TechMentors

Helping you get the most out of technology

Excel 101

Student Manual

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Exploring Excel

Welcome to *Excel 101*! This chapter introduces Microsoft Excel and its core functions. You'll learn what Excel is, how to launch it, and how to navigate its interface. By the end, you'll be comfortable opening Excel and identifying its key components.

What is Microsoft Excel?

Spreadsheet
Excel is a spreadsheet program—a digital grid of rows and columns used to organize, calculate, and analyze data.

Database
While not a full database system, Excel can store structured data and apply filters, sorts, and lookups.

Graphing Program
Excel can turn data into visual charts and graphs, helping you spot trends and patterns.

How Do I Start Excel?

From the Start Menu
1. Click the **Start** button.
2. Type "Excel" in the search bar.
3. Click the **Excel** icon to launch the program.

From the Keyboard
Press `Windows Key + S`, type "Excel," and hit `Enter`.

From the Task Bar
If Excel is pinned to your taskbar, click the icon directly.

Hands-On Exercise: Launch Excel Three Ways
Objective: Practice opening Excel using different methods.

- Method 1: Use the Start Menu.
- Method 2: Use the keyboard shortcut.
- Method 3: Use the Task Bar icon.

How Do I Use the Interface?

Opening Screen
When Excel opens, you'll see the Home screen. This includes options to start a new workbook or open a recent file.

Title Bar
Displays the name of your workbook and includes window controls (minimize, maximize, close).

Resizing the Excel Window
Drag the edges or corners of the window to resize. If Excel is fully maximized, first click the restore icon before dragging the edges or corners.

File Menu
Click **File** to access options like Home, New, Open, Save, Print, Export, and Close.

Ribbon Tabs, Groups, and Icons
The Ribbon organizes commands into tabs (e.g., Home, Insert, Page Layout).
Each tab contains groups of related tools.

Minimizing and Maximizing the Ribbon
Double click one of the ribbon's tabs to collapse or expand the Ribbon.

Workbooks and Worksheets
A **workbook** is the entire Excel file. A **worksheet** is a single tab within the workbook.

Rows, Columns, Cells and Ranges
- **Rows** run horizontally and are numbered.
- **Columns** run vertically and are lettered.
- **Cells** are individual boxes (e.g., A1).
- **Ranges** are groups of cells (e.g., A1:C3).

Gridlines
Light gray lines that separate cells—visible on screen but optional when printing.

Formula Bar
Displays the contents of the selected cell and allows you to enter or edit formulas.

Focus Cell
The currently selected cell, outlined in green.

Zoom Options
Adjust the zoom level using the slider in the bottom-right corner.

Status Bar
Is shown at the bottom of the screen. It displays information like sum, average, and count of selected cells.

Quick Access Toolbar
A customizable toolbar for frequently used commands (e.g., Save, Undo).

Exiting Excel
Click the **X** in the top-right corner or use `Alt + F4`.

🧪 Hands-On Exercise: Interface Scavenger Hunt
Objective: Familiarize yourself with Excel's layout.

1. Open Excel.
2. Locate and identify the following:
    - Title Bar
    - Ribbon Tabs
    - Formula Bar
    - Status Bar
    - Quick Access Toolbar
3. Write down one function each area provides.

💡 TechMentor Tip
Hover over any icon in the Ribbon to see a tooltip. These mini-descriptions are a great way to learn by exploring.

Using Basic Workbook Skills

In this chapter, you will practice selecting cells and ranges, entering and editing values, and managing worksheets and workbooks. These foundational skills are essential for navigating and building spreadsheets effectively.

How Do I Select Cells and Ranges?

Select a Cell or Range with the Keyboard

- Use **Arrow Keys** to move the focus cell.
- Hold **Ctrl + Arrow** to jump to the edge of data.
- Hold **Shift + Arrow** to select multiple cells.
- Use **Ctrl + Shift + Arrow** to select entire data blocks.

Select a Cell or Range with the Mouse

- **Click** to select a single cell.
- **Ctrl + Click** to select non-adjacent cells.
- **Shift + Click** to select a range.
- **Click and Drag** to select multiple adjacent cells.

Select with the Go To Dialog Box

- Press `Ctrl + G` or `F5` to open **Go To**.
- Type a cell reference (e.g., A1:D5) and press `Enter`.

Hands-On Exercise: Cell Selection Practice

Objective: Practice selecting cells using different methods.

1. Open a blank workbook.
2. Select cell A1 using the keyboard or mouse.
3. Use `Shift + Arrow` to select A1 through A5.
4. Use `Ctrl + G` to jump to cell D10.
5. Select a non-adjacent range: A1, C1, E1 using Ctrl + Click.

Reflection: Which method felt most efficient?

How Do I Enter and Edit Values?

Text, Number, and Date Values

Excel accepts text (e.g., “Total”), numbers (e.g., 100), and dates (e.g., 8/18/2025).

Enter Values in a Cell

- Click a cell and type.
- Press `Enter` to confirm and move down or
  Press `Tab` to confirm and move right or
  Press `Ctrl + Enter` to confirm and stay in the same cell.

Edit Values with the Keyboard

- Double-click the cell or press `F2` to edit.
- Use arrow keys to move within the cell.

Enter Values in the Formula Bar

- Click the cell, then type in the **Formula Bar**.

Enter Multiple Values with Autofill

- Type a value (e.g., "Monday") in a cell.
- Drag the **fill handle** (bottom-right corner) to autofill adjacent cells.

🧪 Hands-On Exercise: Enter and Edit Data

Objective: Practice entering and editing different types of values.

1. In cell A1, type "Name".
2. In cell B1, type "Date".
3. In cell C1, type "Amount".
4. Fill in rows 2–6 with sample data of your choosing.
5. Use Autofill to extend a date series.
6. Edit one value using the formula bar.

Reflection: What surprised you about Autofill?

❓ How Do I Work with Worksheets?

Activate a Worksheet with the Mouse

- Click the sheet name at the bottom.
- Use the arrows to the left of the first sheet to scroll through sheets.
- Right-click a sheet tab for more options.

Activate a Worksheet with the Keyboard

- Press `Ctrl + Page Up` or `Ctrl + Page Down`.

