

How to Use VLOOKUP to Return Multiple Columns in Excel (The Easy Way)

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The Excel VLOOKUP function is one of the most fundamental and widely utilized tools for data retrieval and integration. While its primary design focuses on returning a single corresponding value based on a specific lookup criterion, advanced users often encounter scenarios requiring the simultaneous retrieval of data from multiple adjacent columns. Directly applying VLOOKUP in its standard form achieves only one result per formula instance, leading to inefficient spreadsheet construction when many fields are needed.

Fortunately, expert data analysts have developed a powerful technique that leverages the capability of array formula entry within Excel. By incorporating an array constant into the third argument--the column index number--we can instruct the VLOOKUP function to process multiple column indexes concurrently. This sophisticated method allows a single formula structure to seamlessly look up a value and return corresponding data spanning across several columns, drastically improving formula elegance and reducing complexity in large-scale data manipulation tasks.

Understanding the Standard VLOOKUP Structure

Before diving into the multi-column solution, it is essential to appreciate how the standard VLOOKUP function operates. The function requires four distinct components, known as arguments, to execute its vertical lookup operation successfully. These components define what value to search for, where to search, which column contains the desired output, and whether an exact or approximate match is required. The third argument, col_index_num, is the critical constraint; it mandates a single numerical value, thus restricting the output to one column only.

When users need to retrieve data from, for example, five different columns corresponding to a single identification number, the conventional approach involves writing five separate VLOOKUP formulas. While functional, this method introduces redundancy, increases the risk of manual error (especially if the table array changes), and makes the spreadsheet difficult to audit and maintain. Such repetition negates the efficiency that sophisticated spreadsheet software aims to provide, making a single, streamlined solution highly desirable for complex lookup value retrievals.

The solution lies not in changing the inherent structure of the function itself, but in modifying the nature of the input provided to the col_index_num argument. By substituting the required single number with an array constant--a structured list of column indices--we can instruct the function to perform multiple lookups simultaneously. This transformation moves the formula from a standard cell operation to an advanced array formula, a powerful concept that enables a single formula cell to manage and output data across multiple adjacent cells.

Implementing the Array Constant Technique

The array constant technique is the most effective way to force VLOOKUP to return results for

multiple columns. An array constant is a sequence of values entered into a formula, enclosed in curly braces {}. When this array is placed in the `col_index_num` position, Excel processes each number in the array sequentially, effectively executing an internal VLOOKUP for every specified column index number within that single formula instance.

Consider a scenario where you are searching in a five-column table and need the values from the third, fourth, and fifth columns. Instead of supplying the number 3, 4, or 5 individually, you supply the array constant {3,4,5}. The resulting output is not a single value but a horizontal array of three values, which Excel automatically spills into the adjacent cells in the row where the formula is entered, provided they are currently empty. This technique is often referred to as a horizontal expansion of the formula output.

It is crucial to understand the syntax of array constants. Values within the array must be separated by delimiters. In most regional settings, the comma (,) is used as the column separator, which results in the values being returned horizontally. If one were to use a semi-colon (;) instead, the output would be arranged vertically, which is generally less common for VLOOKUP outputs. Always ensure that the column index numbers listed in the array constant accurately reflect the position of the desired data columns relative to the lookup column in the defined table array.

Syntax Breakdown for Multiple Column Retrieval

You can use the following syntax with the **VLOOKUP** function in Excel to look up a value in a range and return the corresponding values from multiple columns:

=VLOOKUP(G2,A2:E11,{3,4,5},FALSE)

In this specific example, the formula is structured to perform several key actions. It looks for the lookup value contained in cell **G2** within the first column of the range **A2:E11**. Crucially, the array constant **{3,4,5}** instructs the function to return the corresponding values found in columns 3, 4, and 5 of that range, resulting in a three-cell horizontal output upon successful execution.

The final component, the **FALSE** argument, is essential when dealing with specific records in a dataset. Using **FALSE** (or 0) compels Excel to look only for an **exact match** of the lookup value, ensuring data integrity. Conversely, using **TRUE** (or omitting the argument) would allow for an approximate match, which is usually only appropriate when the lookup column is sorted numerically or alphabetically, a condition rarely met in standard database lookups.

Example: Using VLOOKUP to Retrieve Basketball Team Statistics

To illustrate the practical application of this array constant method, let us consider a sample dataset detailing statistics for various basketball teams. This data structure provides an ideal

scenario for requiring multiple outputs--specifically, retrieving various statistics like points, assists, and steals--based solely on the team name.

Suppose our data is organized as follows, occupying the range A2 through E11 in the spreadsheet. Column A holds the team names (the lookup column), while columns C, D, and E contain the desired statistics (Points, Assists, and Steals, respectively). Note that the desired output columns are the 3rd, 4th, and 5th columns relative to the start of the defined table array (A2:E11).

