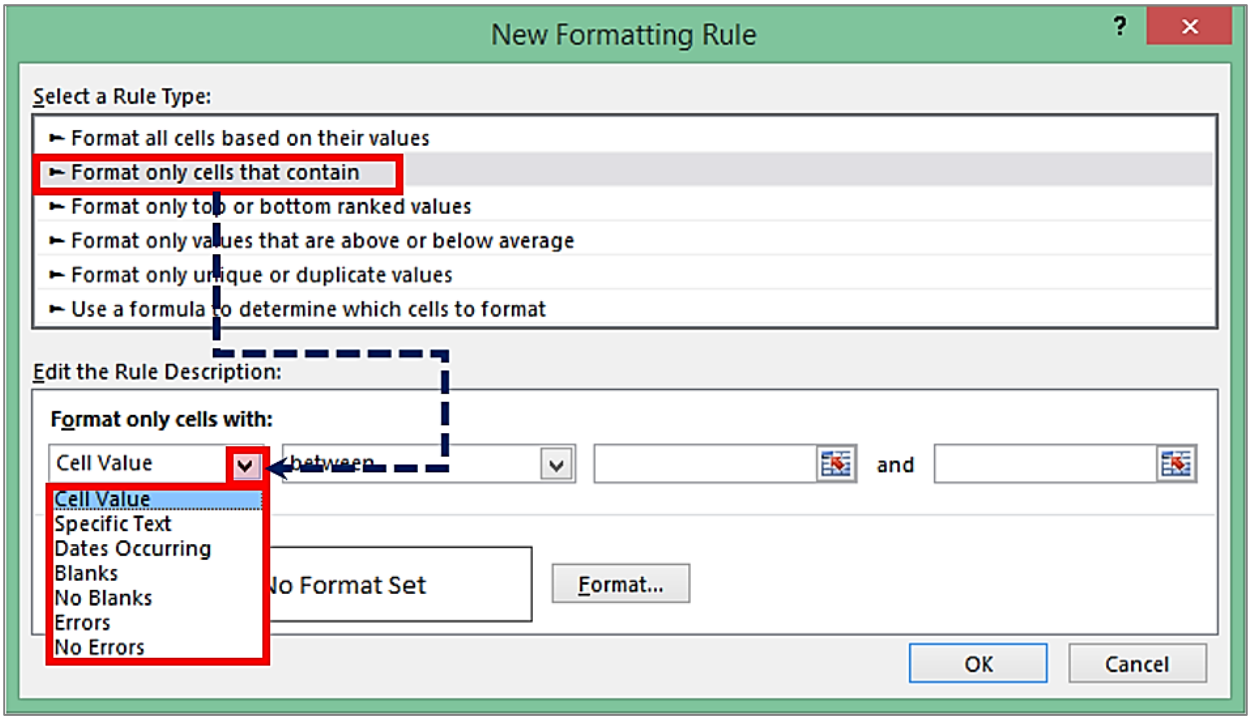


#1403: Conditional Formatting: Data Bars, Color Scales, Icon Sets

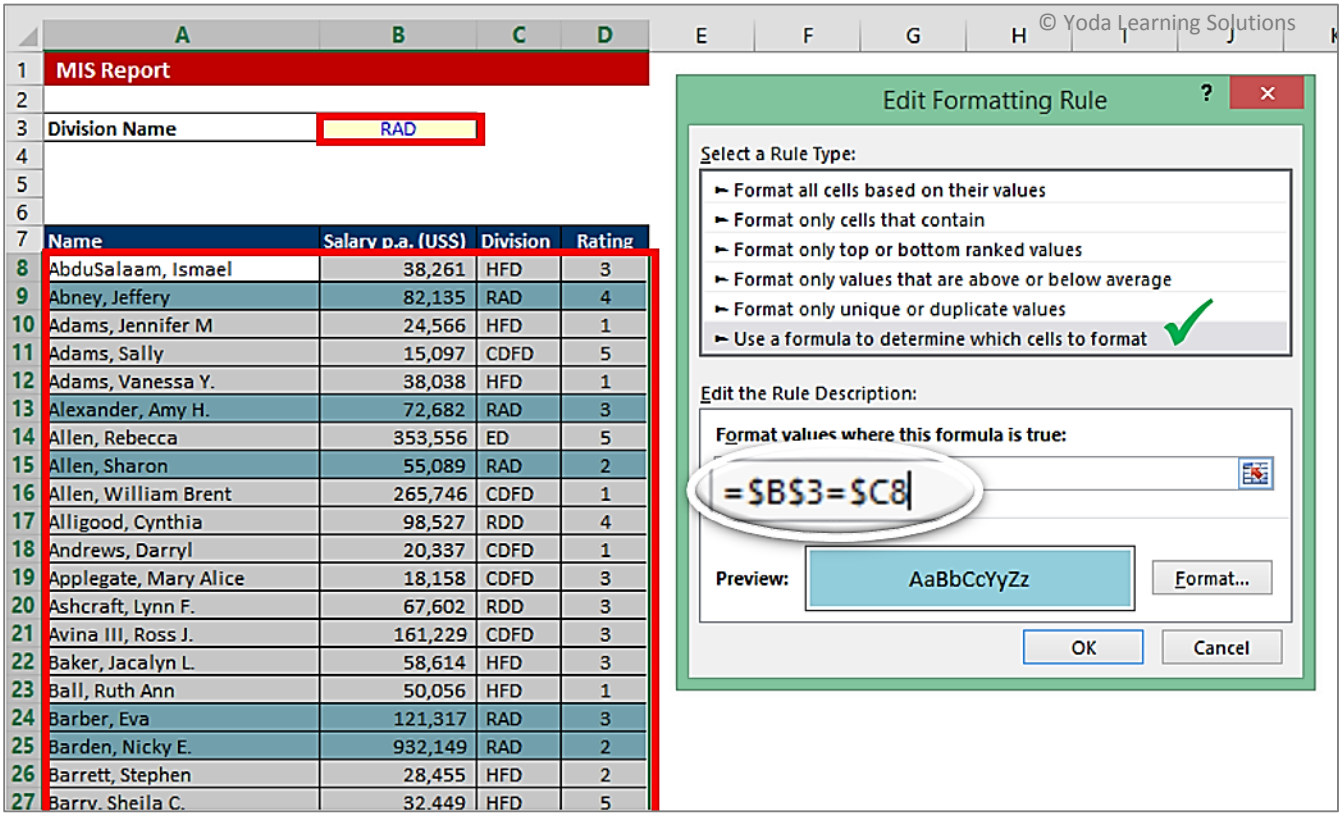


#1404: Conditional Formatting: Blanks, Errors, Values, Duplicates

Most commonly used "Rule":

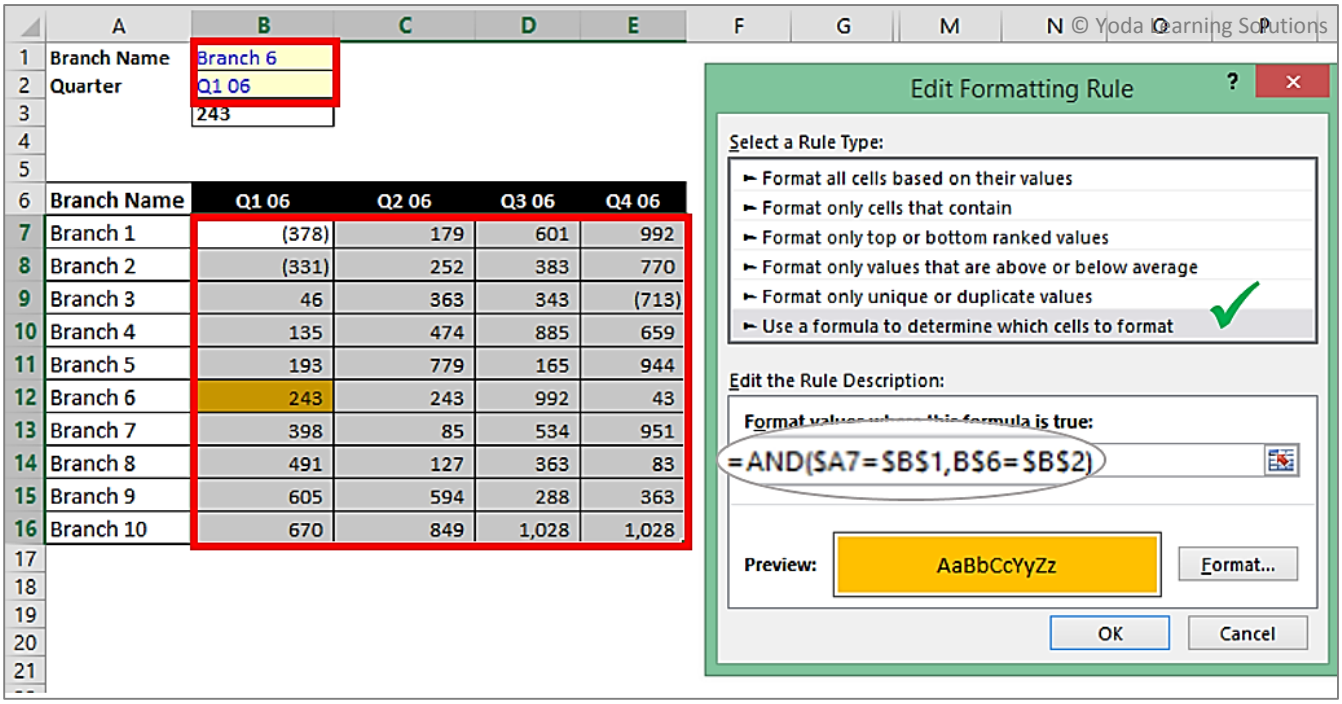


#1405-1407: Conditional Formatting: Formula based

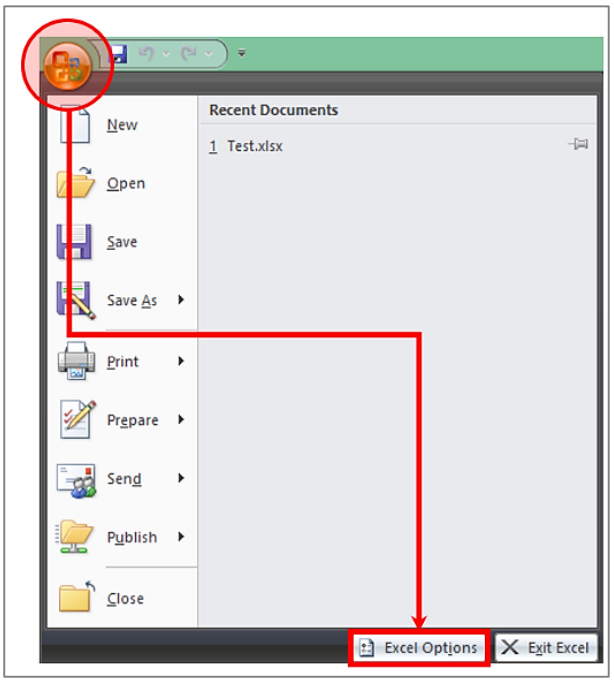
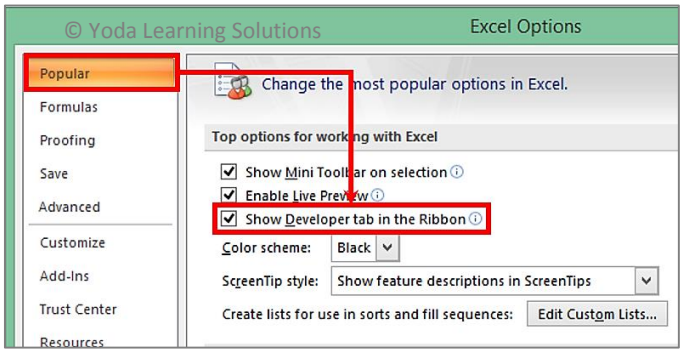


Important:

