Passerelles numériques
A Gateway for Life

Chapter 8

Microsoft Excel

OBJECTIVE

1 Operator

2 Logical test

3 Basic Formular

4 Advance Formular

Microsoft Office 2019

1. What is operator ?
2. What is logical test?
3. What is function that you have known ?

Operator

specify type of calculation that you want to perform on formular
Example: +, /, *, -,>,<….

Fruit Sale	Rate($ per Kg)	Quatity	Total by item	Total item in pentage
Banana	3	20	$ 60.00	10%
Apple	5	30	$ 150.00	25%
Grape	6	34	$ 204.00	35%
Mango	7	25	$ 175.00	30%
Total			$ 589.00	100%

What operator used ?

List the name of operator used below:
-???
-???
-???
-???

Before making calculation by operator usage, we use equal sign "="

(2) Logical Test

What	No.	No.	Fogical Formula	Comparative Operator	Comparative Operator
Is 20 = 30?	20	30	FALSE	=	Equal
Is 10 <> 35?	10	35	TRUE	<>	Not Equal
Is 10 > 40?	10	40	FALSE	>	Great Than
Is 20 >= 200?	20	200	FALSE	>=	Greater Than or equal to
Is 10 < 90?	10	90	TRUE	<	Less Than
Is 30 <= 50?	30	50	TRUE	<=	Less Than or equal to

➤ And Function

It applies TRUE whenever Logical1, Logical2,Logical3…= True. Otherwise it applies FALSE

Number 1	Number 2	Number 3	Result of comparation
20	30	40	=AND(D26=E26,E26<40)
			AND(logical1, **[logical2]**, [logical3], ...)

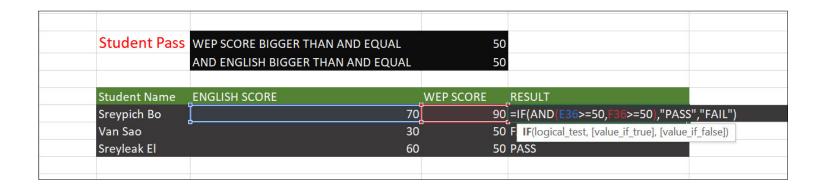| Number 1	Number 2	Number 3	Result of comparation
20	30	40	TRUE

➢ Or Function

It applies TRUE whenever at least one of Logical1, Logical2,Logical3…= True. It
applies FALSE whenever it all logicals are FALSE

Number 1	Number 2	Number 3	Result of comparation
20	30	40	=OR(D26=E26,E26<40)
			OR(**logical1**, [logical2], [logical3], ...)

Number 1	Number 2	Number 3	Result of comparation
20	30	40	TRUE

➢ If function

Student Pass	WEP SCORE BIGGER THAN AND EQUAL		50	
	AND ENGLISH BIGGER THAN AND EQUAL		50	
Student Name	ENGLISH SCORE	WEP SCORE	RESULT	
Sreypich Bo	70	90	=IF(AND(E36>=50,F36>=50),"PASS","FAIL")	
Van Sao	30	50 F	IF(logical_test, [value_if_true], [value_if_false])	
Sreyleak El	60	50	PASS	

Logical_test = true ➔ Value_if_True (PASS)

Logical_test = false ➔ Value_if_False (FALSE)

Basic Function

➤ Sum: add number data in row or column

	A	B
1		Sales
2	Monday	125
3	Tuesday	233
4	Wednesday	244
5	Thursday	502
6	Friday	123

	A	B
1		Sales
2	Monday	125
3	Tuesday	233
4	Wednesday	244
5	Thursday	502
6	Friday	123
7		
8	Total for week	=B2+B3+B4+B5+B6
9		

	A	B
1		Sales
2	Monday	125
3	Tuesday	233
4	Wednesday	244
5	Thursday	502
6	Friday	123
7		
8	Total for week	=SUM(B2:B6)

➢ Sum if : sum cell in row or column according to the criteria

Staff ID	Staff Name	Position	Salary			Total salary staff who work in Trainer	=sumif(F9:F18,F9,G9:G18
1	Sok Sao	IT	$	350.00		Total Salary staff who work in IT	SUMIF(range, criteria, [sum_range])
2	Chantha Sok	IT	$	350.00		Total Salary staff who work in Account	
3	Mao Y	Trainer	$	400.00		Total Salary staff who work in Admin	
4	Mok Song	Trainer	$	430.00		Total Salary staff who work in Coordinator	
5	Mao Yeong	Trainer	$	340.00			
6	Veasna Chin	IT	$	450.00			
7	Makara Sam	Coordinator	$	760.00			
8	Ratana Sam	IT	$	330.00			
9	Sok Pheap	Account	$	300.00			
10	Oudom Sao	Admin	$	300.00			

Range:All the option of range(position)

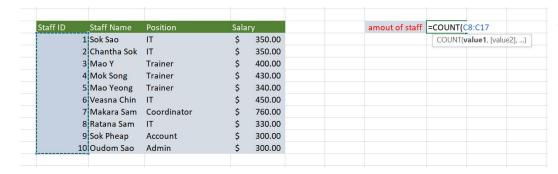Criteria: The option(IT) you select among range(only one)

Sum Range: The data you will make a sum(salary)

Count : Count the cell you select in row or column

count : count number in range
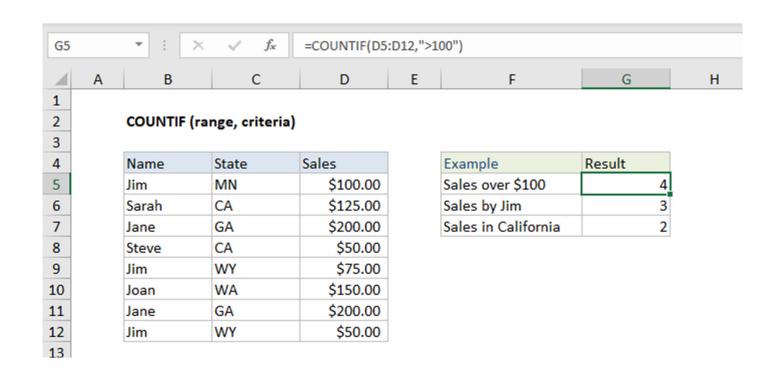
counta : count letter in range

Staff ID	Staff Name	Position	Salary			amout of staff	=COUNT(C8:C17
1	Sok Sao	IT	$	350.00			COUNT(**value1**, [value2], ...)
2	Chantha Sok	IT	$	350.00			
3	Mao Y	Trainer	$	400.00			
4	Mok Song	Trainer	$	430.00			
5	Mao Yeong	Trainer	$	340.00			
6	Veasna Chin	IT	$	450.00			
7	Makara Sam	Coordinator	$	760.00			
8	Ratana Sam	IT	$	330.00			
9	Sok Pheap	Account	$	300.00			
10	Oudom Sao	Admin	$	300.00			

count number

Fruit Sale	Rate($ per Kg)	Quatity	Total by item	Total item in pentage		The number type of fruit	=counta(E7:E10
Banana	3	20	$ 60.00	10%			COUNTA(**value1**, [value2], .
Apple	5	30	$ 150.00	25%			
Grape	6	34	$ 204.00	35%			
Mango	7	25	$ 175.00	30%			
Tot4R x 1C			$ 589.00	100%			

count letter

Count if : count a mount of cell(number or letter) in range that meet single condition.

| G5 | | × ✓ fx | =COUNTIF(D5:D12,">100") |

	A	B	C	D	E	F	G	H
1								
2		**COUNTIF (range, criteria)**						
3								
4		Name	State	Sales		Example	Result	
5		Jim	MN	$100.00		Sales over $100	4	
6		Sarah	CA	$125.00		Sales by Jim	3	
7		Jane	GA	$200.00		Sales in California	2	
8		Steve	CA	$50.00				
9		Jim	WY	$75.00				
10		Joan	WA	$150.00				
11		Jane	GA	$200.00				
12		Jim	WY	$50.00				
13								

Advance Formular

➢ Concatenate: combination string

ID staff	Firs name	Last Name	Full Name
1	sok	sam	=CONCATENATE(E5," ",F5)
2	Leakna	Sok	CONCATENATE(text1, [text2], [text3], [text4], …)
3	Oudom	Sao	
4	Samarn	Chin	
5	Phanith	Sao	
6	Phanha	Sok	

➢ Left, Right, Mid

left: return text from the beginning of a cell (left to right)

Mid: returns text from any start point of the cell (left to right)

Right:eturns text from the end of the cell (right to left)

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Practice

Full Name	Last Name
Sengseiha Sam	=RIGHT(D4,3)
Manith Min	M RIGHT(**text**, [num_
Bunkim Sao	Sao

Full Name	Last Name
Sengseiha Sam	Sam
Manith Min	Min
Bunkim Sao	Sao

Practice

Telephone	Three digit of the telephone
023 121 111	=LEFT(D13,3)
012 111 000	
088 111 999	

Telephone	Three digit of the telephone
023 121 111	023
012 111 000	012
088 111 999	088

Practice

Telephone	Middle three digits of Telephone number
023 121 111	=MID(D20,5,3)
012 111 000	
088 111 999	

Telephone	Middle three digits of Telephone number
023 121 111	121
012 111 000	111
088 111 999	111

Vllokup: Look up data or piece information in the table.
Below exam, lookup the in formation of country which belong to customer id 6,9, 13

Column index

1   2   3   4   5   6

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	5021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	5023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden
6	Blauer See Delikatessen	Hanna Moos	Forsterstr. 57	Mannheim	68306	Germany
7	Blondel père et fils	Frédérique Citeaux	24, place Kléber	Strasbourg	67000	France
8	Bólido Comidas preparadas	Martín Sommer	C/ Araquil, 67	Madrid	28023	Spain
9	Bon app'	Laurence Lebihans	12, rue des Bouchers	Marseille	13008	France
10	Bottom-Dollar Marketse	Elizabeth Lincoln	23 Tsawassen Blvd.	Tsawassen	T2F 8M4	Canada
11	B's Beverages	Victoria Ashworth	Fauntleroy Circus	London	EC2 5NT	UK
12	Cactus Comidas para llevar	Patricio Simpson	Cerrito 333	Buenos Aires	1010	Argentina
13	Centro comercial Moctezuma	Francisco Chang	Sierras de Granada 9993	México D.F.	5022	Mexico

Want to find the country of customer who have id 6,9,13

CustomerID

6 =vlookup(
VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup

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Table_array

Lookup_value: Specific value we want to find

Table Array: The table array is the data array that is to be searched

Col_index_num: This is an integer, specifying the column number of the supplied table_array, that you want to return a value from

Range Look up: This defines what this function should return in the event that it does not find an exact match to the lookup_value. The argument can be set to TRUE or FALSE, which means:

➢ TRUE – Approximate match, that is, if an exact match is not found, use the closest match below the lookup_value.
➢ FALSE – Exact match, that is, if an exact match not found, then it will return an error.

Case: Approximate match match case

| | =VLOOKUP(C6,$H$6:$I$12,2,TRUE) |

	B	C	D	E	F	G	H	I
	Name	**Sale**	**Com %**	**Commission $**			Sales	Comm
	Sengseiha Sam	171900	6%	$ 10,314.00			$ 50,000.00	3%
	Rady Y	73000	3%	$ 2,190.00			$ 75,000.00	4%
	Chantha Y	89000	4%	$ 3,560.00			$100,000.00	5%
	Sok Sao	90000	4%	$ 3,600.00			$125,000.00	6%
	Phalla Oudom	56000	3%	$ 1,680.00			$175,000.00	8%
	Samuth Sam	60000	3%	$ 1,800.00			$200,000.00	9%
	Phally Yin	90000	4%	$ 3,600.00				
	San Sok	68000	3%	$ 2,040.00				

Questions

www.passerellesnumeriques.org