

M365 Excel Basics Video 11: IF Function, IS Functions and Logical Tests (Functions)

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Topics covered in the M365 Excel Basics Video 11:

- IF Functions
- IS Functions
- Logical Tests
 - Comparative Operators
 - AND Logical Test
 - OR Logical Test

Date	Region	Product	Sales	Sales Category	Hurdle	Category
10/30/2022	Australia	Rainbow High Dolls	\$305.44	=IF(E8:E73008>=I8,J8,K8)	300	Average
4/2/2022	Africa	Rainbow High Dolls	\$131.88	Below Average		
3/11/2023	Africa	Rainbow High Dolls	\$258.65	Below Average		
1/5/2023	Europe	Stuffed Animals/Bears	\$233.20	Below Average		
7/13/2022	Africa	LOL OMG Surprise	\$343.42	Average		
6/28/2023	Australia	Monster Trucks	\$257.63	Below Average		
4/10/2023	NorthAmerica	Monster Trucks	\$172.54	Below Average		
5/27/2022	Australia	LOL OMG Surprise	\$483.09	Average		
5/26/2022	Europe	Stuffed Animals/Bears	\$380.52	Average		

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

Formula in F8:
=IF(E8:E73008>=I8,J8,K8)

Sum of Sales (\$)	Sales Category		
Region	Average	Below Average	Grand Total
Africa	2,934,178	1,508,237	4,442,415
Australia	2,834,365	1,473,547	4,307,912
Europe	2,911,903	1,453,851	4,365,754
NorthAmerica	2,911,732	1,454,194	4,365,926
South America	2,919,395	1,435,553	4,354,948
Grand Total	14,511,574	7,325,381	21,836,955

IF Function

The **IF Function** is one of the most used functions in Excel and it allows you to make logical comparisons between a value and what you expect.

An IF Function can have two results. The first result is if your comparison is TRUE, and the second result is if your comparison is FALSE.

For example, if Vivy walks 10,000 steps or Greater daily they met their goal otherwise not met.

=IF(K8>=O8,"Goal Met", Goal Failed") means if TRUE, then Return Goal Met, otherwise return Goal Failed.

The IF Function puts one of two things in a cell or formula. You can put:

- Two numbers
- Two formulas
- Two anything, could be a formula or text
- Two words (also referred to as Text, Text String, or Zero Length Text String)
 - It is called the Zero Length Text String because the Double Quotes make it Text and there are no characters typed between the Double Quotes, the Text has Zero Length.
 - To show nothing in an Excel formula is by using the Zero Length Text String whereby you use the Two Double Quotes with nothing in between the Double Quotes. This is typed as: ""

Formula Syntax:

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

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

IS Function

Even though many logical tests use comparative operators, there are some that do not use the comparative operators. An example would be in a situation where you would want to check whether the value in the cell is a number or a text or the cell is blank. You may also want to check if the cell contains a formula. In this case, you will need to use the IS Functions. The IS Function is not a comparative operator, but it allows you to ask a question and get a True or a False answer. The IS functions provide information about the value, for example is the value a data type, is it an error, is it a formula. The IS function can deliver a Single output Boolean value, or it can spill the results in the neighboring cells.

The Table below shows the IS Functions that you can use in an Excel spreadsheet:

IS Functions allow you to ask a question and get a TRUE or FALSE answer.

IS Function	Question the Function asks
ISNUMBER(value)	Is the value a number?
ISTEXT(value)	Is the value a Text?
ISBLANK(value)	Is the cell empty?
ISERROR(value)	Is the value an error?
ISNA(value)	Is the value an #N/A error?
ISERR(value)	Is the value an error other than #N/A?
ISNONTTEXT(value)	Is the value not a text?
ISLOGICAL(value)	Is the value a logical value?
ISFORMULA(value)	Is there a formula in the cell?
ISREF(value)	Is the value a reference?
ISEVEN(value)	Is the number even?
ISODD(value)	Is the number odd?