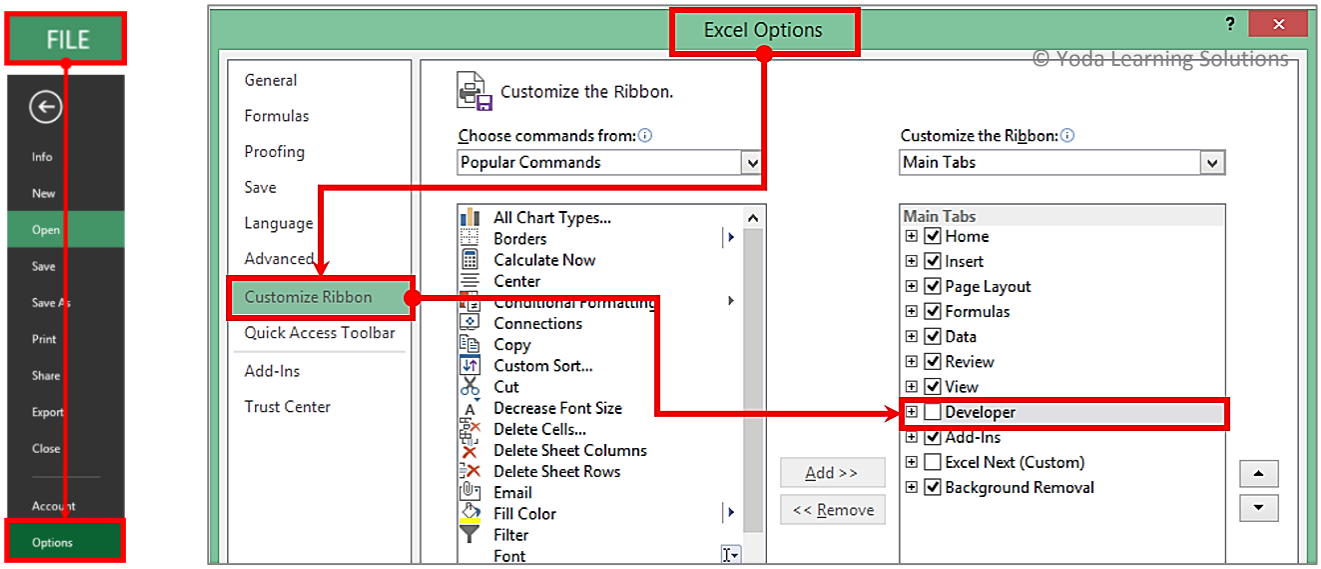
- Formula should yield TRUE or FALSE as an answer
- Relative references ($). E.g. $C8
- Formula in line with selection of data range. E.g. $C8 because selection of data range starts from the 8th row



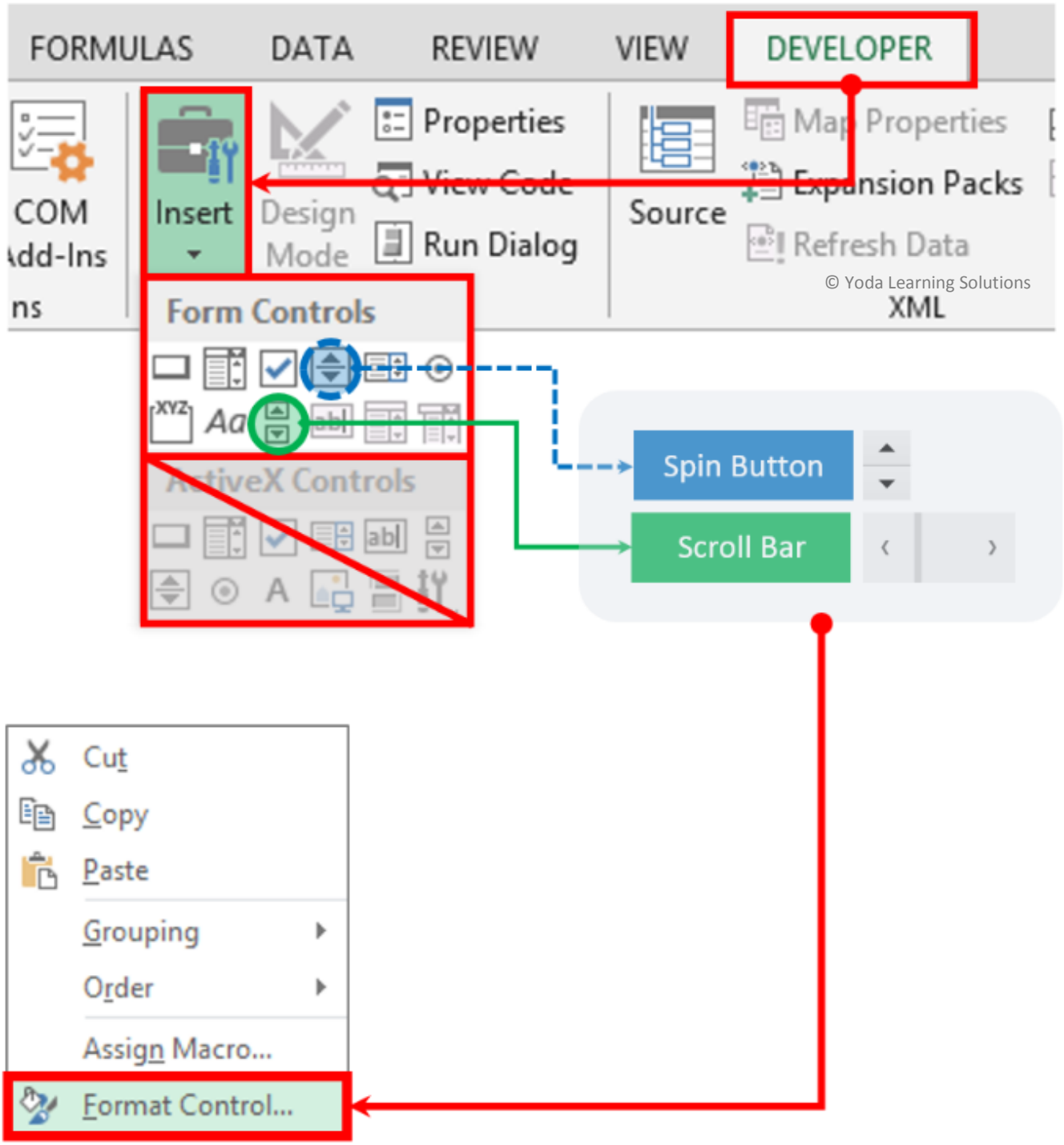
#1501: Activating Developer tab in v. 2007

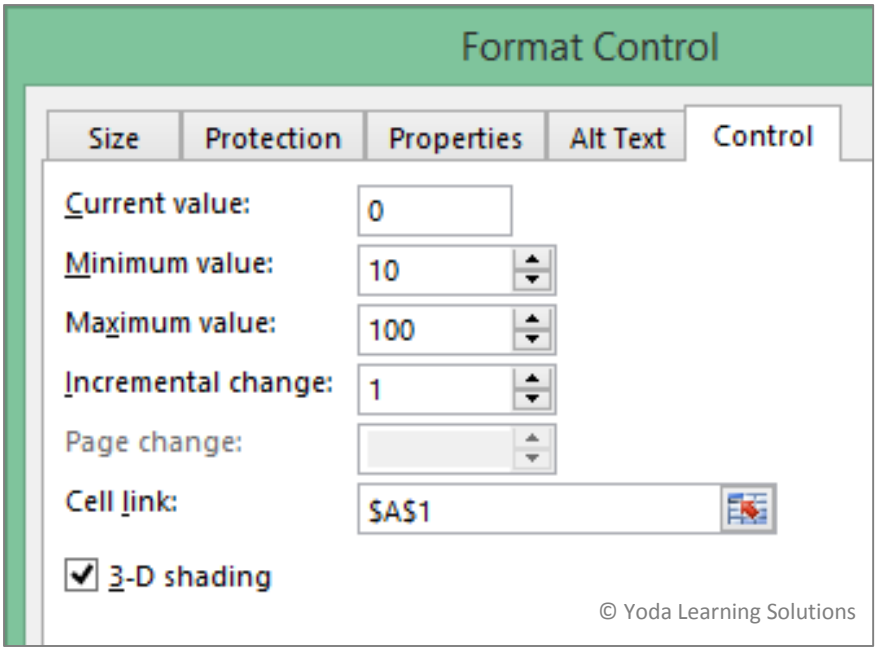
OFFICE BUTTON > EXCEL OPTIONS	POPULAR > Show Developer tab in the Ribbon
	

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



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

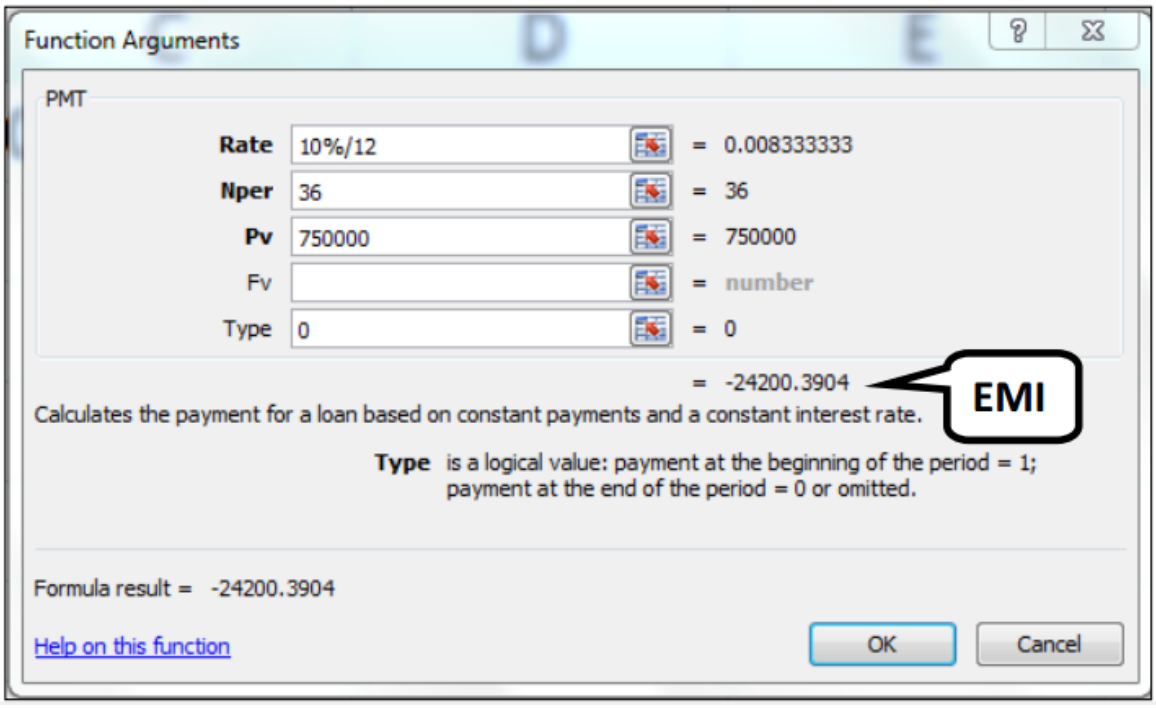




NB: The feature is used to change the input values (assumptions) at the click of a button. The referred "Form Control" buttons cannot accommodate decimal values, % values or a value outside 0-30,000 range.

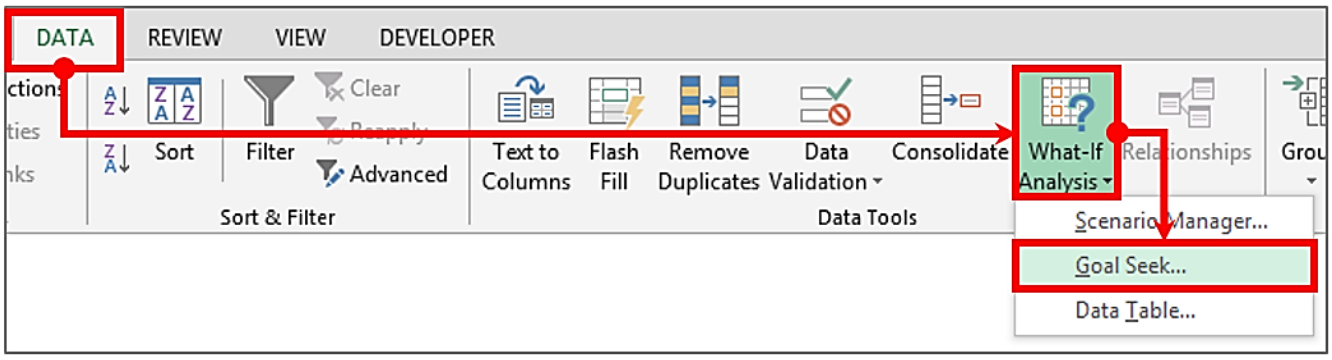
#1504: PMT

=PMT()