Add, Rename, Copy, Color, Delete Sheets

- **Add**: Click the plus icon or press `Shift + F11`.
- **Rename**: Double-click the sheet tab and type the new name.
- **Copy**: Right-click → Move or Copy → Check Create a copy → click OK.

- **Color**: Right-click → Tab Color → choose a color.
- **Delete**: Right-click → Delete.

🧪 **Hands-On Exercise: Worksheet Management**
Objective: Create and customize worksheets.

1. Add three new worksheets.
2. Rename them "January," "February," and "March."
3. Assign each a different tab color.
4. Copy "January" and rename it "January Copy."
5. Delete "March."

Reflection: How might you use multiple worksheets in a real project?

❓ How Do I Work with Workbooks?

Types of Workbooks

- **Blank Workbook**: Starts empty.
- **Template**: Pre-formatted for specific tasks.

Create a Workbook

- **New Blank**: File → New → Blank Workbook.
- **From Template**: File → New → Choose Template.

Save a Workbook

- **Save**: File → Save or `Ctrl + S`.
- **Save As**: or `F12` or File → Save As → Choose location and name.

Switch and Close

- **Switch**: View → Switch Windows.
- **Close**: File → Close or `Ctrl + W`.

🧪 **Hands-On Exercise: Workbook Basics**
Objective: Create, save, and switch between workbooks.

1. Create a new blank workbook.
2. Save it as "Budget2025.xlsx" in a folder of your choice.
3. Create a second workbook from a template.
4. Switch between the two using the Ribbon.
5. Close one workbook.

Reflection: What naming convention will help you organize your files?

💡 **TechMentor Tip**
Use descriptive file names like "ClientList_2025_08" where 2025 is the year and 08 is the month. Using a four-digit year followed by a two-digit month will make searching and sorting easier later.

Working with Rows and Columns

In this chapter, you will learn how to select, resize, hide, insert, delete, and move rows and columns. These skills are vital for organizing data and customizing the layout of a worksheet.

How Do I Select Rows and Columns?

With the Mouse

- **Click** the row number or column letter to select one.
- **Click and Drag** over multiple row numbers or column letters to select a range.
- **Ctrl + Click** to select non-adjacent rows or columns.
- **Shift + Click** to select a continuous range.

With the Keyboard

- **Rows:** `Shift + Spacebar` selects the entire row.
- **Columns:** `Ctrl + Spacebar` selects the entire column.
- Use `Shift + Arrow Keys` to expand the selection.

With the Go To Dialog Box

- Press `Ctrl + G` or `F5`, type a range (e.g., 1:10 or A:C), and press `Enter`.

Hands-On Exercise: Selecting Rows and Columns

Objective: Practice selecting rows and columns using mouse and keyboard.

1. Select row 5 using the mouse.
2. Select columns B through D using click and drag.
3. Use `Ctrl + Spacebar` to select column C.
4. Use `Shift + Spacebar` to select row 10.
5. Use `Ctrl` + Click to select rows 3, 7, and 11.

Reflection: Which method felt most intuitive?

How Do I Resize Rows and Columns?

Drag Method

- Hover over the edge of a row number or column letter.
- Click and drag to resize.

AutoFit Method

- **Double-click** the edge of the row number or column letter to auto-resize based on content.

Ribbon Method

- Home → Cells Group → Format → Row Height / Column Width.

🧪 **Hands-On Exercise: Resizing Practice**
Objective: Resize rows and columns using different methods.

1. Create a new workbook by typing `Ctrl + N`.
2. Type "Long Text Example" in cell A1.
3. Resize column A manually to fit the text.
4. Significantly increase the width of column B.
5. Use AutoFit to resize column B.
6. Use the Ribbon to set the height of row 1 to 30.

Reflection: How does resizing affect readability?

▧ How Do I Hide and Unhide Rows and Columns?

Hide

- **Right-Click Method**: Right-click the row or column → Hide.
- **Drag Method**: Drag the edge up (for rows) or left (for columns) until it disappears.
- **Ribbon Method**: Home → Format → Hide & Unhide.

Unhide

- **Right-Click Method**: Select adjacent rows/columns → Right-click → Unhide.
- **Ribbon Method**: Home → Format → Hide & Unhide → Unhide Rows/Columns.

🧪 **Hands-On Exercise: Hide and Unhide**
Objective: Practice hiding and unhiding rows and columns.

1. Hide column B using the right-click method.
2. Hide row 3 using the Ribbon.
3. Unhide both using adjacent selections.

Reflection: When might hiding data be useful?

❓ How Do I Insert and Delete Rows and Columns?

Insert

- **Right-Click Method**: Select one or more rows/columns then Right-click → Insert.
- **Keyboard Method**: Select one or more rows/columns then press `Ctrl + Shift + +`.
- **Ribbon Method**: Select one or more rows/columns then Home → Insert → Insert Sheet Rows/Columns.

Delete

- **Right-Click Method**: Select one or more rows/columns then Right-click → Delete.
- **Keyboard Method**: Select one or more rows/columns then press `Ctrl + -`.
- **Ribbon Method**: Select one or more rows/columns then Home → Delete → Delete Sheet Rows/Columns.

🧪 Hands-On Exercise: Insert and Delete

Objective: Add and remove rows and columns.

1. Insert a row at row 5 using the Ribbon.
2. Insert a column between columns C and D using the keyboard.
3. Delete row 2 using right-click.
4. Delete column A using the Ribbon.

❓ How Do I Move Rows and Columns?

Cut and Paste

- Select the row/column → `Ctrl + X` → Select destination → `Enter`.

Cut and Insert

- Select → Right-click → Cut → Right-click destination → Insert Cut Cells.

Drag and Drop

- Hover over the edge → Click and drag to new location.

🧪 Hands-On Exercise: Rearranging Data

Objective: Move rows and columns to reorganize a worksheet.

1. Cut row 4 and paste it above row 2.
2. Drag column D to the left of column B.
3. Use "Insert Cut Cells" to move column E between columns A and B.

💡 **TechMentor Tip**
When moving rows or columns, double-check formulas—they may reference cells that shift during the move.

Perfect, Tom—Chapter 4 is where the magic of Excel really begins. Let's introduce your learners to **formulas and functions**, the heart of spreadsheet logic. This module will demystify operators, guide them through building formulas, and give them hands-on practice with essential functions.

