**MATCH Function in Excel**

**What is MATCH?**

The **MATCH function** searches for a value in a range (row or column) and returns its **relative position**.

It’s commonly used **with INDEX** to create **dynamic lookup formulas** (alternative to VLOOKUP/HLOOKUP).

**Syntax:**

=MATCH(lookup\_value, lookup\_array, [match\_type])

**Arguments:**

| **Argument** | **Description** |
| --- | --- |
| lookup\_value | The value to search for. |
| lookup\_array | The range (row or column) to search in. |
| match\_type *(optional)* | Defines how Excel matches the value: |
|  | 0 = exact match (most common) |
|  | 1 = less than or equal (requires sorted data ascending) |
|  | -1 = greater than or equal (requires sorted data descending) |

**Return Value:**

MATCH returns the **position** of the lookup value in the array — not the value itself.

**Example Table (A1:B6):**

| **A** | **B** |
| --- | --- |
| 1 | Apple |
| 2 | Banana |
| 3 | Orange |
| 4 | Mango |
| 5 | Guava |

**Example 1: Exact Match**

=MATCH("Orange", B1:B5, 0)

Returns 3 → Because "Orange" is the 3rd item in the range B1:B5.

**Example 2: With Numbers (Sorted List)**

| **A** |  |
| --- | --- |
| 1 | 10 |
| 2 | 20 |
| 3 | 30 |
| 4 | 40 |
| 5 | 50 |

=MATCH(35, A1:A5, 1)

Returns 3 → 35 is **less than 40**, so it matches 30 (position 3).

Works only because the list is **sorted in ascending order**.

**Example 3: Reverse Sorted Numbers**

| **A** |  |
| --- | --- |
| 1 | 100 |
| 2 | 90 |
| 3 | 80 |
| 4 | 70 |
| 5 | 60 |

=MATCH(85, A1:A5, -1)

Returns 2 → 85 is **greater than 80**, so it matches 90 (position 2).

Works only because the list is **sorted in descending order**.

**Common Uses of MATCH:**

| **Use Case** | **Formula Example** |
| --- | --- |
| Get row position for a name | =MATCH("John", A2:A6, 0) |
| Find column number in a header | =MATCH("Salary", A1:D1, 0) |
| Use with INDEX for dynamic lookup | =INDEX(A2:D6, MATCH("Priya", B2:B6, 0), 4) → Get Priya’s Salary |

**Tips and Best Practices**

1. Use 0 (exact match) when data isn't sorted — which is most common.
2. MATCH returns **#N/A** if the lookup value isn’t found.
3. Combine with ISNA() to handle errors:

=IF(ISNA(MATCH("XYZ", A1:A10, 0)), "Not found", "Found")

1. MATCH works on **1D arrays only** — either a row or a column, not a block.

**MATCH vs. VLOOKUP vs. XLOOKUP**

| **Feature** | **MATCH** | **VLOOKUP** | **XLOOKUP** |
| --- | --- | --- | --- |
| Position only | Yes | No | Yes (with return) |
| Left Lookup | (with INDEX) | No | Yes |
| Dynamic Lookup | Yes | Limited | Yes |

**Combine with INDEX:**

=INDEX(D2:D6, MATCH("Anita", B2:B6, 0))

Returns salary of Anita from a table where names are in B2:B6 and salaries are in D2:D6.

**Practice Data Table (A1:D6)**

| **ID** | **Name** | **Department** | **Salary** |
| --- | --- | --- | --- |
| 1 | John | Sales | 45000 |
| 2 | Priya | HR | 50000 |
| 3 | Karan | IT | 55000 |
| 4 | Anita | Finance | 60000 |
| 5 | Ramesh | Sales | 48000 |

**Practice Questions for MATCH in Excel**

**Basic MATCH Usage**

1. Find the position of **“Priya”** in the Name column.
2. What is the position of **“Sales”** in the Department column?
3. Find the row number for **“Anita”** in the Name column.
4. Find the position of **“IT”** in the Department column.
5. What is the position of **50000** in the Salary column?
6. Find the position of the name **"Karan"**.
7. Match the ID **4** in the ID column.
8. Match the salary **48000**.
9. Find the position of **“Finance”** in column C.
10. What position is **Ramesh** in the Name column?

**MATCH with INDEX**

1. Use MATCH to find “Karan”’s row number, then use INDEX to find his Salary.
2. Get Department of the person whose name is “Anita” using INDEX and MATCH.
3. Find ID of the employee with name “Priya”.
4. Use MATCH to find the position of “Sales”, then use INDEX to return the corresponding Name.
5. Use MATCH to find row number of “John” and return his Salary using INDEX.

**MATCH with Numbers**

1. Match number **3** in the ID column.
2. What is the position of **60000** in Salary?
3. Find the position of **45000** in D2:D6.
4. Use MATCH to find where the value **55000** is in the Salary column.
5. Match number **2** in the ID column.

**Error Checking + MATCH**

1. Try to find position of name “Nisha” (not in list).
2. Use IF and ISNA with MATCH to return “Not found” if name is missing.
3. Try matching **"Marketing"** in Department column.
4. What happens if you try to match text “50000” instead of number in Salary column?
5. Try matching a value with match\_type = 1 in unsorted Salary list – what do you get?

**SOLUTIONS**

| **Q#** | **Formula** | **Result / Output** |
| --- | --- | --- |
| 1 | =MATCH("Priya", B2:B6, 0) | 2 |
| 2 | =MATCH("Sales", C2:C6, 0) | 1 |
| 3 | =MATCH("Anita", B2:B6, 0) | 4 |
| 4 | =MATCH("IT", C2:C6, 0) | 3 |
| 5 | =MATCH(50000, D2:D6, 0) | 2 |
| 6 | =MATCH("Karan", B2:B6, 0) | 3 |
| 7 | =MATCH(4, A2:A6, 0) | 4 |
| 8 | =MATCH(48000, D2:D6, 0) | 5 |
| 9 | =MATCH("Finance", C2:C6, 0) | 4 |
| 10 | =MATCH("Ramesh", B2:B6, 0) | 5 |
| 11 | =INDEX(D2:D6, MATCH("Karan", B2:B6, 0)) | 55000 |
| 12 | =INDEX(C2:C6, MATCH("Anita", B2:B6, 0)) | Finance |
| 13 | =INDEX(A2:A6, MATCH("Priya", B2:B6, 0)) | 2 |
| 14 | =INDEX(B2:B6, MATCH("Sales", C2:C6, 0)) | John |
| 15 | =INDEX(D2:D6, MATCH("John", B2:B6, 0)) | 45000 |
| 16 | =MATCH(3, A2:A6, 0) | 3 |
| 17 | =MATCH(60000, D2:D6, 0) | 4 |
| 18 | =MATCH(45000, D2:D6, 0) | 1 |
| 19 | =MATCH(55000, D2:D6, 0) | 3 |
| 20 | =MATCH(2, A2:A6, 0) | 2 |
| 21 | =MATCH("Nisha", B2:B6, 0) | #N/A |
| 22 | =IF(ISNA(MATCH("Nisha", B2:B6, 0)), "Not Found", "Found") | Not Found |
| 23 | =MATCH("Marketing", C2:C6, 0) | #N/A |
| 24 | =MATCH("50000", D2:D6, 0) | #N/A (data type mismatch) |
| 25 | =MATCH(48000, D2:D6, 1) | Unexpected / wrong |

Q25 gives wrong results because **MATCH type 1** expects **sorted ascending list**, which Salary isn’t.