

Spreadsheets are used to store information and data. Once we have our information in a spreadsheet we can run powerful calculations, make graphs and charts and analyse patterns.

Other uses for spreadsheets –

- Modelling and Planning
- Home/Business Finance and Budgeting
- Wages/Invoices
- Predictions / Simulations / Calculations
- Creating charts and graphs

The screenshot shows a spreadsheet with columns labeled A through G and rows 1 through 14. The data is organized into sections: 'Chocolate' (rows 2-6), 'Stock control' (rows 7-10), and 'Profit/loss' (rows 11-14). Labels with arrows point to specific elements: 'Column' points to column C, 'Text Label' points to 'Chocolate', 'Row' points to row 2, 'Worksheet' points to the entire grid, 'Cell Reference' points to C13, 'Numeric Data' points to the values in row 2, 'Formula' points to the formula bar, and 'Active Cell' points to cell C13.

| | |
|-------------------------------|---|
| What is a Function? | A function is a standard routine used to perform common tasks. It represents a complex formula that uses reserved words e.g. VLOOKUP, IF. A function performs a specific set of operations on its input values to produce a single output value. |
| What is a Formula? | Using formulas in spreadsheets can allow you to quickly make calculations and get totals of multiple cells, rows, or columns in a spreadsheet . |
| Conditional Formatting | is a tool that allows you to apply formats to a cell or range of cells, and have that formatting change depending on the value of the cell or the value of a formula. For example, you can have a cell appear bold only when the value of the cell is greater than 100. |

| | | |
|----------------------------------|------------------|---------------------------------------|
| Common Formulas/Functions | = SUM | Adds a range of cells together |
| | = AVERAGE | Finds an average for a range of cells |
| | = MIN | Returns the smallest value in range |
| | = MAX | Returns the highest value in a range |
| | = COUNT | Counts cells if they meet a condition |

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| | one of the logical functions , to return one value if a condition is true and another value if it's false. For example: =IF(A2>B2,"Over Budget","OK") =IF(A2=B2,B4-A4,"") |
| IF | |
| Count IF | =COUNTIF (Where do you want to look?, What do you want to look for?) |
| Auto SUM | Excel automatically enters a formula (that uses the SUM function) to sum the numbers |
| = COUNT | Counts cells if they meet a condition |

Golden rule: every formula always starts with an =

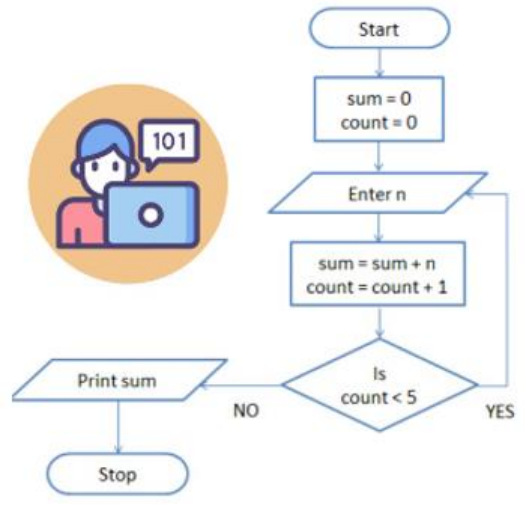
Cell references begin with a letter, and finish with a number. EG: **A1**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |

A range is a selection of cells. EG: **(A2:F4)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |

| Operators | |
|-----------|--|
| + | Adds two numbers / cells |
| - | Subtracts one cell or number from another |
| * | Multiplies two numbers/cells |
| / | Divides one number / cell from another one |
| < | Less than |
| > | Greater than |
| <= | Less than or equal to |
| >= | Greater than or equal to |



| Flowchart Symbols | |
|-------------------|---|
| | Used at the start and end of a flowchart. |
| | Controls all the inputs and outputs. |
| | General instructions and calculations carried out by the computer. |
| | Where a question/decision is asked. Must have a 'Yes' and 'No' output. |
| | Used to connect flowchart symbols to show the direction of flow in the program. |

| Key Vocabulary | |
|------------------|--|
| Algorithm | A set of rules or instructions to be followed. |
| Flowchart | A graphical way of showing an algorithm. |
| Mimic | In Flowol, a simulation of a real world environment. |
| Selection | Deciding what code to run based on a decision or answer to a question. E.g. an IF statement. |
| Sequence | A set of instructions that are completed in the exact order that they are written. |