Creating Simple Formulas

In this chapter, you will discover where the magic of Excel really begins. You will learn how to create formulas, use operators, and apply built-in functions like SUM and AVERAGE. These skills unlock Excel's power to calculate, analyze, and automate.

What Is a Formula?

A **formula** is a calculation written directly into a cell. It starts with an equal sign (=) and can include numbers, cell references, operators, and functions. The answers it produces will automatically change when the underlying data changes.

What Is an Operator?

Operators tell Excel what kind of calculation to perform:

Symbol	Meaning	Description	Example
+	Addition	Adds values together.	=A1+B1
-	Subtraction	Subtracts the second value from the first.	=A1-B1
*	Multiplication	Multiplies numbers.	=A1*B1
/	Division	Divides the first number by the second.	=A1/B1
^	Exponent	Raises a number to a power.	=A1^2
%	Percent (%)	Converts a number into its percentage form in a calculation.	=A1*20%
( )	Parenthesis	Groups parts of a calculation and controls order of operations.	=(A1+B1)*C1
&	Concatenate	Combines multiple text values	=A1&" "&B1

How do I create a formula?

#	Step	Example
1	Determine, in English, what you want the formula to do.	I want to add 10% to the price in cell A2.
2	Translate the English into Excel's Formula language. Begin the formula with an equal sign.	=A2*110%
3.	Enter the formula.	Click in cell B2and type `=A2*110%`
4.	Finish the formula by typing `Enter` (moves the cursor down), or `Tab` (moves the cursor to the right) or `Ctrl + Enter` (keeps the cursor in place).	Press `Ctrl Enter`.
5.	Verify the result is what you expect, and fine-tune if needed.	Look at the values in B2 and verify that it is what you expect.

As demonstrated in step 2 above, simple Excel formulas use the following sequence:

1. **Start with an equal sign:** Every formula begins with = so Excel knows it's a calculation, not plain text.
2. **Enter a value or a cell reference:** You can type a number directly or click a cell to use its value.
3. **Add an operator:** Insert `+`, `-`, `*`, `/`, `&`, or another operator to indicate the calculation you want.
4. **Repeat for additional values, cell references, and operators:** Build the formula step-by-step until it produces the result you need. Press `Enter`, `Tab`, or `Ctrl + Enter` to complete.

Hands-On Exercise: Try Basic Formulas
Objective: Practice using operators in formulas.

1. In cell A1, type 10.
2. In cell B1, type 5.
3. In cell C1, type =A1 + B1.
4. Try other formulas:
   - =A1 – B1
   - =A1 * B1
   - =A1 / B1
   - =(A1 + B1) * 2

❓ What Is a Function?

Function Defined
A **function** is a predefined formula that performs a specific task. Functions start with a name (like SUM) followed by arguments in parentheses.

Parts of a Function
Each function has a **name**, a set of **parenthesis** ( ), and most have **arguments** inside the parentheses. The arguments are separated by commas.
Example: =AVERAGE(A1,C1,F1).

- **Function Name**: Tells Excel what to do (e.g., SUM)
- **Arguments**: The data to process, inside parentheses (e.g., A1:A5)

🔢 Sample Functions

Function	Purpose	Example
SUM	Adds values	=SUM(A1:A5)
AVERAGE	Finds the mean	=AVERAGE(B1:B5)
COUNT	Counts numeric entries	=COUNT(C1:C10)
MAX	Finds the highest value	=MAX(D1:D10)
MIN	Finds the lowest value	=MIN(E1:E10)
IF	Evaluates a condition, and returns one value if it is TRUE, and another value if it is FALSE.	= IF(D2>=18,"Adult","Minor")

🧪 Hands-On Exercise: Use Functions
Objective: Apply basic functions to a data set.

1. In cells A1 through A5, enter: 10, 20, 30, 40, 50.
2. In cell A6, type =SUM(A1:A5).
3. In cell A7, type =AVERAGE(A1:A5).
4. In cell A8, type =MAX(A1:A5).
5. In cell A9, type =MIN(A1:A5).

❔ What Tools Can Help Me Build Formulas?

Excel offers tools to insert and check formulas without memorizing everything.

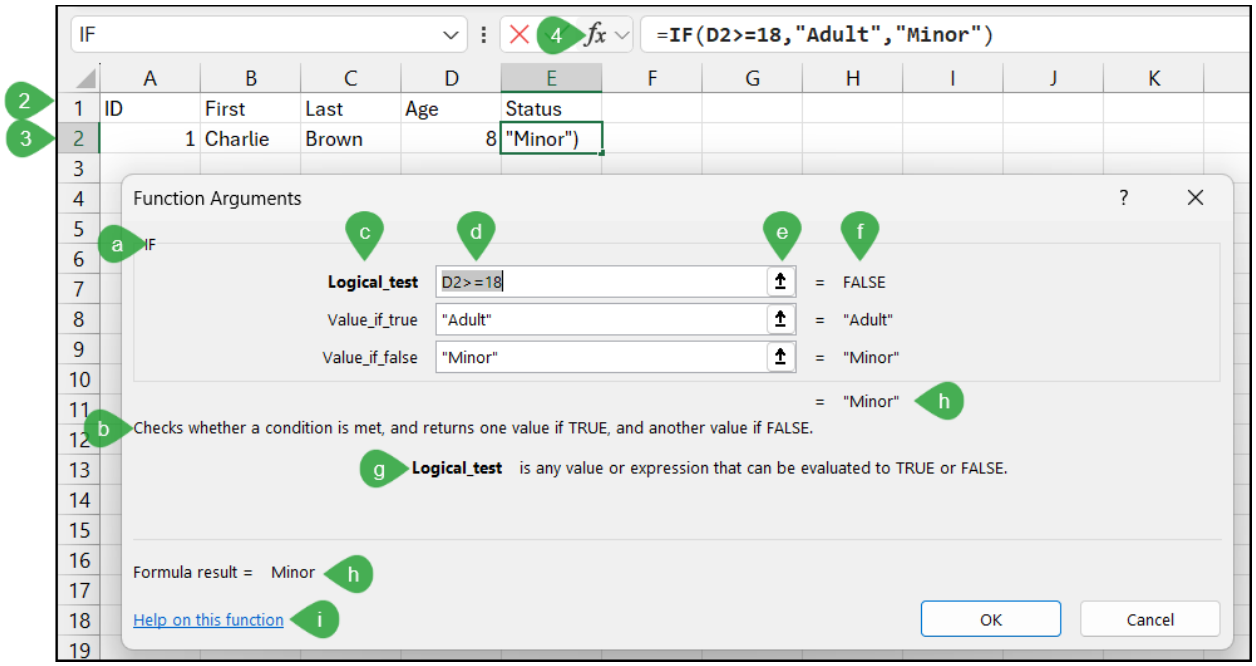
Insert Function

The Insert Function feature helps you find and use the function you need.