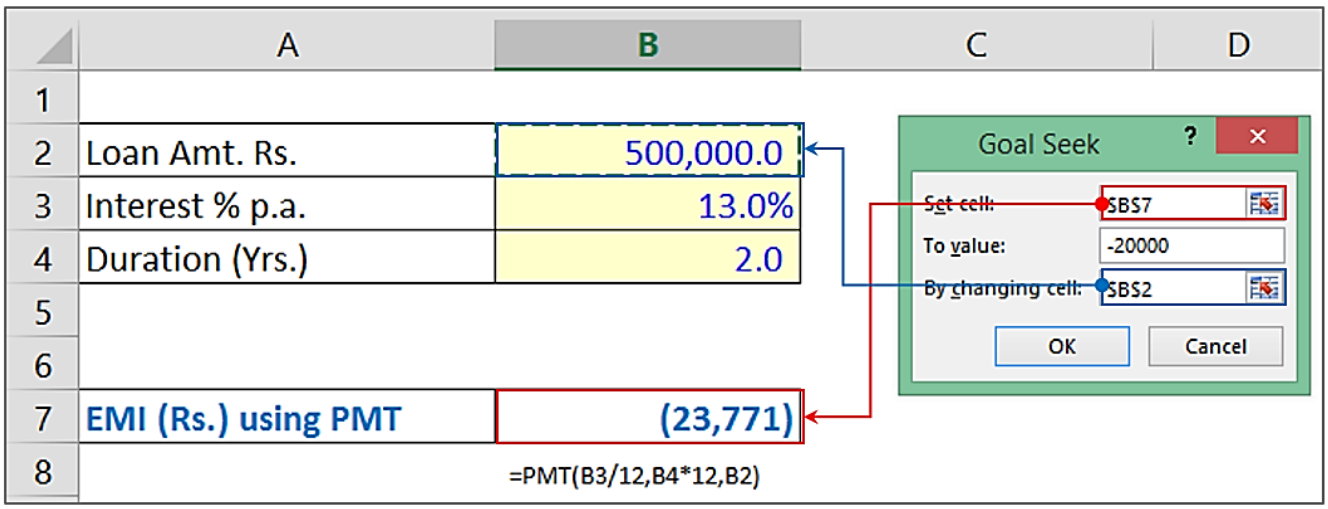


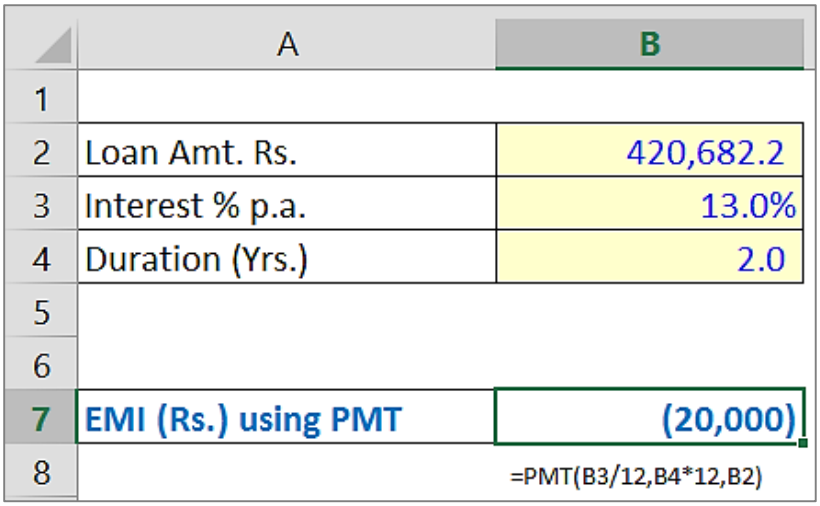
#1504: What IF Analysis – Goal Seek

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



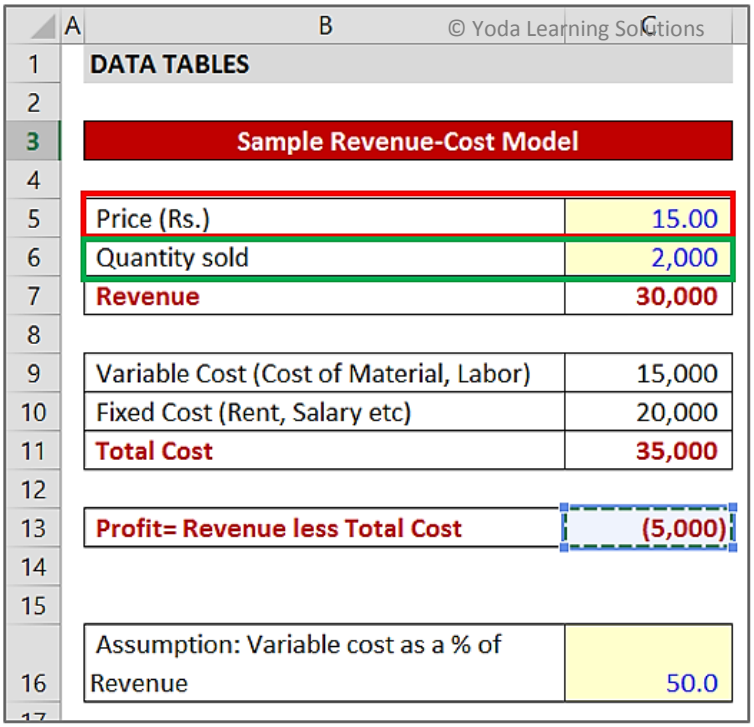
Here it's targeting an EMI of Rs. 20,000 and is trying to back calculate what can be the loan amount given the fixed duration and interest %.



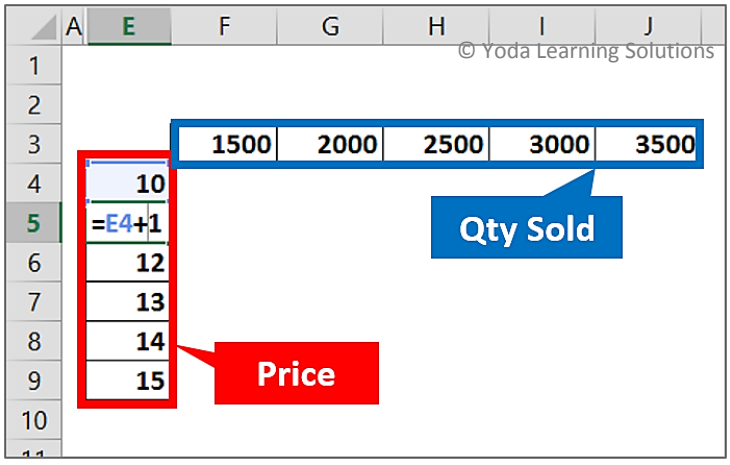


#1505-1506: What IF Analysis – Data Tables (Sensitivity Analysis)

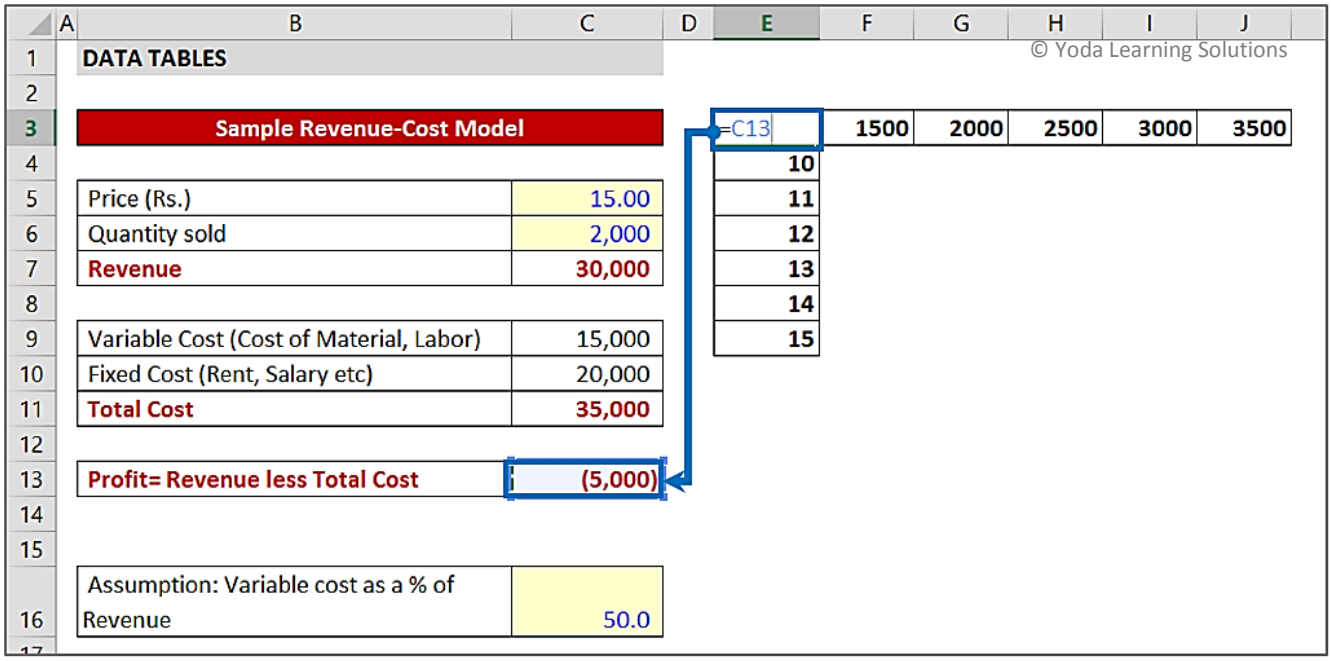
Price & Quantity leads to revenue. Cost component includes Fixed & Variable component. Comparing Revenue vs. Cost yields Profit.



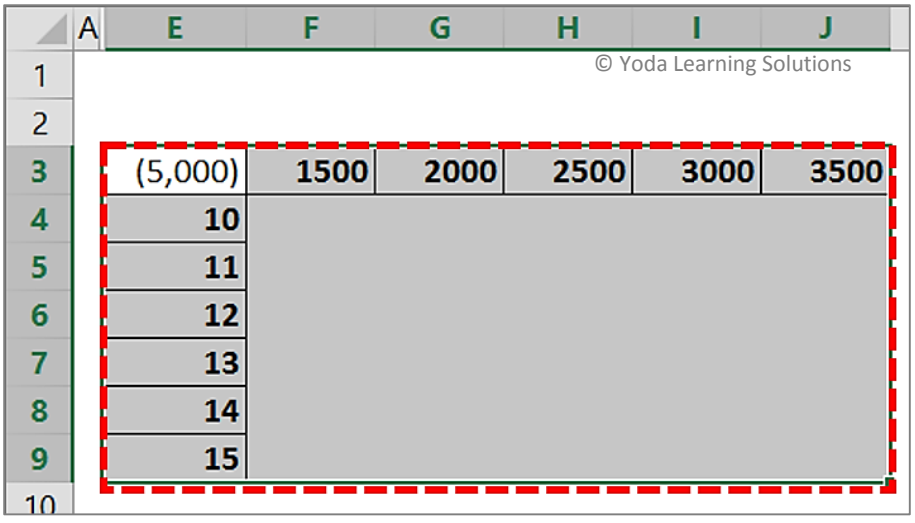
Step 1: Set the layout with up to 2 variables



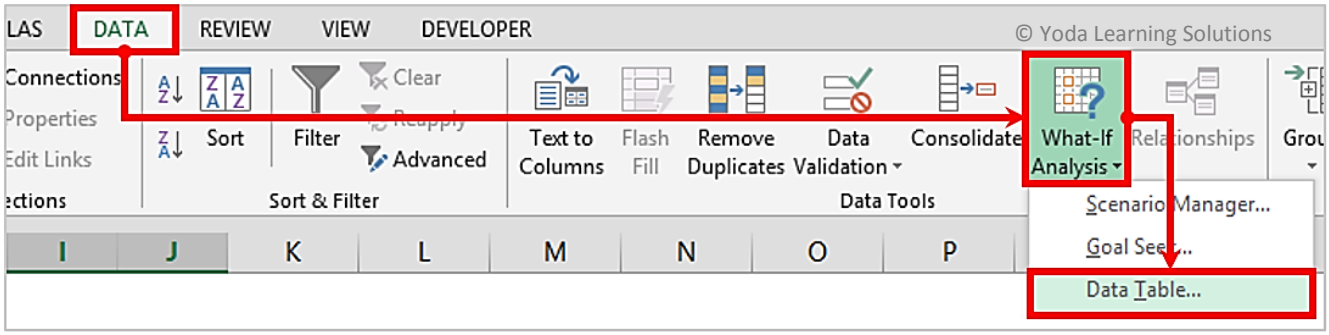
Step 2: At the intersection of the 2-variables (top-left of the table), point the cell to the cell containing formula for effect value. E.g. C13 refers to Profit



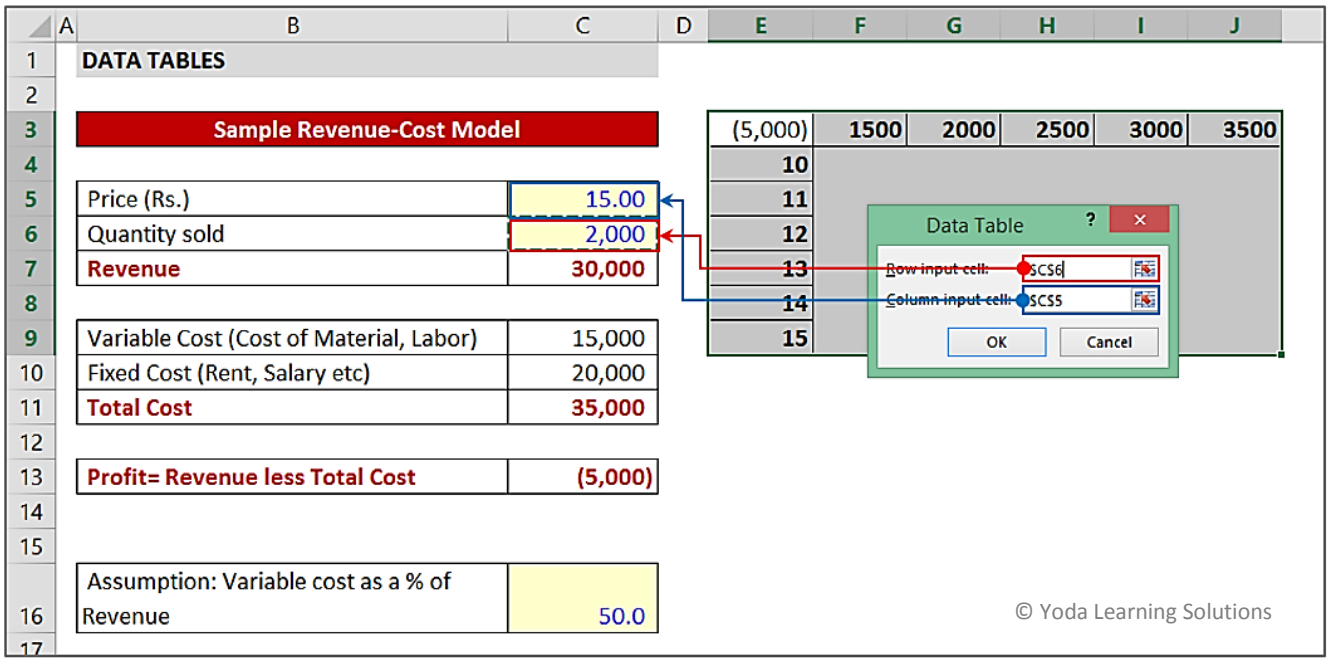
Step 3: Choose the table area (not more not less)



