

XMATCH function in Excel

The XMATCH function in Excel enhances the MATCH function by adding new features, making it ideal for finding the position of items within arrays or cell ranges.

This guide will detail how to use XMATCH through practical examples and will highlight its advantages over MATCH.

◆ Basic XMATCH function

The XMATCH function below performs an exact match and has only 2 arguments!

D3									
	A	B	C	D	E	F	G	H	I
1	Fruits								
2	Kiwi		Item	Cherry					
3	Cherry		Position	2					
4	Apple								
5	Mango								
6	Banana								
7	Apple								
8									

Explanation: XMATCH returns 2 because Cherry is the second item in the range A2:A7.

XMATCH vs MATCH: =MATCH(D2,A2:A7,0) produces the exact same result but needs an extra 3rd argument (0) for an exact match.

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◆ Approximate Matches

You can use the 3rd argument of the `XMATCH` function to perform different kinds of approximate matches. Set this argument to `-1` to find the next smaller item, or to `1` to find the next larger item.

1.The XMATCH function below searches for an exact match (77) or the next smaller item.

=XMATCH(D2,A2:A6,-1)									
	A	B	C	D	E	F	G	H	I
1	Scores								
2	45		Item	77					
3	62		Position	3					
4	74								
5	81								
6	90								
7									

Explanation: since XMATCH cannot find the score of 77, it returns 3 as 74 is the next smaller item.

2. The XMATCH function below performs an exact match (77) or searches for the next larger item.

[illegible]

Explanation: since XMATCH cannot find the score of 77, it returns 4 as 81 is the next larger item.

XMATCH vs MATCH: =MATCH(77,A2:A6,1) also searches for an exact match or the next smaller item and returns 3. However, MATCH cannot find the next larger item, unlike XMATCH. Also, XMATCH does not require sorted data to perform approximate matches! (although the scores are sorted here to simplify the example).

✦ Wildcards

To carry out a partial match using `XMATCH`, set the 3rd argument to 2, which enables wildcard matching.

1. The XMATCH function below searches for any fruit starting with Ban.

D3 ⌵ ⋮ ✕ ✓ *f_x* =XMATCH(D2,A2:A7,2)

	A	B	C	D	E	F	G	H	I
1	Fruits								
2	Kiwi		Item	Ban*					
3	Cherry		Position	5					
4	Apple								
5	Mango								
6	Banana								
7	Apple								
8									

Explanation: XMATCH returns 5 as "Banana" matches the pattern.

XMATCH vs MATCH: MATCH can also do wildcard searches with =MATCH(D2,A2:A7,0). The wildcard * represents any sequence of characters, while ? represents a single character, allowing for flexible search patterns.

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◆ Reverse Search

You can use the 4th argument of the XMATCH function to perform a reverse search. Set this argument to 1 to search from the first item to the last (the default setting), or to -1 to search from the last item to the first.

1. The XMATCH function below searches from the first item to the last for Apple.

D3									
	A	B	C	D	E	F	G	H	I
1	Fruits								
2	Kiwi		Item	Apple					
3	Cherry		Position	3					
4	Apple								
5	Mango								
6	Banana								
7	Apple								
8									

Explanation: XMATCH returns 3 as Apple is the third item. =XMATCH(D2,A2:A7) produces

the same result (nothing special so far).

2. The XMATCH function below searches from the last item to the first for Apple.

D3									
	A	B	C	D	E	F	G	H	I
1	Fruits								
2	Kiwi		Item	Apple					
3	Cherry		Position	6					
4	Apple								
5	Mango								
6	Banana								
7	Apple								
8									

Explanation: XMATCH returns 6 as Apple appears again as the last item in the list (at position 6).

XMATCH vs MATCH: MATCH can only search from the first item to the last.

◆ INDEX XMATCH

XMATCH feels a bit lonely without its best friend, INDEX. Together, they can tackle complex lookups. XMATCH searches for an item's position in one column, while INDEX retrieves the corresponding value from another column based on that position.

1. The INDEX XMATCH formula below finds Mango and retrieves its quantity.

E3									
	A	B	C	D	E	F	G	H	I
1	Fruits	Quantity							
2	Kiwi	50		Fruit	Mango				
3	Cherry	75		Quantity	60				
4	Apple	85							
5	Mango	60							
6	Banana	45							
7	Apple	55							
8									

Explanation: XMATCH finds Mango at position 4 in the range A2:A7. The INDEX function then uses this position to return the 4th value from the range B2:B7, which is 60. Visit our page about [INDEX and MATCH](#) for more awesome lookups.

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