

DEFINITION

Index/Match is a combination of two functions in Excel used to look up values in a table.

PURPOSE

Index/Match is a combination of two functions in Excel used to look up values in a table.

INDEX FUNCTION		MATCH FUNCTION	
Syntax	<code>INDEX(array, row_num, [column_num])</code>	Syntax	<code>MATCH(lookup_value, lookup_array, [match_type])</code>
Purpose	Returns the value of a cell in a table based on the row and column number.	Purpose	Searches for a specified value in a range and returns its relative position.
Usage	Extracts data from a specified row and column in a table.	Usage	Finds the position of a lookup value within a range.
Example	If you have a data table with sales figures and want to retrieve a specific value based on its row and column position, you can use the Index function.	Example	When you need to find the position of a customer's name in a list to retrieve their corresponding sales data, you can use the Match function.

INDEX/MATCH COMBINATION

Purpose	Combines the Index and Match functions to perform flexible and dynamic lookups in Excel.
Advantages	Overcomes the limitations of VLOOKUP, such as the inability to search to the left of the lookup column and the requirement for exact matches.
Usage	By nesting the Match function within the Index function, you can perform lookup operations that are not possible with VLOOKUP.
Example	When you need to perform a two-way lookup to retrieve data based on both row and column criteria, Index/Match is the preferred method.

USEFUL TIPS

<p>1. Using Index/Match for Flexible Lookups</p> <p>Unlike VLOOKUP, Index/Match allows you to perform lookups in any column, not just the leftmost one. This flexibility is useful when your lookup value doesn't reside in the first column of your table or when you want to return values from columns to the right of your lookup column.</p>	<p>2. Avoiding Errors with Match</p> <p>MATCH function can return errors if the lookup value is not found in the search array. To handle this, use error handling functions like IFERROR or ISERROR to display custom messages or perform alternative actions when errors occur.</p>	<p>3. Combining Index/Match with Other Functions</p> <p>Index/Match can be combined with other Excel functions to perform more complex calculations or manipulations. For example, you can use it with IF function to perform conditional lookups or with SUM function to sum values returned by the Index/Match formula.</p>	<p>4. Using Exact Match</p> <p>By default, MATCH performs approximate matches. To ensure an exact match, use the third argument of MATCH function and set it to 0 (zero). This tells Excel to find an exact match for the lookup value.</p>
<p>5. Understanding Array Formulas</p> <p>Index/Match can be used within array formulas to perform calculations across multiple cells or ranges. When using Index/Match in array formulas, remember to press Ctrl + Shift + Enter instead of just Enter to properly enter the formula as an array formula.</p>	<p>6. Dynamic Ranges with Index/Match</p> <p>You can make your Index/Match formulas dynamic by using functions like OFFSET, INDIRECT, or dynamic named ranges. This allows your formulas to adjust automatically as your data changes or expands.</p>	<p>3. Enhancing Performance</p> <p>To improve the performance of your Index/Match formulas, minimize the use of volatile functions and unnecessary calculations. Additionally, try to limit the size of your lookup arrays to only include the necessary data.</p>	<p>8. Using Index/Match with Wildcards</p> <p>Index/Match can be combined with wildcard characters like asterisks (*) or question marks (?) to perform partial matches or pattern-based lookups. This is helpful when you need to search for values that match a specific pattern or contain certain substrings within larger text strings.</p>

EXAMPLES

1. Basic Index/Match

	A	B	C
1	Name	Age	Grade
2	John	25	A
3	Alice	30	B
4	Emily	28	C
5	=INDEX(C2:C4, MATCH("Alice", A2:A4, 0))		
6			

Returns "B", Alice's grade

2. Multi-column Index/Match

	A	B	C	D
1	Region	Product	Sales	
2	North	A	1500	
3	North	B	2000	
4	South	A	1450	
5	South	B	1890	
6	=INDEX(C2:C5, MATCH(1, (A2:A5="South")*(B2:B5="B"), 0))			
7				

Returns 1890, sales figure for Product B in the South region

3. Advanced Index/Match

	A	B	C	D
1	Date	Revenue		
2	01/03/2024	1400		
3	02/03/2024	5000		
4	03/03/2024	3800		
5	=INDEX(B2:B4, MATCH(MAX(B2:B4), B2:B4, 0))			
6				

Returns 5000, the highest revenue