Step 4: Go to "Data Table"

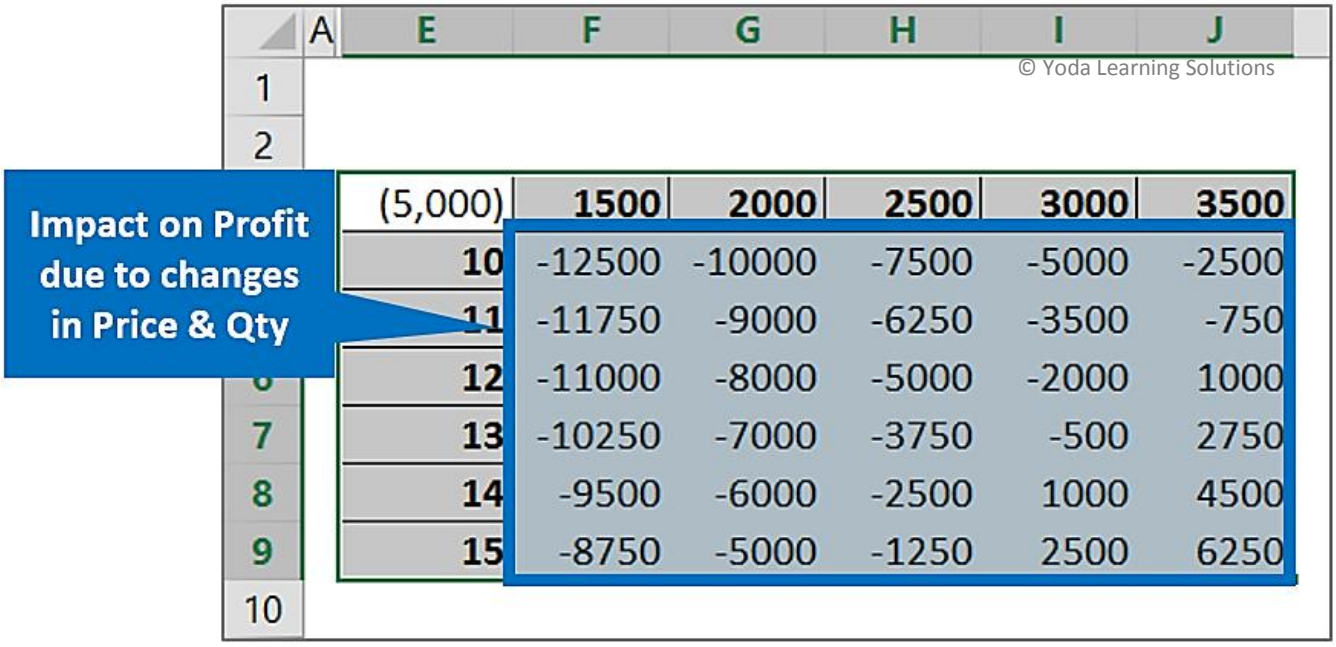


Step 4: Row Input Cell & Column Input Cell (single cell reference each)



VC	**V**ertical data (Say Prices)	**C**olumn Input Cell ($C$5)
HR	**H**orizontal data (say Qty Sold)	**R**ow Input Cell ($C$6)

Result: Generated Output – 2-variable sensitivity analysis

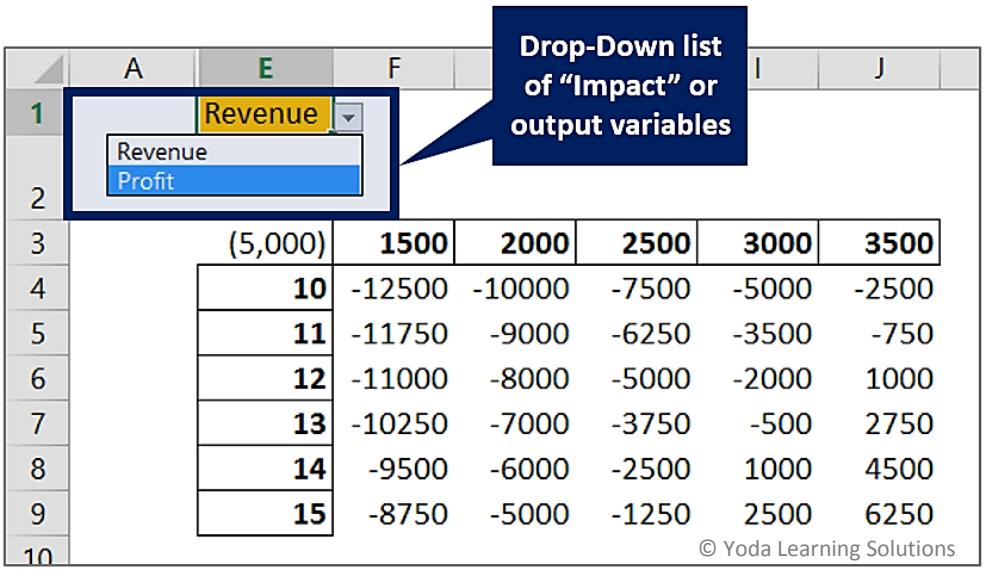


(5,000)	1500	2000	2500	3000	3500
10	-12500	-10000	-7500	-5000	-2500
11	-11750	-9000	-6250	-3500	-750
12	-11000	-8000	-5000	-2000	1000
13	-10250	-7000	-3750	-500	2750
14	-9500	-6000	-2500	1000	4500
15	-8750	-5000	-1250	2500	6250

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

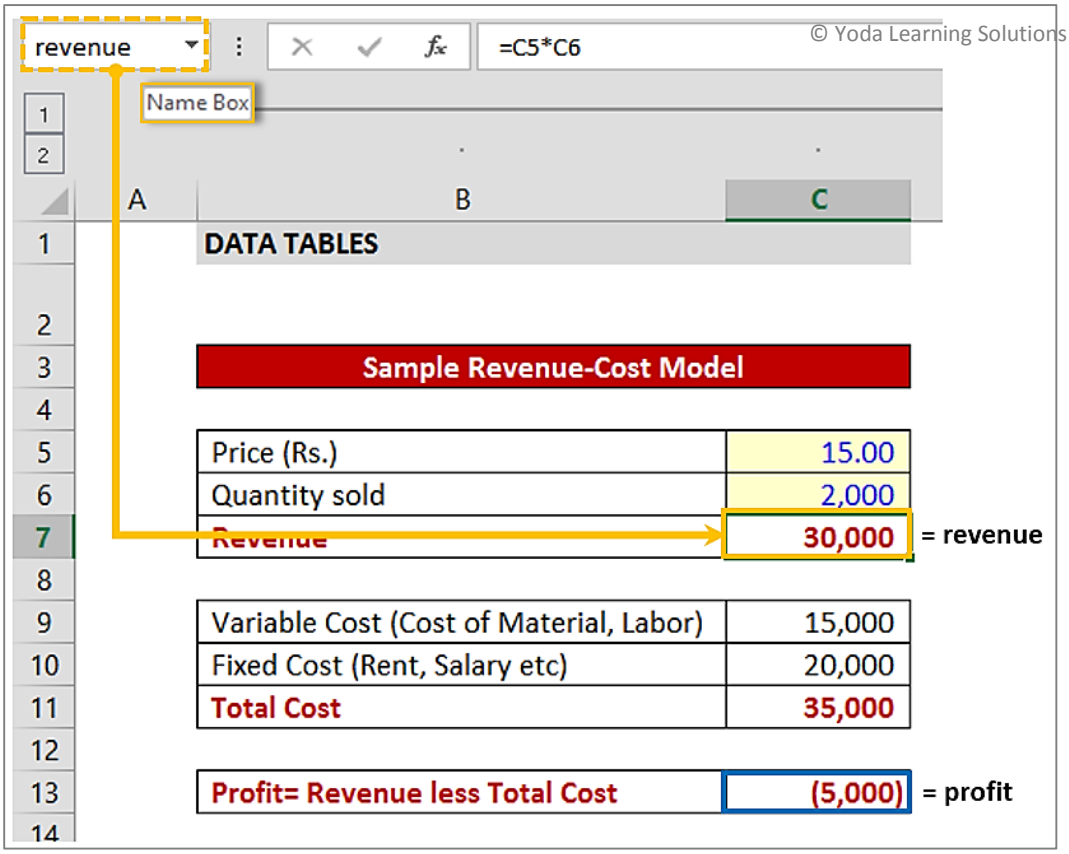
#1507-1508: Data Tables (Sensitivity Analysis) - 2 Inputs & multiple Output

Step 1: Drop-Down list

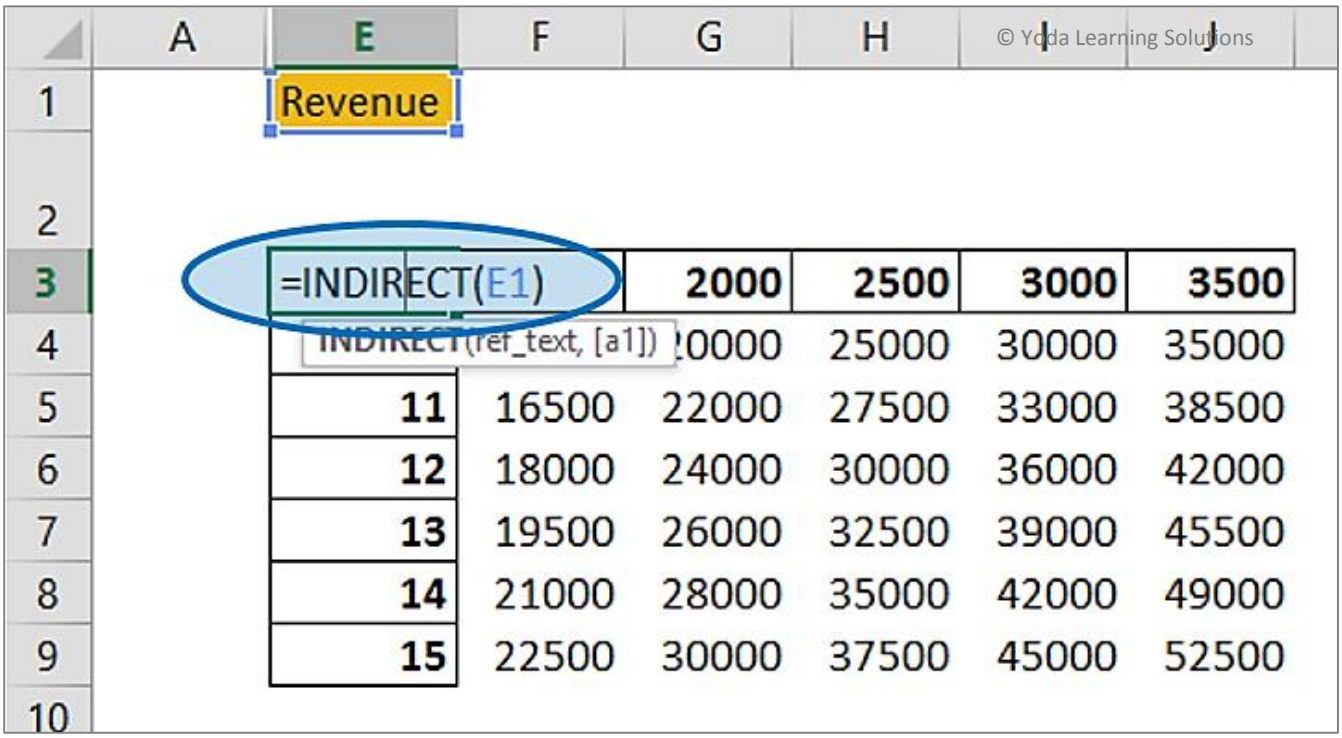


	(5,000)	1500	2000	2500	3000	3500
10		-12500	-10000	-7500	-5000	-2500
11		-11750	-9000	-6250	-3500	-750
12		-11000	-8000	-5000	-2000	1000
13		-10250	-7000	-3750	-500	2750
14		-9500	-6000	-2500	1000	4500
15		-8750	-5000	-1250	2500	6250

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



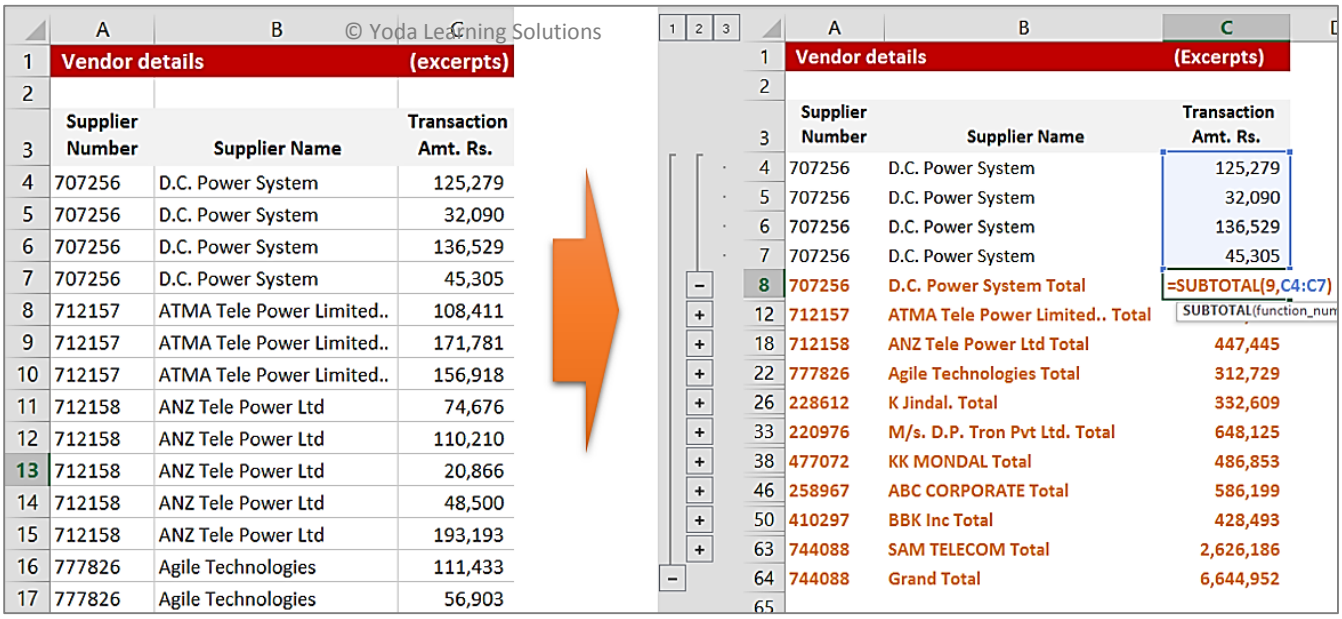
Step 3: Using INDIRECT() in the Data Table – pointing to the cell containing drop-down list



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.

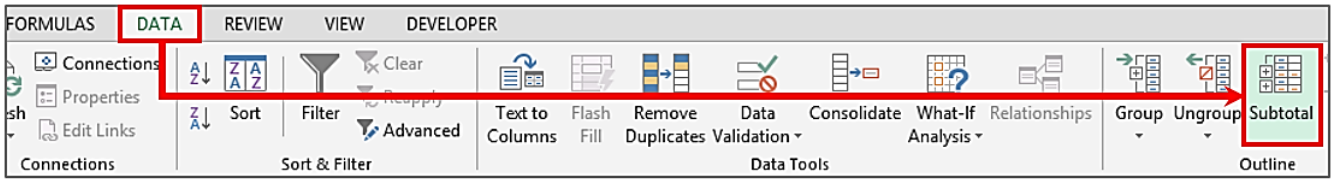


	A	B	C
1	Vendor details		(excerpts)
2			
3	Supplier Number	Supplier Name	Transaction Amt. Rs.
4	707256	D.C. Power System	125,279
5	707256	D.C. Power System	32,090
6	707256	D.C. Power System	136,529
7	707256	D.C. Power System	45,305
8	712157	ATMA Tele Power Limited..	108,411
9	712157	ATMA Tele Power Limited..	171,781
10	712157	ATMA Tele Power Limited..	156,918
11	712158	ANZ Tele Power Ltd	74,676
12	712158	ANZ Tele Power Ltd	110,210
13	712158	ANZ Tele Power Ltd	20,866
14	712158	ANZ Tele Power Ltd	48,500
15	712158	ANZ Tele Power Ltd	193,193
16	777826	Agile Technologies	111,433
17	777826	Agile Technologies	56,903

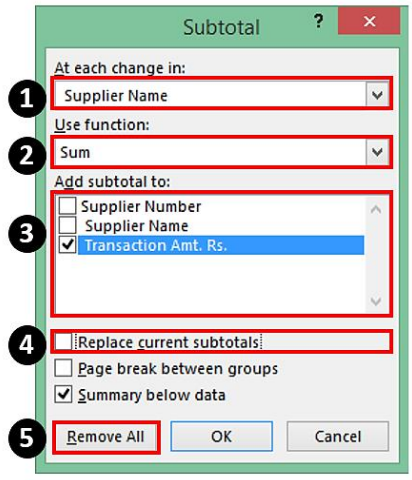
	A	B	C
1	Vendor details		(Excerpts)
2			
3	Supplier Number	Supplier Name	Transaction Amt. Rs.
4	707256	D.C. Power System	125,279
5	707256	D.C. Power System	32,090
6	707256	D.C. Power System	136,529
7	707256	D.C. Power System	45,305
8	707256	D.C. Power System Total	=SUBTOTAL(9,C4:C7)
12	712157	ATMA Tele Power Limited.. Total	
18	712158	ANZ Tele Power Ltd Total	447,445
22	777826	Agile Technologies Total	312,729
26	228612	K Jindal. Total	332,609
33	220976	M/s. D.P. Tron Pvt Ltd. Total	648,125
38	477072	KK MONDAL Total	486,853
46	258967	ABC CORPORATE Total	586,199
50	410297	BBK Inc Total	428,493
63	744088	SAM TELECOM Total	2,626,186
64	744088	Grand Total	6,644,952
65			

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



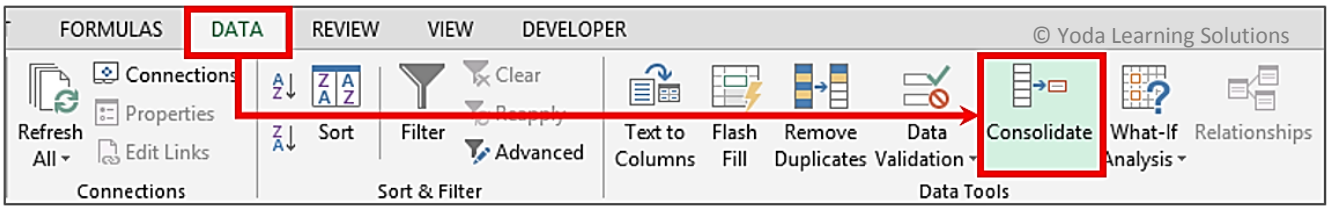
Step 3:

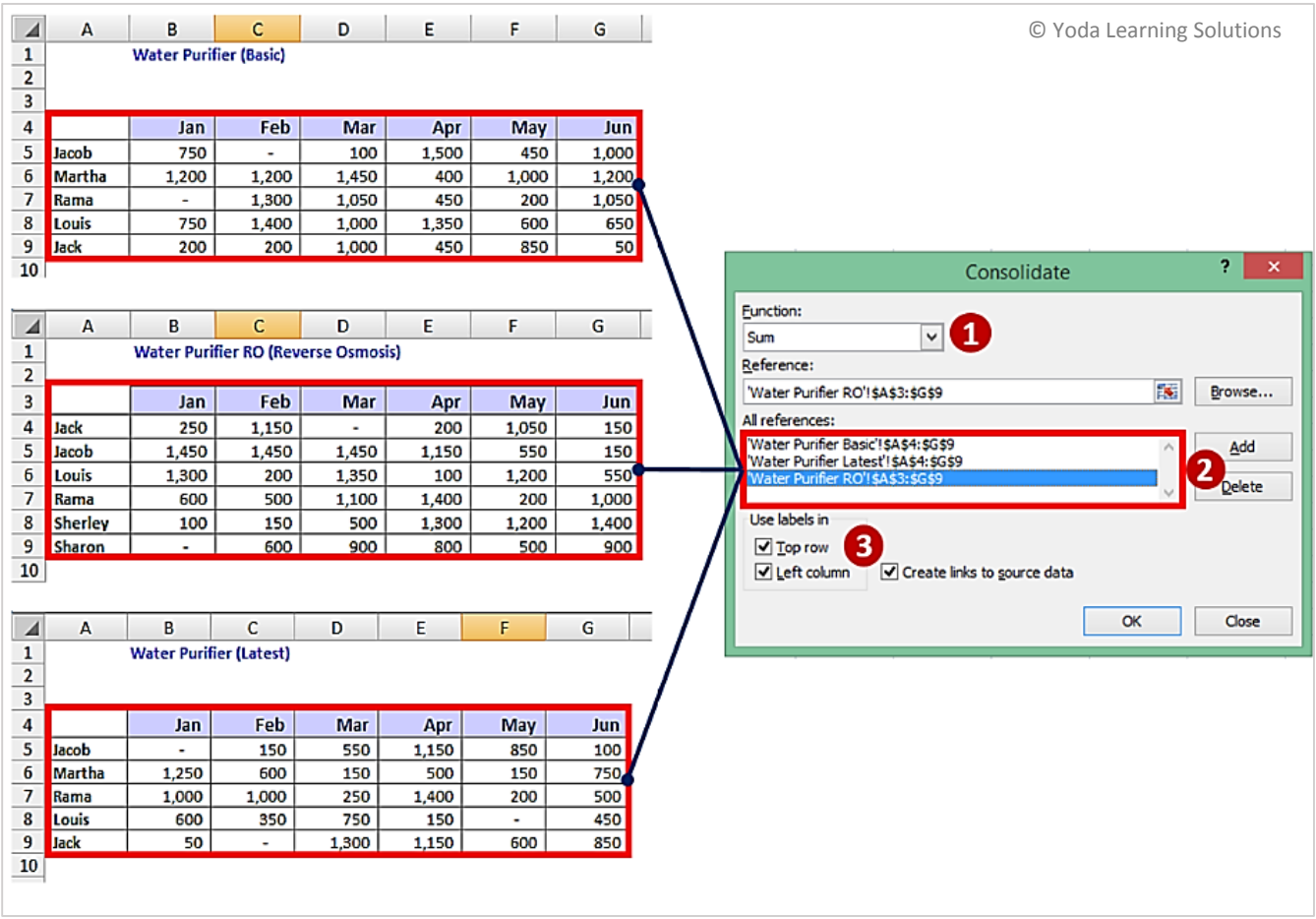


1. Choose the column name which has been sorted
2. SUM, MAX, AVERAGE etc.
3. Choose column(s) under which Subtotal is needed
4. For multi-level Subtotal, multi-level SORT is needed. Plus, tick away "Replace current subtotals"
5. For removing Subtotal, select entire data set and use "Remove All" button (bottom-left) from the Subtotal main box

