

# How to Find the Last Matching Value with VLOOKUP in Google Sheets

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The VLOOKUP function is one of the most fundamental and frequently utilized tools within Google Sheets, designed primarily for efficient data retrieval. Its core purpose is to search for a specified value, often called the **lookup\_value**, in the leftmost column of a designated table or range, and then return a corresponding value from a specified column in the same row. This functionality is crucial for cross-referencing datasets, integrating information from different tables, and automating complex reporting tasks.

When using the standard VLOOKUP function, it is critical to understand its inherent operational constraint: by default, it scans the designated range from top to bottom and returns the corresponding value for the **first match** it encounters. This behavior is ideal when dealing with unique identifiers or when the first instance of a value is sufficient. However, in dynamic datasets, transactional logs, or records where the same identifier appears multiple times--and the most recent entry holds the critical information--retrieving the last match becomes essential. Overcoming this default behavior requires an advanced technique that manipulates the data structure dynamically within the formula itself.

To successfully retrieve the **last matching value** using VLOOKUP, users must combine it with other sophisticated spreadsheet functions to temporarily invert the search range. This ensures that the last matching record in the original data becomes the first record in the temporary array that VLOOKUP analyzes. This approach is non-destructive, meaning the original source data remains untouched, providing a robust solution for accurate data extraction in historical or frequently updated datasets.

## Google Sheets: Using VLOOKUP to Return the Last Matching Value

By default, the **VLOOKUP** function in Google Sheets looks up a value in a range and returns a corresponding value for the **first match**.

However, there are numerous scenarios where you may need to look up a value in a range and retrieve the corresponding result for the **last match**. This requires a specialized combination of functions.

### The Advanced Formula: VLOOKUP, SORT, and ROW Combination

You can use the following comprehensive syntax to dynamically find and return the last matching value. This method utilizes the SORT function in conjunction with the ROW function to reverse the order of your data set internally, effectively pushing the last match to the top of the search range.

```
=VLOOKUP(E2,SORT(A2:C11,ROW(A2:A11),FALSE),3,FALSE)
```

This particular formula looks up the value contained in cell **E2** within the range **A2:C11**. Critically, it

returns the corresponding value from column **3** of the range for the **last matching value** found in the dataset.

The following section provides a detailed example demonstrating how to implement this powerful formula in a real-world scenario.

## Example: Using VLOOKUP to Return the Last Matching Value in Google Sheets

Suppose we are managing a dataset that contains historical performance information for various basketball players. This dataset includes multiple entries for the same teams, and we are interested in finding the most recent (last recorded) points total for a specific team:

	A	B	C	D
1	<b>Team</b>	<b>Assists</b>	<b>Points</b>	
2	Mavs	8	22	
3	Nets	4	14	
4	Warriors	4	29	
5	Warriors	9	30	
6	Mavs	3	36	
7	Nets	10	18	
8	Hawks	13	12	
9	Nets	5	17	
10	Hawks	8	25	
11	Mavs	2	24	
12				
13				
14				
15				

Our goal is to look up the name "Nets" (which we will place in cell E2) in the **Team** column (Column B) and return the last matching value located in the **Points** column (Column C). Because "Nets" appears multiple times, a standard VLOOKUP would retrieve the score from the first row it finds.

We can achieve the desired result by typing the following formula into cell **F2**. This formula ensures that the data is sorted in reverse chronological order based on row placement before the lookup begins:

**=VLOOKUP(E2,SORT(A2:C11,ROW(A2:A11),FALSE),3,FALSE)**

## Executing the Last Match Retrieval and Results

The following screenshot demonstrates the practical application of this formula in the spreadsheet environment. Note that the lookup value "Nets" is in E2, and the formula is in F2:

F2    `=VLOOKUP(E2, SORT(A2:C11, ROW(A2:A11)), FALSE), 3, FALSE)`

	A	B	C	D	E	F
1	<b>Team</b>	<b>Assists</b>	<b>Points</b>		<b>Team</b>	<b>Points</b>
2	Mavs	8	22		Nets	17
3	Nets	4	14			
4	Warriors	4	29			
5	Warriors	9	30			
6	Mavs	3	36			
7	Nets	10	18			
8	Hawks	13	12			
9	Nets	5	17			
10	Hawks	8	25			
11	Mavs	2	24			
12						
13						
14						

The formula correctly returns the value **17**. This is the last recorded value in the **Points** column (Column C) corresponding to the team "Nets" in the dataset, successfully bypassing the earlier entries of 14 and 15 points. This confirms the efficacy of reversing the lookup range.

	A	B	C	D	E	F
1	<b>Team</b>	<b>Assists</b>	<b>Points</b>		<b>Team</b>	<b>Points</b>
2	Mavs	8	22		Nets	17
3	Nets	4	14			
4	Warriors	4	29			
5	Warriors	9	30			
6	Mavs	3	36			
7	Nets	10	18			
8	Hawks	13	12			
9	Nets	5	17			
10	Hawks	8	25			
11	Mavs	2	24			
12						
13						
14						

## Detailed Analysis of the Formula Logic

The success of this technique relies entirely on the temporary array formula generated by the nested functions. Here is a breakdown of how the components interact:

**=VLOOKUP(E2,SORT(A2:C11,ROW(A2:A11),FALSE),3,FALSE)**

### The Internal Sorting Mechanism

First, the inner functions execute. We use **SORT(A2:C11,ROW(A2:A11),FALSE)** to sort the range **A2:C11**. The crucial element is the sort criterion: instead of sorting by a data column, we sort by the output of `ROW(A2:A11)`. This `ROW` function returns an array of the row numbers {2; 3; 4; ...; 11}.

By setting the ascending argument to **FALSE**, the SORT function orders the rows based on the row numbers in **descending order**. This action effectively reverses all of the rows in the original dataset internally, without modifying the physical sheet data. The original row 11 now appears at the top of the temporary array, followed by row 10, and so on.

### The VLOOKUP Execution

Next, the outer **VLOOKUP** function uses the value in cell **E2** ("Nets") to search within this newly sorted, reversed range. Because the last recorded instance of "Nets" is now positioned at the beginning of the temporary array, VLOOKUP correctly identifies and returns the value from the

specified column (column 3, which is Points) that corresponds to this entry. This methodology guarantees that the search always prioritizes the most recent occurrence based on row position.

## Best Practices and Considerations for Implementation

When deploying this advanced lookup method, ensuring data integrity and formula structure is paramount. The strength of this technique lies in its ability to handle duplicates dynamically, but incorrect range definitions can cause errors.

Key implementation guidelines:

**Range Consistency:** The data range (`A2:C11`) must precisely match the range defined for the ROW function (`A2:A11`) in terms of start and end row indices.

**Exact Match:** Always use **FALSE** as the final argument in the VLOOKUP function to ensure that only an exact textual match is returned, preventing lookup errors based on approximate values.

**Column Indexing:** The index number (e.g., 3) must accurately reflect the position of the return column relative to the beginning of the defined lookup range.

By carefully applying this combined formula, spreadsheet users can overcome a major limitation of standard VLOOKUP and efficiently retrieve the most recent, or last matching, data points from large and complex datasets in Google Sheets.

## Related Tutorials for Google Sheets Mastery

The ability to manipulate functions like VLOOKUP is a cornerstone of advanced spreadsheet proficiency. To further enhance your skills in data retrieval and manipulation within Google Sheets, consider exploring the following related topics and tutorials:

Using **INDEX** and **MATCH** for lookups that move beyond the leftmost column constraint.

Techniques for performing case-sensitive lookups in Sheets.

How to use the **QUERY** function for complex filtering and aggregation tasks.