The structure of the data is presented visually below, showcasing the headers and the records we intend to query:

	A	B	C	D	E	F
1	Team	Rebounds	Points	Assists	Steals	
2	Mavericks	12	22	6	4	
3	Rockets	14	28	7	4	
4	Pacers	8	24	7	6	
5	Hornets	7	24	8	5	
6	Rockets	11	25	7	7	
7	Celtics	19	19	6	8	
8	Knicks	15	15	9	3	
9	Nets	14	24	12	5	
10	Raptors	10	30	10	5	
11	Hornets	12	34	8	4	
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Our objective is to specify a team name, such as "Pacers," in a designated lookup cell (G2), and then use a single formula adjacent to this cell to pull all three associated statistics simultaneously. This method is vastly superior to writing three separate formulas, demonstrating the efficiency inherent in the array formula approach.

Executing the VLOOKUP Array Formula

The execution phase requires precision, particularly when entering the formula, as it must be confirmed as an array formula to process the array constant successfully. We will place the lookup value, "Pacers," into cell G2, and then enter the formula into the first cell where the results are expected (e.g., cell H2). This cell will act as the anchor for the multi-column output.

We will use the following formula with **VLOOKUP** to look up the team "Pacers" (referenced by cell **G2**) in column A and return the corresponding values for points, assists, and steals:

=VLOOKUP(G2,A2:E11,{3,4,5},FALSE)

Critical Entry Step: This formula must be entered as a legacy array formula in older versions of Excel (pre-Microsoft 365). After typing the formula, instead of simply pressing the Enter key, you must press the combination of **Ctrl + Shift + Enter** simultaneously. This keyboard shortcut signals to Excel that the formula contains an array operation. Successful array entry is indicated by Excel automatically enclosing the entire formula in curly braces {} in the formula bar. Note that users of modern Excel versions (365) may find that this step is automated due to implicit array behavior (Spill Range functionality).

The following screenshot shows the successful entry and initial output of the formula, showing the formula anchored in cell H2 and expanding horizontally into I2 and J2:

	A	B	C	D	E	F	G	H	I	J
1	Team	Rebounds	Points	Assists	Steals		Team	Points	Assists	Steals
2	Mavericks	12	22	6	4		Pacers	24	7	6
3	Rockets	14	28	7	4					
4	Pacers	8	24	7	6					
5	Hornets	7	24	8	5					
6	Rockets	11	25	7	7					
7	Celtics	19	19	6	8					
8	Knicks	15	15	9	3					
9	Nets	14	24	12	5					
10	Raptors	10	30	10	5					
11	Hornets	12	34	8	4					
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Interpreting the Array Output

Once the VLOOKUP array formula is correctly entered, the output is immediate and highly efficient. The function successfully identifies the row containing "Pacers" in the lookup column and returns the three requested values corresponding to the column indices {3, 4, 5}. These results spill out horizontally, placing the Points value in the first output cell (H2), the Assists value in the second

(I2), and the Steals value in the third (J2).

This single formula has successfully eliminated the need for three separate formulas. Furthermore, if the lookup value in G2 were changed (e.g., to "Knicks"), the formula would dynamically update all three output cells instantly. This highlights the maintenance advantage of using an array-based solution for data retrieval across wide tables.

The final visualized results confirm the accuracy of the lookup: the points, assists, and steals figures associated with the "Pacers" team are correctly pulled from the source dataset and displayed in the result area. The image below confirms the final state of the spreadsheet after the array formula execution:

	A	B	C	D	E	F	G	H	I	J
1	Team	Rebounds	Points	Assists	Steals		Team	Points	Assists	Steals
2	Mavericks	12	22	6	4		Pacers	24	7	6
3	Rockets	14	28	7	4					
4	Pacers	8	24	7	6					
5	Hornets	7	24	8	5					
6	Rockets	11	25	7	7					
7	Celtics	19	19	6	8					
8	Knicks	15	15	9	3					
9	Nets	14	24	12	5					
10	Raptors	10	30	10	5					
11	Hornets	12	34	8	4					
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Beyond VLOOKUP: Modern Lookup Solutions

While mastering the array constant technique for VLOOKUP is valuable, especially for compatibility with older files or systems, modern versions of Excel (specifically Microsoft 365) offer more robust and flexible alternatives that simplify multi-column lookups significantly. The primary alternative to consider is **XLOOKUP**, which is designed to handle multiple returns natively without requiring the Ctrl + Shift + Enter array entry method.

Using **XLOOKUP**, the column index numbers are replaced by an explicit return array that can span multiple columns. This eliminates the need to manually count column indices, making the formula less prone to error if the table structure changes. Another powerful alternative is combining **INDEX** and **MATCH**, which offers even greater flexibility, allowing lookups to occur across any column, not

just the leftmost one, and making multi-column retrieval feasible through relative referencing techniques, although often requiring a more complex formula structure than **XLOOKUP**.

Regardless of the method chosen, a deep understanding of the function's official structure and behavior is key to mastery. For users seeking comprehensive details on all the function's capabilities, including nuances related to different argument types and error handling, consulting the official documentation provided by Microsoft is highly recommended. This resource offers the most accurate and up-to-date guidance on leveraging the full power of VLOOKUP and its contemporary successors.

To find the complete documentation for the **VLOOKUP** function, you should refer to the official Microsoft Support website.