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

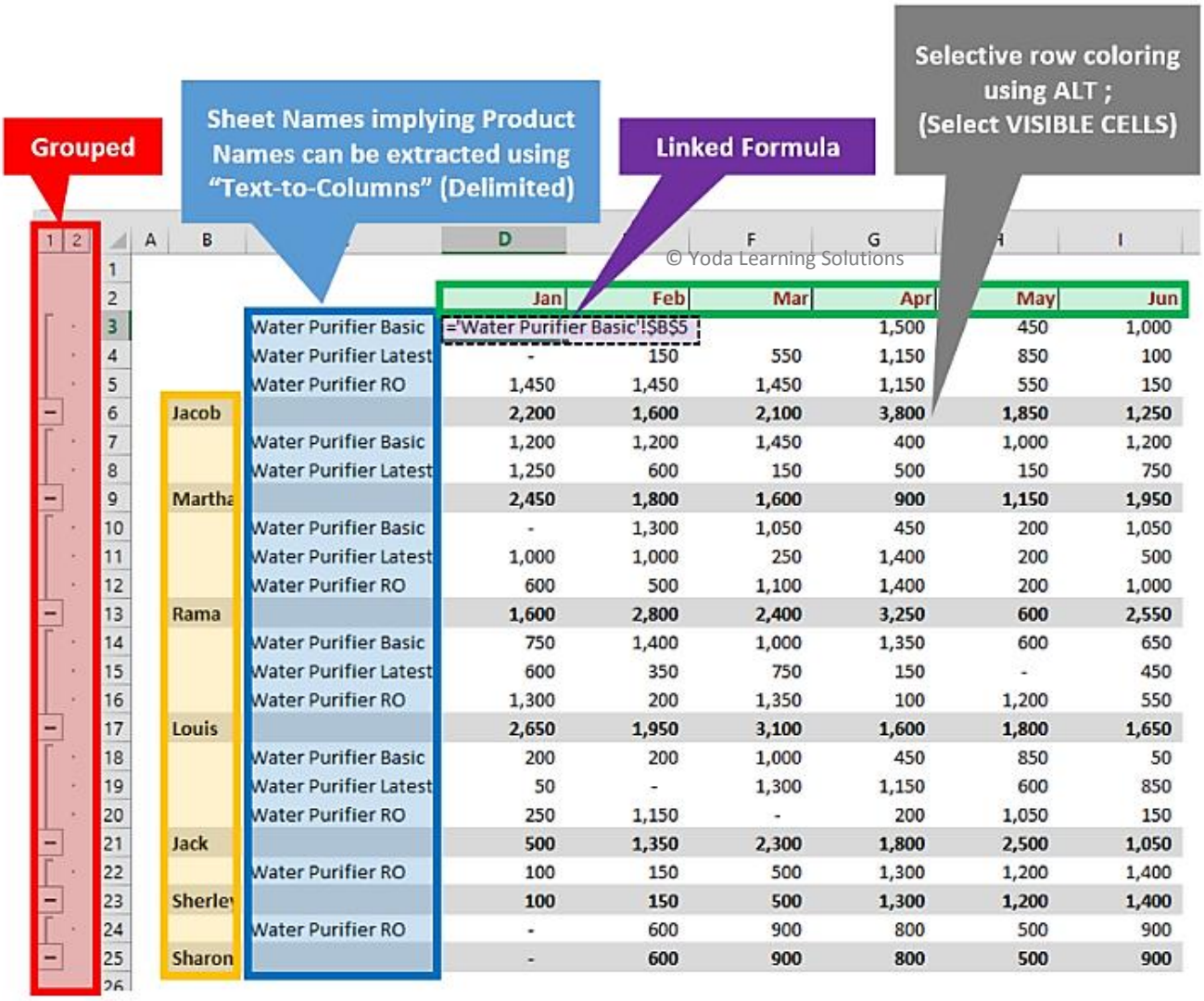
#1605-1606: Consolidate - 2 & 3 Dimensions





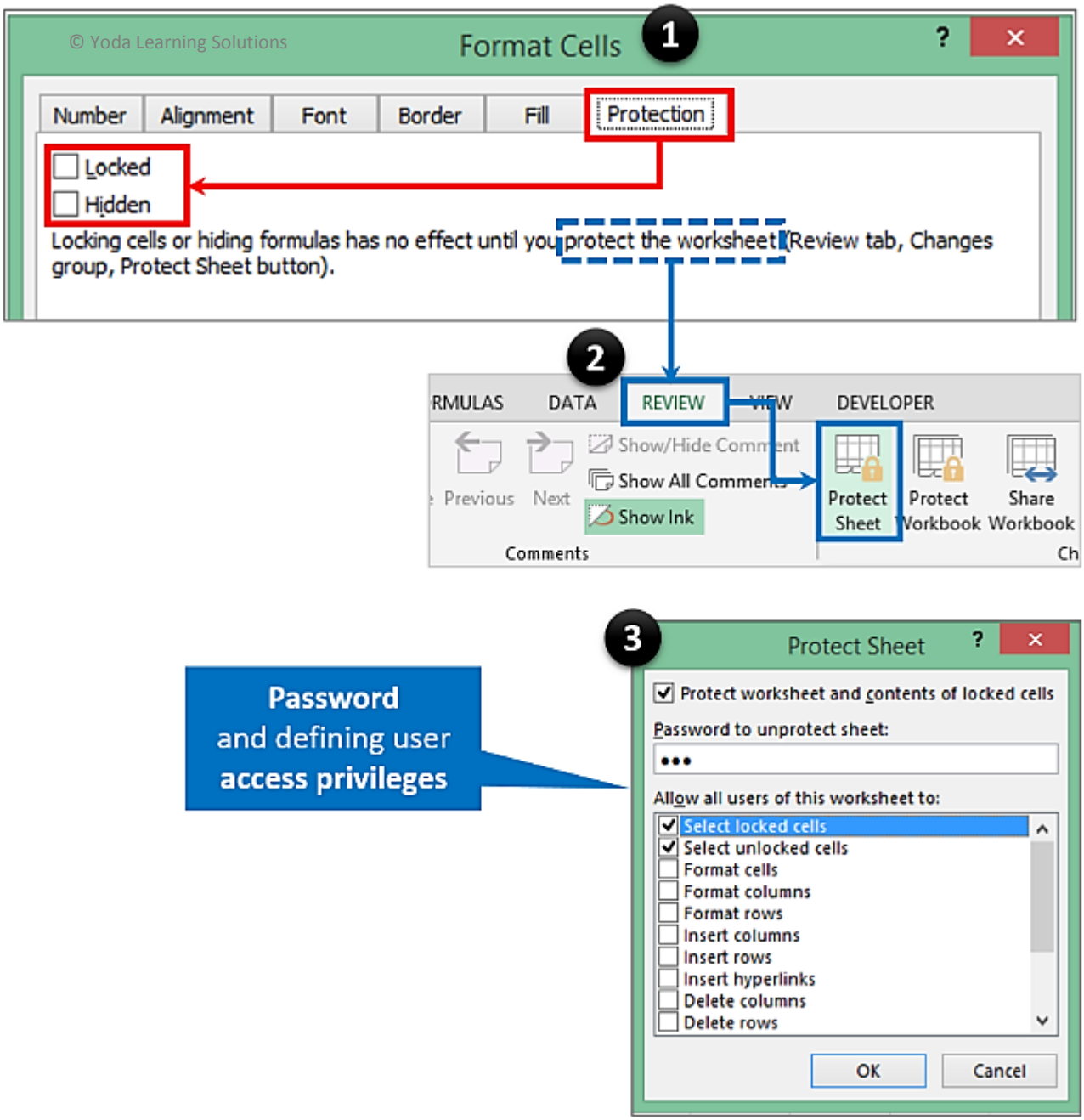
1	Function to be used for Consolidation: SUM, MAX, MIN, AVERAGE etc.
2	Source of data should be selected and “added”
3	Required for “Labels” and “Links to Source data”

Result:



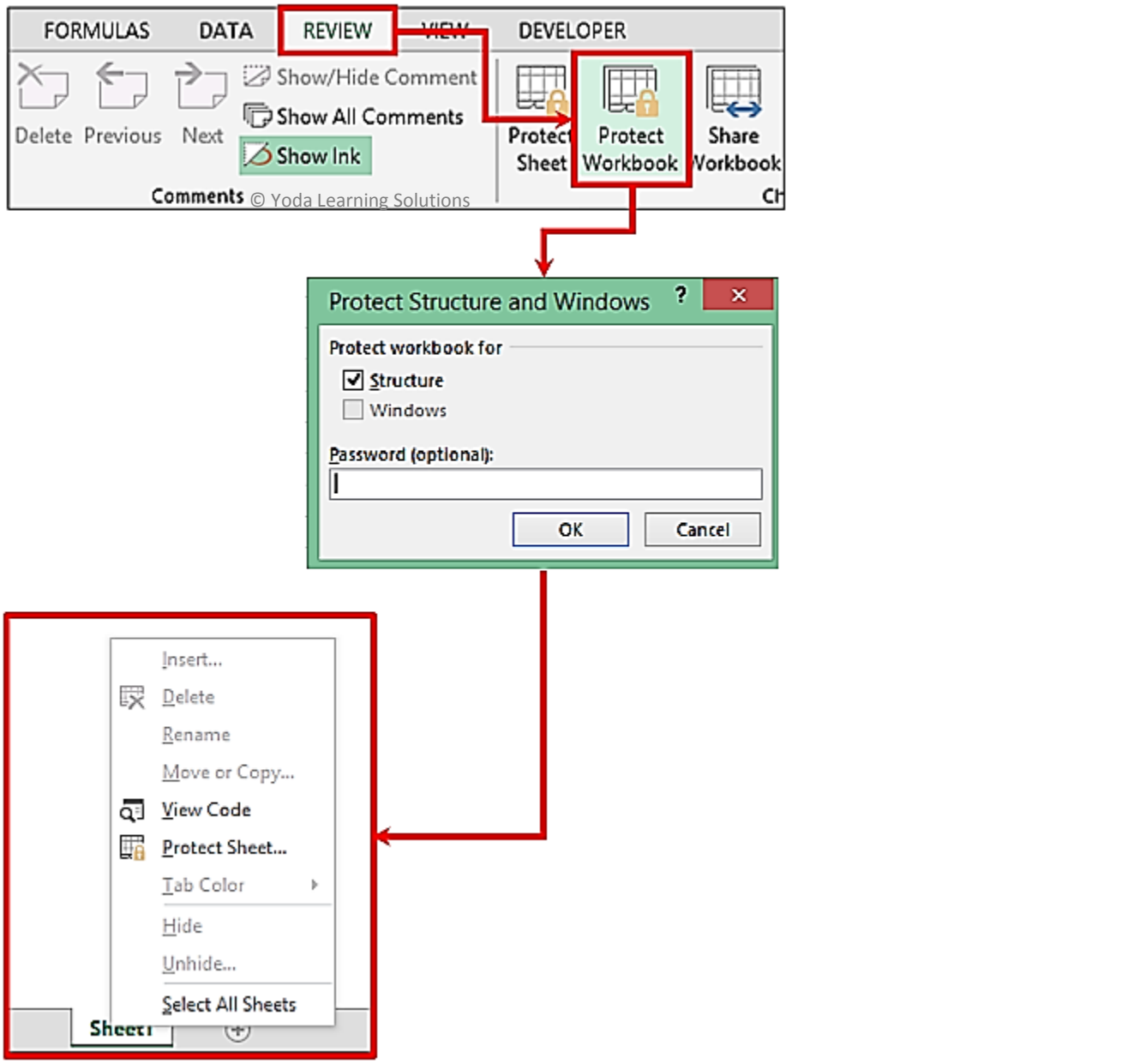
		Jan	Feb	Mar	Apr	May	Jun
Water Purifier Basic		-			1,500	450	1,000
Water Purifier Latest		-	150	550	1,150	850	100
Water Purifier RO		1,450	1,450	1,450	1,150	550	150
Jacob		**2,200**	**1,600**	**2,100**	**3,800**	**1,850**	**1,250**
	Water Purifier Basic	1,200	1,200	1,450	400	1,000	1,200
	Water Purifier Latest	1,250	600	150	500	150	750
Martha		**2,450**	**1,800**	**1,600**	**900**	**1,150**	**1,950**
	Water Purifier Basic	-	1,300	1,050	450	200	1,050
	Water Purifier Latest	1,000	1,000	250	1,400	200	500
	Water Purifier RO	600	500	1,100	1,400	200	1,000
Rama		**1,600**	**2,800**	**2,400**	**3,250**	**600**	**2,550**
	Water Purifier Basic	750	1,400	1,000	1,350	600	650
	Water Purifier Latest	600	350	750	150	-	450
	Water Purifier RO	1,300	200	1,350	100	1,200	550
Louis		**2,650**	**1,950**	**3,100**	**1,600**	**1,800**	**1,650**
	Water Purifier Basic	200	200	1,000	450	850	50
	Water Purifier Latest	50	-	1,300	1,150	600	850
	Water Purifier RO	250	1,150	-	200	1,050	150
Jack		**500**	**1,350**	**2,300**	**1,800**	**2,500**	**1,050**
	Water Purifier RO	100	150	500	1,300	1,200	1,400
Sherle		**100**	**150**	**500**	**1,300**	**1,200**	**1,400**
	Water Purifier RO	-	600	900	800	500	900
Sharon		-	**600**	**900**	**800**	**500**	**900**

