



# VLookups

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- ➊ Quickly lookup values in one table in another table or range
  - ➋ Check whether values in one table are in another range of values
  - ➌ Basically—You're looking for one value (or a list of values) in another table and pulling information that is associated with that value. It's like looking for phone number in the phone book by a name.

- 🔄 In this example, table 1 has information that we would like to add to table 2 based on doc #

	A	Table 1		C	D	Table 2		G
1	<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>			<u>Doc #</u>	<u>Fund</u>	
2	3005368789	JK	100			5073578902	1001	
3	5073578902	ZF	50			7347589383	3500	
4	7347589383	AD	250			3005368789	5550	
5								

- ☉ We want to add Doc Type and Amount to Table 2 without having to manually key it in the rows next to Doc #

	A	B	C	D	E	F	G
1	<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>	
2	3005368789	JK	100		5073578902	1001	
3	5073578902	ZF	50		7347589383	3500	
4	7347589383	AD	250		3005368789	5550	
5							


- In this example, the Vlookup will look for the first value in the second table in the first table and return the Doc Type associated with the Doc #

	A	B	C	D	E	F	G
1	<b><u>Doc #</u></b>	<b><u>Doc Type</u></b>	<b><u>Amount</u></b>		<b><u>Doc #</u></b>	<b><u>Fund</u></b>	
2	30053687	JK	100		5073578902	1001	
3	5073578902	ZF	50				
4	7347589383	AD	250				
5							

The formula will lookup Doc # 5073578902 to the left and retrieve data in columns A, B, or C and place it in a cell that you choose.

- The VLookup formula placed in column G looks for the Doc # in the first table and returns the Doc Type

G2		=VLOOKUP(E:E,A:C,2,FALSE)				
A	B	C	D	E	F	G
<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>	
3005368789	JK	100		5073578902	1001	ZF
5073578902	ZF	50		7347589383	3500	
7347589383	AD	250		3005368789	5550	

-  The VLookup formula can then be copied and pasted to all values in a range

G1      Jk      =VLOOKUP(E:E,A:C,2,FALSE)

A	B	C	D	E	F	G
<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>	<u>Doc Type</u>
3005368789	JK	100		5073578902	1001	ZF
5073578902	ZF	50		7347589383	3500	AD
7347589383	AD	250		3005368789	5550	JK

- ☞ Select the first cell that you would like to bring in the new information, then go to the “Formulas” tab and select “Insert Formula”. This prompt will appear.

The screenshot shows the Microsoft Excel interface with the 'Formulas' tab selected. The 'Insert Function' button (fx) is highlighted in the ribbon. The 'Insert Function' dialog box is open, displaying the 'VLOOKUP' function. A red arrow points from the 'Insert Function' button to the dialog box. The background spreadsheet shows columns A and F, and rows 1 through 10. Column A contains 'Doc #' and values 3005368789, 5073578902, 7347589383. Column F contains 'Fund' and values 1001, 3500, 5550. The cell G2 is selected, and its formula bar is empty.

	A		F	G
1	<b>Doc #</b>		<b>Fund</b>	
2	3005368789 JK		1001	=
3	5073578902 ZF		3500	
4	7347589383 AD		5550	
5				
6				
7				
8				
9				
10				



- When you select the VLookup formula to insert, this help box will appear. There are 3 mandatory fields and one optional.

Function Arguments

VLOOKUP

Lookup_value		= any
Table_array		= number
Col_index_num		= number
Range_lookup		= logical

=

Looks for a value in the leftmost column of a table, and then returns a value in the same row from a column you specify. By default, the table must be sorted in an ascending order.

**Lookup\_value** is the value to be found in the first column of the table, and can be a value, a reference, or a text string.

Formula result =

[Help on this function](#)

OK
Cancel

- The Lookup\_value is where you will enter the range of values to lookup. Since we're wanting to lookup values in column E, we can click into the Lookup\_value field and select column E on the spreadsheet.