🧪 Hands-On Exercise: Use the Insert Function feature

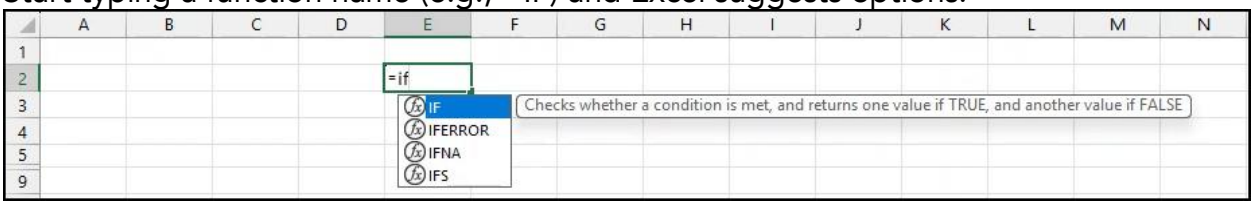
Objective: Apply basic functions to a data set.

1. Begin a new workbook.
2. In cells A1 through E1 enter ID, First, Last, Age, Status.
3. In cells A2 through D2 enter 1, Charlie, Brown, 8.
4. In cell E1 click the **fx** icon on the formula bar.
5. In the **Search for a function** section enter the word IF and click Go.
6. Notice the following in the Function Arguments dialog box.
   a. The name of the function.
   b. A short description identifies what the function calculates.
   c. A list of arguments for the function.
   d. Argument wells where you can enter values for the arguments.
   e. Buttons to aid you in selecting a range of cells for the argument.
   f. Text that shows the value of the argument.
   g. A short description of the current argument.
   h. The computed result of the function.
   i. A hyperlink that opens a web page for the function.
7. For the **Logical_test** argument enter **D2 >= 18**.
8. For the **Value_if_true** argument enter **"Adult"**.
9. For the **Value_if_false** argument enter **"Minor"**.
10. Click OK and verify that Minor appears in cell E1.



AutoComplete

Start typing a function name (e.g., =IF) and Excel suggests options.

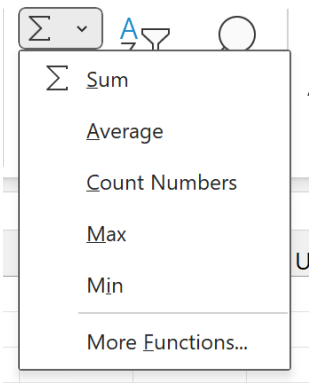


AutoSUM Button

The AutoSUM button automatically inserts a SUM formula for adjacent numbers.
The AutoSUM button is found on the Home tab → Editing group.

AutoSUM List

Click the dropdown next to AutoSUM button to access additional functions.



AutoCalculate
Select a range of numbers and look at the **Status Bar** for quick totals.

🧪 Hands-On Exercise: Explore Formula Tools
Objective: Use Excel's built-in formula helpers.

1. Enter a range of a few numbers.
2. Select those numbers.
3. Look at the Status Bar to see the sum and average.
4. Use the AutoSUM button to total a column.

❓ How Do I Modify a Formula?

Formula Bar
The formula bar lets you see and edit the full formula, which is especially useful for complex ones. If needed, change the heigh of the formula bar by positioning the cursor at its bottom and then dragging up or down as needed.

F2 and Arrow Keys
Press `F2` to enter edit mode for the active cell. You can now you to use the arrow keys to position the cursor within the formula so you can adjust its references without using the mouse.

Range Borders
Click and drag the colored borders to adjust cell references.

Error Checking
Excel flags errors with a small triangle or pop-up. Hover for details. Or use the Formulas > Error Checking to diagnose problems.

Copilot's "Explain This Formula"
Microsoft Copilot in Excel provides a plain-language breakdown of what a formula does, making it easier to learn or debug. You can read more on How-To-Geek.com's webpage: https://www.howtogeek.com/excel-has-a-new-way-of-explaining-formulas-to-you/.

💡 TechMentor Tip
Use parentheses to control the order of operations—just like in math class. Excel follows PEMDAS (Parenthesis, Exponents, Multiply, Divide, Add, Subtract).

Moving and Copying Data

In this chapter, you will practice duplicating and relocating data using keyboard shortcuts, mouse techniques, and Excel's built-in tools. You will also explore relative vs. absolute references and learn how to use Paste Special and the Clipboard Pane.

How Do I Duplicate Data in Excel?

Keyboard Shortcuts

- `Ctrl + D` Duplicates the cell above.
- `Ctrl + C` Copies selected cells.
- `Ctrl + '` Replicates the cell above (copies formula or value).

Ribbon

- Select the range of cells you want to copy.
- Click the **Copy** button on the Home tab.
- Select the top left corner of your destination.
- Press `ENTER`.

Right-Click

- Select the range of cells you want to copy.
- Right-click → Copy.
- Select the top left corner of your destination.
- Press `ENTER`.

Drag and Drop

- Select the range of cells you want to copy.
- Position the cursor on the border of the selected range.
- While holding the `Ctrl` key drag the border to a new location.

AutoFill

- Drag the fill handle (bottom right corner of the selected cell(s)) to copy values or extend a pattern.

Hands-On Exercise: Duplicate Data

Objective: Practice duplicating data using various methods.

1. Type "Sales" in cell A1 and "100" in A2.
2. Use `Ctrl + D` in A3 to duplicate A2.
3. Use `Ctrl + C` to copy A1 and A2 and paste it in C1.
4. Use `Ctrl + '` in C3 to replicate C2.

