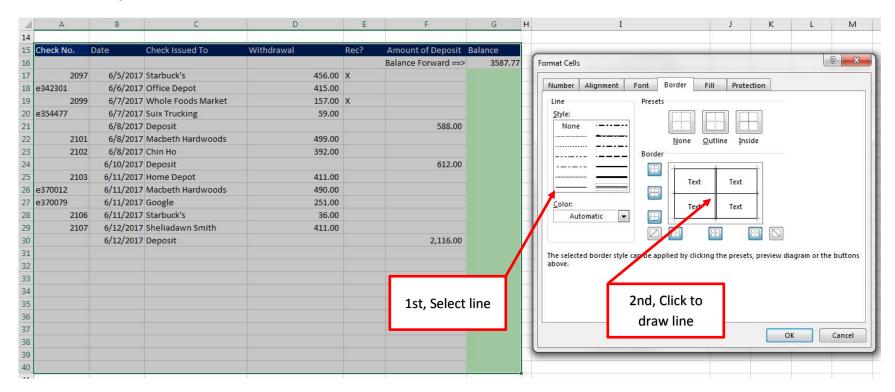
Excel & Business Math Video/Class Project #28 IF Function, ISBLANK function and Building a Check Register

Topics

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1) Format Check Register with Borders as seen in this video

<u>Step 1</u>: We highlighted Checkbook Register and used Ctrl + 1 to open up Format Cells, then on the Border Tab we selected the correct line on the left and then drew the line on the right, as seen here:

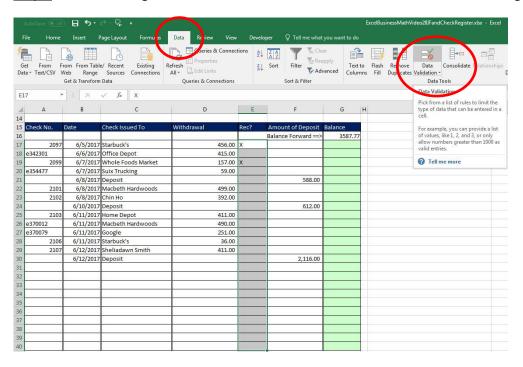


The finished Checkbook Register with Borders looked like this:

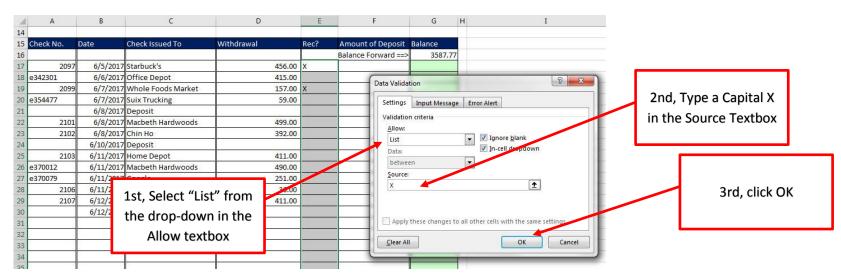
- Al	Α	В	C	D	E	F	G	Н
14								
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16			5.			Balance Forward ==>	3587.77	
17	2097	6/5/2017	Starbuck's	456.00	х			
18	e342301	6/6/2017	Office Depot	415.00				
19	2099	6/7/2017	Whole Foods Market	157.00	X			
20	e354477	6/7/2017	Suix Trucking	59.00				
21		6/8/2017	Deposit			588.00		
22	2101	6/8/2017	Macbeth Hardwoods	499.00				
23	2102	6/8/2017	Chin Ho	392.00				
24		6/10/2017	Deposit			612.00		
25	2103	6/11/2017	Home Depot	411.00				
26	e370012	6/11/2017	Macbeth Hardwoods	490.00				
27	e370079	6/11/2017	Google	251.00				
28	2106	6/11/2017	Starbuck's	36.00				
29	2107	6/12/2017	Sheliadawn Smith	411.00				
30		6/12/2017	Deposit			2,116.00		
31								
32								
33								
34								

2) Data Validation for Reconcile Columns as seen in this video

Step 1: Select the range E17:E40 and then in the Data Ribbon Tab, in the Data Tools group, click the Data Validation button.