Logical Function

A **Logical Function** is a function that returns one or two possible values depending on whether a given condition is **True** or **False**. The two possible outcomes are called Boolean values. The condition is entered as an expression of the logical test for example, =D20=E20, if the value in cell D20 is equal to the value in cell E20, the condition is TRUE, if the value in cell D20 is not equal to the value in cell E20, the condition is FALSE.

Logical Function uses comparative operators. The comparison, or comparative operators are operators expressing the relationship between two values. When you use a comparative operator in a formula, you create a logical formula resulting in either a True or a False value.

Where the **logical-test** is a condition that is either True or False, the **value_if_true** is the value returned by the function if the condition is True, and the **value_if_false** is the argument containing the value returned by the function if the condition is False.

Formula Syntax:

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

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

The Table below shows different comparison operators that can be used with the logical functions.

Comparison Operator:	=	>	>=	<	<=	<>
Phrases	Equals	Greater Than	Greater Than or Equal To	Less Than	Less Than or Equal To	Not Equal To
Alternate Phrases	Equal To	Above	no less than	Under	No More Than	complement of
	Same As	More Than	At Least	Below	At Most	Not
			X or more		X or less	
Examples of Words:	Equals 3000	Greater Than 3000	Greater Than or Equal To 3000	Less Than 3000	Less Than or Equal To 3000	Not Equal To 3000
	Equal To 3000	Above 3000	no less than 3000	Under 3000	No More Than 3000	complement of 3000
	Same As 3000	More Than 3000	At Least 3000	Below 3000	At Most 3000	Not 3000
			3000 or more		3000 or less	
	If Hurdle:					
	3000					

The Table below shows the Logical Tests Examples:

Comparative Operator Used	Logical Test	Item #1	Item #2	Comparison Result	Formula Used
= Equal	If value in cell D20 is Equal To the value in cell E20	BUSN	Busn	TRUE	=D20=E20
= Equal	If value in cell D21 is Equal To the value in cell E21	ACCT&	Busn	FALSE	=D21=E21
= Equal	If value in cell D22 is Equal To the value in cell E22	BUSN	BUS&	FALSE	=D22=E22
= Equal	If value in cell D23 is Equal To the value in cell E23	9:30 PM	21:30	TRUE	=D23=E23
> Greater Than	If value in cell D24 is Greater Than the value in cell E24	3.75	3.7	TRUE	=D24>E24
> Greater Than	If value in cell D25 is Greater Than the value in cell E25	4.00	4	FALSE	=D25>E25
>= Greater Than or Equal To	If value in cell D26 Greater Than or equal to the value in cell E26	3.75	3.7	TRUE	=D26>=E26
< Less Than	If value in cell D27 is Less Than the value in cell E27	14	11	FALSE	=D27<E27
< Less Than	If value in cell D28 is Less Than the value in cell E28	10	12	TRUE	=D28<E28
<= Less Than or Equal To	If value in cell D29 Less Than or Equal To the value in cell E29	4.00	4	TRUE	=D29<=E29
<= Less Than or Equal To	If value in cell D30 Less Than or Equal To the value in cell E30	4.1	4.01	FALSE	=D30<=E30
<> Not Equal To	If value in cell D31 NOT Equal To the value in cell E31	BUSN	Busn	TRUE	=D31<>E31
<> Not Equal To	If value in cell D32 NOT Equal To the value in cell E32	BUSN	BUS&	TRUE	=D32<>E32
= Equal	If value in cell D33 is Equal To the value in cell E33	10/30/2024	11/1/2024	FALSE	=D33=E33
> Greater Than	If value in cell D34 Greater Than the value in cell E34	10/31/2024	11/1/2024	FALSE	=D34>E34
< Less Than	If value in cell D35 is Less Than the value in cell E35	11/1/2024	11/1/2024	FALSE	=D35<E35
<> Not Equal To	If value in cell D36 NOT Equal To the value in cell E36	11/1/2024	11/1/2024	FALSE	=D36<>E36

Comparative Operators:
> Greater Than
>= Greater Than Or Equal To
< Less Than
<= Less Than Or Equal To
= Equal To
<> Not Equal To

NOT Logical Test

A **NOT Logical Test (Formula)** is a test that checks if two items are not equal. NOT logical test tests with a single condition, but it can also be used to test a condition with two or more conditions, and it reverses the outcome so that True becomes False and False becomes True. For example: 11/1/2024 <> 11/1/2024 will result in a FALSE.

