VLOOKUP VS XLOOKUP

Definition

Stands for Vertical Lookup. It's a function used to search for a value in the first column of a range and return a value in the same row from another column.

A newer function introduced in Excel that stands for Extended Lookup. It's designed to overcome some limitations of VLOOKUP and offers more flexibility and capabilities.

Syntax

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

XLOOKUP(lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])

Functionality

Searches for a value in the leftmost column of a table and returns a value in the same row from a column you specify.

More versatile and can perform lookups in any direction (horizontal or vertical). It also allows for approximate and exact matches without sorting data.

Lookup Mode

Supports only approximate match (TRUE) or exact match (FALSE).

Supports four search modes: exact match, exact match with wildcard characters, approximate match, and the ability to return the last matching item.

Column Indexing

Requires specifying the column index number where the return value is located.

Automatically returns values based on their position in the lookup and return arrays, eliminating the need for a separate column index number.

Handling Errors

May return errors if the lookup value is not found or if the table is not sorted (for approximate matches).

Allows for customizable error handling with the [if_not_found] parameter, providing more control over error messages.

Compatibility

Available in older versions of Excel and widely used in legacy spreadsheets.

Available in Excel 365 and Excel 2021, so compatibility may be limited to newer versions unless using the XLOOKUP function backport.

Performance

Known to be slower, especially with large datasets, due to its limitations and the need for sorted data.

Generally faster and more efficient, especially for unsorted data and complex lookup scenarios.
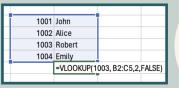
Use Cases

Suitable for simple vertical lookups where data is sorted and the lookup value is in the leftmost column.

Ideal for more complex lookup scenarios, unsorted data, and when flexibility and efficiency are paramount.

Example

Retrieve the name of the employee with ID "1003"

This formula searches for the value "1003" in column B, returns the corresponding value from column C (the second column of the range B2:C5), and uses an exact match (FALSE).

1001	John
1002	Alice
1003	Robert
1004	Emily

=VLOOKUP(1003, B2:C5,2,FALSE)

This formula searches for the value "1003" in the range B2:B5 (lookup_array), and returns the corresponding value from the range C2:C5 (return_array). XLOOKUP automatically performs an exact match.

1001	John
1002	Alice
1003	Robert
1004	Emily

=XLOOKUP(1003, B2:B5,C2:C5)