How can I use VLOOKUP with approximate match in Excel?

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VLOOKUP is a useful function in Microsoft Excel that allows users to search for a specific value in a table and return a corresponding value from a different column. One of the key features of VLOOKUP is the ability to perform an approximate match, which means the function can find the closest match to the search criteria instead of an exact match. This can be particularly helpful when dealing with large datasets or data with slight variations. To use VLOOKUP with approximate match, simply add the optional parameter "TRUE" at the end of the function. This will enable the function to search for the nearest match and return the corresponding value. By utilizing this feature, users can efficiently and accurately retrieve data from their Excel tables.

Excel: Use VLOOKUP with Approximate Match

You can use the VLOOKUP function in Excel to look up a specific value in a range and return the corresponding value in another range.

This function uses the following basic syntax:

VLOOKUP (lookup_value, table_array, col_index_num,)

where:

lookup_value: The value to look up
table_array: The range of cells to look in
col_index_num: The column number that contains the return value
range_lookup: TRUE = look for approximate match, FALSE = look for exact match

By using a value of TRUE for the last argument in the

VLOOKUP function, you can look for an approximate match of the lookup value.

If an exact match can't be found of the lookup value, the approximate match is the next largest value in the range that is less than your lookup value.

In order for the correct approximate match to be found, the first column in the range is assumed to be sorted either numerically or alphabetically.

The following example shows how to use the VLOOKUP function in Excel to look for an approximate match.

Example: Use VLOOKUP with Approximate Match in Excel

Suppose we have the following dataset in Excel that contains information about various basketball players:

	A	B	C	D	E	F
1	**Points**	**Assists**	**Team**			
2	8	4	Mavs			
3	10	8	Spurs			
4	14	14	Rockets			
5	15	9	Kings			
6	17	4	Warriors			
7	20	8	Nets			
8	22	6	Lakers			
9	23	5	Thunder			
10	28	10	Blazers			
11	35	3	Jazz			
12						
13						
14						
15						
16						
17						

Suppose we would like to use the VLOOKUP function to look up the value of 28 in the points column and return the corresponding team name.

We can type the following formula into cell E2 to do so:

=VLOOKUP(F1, A1:C11, 3, TRUE)

The following screenshot shows how to use this formula in practice:

F2 =VLOOKUP(F1, A1:C11, 3, TRUE)

	A	B	C	D	E	F	G
1	**Points**	**Assists**	**Team**		**Points**	28	
2	8	4	Mavs		**Team**	Blazers	
3	10	8	Spurs				
4	14	14	Rockets				
5	15	9	Kings				
6	17	4	Warriors				
7	20	8	Nets				
8	22	6	Lakers				
9	23	5	Thunder				
10	28	10	Blazers				
11	35	3	Jazz				
12							
13							
14							
15							
16							
17							

Since an exact match was found for the lookup value, there was no need to search for an approximate match.

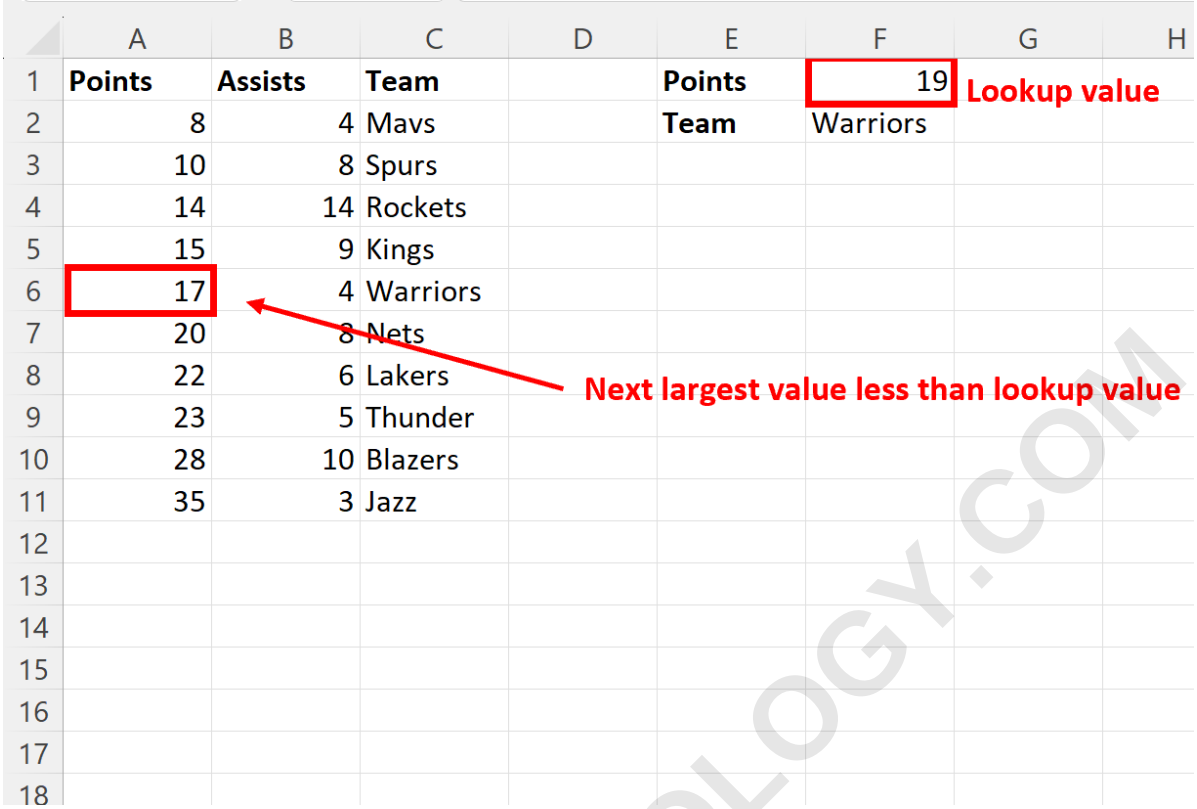
However, suppose we look up the value 19 in the points column, which is a value that does not exist:

F2 =VLOOKUP(F1, A1:C11, 3, TRUE)

	A	B	C	D	E	F	G
1	**Points**	**Assists**	**Team**		**Points**	19	
2	8	4	Mavs		**Team**	Warriors	
3	10	8	Spurs				
4	14	14	Rockets				
5	15	9	Kings				
6	17	4	Warriors				
7	20	8	Nets				
8	22	6	Lakers				
9	23	5	Thunder				
10	28	10	Blazers				
11	35	3	Jazz				
12							
13							
14							
15							
16							

Since a value of 19 didn't exist in the points column, the VLOOKUP function looked for the next largest value in the points column that was less than 19.

The formula identified the value of 17 and returned the team name that corresponded to this value, which was the Warriors.



	A	B	C	D	E	F	G	H
1	**Points**	**Assists**	**Team**		**Points**	19		
2	8	4	Mavs		**Team**	Warriors		
3	10	8	Spurs					
4	14	14	Rockets					
5	15	9	Kings					
6	17	4	Warriors					
7	20	8	Nets					
8	22	6	Lakers					
9	23	5	Thunder					
10	28	10	Blazers					
11	35	3	Jazz					
12								
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18								

Note that the values in the points column are already sorted from least to greatest, which is why the VLOOKUP function was able to correctly identify the next largest value that was less than the lookup value.

If the first column in your lookup range is not sorted, the VLOOKUP function could return unexpected results.

The following tutorials explain how to perform other common tasks in Excel: