

# SUMIF Formula in Excel

## Usage

The SUMIF function in Excel is used to sum the values in a range that meet specific criteria. This function is particularly useful for financial analysis, budgeting, and reporting where you need to aggregate data based on certain conditions. It allows you to efficiently analyze data by applying criteria to filter the data you want to sum.

## How to Use

### Formula:

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

- 
- **Parameters:**
  - **range:** The range of cells that you want to apply the criteria to.
  - **criteria:** The condition that determines which cells will be summed. This can be a number, text, expression, or a cell reference.
  - **sum\_range** (optional): The actual cells to sum if different from the range. If omitted, Excel sums the cells in the range.

## Examples:

### 1. Sum with a Numeric Criteria:

To sum values in the range B1  
where the corresponding values in A1  
are greater than 100:

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```
=SUMIF(A1:A10, ">100", B1:B10) // Sums values in B1:B10 where  
the corresponding A1:A10 values are greater than 100
```

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### 2. Sum with Text Criteria:

To sum values in the range C1  
where the corresponding cells in D1  
equal "Approved":

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```
=SUMIF(D1:D10, "Approved", C1:C10) // Sums values in C1:C10  
where the corresponding D1:D10 values are "Approved"
```

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### 3. Using Cell References:

If you have a criteria in cell E1, to sum values in B1 based on that criteria:

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```
=SUMIF(A1:A10, E1, B1:B10) // Sums values in B1:B10 based on the criteria specified in E1
```

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#### Applications

- **Budgeting and Financial Analysis:** Summing expenses or income categories that meet specific criteria, allowing for more granular financial insights.
- **Sales Analysis:** Analyzing sales data by summing sales amounts for specific products, regions, or sales representatives.
- **Project Management:** Tracking project costs or resource allocations based on task statuses or categories.
- **Dynamic Reporting:** Creating reports that update automatically based on user-defined criteria, improving efficiency in data analysis.