AND Logical Test

An **AND Logical Test (Formula)** has two or more conditions. AND Logical Test is used to test two or more logical tests to evaluate if all logical tests will be TRUE.

There are four possible answers for an AND Logical Test, and only the TRUE,TRUE will result in a TRUE value from an AND Logical Test, all these other three possible answers will result in a FALSE value.

- TRUE, TRUE
- TRUE, FALSE
- FALSE, TRUE
- FALSE, FALSE

In this class in our past video, we covered the aggregate functions that can perform the AND Logical Tests. Here are the functions that we covered:

- COUNTIFS: Counts numbers with one or more conditions or criteria
- SUMIFS: Adds numbers with one or more conditions or criteria
- AVERAGEIFS: Averages numbers with one or more conditions or criteria
- MINIFS: Finds the minimum number with one or more conditions or criteria
- MAXIFS: Finds the maximum number with one or more conditions or criteria

An example of an AND Logical Test is if you would like to determine if a student is eligible for the honors roll. To be awarded with an honors roll in each quarter, students must have completed more than 12 college level credits AND with a cumulative GPA of 3.5 and above. Here is how the formula is entered in the cell:

```
=AND(E10>$C$6,F10>=$C$7)
```

```
=AND(College Level Credits >12, Cumulative GPA >=3.5)
```

OR Logical Test

An **OR Logical Test (Formula)** has two or more conditions. This logical test is used to check whether at least one test evaluates to True. With the OR logical test, you are determining whether one or more of the logical tests evaluates to True.

There are four possible answers for an OR Logical Test, and only the FALSE, FALSE will result in a FALSE value from an OR Logical Test, all these other three possible answers will result in a TRUE value. You can have one TRUE, or both TRUE and the OR logical test will evaluate to a TRUE.

- FALSE, FALSE
- TRUE, FALSE
- FALSE, TRUE
- TRUE, TRUE

An example of the OR Logical test is the Business and Accounting Department has a scholarship that is offered only to students whose program of study is Business or Accounting. Here is how the formula is entered in the cell:

```
=OR(D35=$C$31,D35=$C$32)
```

```
=OR(Program of Study=Accounting, Program of Study=Business)
```

The AND and OR functions can have up to 255 logical tests entered as arguments, separated by commas. The order in which you enter these arguments does not matter because for both functions they are looking at how many TRUE values there are and not the order in which they occur. The NOT function accepts only one argument. In all these three functions, the arguments interpret any nonzero number as TRUE and interpret zero as FALSE. All these three functions can accept logical tests created with comparison operators, numeric values, the IS functions, any other function or formula that delivers a Boolean or numeric value (Girvin, 2022).

NOTE: You cannot Spill your answers using the AND, OR, and NOT Functions, with these functions you must enter the formula in the top cell and then manually copy the formula down the column. If you do not want to copy then you can use the Excel Table formula as this will automatically copy the formulas for you.

Examples:

The next pages show the pictures of all the examples in the M365 Excel Basics Video 11, and it includes also the formulas used on each of the examples.

