



## Discuss and explain how to use spreadsheets

Spreadsheets are tools for organizing data in a grid of rows and columns, then using formulas to calculate, sort, and analyze that data efficiently. They are useful for tasks like budgets, lists, tracking projects, and basic data analysis.<sup>[1] [2]</sup>

### Spreadsheet basics

A spreadsheet file (Excel, Google Sheets, etc.) contains one or more sheets; each sheet is a grid of **cells** identified by column letter and row number (for example, A1, C3). You type text, numbers, or dates into cells to build tables such as budgets, contact lists, or inventories.<sup>[2] [1]</sup>

- Columns run vertically and are labeled with letters (A, B, C...).<sup>[1]</sup>
- Rows run horizontally and are labeled with numbers (1, 2, 3...).<sup>[1]</sup>
- The formula bar shows or edits the contents or formula for the selected cell.<sup>[1]</sup>

### Entering and formatting data

To enter data, click a cell, type, then press Enter or Tab to move to another cell. You can format data so it appears as numbers, currency, percentages, or dates, and you can adjust column widths, bold text, or apply fill colors from the toolbar.<sup>[2] [1]</sup>

- Use number, currency, or percentage formats so calculations work correctly.<sup>[1]</sup>
- Resize columns by double-clicking the divider between column letters.<sup>[2]</sup>
- Apply text formatting (bold, color, alignment) to make tables easier to read.<sup>[2]</sup>

### Using formulas and functions

Formulas perform calculations based on the values in cells and always start with an equal sign =. A simple example is =A1+B1, which adds the values in cells A1 and B1.<sup>[3]</sup>

- Basic arithmetic uses + (add), - (subtract), \* (multiply), / (divide) with cell references, such as =B2\*0.05.<sup>[3]</sup>
- Common built-in functions include =SUM(A1:A10) to add a range, =AVERAGE(A1:A10) for an average, and =IF(A1>10, "Yes", "No") for simple logic.<sup>[4] [2]</sup>
- You can insert functions from menus like Insert → Function (Sheets) or the Formulas tab (Excel) instead of typing them completely by hand.<sup>[5] [4]</sup>

## Copying formulas efficiently

Most spreadsheet work reuses similar formulas across rows or columns, so copying formulas saves time. When you copy a formula, cell references usually adjust automatically (for example, copying `=A2+B2` down becomes `=A3+B3`, `=A4+B4`, etc.).<sup>[6]</sup>

- Drag the **fill handle**: select the formula cell, then drag the small square at its bottom-right corner over the range you want to fill.<sup>[6]</sup>
- Double-click the fill handle to auto-fill down a column as far as there is data in an adjacent column.<sup>[6]</sup>
- Use shortcuts like Ctrl+D (fill down) or Ctrl+R (fill right) in Excel to copy formulas quickly.<sup>[6]</sup>

## Sorting and filtering data

Sorting and filtering help you reorganize and examine your data without changing the underlying values. Sorting reorders rows (for example, A–Z, Z–A, smallest to largest), while filtering temporarily hides rows that do not meet certain criteria.<sup>[7] [8]</sup>

- Use Data → Sort (or column header menus) to sort by one or more columns, choosing ascending or descending order.<sup>[8] [7]</sup>
- Use Data → Filter (or filter icons in header cells) to show only rows matching conditions, like dates in a certain month or items above a threshold.<sup>[8]</sup>
- Converting your range to a table in Excel adds filter arrows on headers that make sorting and filtering easier.<sup>[9]</sup>

If you say what you want to use spreadsheets for (budgeting, grade tracking, work reports, etc.), a step-by-step example can be outlined for that specific task.



1. <https://subjectguides.york.ac.uk/spreadsheets/basics>
2. <https://www.instructables.com/Mastering-Excel-a-Beginners-Guide-to-Spreadsheets/>
3. <https://support.microsoft.com/en-us/office/create-a-simple-formula-in-excel-11a5f0e5-38a3-4115-85bc-f4a465f64a8a>
4. <https://avidian.com/excel-tips-for-beginners/>
5. <https://zapier.com/blog/google-sheets-tutorial/>
6. <https://www.datacamp.com/tutorial/basic-excel-formulas-for-everyone>
7. <https://guides.lib.umich.edu/c.php?g=283162&p=1886445>
8. <https://edu.gcfcglobal.org/en/googlespreadsheets/sorting-and-filtering-data/1/>
9. [https://www.reddit.com/r/excel/comments/184leka/how\\_to\\_sort\\_a\\_column\\_but\\_keep\\_rows\\_matched/](https://www.reddit.com/r/excel/comments/184leka/how_to_sort_a_column_but_keep_rows_matched/)
10. <https://support.microsoft.com/en-us/office/use-conditional-formatting-to-highlight-information-in-excel-fed60dfa-1d3f-4e13-9ecb-f1951ff89d7f>