5. Enter “Monday” in cell C1.
6. Use the AutoFill to extend “Monday” across cells D1 to G1.
   Reflection: Which method felt fastest?

❔ How Do I Move Data in Excel?

Keyboard Shortcut

- Select the range of cells you want to move.
- Press `Ctrl + X` to cut the selected range.
- Select the top left corner of your destination.
- Press `ENTER`.

Ribbon

- Select the range of cells you want to move.
- Click the **Cut** button on the Home tab to cut the selected range.
- Select the top left corner of your destination.
- Press `ENTER`.

Right-Click

- Select the range of cells you want to move.
- Right-click → Cut
- Select the top left corner of your destination.
- Press `ENTER`.

Drag and Drop

- Select the range of cells you want to copy.
- Position the cursor on the border of the selected range.
- Drag the border to a new location.

🧪 Hands-On Exercise: Move Data

Objective: Practice relocating data.

1. Add a new sheet to your workbook.
2. Type “Expenses” in cell A1 and “200” in A2.
3. Cut and paste both into column C.
4. Drag cell C2 to D2.

What are Relative, Absolute and Mixed References?

When a formula is copied from one cell to another, the formula's cell addresses may be adjusted **relative** to the new vs. original location. You can force the copy to be **absolute** (stay the same) by adding a $ in front of both the column letter and the row number. Or you can force the formula to have a mixed result by placing a $ in front of part of the address (either the column letter or the row number, but not both). The details are explained below.

Relative Reference

A relative reference is created when you do not place a $ in front of both the row number and the column letter.

	A	B	C
1	10		
2		=A1	=B1
3		=A2	=B2

Based on the destination cell, both the row number and the column letter can change.

In this example, when B2 is copied down to B3, the "1" becomes a "2". When B2 is copied across to C3, the column letter changes to a "B". When B2 is copied to C3, both the column letter and row number are changed.

Absolute Reference

An absolute reference is created when you use a $ in front of both the column letter and row number

	A	B	C
1	10		
2		=$A$1	=$A$1
3		=$A$1	=$A$1

No matter where the destination cell is, the row number and the column letter will not change.

In this example, when B2 is copied down to B3, or across to C2, or to some other location like C3, the "A" stays an "A" and the "1" stays a "1" because the proceeding $ makes those references absolute.

Mixed with Relative Row, Absolute Column

Use a $ in front of the column letter but not the row number.

	A	B	C
1	10		
2		=$A1	=$A1
3		=$A2	=$A2

Based on the destination cell, the row number can change but the column letter will not change.

In this example, when B2 is copied down to B3, the "1" becomes a "2". But when copied across C3, the column letter remains an "A" because the preceding $ makes it absolute.

Mixed with Absolute Row, Relative Column

Use a $ in front of the row number but not the column letter.

	A	B	C
1	10		
2		=A$1	=B$1
3		=A$1	=B$1

Based on the destination cell, the row number will not change but the column letter can change.

In this example, when B2 is copied down to B 3, the "1" remains a "1" because the $ in front of the row letter makes it absolute. When B2 is copied across to C2 the column letter changes to a "B".

Summary

Type	Example	Behavior
Relative	=A1	References may change when copied to a new location.
Absolute	=$A$1	References stay the same when copied to a new location.
Mixed	=A$1 =$A1	The part of the reference with a $ will stay the same, the part without a $ may change when copied to a new location.

Why It Matters

Relative references change based on position—great for repeating formulas. Absolute references stay locked—ideal for constants like tax rates.

💡 TechMentor Tip

When creating or editing a formula, you can use press **F4** to quickly toggle between relative, absolute, and mixed references.

🧪 Hands-On Exercise: Reference Types

Objective: Compare reference behaviors.

1. Add a new sheet to your workbook.
2. Fill in the worksheet as shown below.

	A	B	C
1		Rate	10%
2			
3	Name	Sales	Commission
4	Larry	100	
5	Curly	120	
6	Moe	95	
7	Total		

3. In cell B7 click the AutoSum button and press **ENTER**.
4. Notice this formula uses relative references.
5. In cell C4 enter the following relative reference formula:
   `=B4*C1`
6. Use the AutoFill feature to copy the formula from C4 to C5:C6.
7. Notice the errors.
8. Press **Ctrl + `**. This displays the formulas in each cell.
9. Notice how the relative references changed as the formula was copied down. B4 became B5 and B6 which is good. But C1 became C2 and C3, which is the cause of the error.
10. Press **Ctrl + `**. Each cell again displays its value instead of its formula.
11. Press **Ctrl + Z** to undo the copy.
12. Select cell C4 and press **F2** to so you can edit the formula.
13. Press the **F4** key to change the C1 reference to $C$1, then press **ENTER**.
    As shown below the first part of the formula `B4` is still relative, but the second part, `$C$1` is an absolute reference.
    `=B4*$C$1`
14. Again, use the AutoFill feature to copy the formula from C4 to C5:C6.
15. Notice no errors.
16. Toggle the display of formulas again by pressing **Ctrl + `**.
17. Notice that the $C$1 reference did not change.
18. Toggle the display of formulas again by pressing **Ctrl + `**.

Reflection: When might you use an absolute reference?
When might you use a mixed reference?

❓ What is the difference between Duplicate, Replicate, Cut and Copy?

Duplicate

When you duplicate a cell using `Ctrl + D` Excel copies the formula from the cell above. If the formula uses relative references, those references are modified relative to the location of the focus cell.

Replicate

When you replicate a cell using `Ctrl + '` again Excel copies the formula from the cell above. If the formula uses relative references, those references are NOT modified. In other words, replicate gives you an exact copy of the cell above.

Copy

When you copy a cell using `Ctrl + C`, Excel copies the formula to the clipboard. You then need to move to the desired destination cell and press `ENTER` to finish the copy. If the formula uses relative references, those references are modified relative to the location of the destination cell.

Cut

When you cut a cell using `Ctrl + X`, Excel copies the formula to the clipboard and removes it from the focus cell. You then need to move to the desired destination cell and press `ENTER` where it will be pasted. If the formula uses relative references, those references are NOT modified relative to the location of the destination cell.