#1701-1702: Cell level Security

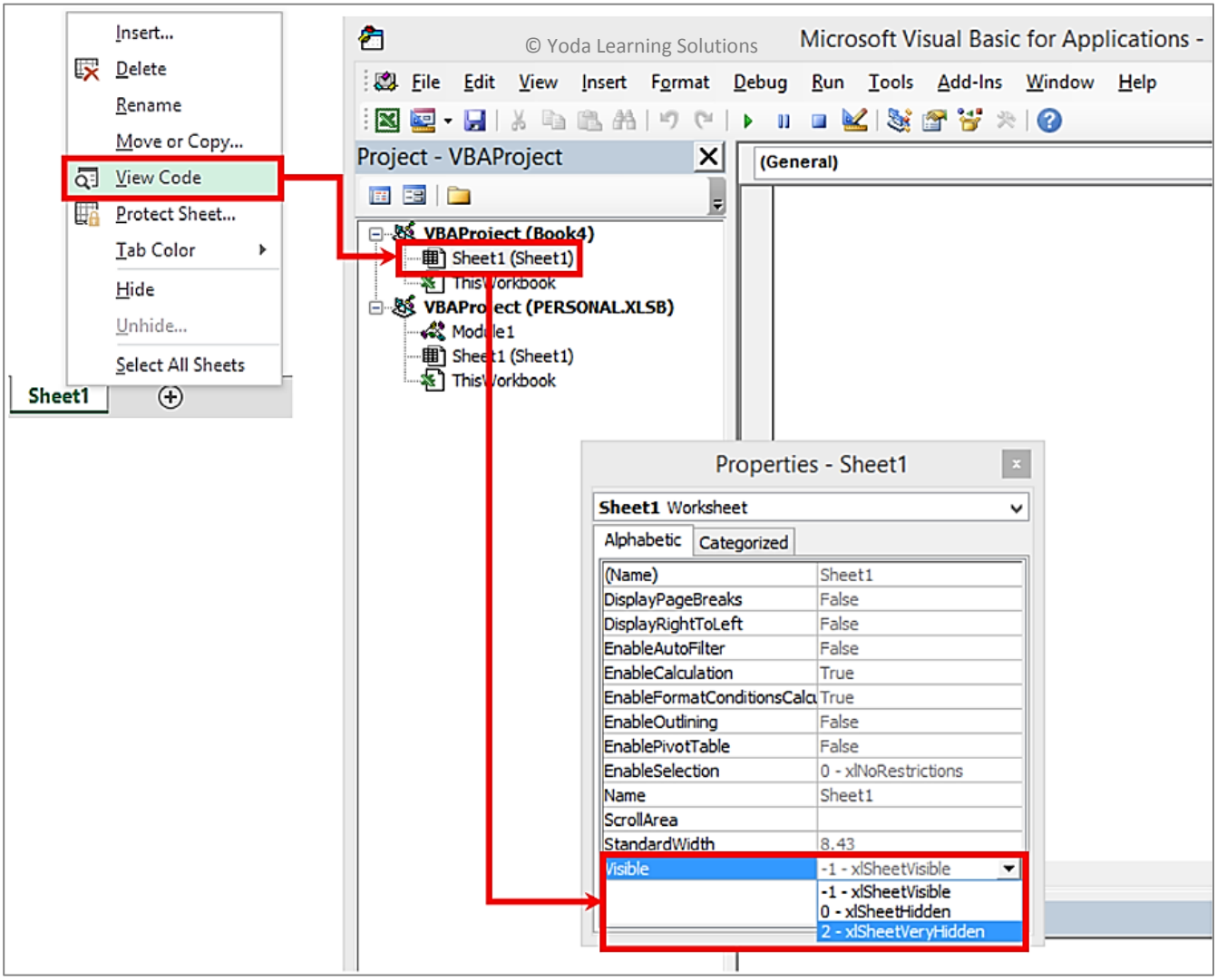


Note: By default, ALL cells are "Locked" (identified for protection). Ensure that ALL cells in the sheet are "Unlocked" and only chosen ones are "Locked". Else ALL cells will be locked and no changes can be made.

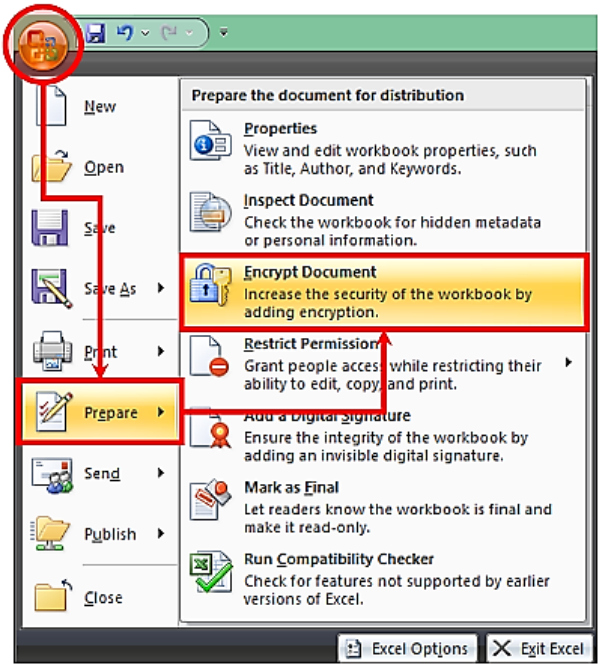
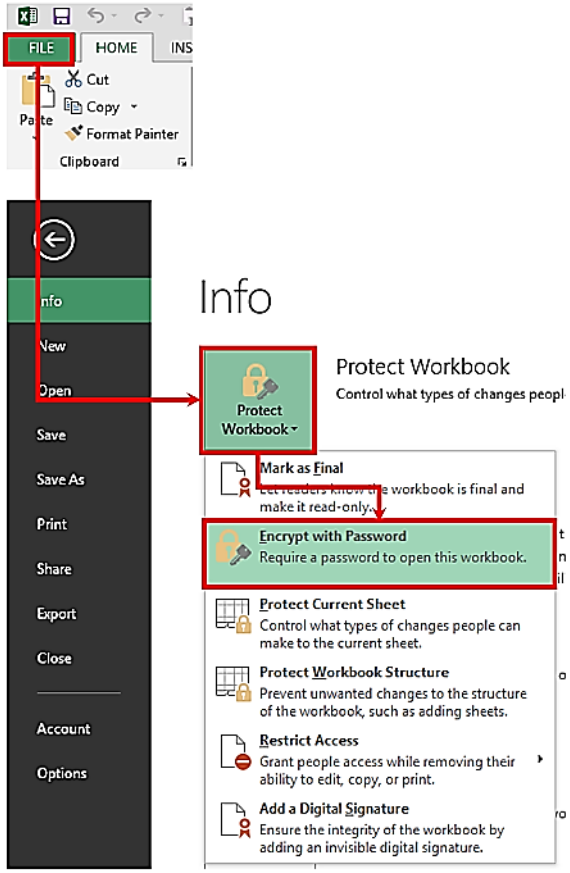
#1703: Sheet level Security [Protect Workbook Structure]



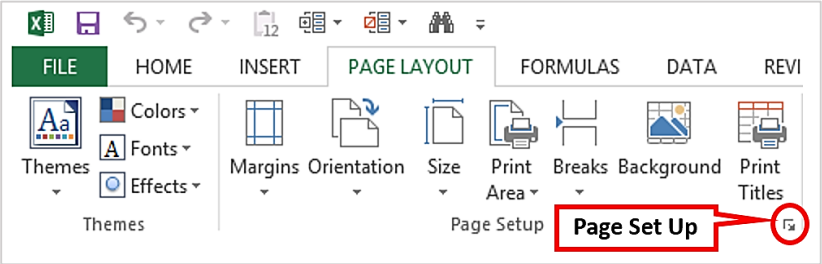
#1703: Sheet level Security [Sheet Properties – "Very Hidden"]



#1704: File level Security

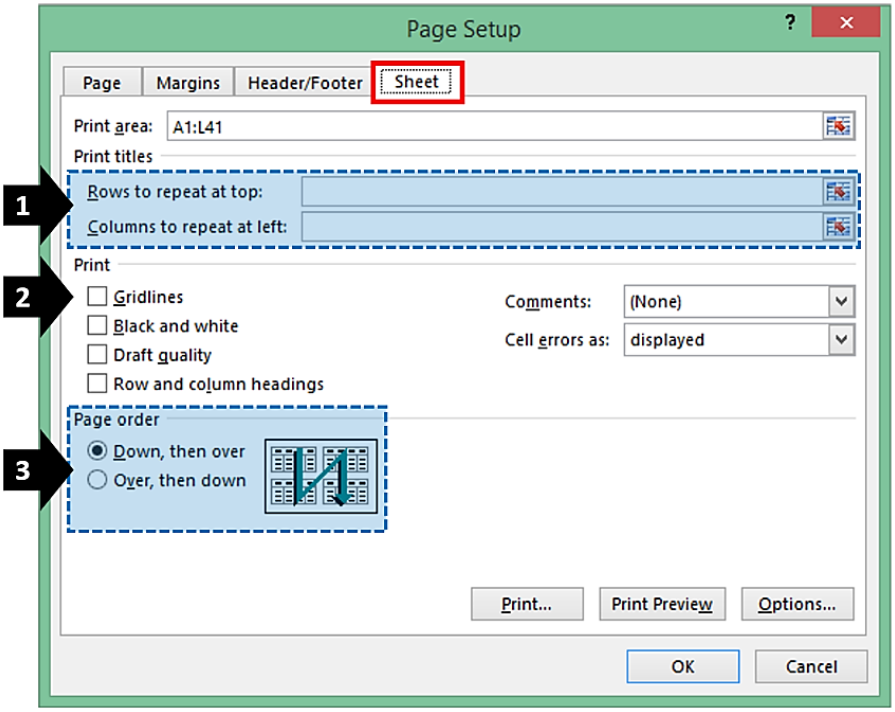
Excel v. 2007	Excel v. 2010/2013
	

#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

2	Gridlines	Switches on/off the dotted-cell border while printing

US$ Bond issues from High Grade Companies in US (Mar-09) -

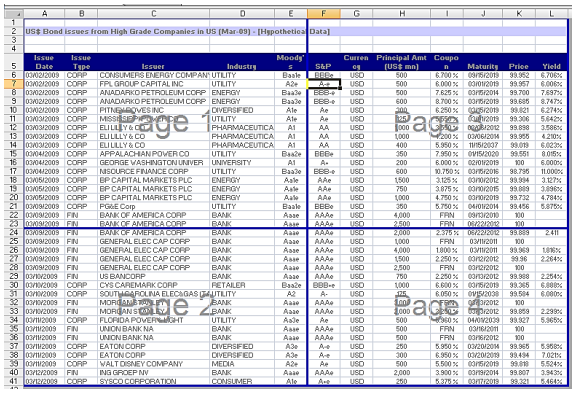
Issue Date	Issue Type	Issuer
03/02/2009	CORP	CONSUMERS ENERGY COMPANY
03/02/2009	CORP	FPL GROUP CAPITAL INC
03/02/2009	CORP	ANADARKO PETROLEUM CORP
03/02/2009	CORP	ANADARKO PETROLEUM CORP
03/02/2009	CORP	PITNEY BOWES INC
03/03/2009	CORP	MISSISSIPPI POWER CO

[vs.]

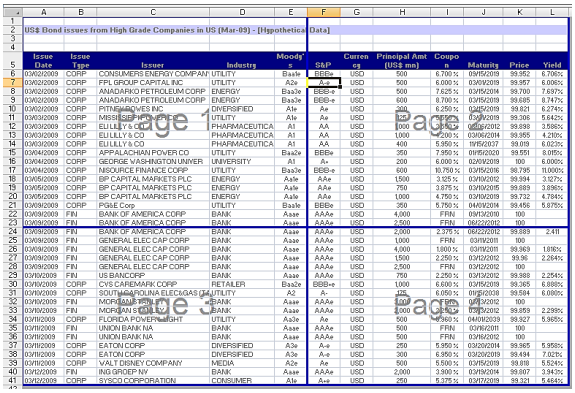
US$ Bond issues from High Grade Companies in US (Mar-09) -

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

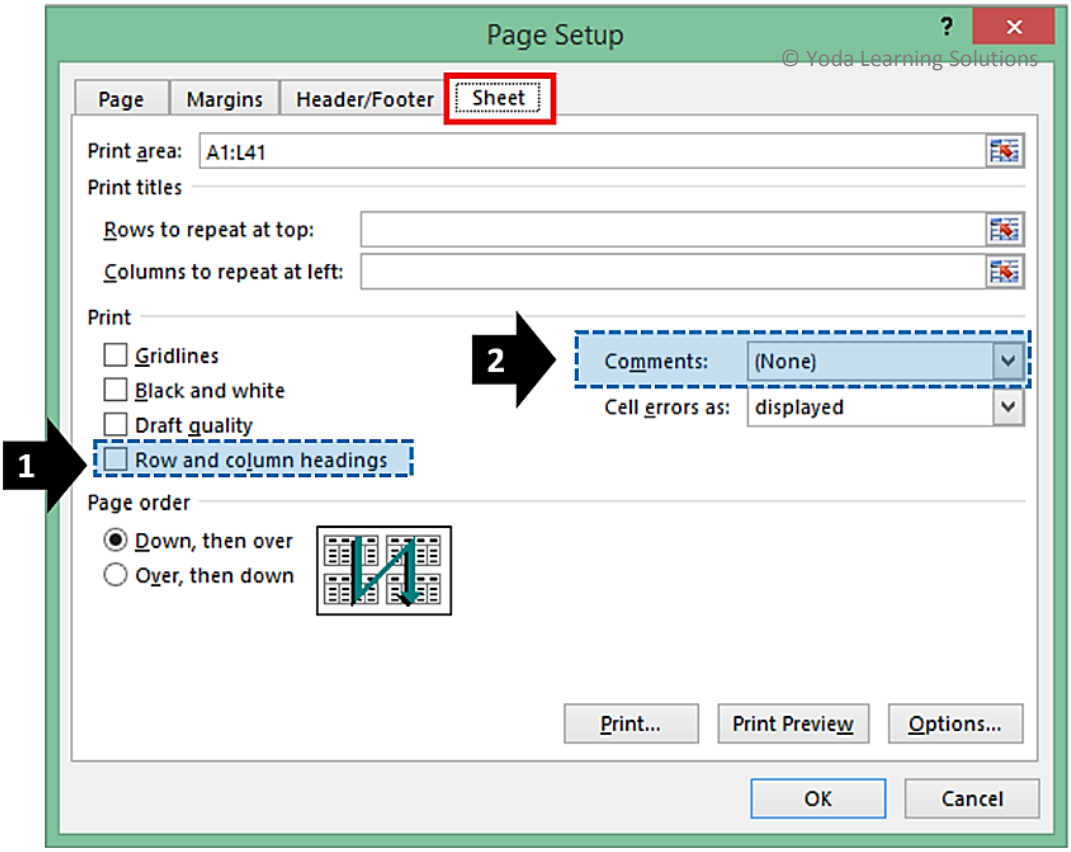
3	Page Order - Vertical vs. Horizontal	For worksheets with print area extending to multiple pages – both horizontally and vertically, users can decide the page order of print out.