	A	B	C	D	E	F	G	H	I	J	K	
1												
2		You would like to track if you are within the budget for the Month or not.										
3		If you are within the budget the IF function returns 'Within Budget', otherwise 'Over Budget'.										
4		You will also calculate the amount over the budget for every month.										
5												
6												
7	Ex. 3	Month	Budgeted Amount	Actual Amount Spent	Status? TRUE or FALSE							
8		Dec	\$900.00	\$1,200.00	FALSE	=D8:D14<=C8:C14						
9		Jan	\$700.00	\$500.00	TRUE							
10		Feb	\$400.00	\$500.00	FALSE							
11		Mar	\$500.00	\$300.00	TRUE							
12		Apr	\$300.00	\$150.00	TRUE							
13		May	\$200.00	\$190.00	TRUE							
14		Jun	\$700.00	\$900.00	FALSE							
15												
16												
17	Ex. 4	Month	Budgeted Amount	Actual Amount Spent	Status	Amount Over						
18		Dec	\$900.00	\$1,200.00	Over Budget	\$300.00						
19		Jan	\$700.00	\$500.00	Within Budget	\$0.00						
20		Feb	\$400.00	\$500.00	Over Budget	\$100.00						
21		Mar	\$500.00	\$300.00	Within Budget	\$0.00						
22		Apr	\$300.00	\$150.00	Within Budget	\$0.00						
23		May	\$200.00	\$190.00	Within Budget	\$0.00						
24		Jun	\$700.00	\$900.00	Over Budget	\$200.00						
25					=IF(D18:D24<=C18:C24,H18,I18)							
26					=IF(D18:D24<=C18:C24,0,D18:D24-C18:C24)							
27												

	A	B	C	D	E	F	G	H	I	J
27										
28	You would like to keep a track of the customers that owe the company money.									
29	If the customer owes a balance the IF function will return the amount owed otherwise returns 'No Balance'									
30										
31	Ex. 5	Customer	Invoice Amount	Amount Paid	Amount Owed	Show Nothing or "Balance Owed"	Show the Balance Amount Owed or Show Nothing		Hurdle:	
32		Tiana Anderson	\$481.13	\$481.13	\$0.00				Balance Owed	
33		Cinderelli Carson	\$411.75	\$461.75	-\$50.00					
34		Carmen Williams	\$209.79	\$209.79	\$0.00					
35		Brixten Luis	\$232.33	\$157.33	\$75.00	Balance Owed	\$75.00			
36		Stella Farewell	\$354.94	\$300.00	\$54.94	Balance Owed	\$54.94			
37		Miles Smith	\$376.30	\$376.30	\$0.00					
38		Miley Davis	\$409.84	\$400.00	\$9.84	Balance Owed	\$9.84			
39		Daudi Shem	\$320.08	\$0.00	\$320.08	Balance Owed	\$320.08			
40		Marcus Brown	\$402.60	\$400.00	\$2.60	Balance Owed	\$2.60			
41		Kaitlyn Miller	\$218.45	\$218.45	\$0.00					
42		Sophia Garcia	\$347.35	\$354.70	-\$7.35					
43										
44				=C32:C42-D32:D42		=IF(E32:E42<=0,"",I32)				
45							=IF(E32:E42<=0,"",E32:E42)			
46										
47	You are the sales and Marketing manager and would like to give a Bonus to all the employees whose sales are Greater Than 25,000.									
48	You would like to track which employee gets the Bonus and how much of the Bonus they get.									
49	The contract read that they will receive a 10% Bonus if the sales are Greater Than \$25,000, otherwise 2%									
50										
51	Ex. 6	Employee	Sales Amount	Bonus Commission %		Hurdle:	Bonus %	No Bonus %		
52		Tiana Anderson	\$45,532.01	10.00%		\$25,000.00	10.00%	2.00%		
53		Cinderelli Carson	\$24,999.99	2.00%						
54		Carmen Williams	\$48,869.27	10.00%						
55		Brixten Luis	\$23,628.28	2.00%		=IF(C52:C58>F52,G52,H52)				
56		Stella Farewell	\$19,065.53	2.00%						
57		Miles Smith	\$32,385.57	10.00%						
58		Miley Davis	\$47,062.08	10.00%						