Summary

Action	Shortcut	Description	Adjust Relative References
Duplicate	`Ctrl + D`	Copies value / formula from cell above	Yes
Replicate	`Ctrl + '`	Copies value / formula from cell above	No
Copy	`Ctrl + C`	Copies values / formula of the selected cells	Yes
Cut	`Ctrl + X`	Moves selected cells	No

🧪 Hands-On Exercise: Compare Actions

Objective: Try each method and observe results.

1. Use `Ctrl + D` to duplicate a value.
2. Use `Ctrl + '` to replicate a formula.
3. Use `Ctrl + C` and `ENTER` to copy and paste.
4. Use `Ctrl + X` and `ENTER` to cut and paste.

❔ What Does Paste Special Do?

Paste Special offers advanced options including:

- **Values**: Paste only the result, not the formula.
- **Formats**: Paste only formatting.
- **Formulas**: Paste formulas without formatting.
- **Transpose**: Flip rows to columns and vice versa.

Accessing Paste Special

- **Ribbon**: Home → Paste → Paste Special.
- **Right-Click**: After copying → Right-click → Paste Special.
- **Keyboard**: After copying → `Ctrl + Alt + V`.

💉 Hands-On Exercise: Paste Special

Objective: Use Paste Special to control what gets pasted.

1. Copy the commissions in cells C4:C6.
2. Paste into `F5` using Paste Special → Values.
3. Copy the Sales data (cells A3:C7) and paste into A11 using Paste Special → Transpose.

Reflection: When is Paste Special most useful?

❔ What Is the Clipboard Pane?

The clipboard pane is a pane that can appear on the left side of the worksheet. It shows a list of items that have been copied.

Viewing the Clipboard Pane

- On the Home tab, click the small arrow in the Clipboard group.

Pasting from the Clipboard

- Click any item in the pane to paste it.

Clearing the Clipboard

- Click **Clear All** in the Clipboard pane.

💉 Hands-On Exercise: Clipboard Pane

Objective: Use the Clipboard to manage multiple items.

1. Open the Clipboard pane.
2. Copy three different cells, one at a time.
3. Paste each item into a new location.
4. Clear the Clipboard.

Reflection: How does the Clipboard help with multitasking?

💡 **TechMentor Tip**
Use Paste Special → Values when sharing spreadsheets—this prevents accidental formula errors when others open your file.

Printing Worksheets

In this chapter, you will learn how to preview and print worksheets, adjust page layout settings, and use advanced print options like scaling, page breaks, and headers/footers. These skills ensure that printed spreadsheets look clean, professional, and intentional.

How Can I Preview a Printout?

- Go to **File** → **Print** or press `Ctrl + P`.
- The **Print Preview** pane shows how the worksheet will appear on paper.
- Optional: Scroll through pages using the arrows.

Hands-On Exercise: Print Preview

Objective: Explore the print preview screen.

1. Open a worksheet with sample data.
2. Go to **File** → **Print** or press `Ctrl + P` to open Print Preview.
3. Scroll through the preview.
4. Note any layout issues or cut-off content.

What Are Workbook Views?

Another way to preview the print out is by changing the workbook view.

- Go to View and select one of the following Workbook Views

View	Description
Normal	Default editing view
Page Break Preview	Shows page breaks visually
Page Layout	Shows an editable preview with headers and footers.

TechMentor Tip

Toward the right of the status bar are three icons that correspond to the three workbook views.

Hands-On Exercise: View Modes

Objective: Explore different workbook views.

1. Switch to Page Layout view.
2. Switch to Page Break Preview.
3. Return to Normal view.

Reflection: Which view helps most with printing?

How Can I Actually Print a Worksheet?

- Go to **File** → **Print** or press `Ctrl + P` to open Print Preview.
- Choose a printer from the dropdown.
- Click **Print** to send the job.

Hands-On Exercise: Print a Sample

Objective: Practice printing a worksheet.

1. Open a worksheet.
2. Go to **File** → **Print**.
3. Choose the **Microsoft Print to PDF** printer.
4. Click **Print**.
5. Choose a folder, enter a file name, and click **Save**.
6. Open the PDF and verify it is what you expected.

What Options Does the Print Preview Screen Provide?

Option	Description
Copies	Number of copies to print
Printer	Select from available printers
Page Range	Choose specific pages
Sides	Print one-sided or double-sided
Collated	Keeps multi-page sets together
Orientation	Portrait or Landscape
Margins	Adjust space around content
Scaling	Fit content to page

Hands-On Exercise: Print Settings

Objective: Customize print settings.

1. Change orientation to Landscape.
2. Set margins to Narrow.
3. Scale to fit all columns on one page.
4. View the preview and assess layout.

How do I use the Page Setup Options?

The ribbon has a Page Layout that includes many options including the following:

Change Margins

- Page Layout → Margins dropdown → Choose a preset or Custom Margins.

Center Output
- Page Layout → Margins dropdown → Choose Margins.
- In Custom Margins, check **Horizontally** and/or **Vertically**.
- Click **Print Preview** to inspect the results.

Change Orientation
- Page Layout → Orientation dropdown.
  - Choose **portrait** for regular paper: 8 ½" width and 11" height.
  - Choose **landscape** for sideways paper: 11"width and 8 ½" height.

Set Paper Size
- Page Layout → Size dropdown → Choose a paper size.

Set Print Area
- Select the range you want to print.
- Page Layout → Print Area → Set Print Area.

Clear Print Area
- Page Layout → Print Area → Clear Print Area.

🧪 Hands-On Exercise: Print Area
Objective: Control what gets printed.

1. Select some, but not all the data in your worksheet.
2. Set it as the print area.
3. Preview the printout.
4. Clear the print area and preview again.

Reflection: When would you want to isolate a print area?

❓ How Do I Set and Remove Page Breaks?

Set Page Breaks
- Select the row or column where you need a page break.
- Page Layout → Breaks → Insert Page Break.

Use Page Break Preview
- View → Page Break Preview
- Drag the page breaks (blue lines) to the desired location.

Remove Page Breaks
- Page Layout → Breaks → Remove Page Break.

Reset All
- Page Layout → Breaks → Reset All Page Breaks.

🧪 Hands-On Exercise: Page Breaks

Objective: Control where pages split.

1. Insert a page break after row 20.
2. Preview the result.
3. Remove the break and reset all.

How Can I Set Print Titles?

A print title is one or more repeated rows at the top of each page, or one or more repeated columns at the left of each page.