[vs.]



#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

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
03/03/2009	CORP	ELI LILLY & CO
03/03/2009	CORP	ELI LILLY & CO
03/03/2009	CORP	ELI LILLY & CO

[vs.]

	A	B	C
1			
2	US$ Bond issues from High Grade Companies in US (Mar-09) -		
3			
4			
5	Issue Date	Issue Type	Issuer
6	03/02/2009	CORP	CONSUMERS ENERGY COMPANY
7	03/02/2009	CORP	FPL GROUP CAPITAL INC
8	03/02/2009	CORP	ANADARKO PETROLEUM CORP
9	03/02/2009	CORP	ANADARKO PETROLEUM CORP
10	03/02/2009	CORP	PITNEY BOWES INC
11	03/03/2009	CORP	MISSISSIPPI POWER CO
12	03/03/2009	CORP	ELI LILLY & CO
13	03/03/2009	CORP	ELI LILLY & CO
14	03/03/2009	CORP	ELI LILLY & CO

Audit Trick: Press Ctrl ` to "Show all formulas" and then "Print" with "Row & Column headings"

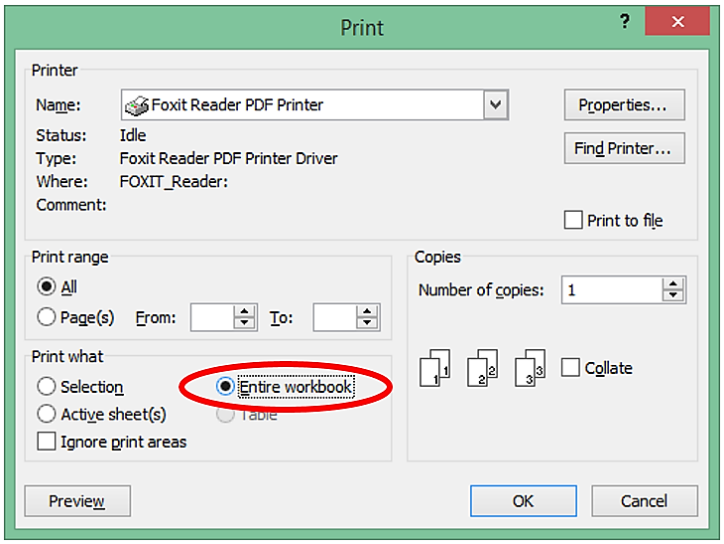
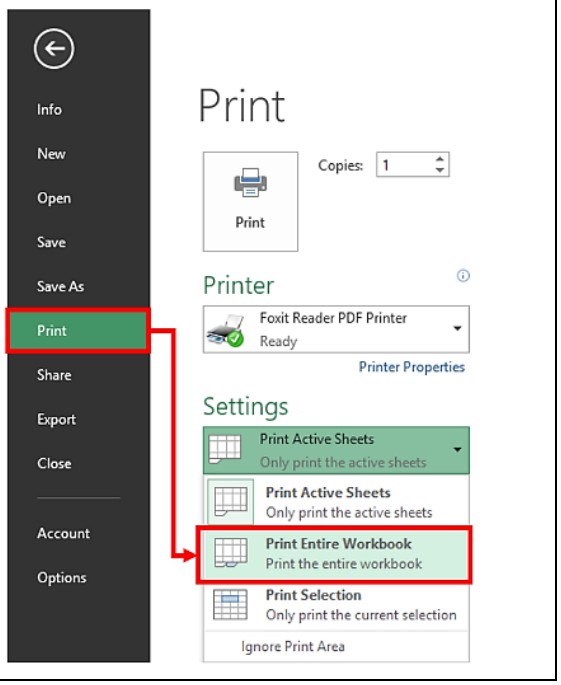
	A	B	C	D
1				
2	CAB Pvt		Reported	Reported
3	Financi		39538	39903
4				
5				
6	*Assump*			
7		Sales growth	NA	0.05
8		Costs as % of Sales	=C12/C11	=D12/D11
9				
10	*Income*			
11		Sales (A)	1201	780
12		Costs (B)	802	511
13		**Profit (C=A-B)**	=C11-C12	=D11-D12
14				
15		**Profit as % of Sales (C/A)**	=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.

Cell: C8
Comment: Roy Jr.:
Refer email dtd 21-Apr-2009

Cell: E11
Comment: Yoda Learning:
Annual Report Pg 21

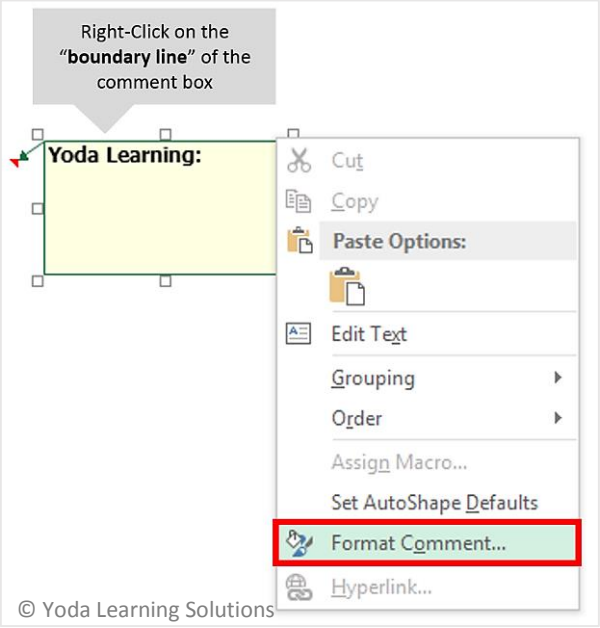
#1807: Print Entire Workbook

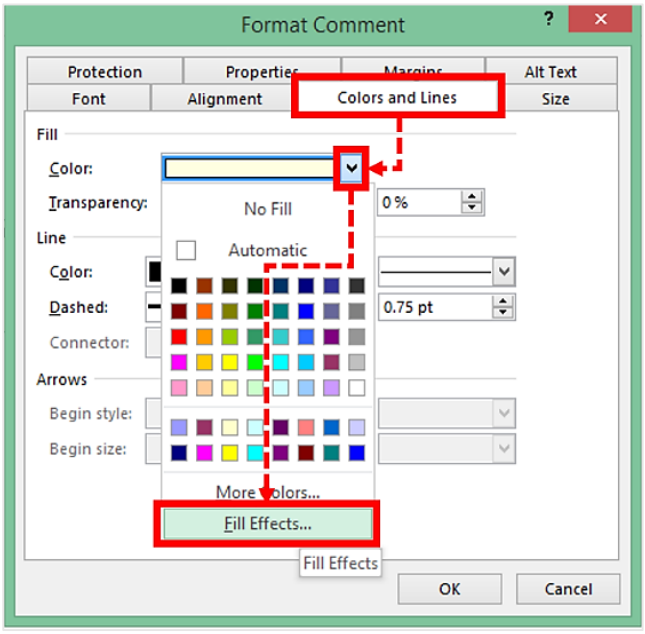
Excel v. 2007	Excel v. 2010/2013
	

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

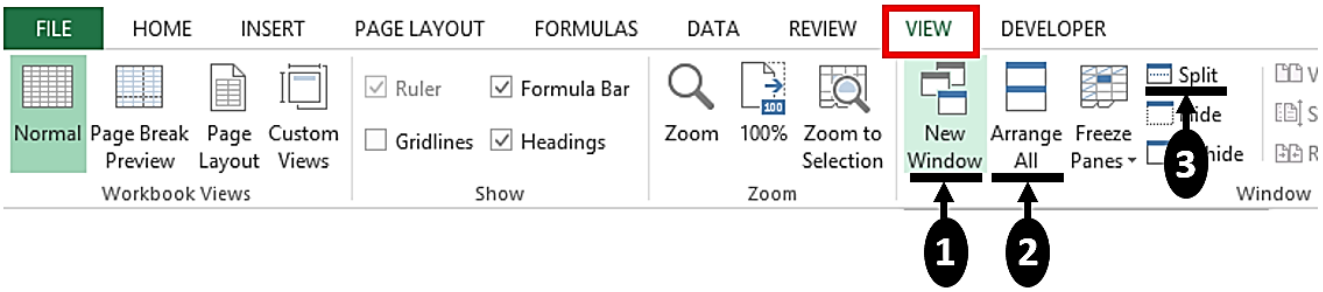
SN	Shortcut Key / Path	Objective
1	Shift + F2	Insert/Edit Comment
2	ALT, R, A	Show All Comment
3	Ctrl + Shift + O	Go To (Special) -> Comment
4	Ctrl + Alt + V -> Comment	Paste Special -> Comment

Inserting a Picture in the comment box:

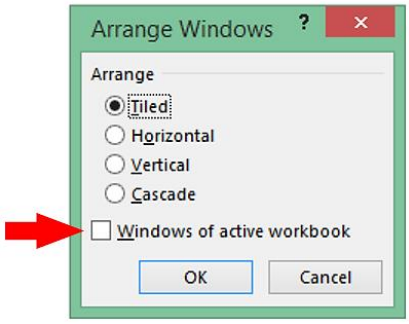




#1902: Split Windows, Viewing multiple Windows - Simultaneously working with different workbooks, worksheets & scattered cell ranges simultaneously

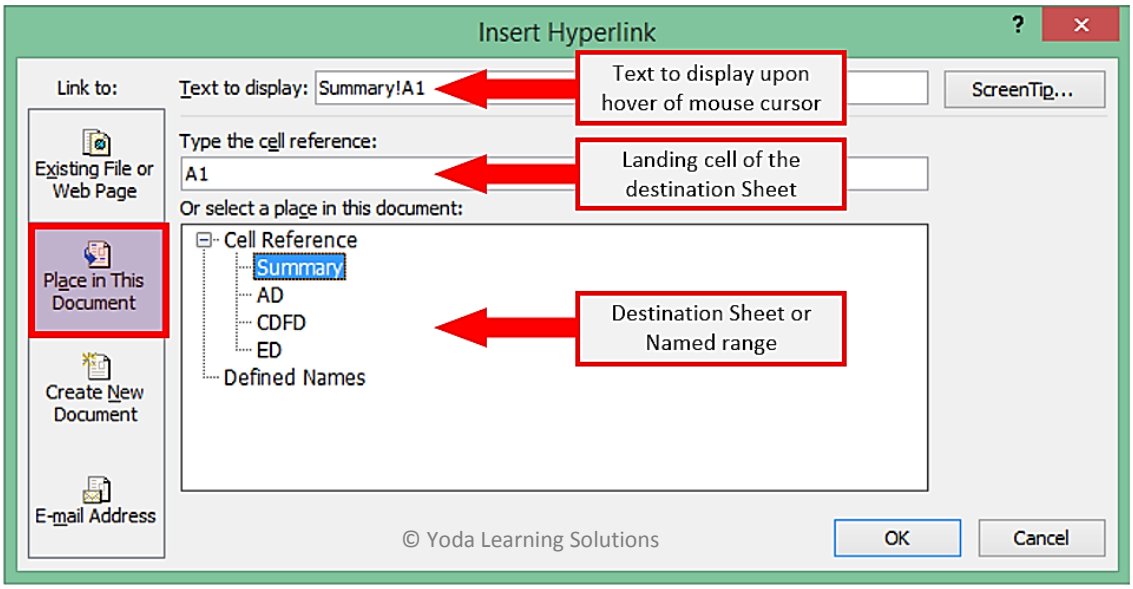


1	***NEW WINDOW***	Opens another instance (window) of the active workbook, thus, allowing you to work on different worksheets of the same/different workbook simultaneously. "*Arrange All*" feature will help arrange the open windows side-by-side (horizontal / vertical).
Book1:1 - Microsoft Excel Book1:2 - 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
		**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.

3	***SPLIT***	6. Divides/"Splits" the window into different panes that each scroll differently. It is ideal if you want to work simultaneously on different areas of the SAME worksheet of the workbook. 7. Unlike "*New Window*", it doesn't allow you to work on different worksheets of the same workbook simultaneously.

#1903: Hyperlinking (Ctrl + K)



Quick Tip: New function in v. 2013	
=HYPERLINK(HYPERLINK(**link_location**, [friendly_name])	▪ Example: = HYPERLINK("http://www.yodalearning.com", "Click here for Excel Tricks") ▪ For more details, refer Microsoft Excel help