

Important functions in Excel continued...

XLOOKUP() — This function in Microsoft Excel searches for a value in a range and returns the first matching item. It can also return the closest match if there is no exact matching value.

Syntax is :-

=XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

Where:- lookup_value - is the value to search for (Required)
lookup_array - is the array or range to search (Required)
return_array - the array or range to return (Required)

[if_not_found] - Where a valid match is not found, return the [if_not_found] text - you give (Optional)

[match_mode] - Specify the match type :-
0 → Exact match. If not found, #N/A
1 → If exact match not found, return next largest element
-1 → If exact match not found, return next lower element
2 → A wildcard match where *, ? and ~ have meanings as:-

? - Any single character

* - Any no. of characters

~ - Tilde followed by ?, * or ~

for example, Shoe~? will find "Shoe6?"

[search_mode] - Specifies the search mode to use:-

1 → Perform a search starting at the first item.

-1 → Perform a search starting at the last item.

2 → Perform a binary search that relies on lookup_array being sorted in ascending order.

-2 → Perform a binary search that relies on lookup_array being sorted in descending order.

Examples: —

①

A	B	C
Country	Code	Prefix
1 China	CN	+86
2 India	IN	+91
3 United States	US	+1
4 Indonesia	ID	+62
5 Brazil	BR	+55
6 Pakistan	PK	+92
7 Nigeria	NG	+234
8 Bangladesh	BD	+880
9 Russia	RU	+7
10 Mexico	MX	+52

What is the dial code?

`=XLOOKUP(D2, A2:A11, C2:C11)`

XLOOKUP uses a lookup array and a return array, whereas VLOOKUP uses a single table array followed by a column index number. It is equivalent to

`=VLOOKUP(D2, A2:A11, 3, FALSE)`

②

A	B	C
EmpID	Employee Name	Department
1 1234	=	

EmpID	Employee Name	Department
4 4390	Ramesh Kumar	Marketing
5 8604	Shanku Sharan	Sales
6 8389	Ramu Singh	Finance
7 4937	Pravash Singh	Accounts
8 8299	Ramesh Kumar	Operations
9 2643	Manish Ojha	Executive
10 5243	Santanu Gupta	Sales
11 9693	Praveen Gupta	Finance
12 1636	Pradeep Bhatia	Accounts
13 6703	Sundar Khan	Marketing

This formula gives us Employee and Department both from cells.

`B5:C14`

If not found EmpID then "ID not found".

③

A	B	C	D
Tax Rate	Max Income	Income	Tax Rate
1 10%	1200000	2200000	=
2 22%	1500000		
3 24%	2000000		
4 32%	2200000		
5 35%	2500000		
6 37%	3000000		

`=XLOOKUP(C2, B2:B7, 0, 1, 1)`

Looks in personal Income entered in C2, and finds the rate of tax in Column A. If not found any result.

match mode 1 means if not found then next larger item.

Finally, search mode item 1 means the function will search from the first item to the last.

Example 4

Nested XLOOKUP uses: —

	A	B	C	D	E	F	G
1							
2							
3							
4							
5		Income Statement	Qtr1	Qtr2	Qtr3	Qtr4	Total
6		Total Sales	50000	78200	89500	91250	308950
7		Cost of Sales	25000	42050	59450	60450	186950
8		Gross Profit	25000	36150	30050	30800	122000
9		Depreciation	899	791	202	412	2304
10		Interest	513	853	150	956	2472
11		Earnings before tax	23588	34506	29698	29432	117224
12		Tax	4246	6211	5346	5298	21100
13		Net Profit	19342	28295	24352	24134	96124
14		Profit %	29.3%	27.8%	23.4%	27.6%	26.9%
15							
16							
17							

= XLOOKUP(D2, \$B6:\$B14, XLOOKUP(\$C3, \$C5:\$G5, \$C6:\$G14))

The formula will give all three values depending on C3 cell data which can be Qtr1, Qtr2, Qtr3 or Total.

Example 5 Uses of SUM function with two XLOOKUP as nested.

	A	B	C	D	E	F	G
1							
2		Start	End	Total			
3		Grapes	Banana	11000			
4							
5		Product	Quantity	Price	Total		
6		Apple	120	70	840		
7		Grapes	70	75	5250		
8		Pear	70	65	4550		
9		Banana	40	30	1200		
10		Cherry	80	120	9600		

= SUM(XLOOKUP(B3, B6:B10, E6:E10): XLOOKUP(C3, B6:B10, E6:E10))

It gives sum of total from B3 data to C3 data as entered by user. In this case from Grapes to Banana that is 11000.