Set Print Titles

- Page Layout → Print Titles
- Click in the **Rows to repeat at top** well or the **Columns to repeat at left** well.
- Use the mouse to select the desired rows / columns.
- Click Print Preview and scroll through the pages to verify the print tiles work.

🧪 Hands-On Exercise: Print Titles

Objective: Keep headers visible across pages.

1. Open a worksheet with column headers.
2. Set row 1 as the row to repeat at top.
3. Preview multiple pages.

What Is Scale to Fit?

Fit to Width: Shrinks content to fit page width

- Page Layout → Width drop down → Select the desired number of pages wide.
- Go to **File** → **Print** or press `Ctrl + P` to verify in Print Preview.

Fit to Height: Shrinks content to fit page height

- Page Layout → Height drop down → Select the desired number of pages tall.
- Go to **File** → **Print** or press `Ctrl + P` to verify in Print Preview.

Page Scale: Manually scale the print out

- Page Layout → Scale → Set desired percentage.
- Go to **File** → **Print** or press `Ctrl + P` to verify in Print Preview.

🧪 Hands-On Exercise: Scaling

Objective: Fit content neatly on one page.

1. Use Fit to Width to fit all columns on one page.

2. Preview the results.
3. Exit preview.
4. Adjust page scale to 80%.
5. Preview the results again.
6. Exit preview
7. Fine tune as desired.

❓ How Can I Add a Page Header/Footer?

Page Setup Method

- On the Page Setup tab, click the small arrow in the Page Setup group.
- Click the Header/Footer tab.
- Click Custom Header… or Custom Footer…
- Enter desired text in the Left, Center and/or Right sections.
- Optional: Highlight your text and use the A button to change the font.
- Optional: Use the other buttons to insert page numbers, dates, time, file path, file name, sheet name and more.

Page Layout Method

- Switch to Page Layout view → Click in the left, center or right sections of the header or footer.
- Type your text.

🧪 Hands-On Exercise: Headers and Footers

Objective: Add identifying info to printed pages.

1. Add your name to the header.
2. Add page numbers to the footer.
3. Preview the result.
   Reflection: What info belongs in a header vs. footer?

📄 How Can I Print / Not Print Gridlines?

- Page Layout → Sheet Options → Gridlines → Check/Uncheck **Print**.

💡 TechMentor Tip

Use Print Titles and Scaling together to create clean, readable reports—especially when printing large tables.

Formatting Numbers and Dates

In this chapter, you will explore how to format numbers, currency, percentages, and dates in Excel. You will learn how to use built-in formats, apply formatting icons, and create custom number formats for specialized needs.

What Is the Number Format Drop-Down?

Located on the **Home tab**, the Number Format drop-down lets you quickly change how values appear.

Common Formats

Format	Description	Example
General	Default format, no specific styling	1234.567
Number	Adds commas and decimals	1,234.57
Currency	Adds currency symbol	$1,234.57
Accounting	Aligns currency symbols	$ 1,234.57
Short Date	Compact date format	8/18/2025
Long Date	Full date format	Monday, August 18, 2025
Time	Time format	4:30 PM
Percentage	Multiplies by 100 and adds %	85%
Fraction	Displays as a fraction	1/2
Scientific	Scientific notation	1.23E+03
Text	Treats value as text	1234

Hands-On Exercise: Apply Number Formats

Objective: Format values for clarity and context.

1. Add a new sheet.
2. Enter 1234.567 in cell A1.
3. Apply the following formats:
    - Number
    - Currency
    - Accounting
    - Percentage
    - Short Date
4. Observe how the value changes.

Reflection: Which format best suits financial data?

🧮 What Are the Number Format Icons?

The following icons are in the **Number group** on the Home tab:

- **Accounting ($)**: Applies accounting format.
- **Percentage (%)**: Converts to percent.
- **Comma (,)**: Adds thousand separators.
- **Increase Decimal**: Adds decimal places.
- **Decrease Decimal**: Removes decimal places.

🧪 Hands-On Exercise: Format Icons

Objective: Use icons to refine number appearance.

1. Enter 1234.5 in cell B1.
2. Apply Accounting format.
3. Use Increase Decimal twice.
4. Use Comma format.

🧰 How Does the Number Format Dialog Box Work?

The Format Cells dialog box's Number tab provides additional options for formatting numbers.

1. Launch the Format Cells dialog.
   - Click the small arrow in the Number group or press `Ctrl + 1`.
2. Choose one of the categories.
3. Based on your category, select the desired options.
4. Click **OK**.

🧪 Hands-On Exercise: Explore Format Dialog

Objective: Customize number formatting.

1. Select a cell with a number.
2. Press `Ctrl + 1`.
3. Explore each category.
4. Apply a custom format.

Formatting Fonts and Alignment

In this chapter, you will explore how to change font styles, adjust alignment, rotate and wrap text, and merge cells. These formatting tools help make spreadsheets easier to read and more visually appealing.

How Can I Change the Font Type?

- Use the **Font drop-down** on the Home tab.
- Choose from standard fonts like Arial, Calibri, or Times New Roman.
- Fonts affect readability and tone—use clean, professional styles.

How Can I Change the Font Size?

Font Size Drop-Down

- Select a cell → Use the drop-down to choose a size.

Increase/Decrease Buttons

- Click the **Increase Font Size** or **Decrease Font Size** buttons to adjust incrementally.

Hands-On Exercise: Font Styling

Objective: Customize font type and size.

1. Start a new workbook.
2. Type "Monthly Report" in cell A1.
3. Change the font to Arial.
4. Increase the font size to 16.
5. Try a different font like Verdana.

How Can I Make the Font Bold, Italic, or Underlined?

Keyboard Shortcuts

- **Ctrl + B**: Bold
- **Ctrl + I**: Italic
- **Ctrl + U**: Underline

Ribbon Buttons

- Use the **Bold**, **Italic**, and **Underline** buttons on the Home tab.
- Click the **Underline drop-down** for double underline.

🧪 Hands-On Exercise: Emphasis Formatting

Objective: Apply emphasis to text.

1. Type “Total Revenue” in cell B1.
2. Make it bold and italic.
3. Add a double underline.

🎨 How Can I Change Font Color and Background Color?