46											
47	You are the sales and Marketing manager and would like to give a Bonus to all the employees whose sales are Greater Than 25,000.										
48	You would like to track which employee gets the Bonus and how much of the Bonus they get.										
49	The contract read that they will receive a 10% Bonus if the sales are Greater Than \$25,000, otherwise 2%										
50											
51	Ex. 6	Employee	Sales Amount	Bonus Commission %		Hurdle:	Bonus %	No Bonus %			
52		Tiana Anderson	\$45,532.01	10.00%		\$25,000.00	10.00%	2.00%			
53		Cinderelli Carson	\$24,999.99	2.00%							
54		Carmen Williams	\$48,869.27	10.00%							
55		Brixten Luis	\$23,628.28	2.00%		=IF(C52:C58>F52,G52,H52)					
56		Stella Farewell	\$19,065.53	2.00%							
57		Miles Smith	\$32,385.57	10.00%							
58		Miley Davis	\$47,062.08	10.00%							
59											
60											
61											
62	Ex. 7	Employee	Sales Amount	Bonus Commission \$	Amount Paid	Hurdle:	Bonus %	No Bonus %			
63		Tiana Anderson	\$45,532.01	\$4,553.20		\$25,000.00	10.00%	2.00%			
64		Cinderelli Carson	\$24,999.99	\$500.00							
65		Carmen Williams	\$48,869.00	\$4,886.90							
66		Brixten Luis	\$23,628.00	\$472.56		=IF(C63:C69>F63,G63,H63)*C63:C69					
67		Stella Farewell	\$19,065.00	\$381.30							
68		Miles Smith	\$32,385.00	\$3,238.50							
69		Miley Davis	\$47,062.01	\$4,706.20							
70											
71											
72											

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2	Ex. 8	You work at the enrollment office and would like to post Honors Roll on the transcript for the students who have completed more than 12 credits and have a cumulative GPA of 3.5 and above															
3		If the student has completed 12 college level credits and have a cumulative GPA of 3.5 and above, they are eligible to have the Honors Roll posted on their transcript otherwise Not eligible															
4		Create a logical formula that shows if they are eligible for the Honors Roll															
5																	
6		Credit Hurdle	12				Formula in cell G10										
7		GPA Hurdle	3.5				=AND(E10>\$C\$6,F10>=\$C\$7)										
8																	
9		Students Name	Student ID Number	Major	College Level Credits	Cumulative GPA	Honors Roll Eligible?										
10		Barton, Allie	6114960	Physics	45	3.2	FALSE										
11		Gill, Hallie	5054429	Nursing	60	3.6	TRUE										
12		Lucas, Jeanette	5337134	Chemistry	45	3.9	TRUE										
13		Tucker, Mathew	6075206	Business	90	3.4	FALSE										
14		Casey, Amy	6182899	Business	23	3.8	TRUE										
15		Boyle, Rhett	6831591	Accounting	11	3.95	FALSE										
16		Key, Cortez	5454242	Physics	70	2.25	FALSE										
17		Bailey, Jonathan	5277513	Biology	40	3.75	TRUE										
18		Jones, Adolph	6754697	Physics	65	3.65	TRUE										
19		Kelley, Bobby	5174488	Biology	70	3.2	FALSE										
20		Morrison, Rosella	6597730	Nursing	10	4	FALSE										
21		Cruz, Annmarie	6537185	Nursing	12	3.8	FALSE										
22		Berg, Jarrod	6582539	Accounting	50	3.49	FALSE										
23		Hart, Mikel	5495287	Business	80	3.5	TRUE										
24		Mckenzie, Levi	6182364	Chemistry	50	2.5	FALSE										
25																	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
27														
28	Ex. 9	The Business and Accounting Department has a scholarship that is offered only to students whose program of study is Business or Accounting												
29		Create a logical formula that shows True for the students eligible for the scholarship and False if not												
30														
31		Program of Study	Accounting											
32		Program of Study	Business											
33														
34		Students Name	Student ID Number	Program of Study	College Level Credits	Cumulative GPA	Scholarship Eligible?							
35		Barton, Allie	6114960	Physics	45	3.2	FALSE							
36		Gill, Hallie	5054429	Nursing	60	3.6	FALSE							
37		Lucas, Jeanette	5337134	Chemistry	45	3.9	FALSE							
38		Tucker, Mathew	6075206	Business	90	3.4	TRUE							
39		Casey, Amy	6182899	Business	23	3.8	TRUE							
40		Boyle, Rhett	6831591	Accounting	11	3.95	TRUE							
41		Key, Cortez	5454242	Physics	70	2.25	FALSE							
42		Bailey, Jonathan	5277513	Biology	40	3.75	FALSE							
43		Jones, Adolph	6754697	Business	65	3.65	TRUE							
44		Kelley, Bobby	5174488	Biology	70	3.2	FALSE							
45		Morrison, Rosella	6597730	Nursing	10	4	FALSE							
46		Cruz, Annmarie	6537185	Nursing	12	3.8	FALSE							
47		Berg, Jarrod	6582539	Accounting	50	3.49	TRUE							
48		Hart, Mikel	5495287	Business	80	3.5	TRUE							
49		Mckenzie, Levi	6182364	Chemistry	50	2.5	FALSE							
50														

