
User:

tutorial for 6

ChatGPT:

Great choice! 🌟 Topic 6: **Conditional Counting with COUNTIF / COUNTIFS**
This is one of the most useful skills in Excel for analyzing data.

Tutorial: Conditional Counting (COUNTIF & COUNTIFS)

Objective

Learn how to count cells that meet specific conditions using **COUNTIF** (one condition) and **COUNTIFS** (multiple conditions).

Why it matters

- Quickly answer questions like:
 - *How many students scored above 50?*
 - *How many orders came from Singapore AND are over \$100?*
 - Saves time compared to counting manually.
-

Steps

1. COUNTIF syntax

```
go
=COUNTIF(range, criteria)
```

- **range** = where to look (e.g., B2:B20)
- **criteria** = what condition must be true (e.g., ">50")

2. COUNTIFS syntax

```
=COUNTIFS(range1, criteria1, range2, criteria2, ...)
```

- Can test multiple conditions.
 - Example: =COUNTIFS(A2:A20, "Singapore", B2:B20, ">100")
-

Worked Example

Imagine this table of sales:

Name	Country	Sales
Alex	Singapore	120
Ben	Malaysia	80
Clara	Singapore	60
Devi	Singapore	200
Ethan	Malaysia	150

Example 1: Count how many sales are greater than 100

```
php
=COUNTIF(C2:C6, ">100")
```

Answer → 3

Example 2: Count how many sales came from Singapore

```
php
```

```
=COUNTIF(B2:B6,"Singapore")
```

Answer → 3

Example 3: Count how many Singapore sales are greater than 100

```
php
=COUNTIFS(B2:B6,"Singapore",C2:C6,">100")
```

Answer → 2

**Try-it Tasks****Starter**

1. Count how many sales are less than 100.

Core

2. Count how many Malaysia sales are greater than 100.

Stretch

3. Count how many Singapore sales are between 50 and 150. *(Hint: Use two criteria in COUNTIFS with ">=50" and "<=150")*

**Common Mistakes**

- Forgetting quotes around text or operators: "Singapore", ">100"
- Mixing up COUNTIF with SUMIF (COUNTIF counts, SUMIF adds values)
- Not matching range sizes in COUNTIFS (all ranges must be same length)

**Quick Recap**

- **COUNTIF** → 1 condition.
- **COUNTIFS** → multiple conditions.
- Always put criteria inside quotes if using text or operators.

Would you like me to now **generate your starter workbook (Python script)** for this topic, with sample data, tasks, hints, and answers?

User:

generate workbook

ChatGPT:

Awesome — here's a **ready-to-run Python script** that builds your COUNTIF/COUNTIFS starter workbook.

How to run (Windows/Mac)

1. Ensure **Python 3.9+** is installed.
2. Install dependency:

```
nginx
pip install openpyxl
```

3. Save the script below as `build_countifs_workbook.py`.
4. Run it:

```
nginx
python build_countifs_workbook.py
```

5. It creates `NLevel_COUNTIFS_Practice.xlsx` in the same folder.

What you'll get