# VLOOKUP

I am unable to provide a working VLOOKUP formula in an Excel document directly. However, I can explain how to use the **VLOOKUP** function with a step-by-step guide and an illustrative example.

**What is VLOOKUP?**

**VLOOKUP** (short for "Vertical Lookup") is a powerful function in Excel that helps you find specific information in a table. It's designed to **search vertically** down the first column of a data range and retrieve a value from a specified column in the same row.

**Analogy**

Imagine you have a phonebook. The names are listed in the first column (alphabetical order). To find someone's phone number, you look for their name and then read across the row to find the number. VLOOKUP works in a very similar way.

**How to Use the VLOOKUP Function**

The syntax for VLOOKUP is:

=VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

Here's a breakdown of each argument:

1. **lookup\_value**: This is the piece of data you want to find. It's the "name" you're looking up in your phonebook. It can be a cell reference or a value in quotation marks.
2. **table\_array**: This is the entire data range or table where you're searching for information. Think of it as the entire phonebook. **Important:** The lookup value must be in the **first column** of this range.
3. **col\_index\_num**: This is the column number in your table\_array that contains the information you want to retrieve. The first column is 1, the second is 2, and so on.
4. **[range\_lookup]**: This is an **optional** argument that determines if you want an exact match or an approximate match.
   * **FALSE** or **0**: This is for an **exact match**. You'll use this most of the time. It will only return a value if it finds an exact match for your lookup\_value. If it can't find it, it returns a #N/A error.
   * **TRUE** or **1**: This is for an **approximate match**. It finds the closest value that is less than or equal to the lookup\_value. This is useful for things like finding a grade based on a score range. **Important:** For this to work correctly, the first column of your table\_array must be sorted in ascending order.

**Step-by-Step Example**

Let's say you have a list of employees and their salaries. You want to find the salary of a specific employee, say **"Jane Doe"**.

| Employee ID | Employee Name | Department | Salary |
| --- | --- | --- | --- |
| 101 | John Smith | Sales | $55,000 |
| 102 | **Jane Doe** | Marketing | **$60,000** |
| 103 | Peter Jones | HR | $58,000 |
| 104 | Lisa White | Sales | $52,000 |

1. **Select a cell** where you want the result to appear (e.g., cell C9).
2. **Type the formula** =VLOOKUP(.
3. For the lookup\_value, **select the cell** containing "Jane Doe" (e.g., cell B9). The formula now looks like this: =VLOOKUP(B9,
4. For the table\_array, **select the entire table** (e.g., A2:D5). The formula becomes: =VLOOKUP(B9, A2:D5,
5. For the col\_index\_num, you want the salary, which is in the **fourth column** of your selected table. Type 4. The formula is now: =VLOOKUP(B9, A2:D5, 4,
6. For the [range\_lookup], you want an **exact match** for "Jane Doe," so type FALSE or 0.
7. **Close the parenthesis** and press Enter.

The final formula will be:

=VLOOKUP("Jane Doe", A2:D5, 4, FALSE)

The result will be **$60,000**.

# HLOOKUP

**How HLOOKUP Works in Excel**

HLOOKUP is a function in Excel that stands for "Horizontal Lookup." It searches for a value in the **top row** of a table and returns a corresponding value from a specified row in the same column. It's useful when your data is organized horizontally, with headers in the first column and data extending to the right.

**Syntax**

The basic syntax for the HLOOKUP function is:

=HLOOKUP(lookup\_value, table\_array, row\_index\_num, [range\_lookup])

Here's a breakdown of each argument:

* **lookup\_value**: The value you want to find. This could be a number, text, or a cell reference.
* **table\_array**: The range of cells that contains the data. HLOOKUP will search for the lookup\_value in the top row of this range.
* **row\_index\_num**: The row number in the table\_array from which to return a value. The first row in the table\_array is row 1.
* **[range\_lookup]**: An optional argument that specifies whether you want an approximate or exact match.
  + **TRUE** (or omitted): HLOOKUP will find an **approximate match**. The top row of your table\_array must be sorted in ascending order.
  + **FALSE**: HLOOKUP will find an **exact match**. The table\_array does not need to be sorted. This is the most common use case.

**Example**

Let's say you have a table showing sales data for different months, and you want to find the sales value for a specific month.

In this example, the data is organized horizontally. The months (Jan, Feb, etc.) are in the top row. The sales figures are in the second row.

To find the sales for **March**, you would use the following formula:

=HLOOKUP("March", A1:E2, 2, FALSE)

* lookup\_value: "March" (the value you're looking for).
* table\_array: A1:E2 (the range containing your data).
* row\_index\_num: 2 (you want the value from the second row, which contains the sales figures).
* range\_lookup: FALSE (you want an exact match for "March").

This formula would return **$35,000**. 💰

**Common Issues and Tips**

* **Horizontal Data**: Remember that HLOOKUP is specifically for data that is laid out horizontally, where your headers are in the top row. If your headers are in the first column, you should use **VLOOKUP**.
* **Exact Match**: For most lookup tasks, you will want an **exact match**. Always use FALSE for the range\_lookup argument unless you have a specific reason to find an approximate match.
* **Row Index**: The row\_index\_num is the position of the row within your **table\_array**, not the entire spreadsheet. If your table\_array starts on row 5, the first row of that array is still considered row 1 for the function.
* **Error Handling**: If HLOOKUP can't find the lookup\_value, it will return a #N/A error. You can use the IFERROR function to handle this gracefully, for example: =IFERROR(HLOOKUP(...), "Not Found").