

Chapter-3 Working with SUMIF and SUMIFS in MS Excel

The `SUMIF` and `SUMIFS` functions are used to calculate the sum of values in a range based on specified criteria. These functions are especially useful for conditional summing tasks.

1. SUMIF Function

The `SUMIF` function calculates the sum of cells that meet a single condition.

Syntax:

```
=SUMIF(range, criteria, [sum range])
```

| Argument | Description |
|------------------------|--|
| <code>range</code> | The range of cells to evaluate against the <code>criteria</code> . |
| <code>criteria</code> | The condition that determines which cells to include in the sum. |
| <code>sum_range</code> | <i>(Optional)</i> The range of cells to sum. If omitted, <code>range</code> is used. |

Example 1: Using SUMIF

- **Scenario:** Calculate the total sales where the salesperson is "John".
- **Data:**

| | A | B |
|---|-------------|-------|
| 1 | Salesperson | Sales |
| 2 | John | 100 |
| 3 | Jane | 200 |
| 4 | John | 150 |

- **Formula:**

```
=SUMIF(A2:A4, "John", B2:B4)
```

- **Result:** 250 (100 + 150).
-

Example 2: SUMIF with Comparison Operators

- **Scenario:** Calculate the total sales greater than 100.
- **Formula:**

```
=SUMIF(B2:B4, ">100")
```

- **Result:** 350 (200 + 150).

2. SUMIFS Function

The `SUMIFS` function calculates the sum of cells that meet multiple conditions.

Syntax:

```
=SUMIFS(sum_range, criteria_range1, criterial, [criteria_range2, criteria2], ...)
```

| Argument | Description |
|---------------------------------|---|
| sum_range | The range of cells to sum. |
| criteria_range1 | The range of cells to evaluate the first condition. |
| criterial | The first condition to evaluate. |
| criteria_range2, criteria2, ... | <i>(Optional)</i> Additional ranges and conditions to evaluate. |

Example 1: Using SUMIFS

- **Scenario:** Calculate total sales made by "John" in the East region.
- **Data:**

| | A | B | C |
|---|-------------|--------|-------|
| 1 | Salesperson | Region | Sales |
| 2 | John | East | 100 |
| 3 | Jane | West | 200 |
| 4 | John | West | 150 |
| 5 | John | East | 200 |

- **Formula:**

```
=SUMIFS(C2:C5, A2:A5, "John", B2:B5, "East")
```

- **Result:** 300 (100 + 200).

Example 2: SUMIFS with Date Conditions

- **Scenario:** Calculate sales after a specific date.
- **Data:**

| | A | B |
|---|------------|-------|
| 1 | Date | Sales |
| 2 | 01/01/2024 | 100 |
| 3 | 02/01/2024 | 200 |
| 4 | 03/01/2024 | 150 |

- **Formula:**

```
=SUMIFS(B2:B4, A2:A4, ">01/01/2024")
```

- **Result:** 350 (200 + 150).
-

Key Points

1. Wildcards in Criteria:

- Use * to match any sequence of characters and ? to match a single character.
- Example: =SUMIF(A2:A5, "Jo*", B2:B5) sums values for names starting with "Jo".

2. Logical Operators:

- Use >, <, >=, <=, <> in the criteria.
- Example: =SUMIF(B2:B5, ">100").

3. Date Conditions:

- Use valid date formats in the criteria (e.g., ">01/01/2024").

4. Multiple Conditions:

- Use SUMIFS for summing with multiple conditions (AND logic).
- For OR logic, combine multiple SUMIF functions:

```
=SUMIF(A2:A5, "John", B2:B5) + SUMIF(A2:A5, "Jane", B2:B5)
```