Function Library      Defined Names      Formula Auditing

VLOOKUP           =VLOOKUP(E:E)

	A	B	C	D	E	F	G
1	<b>Doc #</b>	<b>Doc Type</b>	<b>Amount</b>		<b>Doc #</b>	<b>Fund</b>	
2	3005368789	JK	100		5073578902	1001	VLOOKUP(E:E)
3	5073578902	ZF	50		7347589383	3500	
4	734					5550	
5							
6							

Function Arguments

VLOOKUP

Lookup\_value      E:E           = 5073578902

Table\_array                = number

- The Table\_array is the table that we're going to in order to lookup the information. When you click into the Table\_array field, you can then select the range of your table. In this example, you can select the top of column A and drag to column C.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G
1	<b><u>Doc #</u></b>	<b><u>Doc Type</u></b>	<b><u>Amount</u></b>		<b><u>Doc #</u></b>	<b><u>Fund</u></b>	
2	3005368789	JK	100		5073578902	1001	E:E,A:C)
3	5073578902	ZF	50		7347589383	3500	
4	734					5550	

The formula bar shows: `=VLOOKUP(E:E,A:C)`

The Function Arguments dialog box for VLOOKUP is open, showing:

- Lookup\_value: E:E = 5073578902
- Table\_array: A:C = {...}

A red arrow points from the 'Table\_array' field in the dialog box to the 'Amount' column (column C) in the spreadsheet.

- The Col\_index\_num is the number of columns over from the key that you want to look up. The first column will be value to lookup, and in this example, column B (or the second column) will bring in the Doc Type. ("3" would bring in the Amount).

VLOOKUP    X ✓    fx    =VLOOKUP(E:E,A:C,2)

A	B	C	D	E	F	G
<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>	
3005368789	JK	100		5073578902	1001	E,A:C,2)
5073578902	ZF	50		7347589383	3500	
734					5550	

Function Arguments

VLOOKUP

Lookup\_value    E:E    = 5073578902

Table\_array    A:C    = {...}

Col\_index\_num    2    = 2

Range\_lookup       = logical

- The Range\_lookup field is optional and defaults to “True”. 99.9% of the time you will enter false. False tells the formula to look for an exact match. We’ll discuss when to use “True” later.

VLOOKUP    x ✓ f_x =VLOOKUP(E:E,A:C,2,false)							
	A	B	C	D	E	F	G
1	<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>	
2	3005368789	JK	100		5073578902	1001	,2,false)
3	5073578902	ZF	50		7347589383	3500	
4	734					5550	
5							
6							
7							
8							

Function Arguments

VLOOKUP

Lookup\_value E:E = 5073578902

Table\_array A:C = {...}

Col\_index\_num 2 = 2

Range\_lookup false = FALSE

= "ZF"

- Once the Lookup\_value (the value you're looking for), the Table\_array (the table with matching value to the left), The Column\_index (the number of columns with the value that you're looking for) and the Range\_lookup (false) is entered the Vlookup is complete.

fx =VLOOKUP(E:E,A:C,2,FALSE)						
B	C	D	E	F	G	
<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>		
JK	100		5073578902	1001	ZF	
ZF	50		7347589383	3500	AD	
AD	250		3005368789	5550		

- ☪ If you were to enter 3 in the Column\_index field, you would bring in the 3<sup>rd</sup> column in the Table\_array (Amount) in the cell where you entered the Vlookup formula.

G2						
		fx =VLOOKUP(E:E,A:C,3,FALSE)				
A	B	C	D	E	F	G
<u>Doc #</u>	<u>Doc Type</u>	<u>Amount</u>		<u>Doc #</u>	<u>Fund</u>	
3005368789	JK	100		5073578902	1001	50
5073578902	ZF	50		7347589383	3500	250
7347589383	AD	250		3005368789	5550	

- You can search two lists to see if one value is in another list by doing a Vlookup. If you enter 1 into the Column\_index and the value isn't in the table\_array range, a "#N/A" error will appear.

Function Library					
D4		=VLOOKUP(C:C,A:A,1,FALSE)			
A	B	C	D	E	
Doc #		Doc#			
123		123	123		
124		124	124		
126		125	#N/A		



- If you're doing a lookup against a list of values arranged in ascending order, you can use true in the Vlookup command to find an approximate match. The Vlookup will look for the closest value that does not exceed the looked up amount.

F2		fx		=VLOOKUP(E:E,\$A\$2:\$C\$4,3,TRUE)		
	A	B	C	D	E	F
1	Low End	High End	Discount		Goods Amount	Discount
2	\$0.00	\$999.99	5.00%		\$400.00	5.00%
3	\$1,000.00	\$9,999.99	6.00%		\$25,000.00	10.00%
4	\$10,000.00	\$1,000,000.00	10.00%		\$2,000.00	6.00%
5						