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WHAT's New?



**Discovering the Undiscovered Features of Excel:
(Part 2)**

Due to the vast features of Excel that caters to our work needs, some functions are left unused, moreover, undiscovered. Here are additional **Computation Functions** of Excel.

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Undiscovered Features of Excel (Part 2)

We can use conditional sums to TOTAL and COUNT data but before we can learn to do conditional sums, we need to learn using the IF functions.

1. **IF Function.** This function will basically test to see whether your condition is TRUE or FALSE. Here's how:
 - a. For instance, in the example below, we would like to find out if the cell value is greater than 50.

	A	B	C	D	E
1					
2		52			
3		35			
4					
5					

- b. Click a blank cell and then supply this formula: IF(*logical_test*, *value_if_true*, *value_if_false*)
Where:
 - *logical_test* is condition that will be tested. In our example the value for this is **B2>50**.
 - *value_if_true* will be the value if the condition's result is **true**. This will be **TRUE** in our example.
 - *value_if_false* will be the value if the condition's result is **false**. This will be **FALSE** in our example.
 - c. Formula should be: **=IF(B2>50,"TRUE","FALSE")**

	A	B	C	D	E	F
1						
2		52		TRUE		
3		35		FALSE		
4						
5						

IF Functions will be used in conditional sums. Now we can proceed to conditional sums functions.

2. Use conditional sums to TOTAL data. In using conditional formatting, we will be exercising the nested IF scenario. Nested IF is a formula where one IF Function is inside another IF Function. In the sample below, we will also utilize the commonly used SUM Function.

- a. Lets say we have this list of numbers:

	A	B	C
1			
2		52	
3		101	
4		79	
5		86	
6		32	
7		11	
8		257	
9		194	
10		0	
11		0	

- b. And we like to total all numbers that are greater than or equal to 50 but less than 200. To achieve this we will need to use Conditional Sums to TOTAL Data. Formula will be: `=SUM(IF(B2:B11>=50,IF(B2:B11<=200,B2:B11,0),0))`

```
=SUM(IF(B2:B11>=50,IF(B2:B11<=200,B2:B11,0),0))
```

2nd IF Function tests if numbers are less than 200

1st IF Function tests if numbers are greater than or equal to 50

If the both the two IF Functions were satisfied the value will then be added.

- c. The first IF statement in the formula tests if the values in the list are greater than or equal to 50. And if TRUE, it will then proceed to the second if statement. If FALSE, value to be added is 0.
- d. The second IF statement in the formula tests if the values in the list are less than 200. And if TRUE, it will add all the values. If FALSE, value to be added is 0.
- e. After inputting the formula on a cell, press CTRL+SHIFT+ENTER keys. Excel will then put curly braces {} surrounding the formula. This means that the formula is an array. **Array** is a formula that will perform multiple calculations on one or more sets of values. We need the formula to be an array so the return value of the computation is correct since the formula contains several conditions.
- f. Result would be like this:

	A	B	C	D	E	F	G	H	I
1									
2		52							
3		101							
4		79		Total of >= 50 and less than 200					
5		86		512					
6		32							
7		11							
8		257							
9		194							
10		0							
11		0							
12									
13									

3. Use conditional sums to COUNT data. This function is the same as no. 2 but instead of adding the values, this will count the number of instance that both the two IFs are TRUE.
- Formula will be: `=SUM(IF(B2:B11>=50,IF(B2:B11<=200,1,0),0))`
 - The first IF statement in the formula tests if the values in the list are greater than or equal to 50. And if TRUE, it will then proceed to the second if statement. If FALSE, value to be added is 0.
 - The second IF statement in the formula tests if the values in the list are less than 200. And if TRUE, value to be added is 1. If FALSE, value to be added is 0.
 - This will then add all the 1 and 0.
 - Result would be like this:

	A	B	C	D	E	F	G	H
1								
2		52						
3		101						
4		79		Number of > = 50 and less than 200				
5		86		5				
6		32						
7		11						
8		257						
9		194						
10		0						
11		0						
12								
13								

Now try using these undiscovered features of Excel and tell us your results.