<u>Step 2</u>: In the Data Validation dialog box, on the Settings Tab: 1) Select "List" from the drop-down in the Allow textbox, then 2) Type a Capital X in the Source Textbox, 3) click OK.



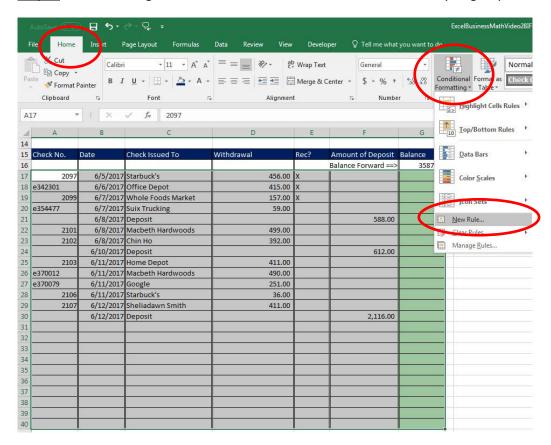
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Step 3: Now there is a drop-down arrow to select your X. Each cell will now ONLY allow you to enter an X value.

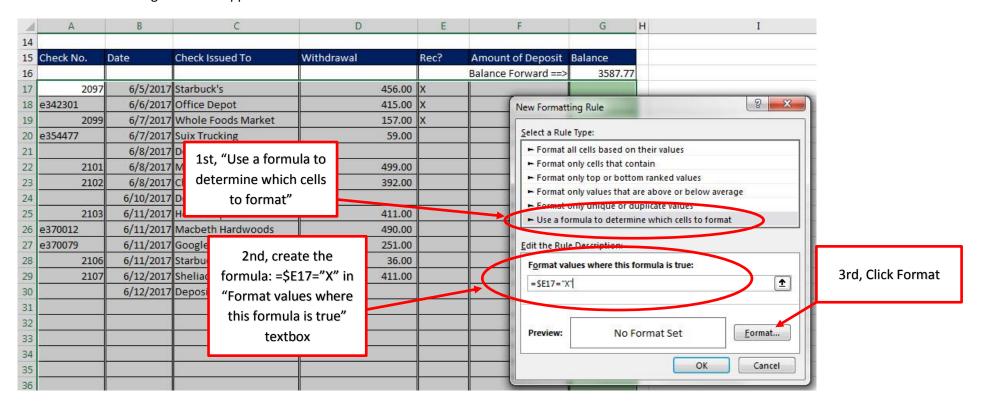
1	Α	В	С	D	E	F	G
14							
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance
16						Balance Forward ==>	3587.77
17	2097	6/5/2017	Starbuck's	456.00	X		
18	e342301	6/6/2017	Office Depot	415.00		~	
19	2099	6/7/2017	Whole Foods Market	157.00	X		
20	e354477	6/7/2017	Suix Trucking	59.00			

3) Conditional Formatting to Highlight Reconciled Row as seen in this video

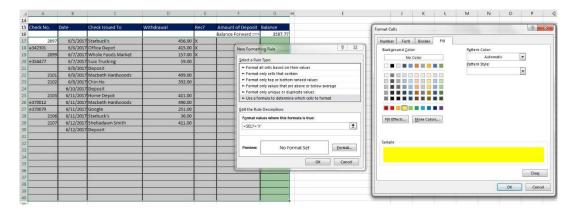
Step 1: Select the range A17:G40 and in the Home Ribbon Tab, in the Styles group, click the Conditional Formatting drop-down arrow and then click on "New Rule..."



Step 2: In the New Formatting Rule dialog box, click on the option "Use a formula to determine which cells to format", then in the "Format values where this formula is true" textbox, create the formula: =\$E17="X". This formula will format the each when an "X" is entered into the "Rec?" Column. Finally, Click the Format button to decide what formatting should be applied when an "X" is entered into the "Rec?" Column.



Step 3: In the Format Cells dialog box, add formatting, then click OK in the Format Cells dialog box and then OK in the New Formatting Rule dialog box.



Step 4: Now when you select an "X" from the drop down in the "Rec?" column, the row will be formatted:

15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance
16						Balance Forward ==>	3587.77
17	2097	6/5/2017	Starbuck's	456.00	Х		3,131.77
18	e342301	6/6/2017	Office Depot	415.00			2,716.77
19	2099	6/7/2017	Whole Foods Market	157.00	Х	▼	2,559.77
20	e354477	6/7/2017	Suix Trucking	59.00			2,500.77

4) Calculate Balance Formula as seen in this video

Step 1: Create a Balance Formula with Relative Cell References that will add the "Amount of Deposit" and Subtract the "Withdrawal" from the balance from the previous row. Then copy the formula down the column.

1	Α	В	C	D	E	F	G	Н
14				_	1			
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16						Balance Forward ==>	3587.77	I
17	2097	6/5/2017	Starbuck's	456.00	Х		=G16+F17-D1	7
18	e342301	6/6/2017	Office Depot	415.00	Х			
19	2099	6/7/2017	Whole Foods Market	157.00	Х			
20	e354477	6/7/2017	Suix Trucking	59.00				

Step 2: After you copy the formula down the column, we notice that all the rows after the last transaction have the same balance, and we do not want that. Our goal is to edit and change the formula so that the formula will be run only when a date is entered into the date column, otherwise we want the cell to Show Nothing.

A	Α	В	C	D	E	F	G	Н
14								
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16						Balance Forward ==>	3587.77	
17	2097	6/5/2017	Starbuck's	456.00	Х		3,131.77	
18	e342301	6/6/2017	Office Depot	415.00	X		2,716.77	
19	2099	6/7/2017	Whole Foods Market	157.00	X		2,559.77	
20	e354477	6/7/2017	Suix Trucking	59.00			2,500.77	
21		6/8/2017	Deposit			588.00	3,088.77	
22	2101	6/8/2017	Macbeth Hardwoods	499.00			2,589.77	
23	2102	6/8/2017	Chin Ho	392.00			2,197.77	
24		6/10/2017	Deposit			612.00	2,809.77	
25	2103	6/11/2017	Home Depot	411.00			2,398.77	
26	e370012	6/11/2017	Macbeth Hardwoods	490.00			1,908.77	
27	e370079	6/11/2017	Google	251.00			1,657.77	
28	2106	6/11/2017	Starbuck's	36.00	j		1,621.77	
29	2107	6/12/2017	Sheliadawn Smith	411.00			1,210.77	
30		6/12/2017	Deposit			2,116.00	3,326.77	
31							3,326.77	
32							3,326.77	
33							3,326.77	
34							3,326.77	
35							3,326.77	
36							3,326.77	
37							3,326.77	
38							3,326.77	
39					6 1		3,326.77	
40				Ī	Ī	Ī	=G39+F40-D4	0

5) IS Functions: Logical Function to yield a TRUE or FALSE based on a Logical Test as seen in this video

- 1. Reminder: Logical Formulas deliver a TRUE or FALSE based on a Logical Test
- 2. So far in this class we have seen how to create Logical Formulas using Comparative Operators like the equal sign.
- 3. We can also use a set of IS Functions in Excel like these:
 - ISNUMBER function to check whether cell contains a Number
 - ISBLANK function to check whether cell is Empty
 - ISFORMULA to check whether a is contains a formula

<u>Step 1</u>: As seen in the video, we can use the ISNUMBER to check whether or not a number has been entered into the Date Column (Remember from Video #4 in this class: Dates, Times and Numbers are all considered to be the Data Type "Number" in Excel).

A	А	В	С	D	Е	F	G	H
14								
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16			8			Balance Forward ==>	3587.77	Does Cell in Date Column contain a Number
17	2097	6/5/2017	Starbuck's	456.00	X		3,131.77	=ISNUMBER(B17
18	e342301	6/6/2017	Office Depot	415.00	Х		2,716.77	ISNUMBER(value)
19	2099	6/7/2017	Whole Foods Market	157.00	Х		2,559.77	
20	e354477	6/7/2017	Suix Trucking	59.00			2,500.77	
21		6/8/2017	Deposit		2	588.00	3,088.77	

<u>Step 2:</u> When we copy the ISNUMBER Formula down, we can see the pattern of TRUEs and FALSEs that are based on the Date Column. Now we can use4 this Logical Pattern with the IF Function to put the Balance Formula into each cell that has a TRUE and the formula equivalent of "Show Nothing" into each cell that has a FALSE.

1	Α	В	C	D	E	F	G	H
14					-			
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16						Balance Forward ==>	3587.77	Does Cell in Date Column contain a Number?
17	2097	6/5/2017	Starbuck's	456.00	Х		3,131.77	TRUE
18	e342301	6/6/2017	Office Depot	415.00	X		2,716.77	TRUE
19	2099	6/7/2017	Whole Foods Market	157.00	Х		2,559.77	TRUE
20	e354477	6/7/2017	Suix Trucking	59.00			2,500.77	TRUE
21		6/8/2017	Deposit			588.00	3,088.77	TRUE
22	2101	6/8/2017	Macbeth Hardwoods	499.00			2,589.77	TRUE
23	2102	6/8/2017	Chin Ho	392.00			2,197.77	TRUE
24		6/10/2017	Deposit			612.00	2,809.77	TRUE
25	2103	6/11/2017	Home Depot	411.00			2,398.77	TRUE
26	e370012	6/11/2017	Macbeth Hardwoods	490.00			1,908.77	TRUE
27	e370079	6/11/2017	Google	251.00			1,657.77	TRUE
28	2106		Starbuck's	36.00			1,621.77	TRUE
29	2107		Sheliadawn Smith	411.00			1,210.77	TRUE
30		6/12/2017	Deposit			2,116.00	3,326.77	TRUE
31							3,326.77	FALSE
32							3,326.77	FALSE
33							3,326.77	FALSE
34							3,326.77	FALSE
35							3,326.77	FALSE
36							3,326.77	FALSE
37							3,326.77	FALSE
38							3,326.77	FALSE
39							3,326.77	FALSE
40							3,326.77	=ISNUMBER(B40)
41	2							ISNUMBER(value)

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6) IF Function to put either Calculate Balance Formula or "Show Nothing" in each cell as seen in this video

- 1. The IF Function
 - The IF Function is a Logical Function that puts one of two things into a cell based on Logical Test.
 - Anytime you have one of two things that can go into a cell, the IF Function is the perfect function to use!!!
 - The IF Function had three arguments: =IF(logical test, value if true, value if false)
 - i. logical_test = a formula element that comes out TRUE or FALSE
 - ii. value_if_true = What to put in the cell if the logical test comes out TRUE
 - iii. value_if_false = What to put in the cell if the logical_test comes out FALSE
- 2. How to Show Nothing in a Cell with a Formula using "" (Two Double Quotes with no characters, not even a space between them)
 - In a formula, "" (Double Quote, Double Quote) is the syntax to have a formula **Show Nothing** in a cell.
 - When we use Two Double Quotes (no space between them) in a formula, we are actually putting a **Zero Length Text String** into the cell.
 - This **Zero Length Text String** is considered a "Text" Data Type by Excel.
 - Even though it is considered "Text" by Excel, it is what we use in formulas when we want the formula to show nothing in the cell.

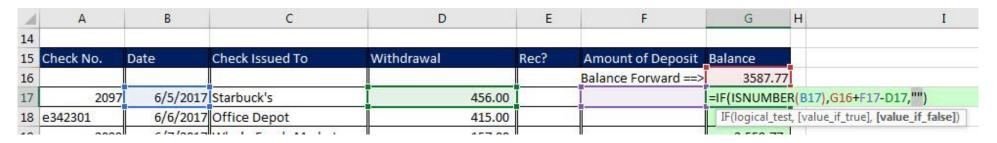
<u>Step 1:</u> For the <u>logical_test</u> in the IF function we can use the ISNUMBER Function and have it look at the date in the Date Column using a Relative Cell Reference. This logical_test using the ISNUMBER will come out TRUE where there is a date in the Date Column and FALSE when there is no date.

A	A	В	С	D	Е	F	G	H I
14								
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16	9	83			ė.	Balance Forward ==>	3587.77	1
17	2097	6/5/2017	Starbuck's	456.00			=IF(ISNUMBE	R(B17),G16+F17-D17,"")
18	e342301	6/6/2017	Office Depot	415.00			IF(logical_te	st, [value_if_true], [value_if_false])
19	2099	6/7/2017	Whole Foods Market	157.00	S.		2,559.77	1

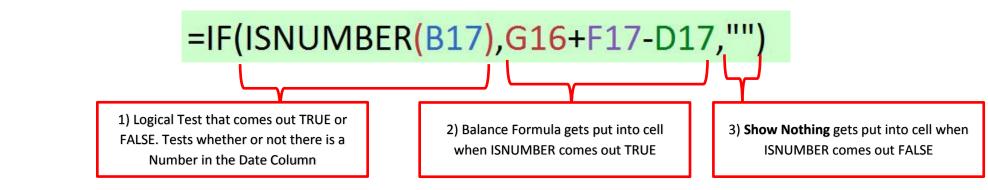
<u>Step 2:</u> For the <u>value_if_true</u> argument in IF function, we put the Balance Formula. This way the IF Function can put the Balance Formula into the cell when the ISNUMBER delivers a TRUE.

d	Α	В	C	D	E	F	G	H
14	2							
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16			-1			Balance Forward ==>	3587.77	
17	2097	6/5/2017	Starbuck's	456.00			=IF(ISNUMBE	R(B17),G16+F17-D17,"")
18	e342301	6/6/2017	Office Depot	415.00			IF(logical_tes	t, [value_if_true], [value_if_false])
19	2099	6/7/2017	Whole Foods Market	157.00			2,559.77	

<u>Step 3:</u> For the <u>value_if_false</u> argument in IF function, we put the syntax to **Show Nothing**, our **Zero Length Text String**, "". This way the IF Function can Show Nothing in the cell when the ISNUMBER delivers a FALSE.



Step 4: All together the three parts of the IF Function look like this:

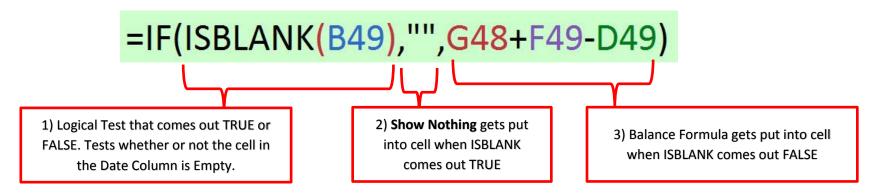


Step 5: For Each Cell, the IF Function delivers one of two things: Balance Formula or Show Nothing.

À	A	В	C	D	E	F	G	Н 1
14								
15	Check No.	Date	Check Issued To	Withdrawal	Rec?	Amount of Deposit	Balance	
16						Balance Forward ==>	3587.77	
17	2097	6/5/2017	Starbuck's	456.00			3,131.77	
18	e342301		Office Depot	415.00			2,716.77	
19	2099	6/7/2017	Whole Foods Market	157.00			2,559.77	
20	e354477	6/7/2017	Suix Trucking	59.00			2,500.77	
21		6/8/2017	Deposit			588.00	3,088.77	
22	2101	6/8/2017	Macbeth Hardwoods	499.00			2,589.77	
23	2102	6/8/2017	Chin Ho	392.00			2,197.77	
24		6/10/2017	Deposit			612.00	2,809.77	
25	2103		Home Depot	411.00			2,398.77	
26	e370012	6/11/2017	Macbeth Hardwoods	490.00			1,908.77	
27	e370079	6/11/2017	Google	251.00			1,657.77	
28	2106	6/11/2017	Starbuck's	36.00			1,621.77	
29	2107	6/12/2017	Sheliadawn Smith	411.00			1,210.77	
30		6/12/2017	Deposit			2,116.00	3,326.77	
31								
32								
33								
34								
35								
36			Ĵ.					
37								
38								
39		_						Ī
40			Ī	<u>I</u>	Ī	Ţ	=IF(ISNUMBE	R(B40),G39+F40-D40,"")
41		VI I			T			

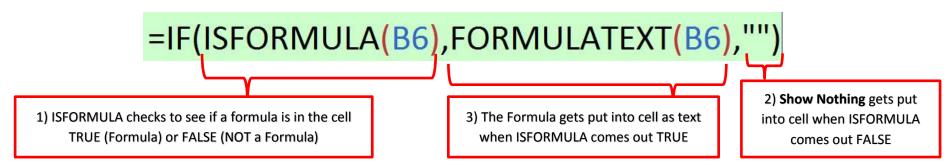
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<u>Step 6:</u> As an alternative for the checkbook register IF Function formula, you can use the ISBLANK Logical Function to check whether or not the Date Column Cell is Empty. If the Cell in the Date Column is empty, then the formula will Show Nothing. If the Cell in the Date Column is NOT empty, then the formula put the Balance Formula in the cell.



7) ISFORMULA & FORMULATEXT to show formulas after you enter them into cell as seen in this video

3							
4	Description	Value	Term	Type of Formula	Actual Formula		
5	Stock	QVC					
6	Stock Value at Begin of Day	15.75	Begin		=IF(ISFORMULA(B6),	FORMULA	TEXT(B6),"")
7	Stock Value at End of Day	17.45	End Part			Ī	
8	Amount of Change	1.7	Change Part	End Part - Begin	=B7-B6		
9	% Change	0.107936508	Rate of Change ROC	Change Part/Begin	=B8/B6		
10	1 + % Change	1.107936508	Rate	1 + ROC	=1+B9		



8) IF Function, ISBLANK (or ISNUMBER) and Zero Length Text String to create Balance Formula for Inventory Tracking Table

100	Α	В	C	D	E	F	G	Н	Ī	J
1	Below is an	Inventory Tracking	g Table.							
2	The "Number of Items Purchased" Column contains the number of inventory items purchased (added to balance).									
3	The "Number of Items Sold" Column contains the number of inventory items sold (subtracted from balance).									
4	In cell F10 create a formula that can calculate the inventory balance when a date is entered into the date column,									
5	or show nothing when a date is not entered. Then copy the formula down the column.									
6										
7		Inventory Tracker for Quad Boomerang								
				Number						
		Number of Items	Purchase Order	of Items	Invoice					
8	Date	Purchased	Number	Sold	Number	Balance				
						1				
9		entory Count from I	End of Last Period			102			Other Possibilities:	
-	2/16/2018				IN #10266		=IF(ISBLANK(A10),"",F9-D10+B10)	OR =>>		=IF(ISNUMBER(A10),F9+B10-D10,"")
-	2/16/2018			10	IN #10291	47			47	
-	2/17/2018		PO # 611296			191			191	
-	2/17/2018				IN #10301	189			189	
	2/18/2018				IN #10309	165			165	
	2/20/2018			5.5%	IN #10445	117			117	
-	2/22/2018			54	IN #10500	63			63	
	2/22/2018		PO # 611317		en characteristics	287			287	
	2/22/2018	-			IN #10521	143			143	<u> </u>
-	2/23/2018			24	IN #10544	119			119	
	2/24/2018	144	PO # 611329			263			263	
21		4								
22						1			,	
23	8			£ r :		3				
25		8				10			2	
26		4				4				
27		1								
28		3								
29										
30										