Fill Color Button

- Use the **Fill Color** drop-down to change cell background.

Font Color Button

- Use the **Font Color** drop-down to change text color.

Color Options

- **Theme Colors**: Match workbook theme.
- **Standard Colors**: Basic palette.
- **More Colors**: Custom RGB or HSL values.

🧪 Hands-On Exercise: Color Formatting

Objective: Add visual contrast.

1. Type “Expenses” in cell C1.
2. Change font color to dark red.
3. Change background to light gray.

💼 How can I use Format Cells Dialog Box: Font & Fill Tabs

Font Tab

- Adjust font, style, size, underline, color, and effects.

Fill Tab

- Choose background color, pattern color, and style.
- Use **Fill Effects** for gradients.

🧪 Hands-On Exercise: Format Cells Dialog

Objective: Explore advanced font and fill options.

1. Select a cell → Press `Ctrl + 1`.
2. Use the Font tab to apply bold, blue text.
3. Use the Fill tab to apply a gradient background.

📐 How Can I Align Text?

Horizontal Alignment

- Left, Center, Right
- Found in the Alignment group on the Home tab.

Vertical Alignment

- Top, Middle, Bottom
- Also in the Alignment group.

🧪 Hands-On Exercise: Text Alignment

Objective: Align text for clarity.

1. Type "Quarter 1" in cell D1.
2. Center horizontally and vertically.
3. Try left and bottom alignment.

🔄 How Can I Rotate Text?

Orientation Button

- Found in the Alignment group.
- Options:
  - Angle Clockwise
  - Angle Counterclockwise
  - Vertical Text
  - Rotate Up / Down
  - Reset Orientation

🧪 Hands-On Exercise: Text Rotation

Objective: Rotate text for layout efficiency.

1. Type "Region" in cell E1.
2. Rotate text vertically.
3. Try Angle Clockwise.

↔️ How Can I Change Text Indentation?

- Use the **Increase Indent** and **Decrease Indent** buttons.
- Helps structure hierarchical data.

Hands-On Exercise: Indentation

Objective: Organize text visually.

1. Type "North Region" in cell F1.
2. Increase indent twice.

How Can I Wrap Text?

- Select the cell → Click **Wrap Text** in the Alignment group.
- Makes long text fit within cell width by breaking it into lines.

Hands-On Exercise: Wrapping Text

Objective: Fit long text into a cell.

1. Type "This is a long description of quarterly performance" in cell G1.
2. Apply Wrap Text.

How Can I Merge Cells?

Option	Description
Merge & Center	Combines cells and centers content
Merge Across	Merges cells across columns. If cells in multiple rows are selected, then multiple merges occur, one per row.
Merge	Merges cells without centering
Unmerge Cells	Splits merged cells back to original cells

Hands-On Exercise: Merging Cells

Objective: Create a centered title.

1. Type "Annual Summary" in cell A1.
2. Select A1 through D1.
3. Click **Merge & Center**.

How can I use the Format Cells Dialog Box: Alignment Tab

- Launch the Format Cells dialog box `Ctrl + 1`.
- Choose from the following options.

Option	Description
Horizontal alignment	Choose an option from the drop-down menu.
Vertical alignment	Choose an option from the drop down menu
Indent	Enter a number for the desired indentation.
Wrap text	When checked text can wrap.
Shrink to fit	When checked, large amounts of text fit in the width of the cell.
Merge cells	When checked, the selected cells are merged.
Text direction	Choose an option from the drop-down menu.
Orientation	Click on an orientation, change the angle with the mouse, or set the angle with the degrees control.

How Can I Use the Format Painter?

The format painter allows you to quickly "paint" the format of a cell(s) to other cells.

- Select a formatted cell
- Click **Home → Format Painter**
- Click target cell.

TechMentor Tip

If you double click the Format Painter button, then you can continually paint the format on to multiple distinct cells. When done, press the `ESC` key to get out of the format painter mode.

Hands-On Exercise: Format Painter

Objective: Copy formatting efficiently.

1. Format cell A1 with bold, blue text and yellow fill.
2. Use Format Painter to apply the same style to A2 and A3.

How Can I Use the Clear Button?

The Clear button drop-down on the Home tab includes the following options.

Option	Description
Clear All	Removes everything from the selected cells.
Clear Formats	Removes only the formatting of the selected cells.
Clear Contents	Removes the data but keeps the formatting.
Clear Comments/Notes	Removes annotations.
Clear Hyperlinks	Removes hyper-links but keeps the text.

💡 **TechMentor Tip**
Use Wrap Text and Merge & Center together to create clean, readable headers that stand out without cluttering your layout.

Using Borders

In this chapter, you will learn how to add, customize, and remove cell borders in Excel. Borders help define sections, highlight key data, and improve overall readability—especially when printing or sharing spreadsheets.

How Are Cell Borders Different from Gridlines?

Gridlines
The light gray lines visible around every cell on the worksheet. You can turn all of them on or off, but you cannot turn them off for individual cells. By default, they are not printed.

Cell Borders
Custom lines that you can put around individual cells and/or groups of cells. You can adjust their color, line style, thickness, and location (top, bottom, left, right, etc.)

How Can I Use the Borders Button?

Located in the **Font group** on the Home tab:

- Click the **Borders drop-down** to choose from multiple options including:
  - Bottom Border
  - Top Border
  - Left Border
  - Right Border
  - All Borders
  - Outside Borders
  - Thick Box Border
  - Draw Border / Erase Border

Hands-On Exercise: Apply Borders
Objective: Use the Borders button to format a table.

1. Add a new worksheet.
2. Select cells B2:D5.
3. Apply **All Borders** to the range.
4. Apply a **Thick Box Border** around the entire table.
5. Add a **Bottom Border** to the header row (B2:B5).

How Can I Use the Format Cells Dialog Box's Border Tab?

Launching the Dialog

- Select a cell or range → Press Ctrl + 1 → Go to **Border tab**.

Options

- Choose **Line Style** (solid, dashed, double).
- Choose **Color** for borders.
- Click edges of the preview box to apply borders to specific sides.

🧪 **Hands-On Exercise: Custom Borders**
Objective: Apply styled borders using the dialog box.

1. Select a table range.
2. Press Ctrl + 1 → Border tab.
3. Choose a dashed line style and blue color.
4. