**🔹 SUMIF & SUMIFS in Excel — Basic Introduction**

**📌 1. What is SUMIF?**

SUMIF is used to **add values based on a single condition**.

**✅ Syntax:**

excel

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=SUMIF(range, criteria, [sum\_range])

| **Parameter** | **Meaning** |
| --- | --- |
| range | Where Excel checks the condition |
| criteria | What condition must be true |
| sum\_range | Which cells to add (optional) |

**📍 Example:**

You have a list of students and their marks. Add marks of only **"Science"** students.

=SUMIF(A2:A10, "Science", B2:B10)

* A2:A10 → Subject column
* "Science" → Condition
* B2:B10 → Marks column to add

**📌 2. What is SUMIFS?**

SUMIFS is used when you need to **add values based on multiple conditions** (yes, “S” stands for **plural**: conditions).

**✅ Syntax:**

=SUMIFS(sum\_range, criteria\_range1, criteria1, [criteria\_range2, criteria2], ...)

**📍 Example:**

Add marks of students where:

* Subject = "Science"
* Class = "10th"

=SUMIFS(C2:C10, A2:A10, "Science", B2:B10, "10th")

C2:C10 → Marks to add

A2:A10 → Subject column

B2:B10 → Class column

"Science" and "10th" → Conditions

🔧 Use Cases — Real-Life Style

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use Case | Formula | | Use Description | |
| 🛒 Total sales for "Product A" | | =SUMIF(A2:A100, "Product A", B2:B100) | | Adds sales only of Product A |
| 👨‍🏫 Total marks of students in "Maths=SUMIF(SubjectRange, "Maths", MarksRange) | | Add marks only for Math | |  |
| 📅 Total revenue in Jan 2024 | | =SUMIF(DateRange, ">=01/01/2024", RevenueRange) | | Add revenue starting Jan |
| 🧾 Total "Online" sales by "Cash" | | =SUMIFS(SalesRange, ChannelRange, "Online", PaymentModeRange, "Cash") | | Multiple conditions |
| 🎓 Total marks of girls in class 12 | =SUMIFS(MarksRange, GenderRange, "F", ClassRange, 12) | | Gender + class filter | |