Formula in cell G35
 =OR(D35=\$C\$31,D35=\$C\$32)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
53																	
54	Ex. 10	The Business and Accounting Department has a scholarship that is offered only to students whose their program of study is Business or Accounting with a Cumulative GPA of 2.5 and above															
55		Create a logical formula that shows True for the students eligible for the scholarship and False if not															
56																	
57		Cumulative GPA	2.5														
58		Program of Study	Accounting														
59		Program of Study	Business														
60																	
61		Students Name	Student ID Number	Major	College Level Credits	Cumulative GPA	Scholarship Eligible?										
62		Barton, Allie	6114960	Physics	45	3.2	FALSE										
63		Gill, Hallie	5054429	Nursing	60	3.6	FALSE										
64		Lucas, Jeanette	5337134	Chemistry	45	3.9	FALSE										
65		Tucker, Mathew	6075206	Business	90	3.4	TRUE										
66		Casey, Amy	6182899	Business	23	3.8	TRUE										
67		Boyle, Rhett	6831591	Accounting	11	3.95	TRUE										
68		Key, Cortez	5454242	Accounting	70	2.25	FALSE										
69		Bailey, Jonathan	5277513	Biology	40	3.75	FALSE										
70		Jones, Adolph	6754697	Business	65	3.65	TRUE										
71		Kelley, Bobby	5174488	Biology	70	3.2	FALSE										
72		Morrison, Rosella	6597730	Nursing	10	4	FALSE										
73		Cruz, Annmarie	6537185	Nursing	12	3.8	FALSE										
74		Berg, Jarrod	6582539	Accounting	50	3.49	TRUE										
75		Hart, Mikel	5495287	Business	80	3.5	TRUE										
76		Mckenzie, Levi	6182364	Business	50	2.4	FALSE										
77																	
78																	

Formula in cell G62
 =AND(F62>=\$C\$57,OR(D62=\$C\$58,D62=\$C\$59))

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
79														
80	Ex. 11	The Graduation office would like to track the students that are eligible to apply for graduation.												
81		Students are eligible to apply for graduation if they have completed 75 or more college level credits and have a cumulative GPA of 2.0 or above												
82		Create a logical formula that shows True for the students eligible to apply for graduation and False if not eligible												
83														
84														
85		Cumulative GPA	2				Formula in cell G89							
86		College Level Credits	75				=AND(F89>=\$C\$85,E89>=\$C\$86)							
87														
88		Students Name	Student ID Number	Major	College Level Credits	Cumulative GPA	Graduation Eligible?							
89		Barton, Allie	6114960	Physics	45	3.2	FALSE							
90		Gill, Hallie	5054429	Nursing	75	3.6	TRUE							
91		Lucas, Jeanette	5337134	Chemistry	84	1.85	FALSE							
92		Tucker, Mathew	6075206	Business	90	3.4	TRUE							
93		Casey, Amy	6182899	Business	76	3.8	TRUE							
94		Boyle, Rhett	6831591	Accounting	90	1.9	FALSE							
95		Key, Cortez	5454242	Accounting	80	2.25	TRUE							
96		Bailey, Jonathan	5277513	Biology	78	3.75	TRUE							
97		Jones, Adolph	6754697	Business	65	3.65	FALSE							
98		Kelley, Bobby	5174488	Biology	70	3.2	FALSE							
99		Morrison, Rosella	6597730	Nursing	160	4	TRUE							
100		Cruz, Annmarie	6537185	Nursing	72	3.8	FALSE							
101		Berg, Jarrod	6582539	Accounting	50	3.49	FALSE							
102		Hart, Mikel	5495287	Business	80	3.5	TRUE							
103		Mckenzie, Levi	6182364	Business	89	2.4	TRUE							
104														
105														

	A	B	C	D	E	F	G
1				Ex 12	Ex 13	Ex 14	
2				=ISNUMBER(B7:B21)	=ISBLANK(B7:B21)	=ISTEXT(B7:B21)	
3				ISNUMBER	ISBLANK	ISTEXT	
4				Is it a Number?	Is cell empty?	Is it Text?	
5							
6	Date	Sales	Product	Sale Entered?	Sale Not Entered?	Is Text?	
7	8/5/2024		Monster Trucks	FALSE	TRUE	FALSE	
8	8/9/2024	\$1,598.16	Stuffed Animals/Bears	TRUE	FALSE	FALSE	
9	8/7/2024	\$3,013.36	Hot Wheels	TRUE	FALSE	FALSE	
10	8/3/2024		LOL Surprise	FALSE	TRUE	FALSE	
11	8/17/2024	\$3,735.88	Hot Wheels	TRUE	FALSE	FALSE	
12	8/19/2024	\$1,208.49	Hot Wheels	TRUE	FALSE	FALSE	
13	8/27/2024	\$4495,.21	Monster Trucks	FALSE	FALSE	TRUE	
14	8/11/2024	\$3,855.30	LOL Surprise	TRUE	FALSE	FALSE	
15	8/1/2024	\$1,798.67	Hot Wheels	TRUE	FALSE	FALSE	
16	8/17/2024	&4589.36	Monster Trucks	FALSE	FALSE	TRUE	
17	8/5/2024		Hot Wheels	FALSE	TRUE	FALSE	
18	8/11/2024	\$1,437.43	LOL OMG Surprise	TRUE	FALSE	FALSE	
19	8/30/2024	\$1,135.58	Monster Trucks	TRUE	FALSE	FALSE	
20	8/8/2024	3413.28	Hot Wheels	TRUE	FALSE	FALSE	
21	8/8/2024	2.714.54	LOL OMG Surprise	FALSE	FALSE	TRUE	
22							
23							

1	Ex. 15	You are doing your own bookkeeping and you would like to track and calculate your checkbook balance														
2		Create a formula in cell that will calculate your checkbook balance when you enter a date into the date column, or show nothing														
3		when a date is not entered. Copy the formula down the column.														
4																
5																
6		My Check Book Register														
7		Check No.	Date	Transaction	Amount of Deposit	Withdrawals	Balance		Balance		Balance					
8					Balance Forward ==>		\$42,534.75									
9		e447	10/2/2024	Highline Water District		99.35	\$42,435.40	=IF(ISNUMBER(C9),G8+E9-F9,"")	\$42,435.40	=IF(ISBLANK(C9),"",G8+E9-F9)	\$42,435.40	=IF(C9="","",G8+E9-F9)				
10			10/2/2024	Deposit	1,235.57		\$43,670.97		\$43,670.97		\$43,670.97					
11		e555	10/4/2024	Xfinity		185.91	\$43,485.06		\$43,485.06		\$43,485.06					
12		1001	10/5/2024	Bob's Lawn Mowers		160.00	\$43,325.06		\$43,325.06		\$43,325.06					
13		1002	10/6/2024	Salon DayVon		55.00	\$43,270.06		\$43,270.06		\$43,270.06					
14		e775	10/7/2024	Auto-Loan		436.67	\$42,833.39		\$42,833.39		\$42,833.39					
15		1003	10/7/2024	Toyota Fife		120.20	\$42,713.19		\$42,713.19		\$42,713.19					
16			10/9/2024	Deposit	975.55		\$43,688.74		\$43,688.74		\$43,688.74					
17			10/9/2024	Deposit	1,120.75		\$44,809.49		\$44,809.49		\$44,809.49					
18		1004	10/10/2024	Costco		200.19	\$44,609.30		\$44,609.30		\$44,609.30					
19		e875	10/10/2024	Progressive Insurance		128.25	\$44,481.05		\$44,481.05		\$44,481.05					
20		1005	10/12/2024	Trader Joe's		59.58	\$44,421.47		\$44,421.47		\$44,421.47					
21		1006	10/13/2024	Discover Toys		28.46	\$44,393.01		\$44,393.01		\$44,393.01					
22		1007	10/14/2024	Office Depot		74.31	\$44,318.70		\$44,318.70		\$44,318.70					
23			10/15/2024	Deposit	1,074.32		\$45,393.02		\$45,393.02		\$45,393.02					
24		e1050	10/15/2024	Mortgage Loan		1,107.00	\$44,286.02		\$44,286.02		\$44,286.02					
25																
26																
27																
28																
29																
30																

Date	Region	Product	Sales	Sales Category	Hurdle	Category	Sum of Sales (\$)	Sales Category	Region	Average	Below Average	Grand Total
10/30/2022	Australia	Rainbow High Dolls	\$305.44	Average	300	Average Below Average						
4/2/2022	Africa	Rainbow High Dolls	\$131.88	Below Average			Africa	2,934,178		1,508,237	4,442,415	
3/11/2023	Africa	Rainbow High Dolls	\$258.65	Below Average			Australia	2,834,365		1,473,547	4,307,912	
1/5/2023	Europe	Stuffed Animals/Bears	\$233.20	Below Average			Europe	2,911,903		1,453,851	4,365,754	
7/13/2022	Africa	LOL OMG Surprise	\$343.42	Average			NorthAmerica	2,911,732		1,454,194	4,365,926	
6/28/2023	Australia	Monster Trucks	\$257.63	Below Average			South America	2,919,395		1,435,553	4,354,948	
4/10/2023	NorthAmerica	Monster Trucks	\$172.54	Below Average			Grand Total	14,511,574		7,325,381	21,836,955	
5/27/2022	Australia	LOL OMG Surprise	\$483.09	Average								
5/26/2022	Europe	Stuffed Animals/Bears	\$380.52	Average								
7/3/2023	Europe	Hot Wheels	\$184.15	Below Average								
11/16/2022	Europe	Hot Wheels	\$457.83	Average								
8/11/2023	NorthAmerica	Hot Wheels	\$479.02	Average								
8/27/2023	Africa	LOL Surprise	\$103.45	Below Average								
6/15/2023	Africa	LOL Surprise	\$184.43	Below Average								
9/6/2022	South America	Rainbow High Dolls	\$235.62	Below Average								
7/3/2023	South America	Stuffed Animals/Bears	\$498.02	Average								
7/4/2023	Europe	Stuffed Animals/Bears	\$157.02	Below Average								
8/16/2023	Europe	Hot Wheels	\$433.55	Average								
3/26/2022	Australia	LOL OMG Surprise	\$129.98	Below Average								
5/25/2022	NorthAmerica	LOL OMG Surprise	\$177.49	Below Average								
6/2/2022	Australia	Monster Trucks	\$140.71	Below Average								
5/2/2023	Europe	Rainbow High Dolls	\$247.27	Below Average								
8/29/2022	Africa	Rainbow High Dolls	\$228.73	Below Average								
1/3/2022	Africa	LOL Surprise	\$496.19	Average								
12/14/2021	NorthAmerica	LOL Surprise	\$421.08	Average								

Formula in F8:
=IF(E8:E73008>=I8,J8,K8)