Medals spreadsheet analysis

We can use **functions** to quickly find answers to questions about data

1. Open the **Olympic Medals spreadsheet**
2. Switch to the **Data analysis worksheet** at the bottom

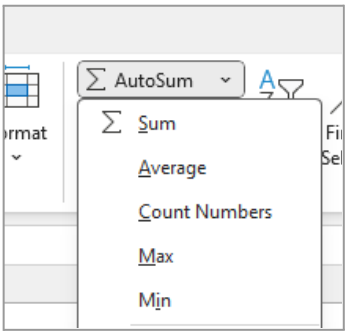
Part A – Calculating averages

3. Click in cell **G3**

   This cell needs to have the average number of gold medals in it

4. At the **top**, find the **AutoSum button**. Click the **arrow** on the right of it and choose **Average**

   Excel tries to guess the cells you want and fails



5. **Drag** the mouse to select cells **B2 to B93** and press **Enter** to set the cells. This calculates the average
6. Dragging down so many cells is quite tricky. You can just enter the function in cell G3

   The function you need is: **`=AVERAGE(B2:B93)`**

   Don't forget the **=** to start with

7. Click in cell **G4**. Use a function to calculate the average silver medals (**C2** to **C93**)
8. Click in cell **G5**. Use a function to calculate the average bronze medals (**D2** to **D93**)

Part B – Most medals of each type

9. Click in cell **G10**
10. This time we need to use the **MAX** function

    This is under **AutoSum** as well, so you can use the same method

    The function you want in cell G10 is: **=MAX(B2:B93)**

    Don't forget to click and drag to select the cells you need

11. **Repeat** this for the silver and bronze medals

Part C – Fewest medals of each type

12. Click in cell G17. Do the same thing using a **MIN** function. The function you need in cell G17 is: **=MIN(B2:B93)**
13. **Repeat** this for silver and bronze medals

Part D – Total medals

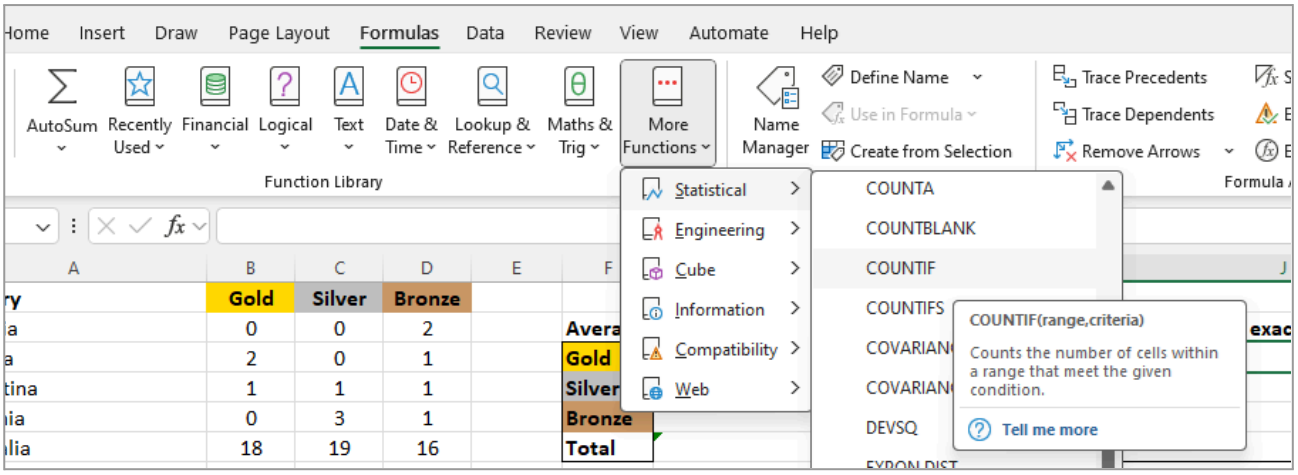
14. Click in cell **G24**. Now you need to add up the total number of gold medals
15. This uses a **SUM** function. This is also under **AutoSum.** In G24 you need: **=SUM(B2:B93)**
16. Cell **G27** wants the total number of medals – All the gold, silver, and bronze added together. Use a **SUM** function to add up the numbers in cells G24, G25, and G26

Part E – Using COUNTIF

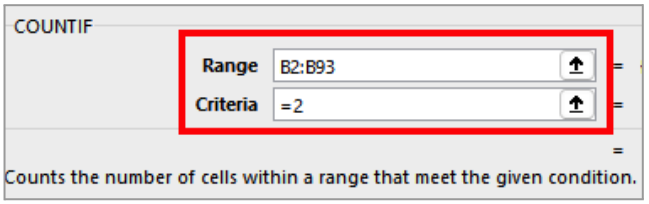
In cell **J3** we need a function to find out the number of countries with **exactly** 2 gold medals. This is much harder to do!

17. Click in cell **J3**
18. At the top, click **Formulas**
19. On the ribbon, click **More functions** > **Statistical** > find the **COUNTIF** function

    VERY IMPORTANT: COUNTIF, not COUNTIF<u>S</u>

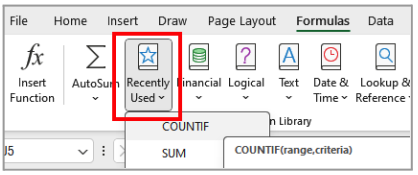


20. A pop up box appears. You start clicked in the range box
21. **Drag** your mouse to select the gold medals cells in **column B**. You want cells **B2** to **B93** The range appears in the box
22. **Click** in the **Criteria box** and type **=2** This is saying, check these cells and tell me how many have the value 2 exactly

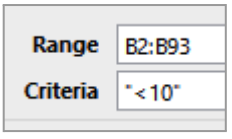


23. Press the **OK** button
24. The answer should appear (it should be 12)
25. **Repeat** this for silver (cells C2 to C93) and bronze (D2 to D93) medals

    Hint: once you've used a function it will appear in the **Recently Used** part of the Formulas section in the ribbon



26. In cell **J10** we need to find the number of countries with **fewer than 10** gold medals



27. Use a **COUNTIF** function again, but this time the criteria should be **<10**
28. **Repeat** for silver and bronze medals
29. In cell **J17** we need to look for the countries with **greater than 20** medals, so the criteria needs to be **>20**. **Repeat** for silver and bronze again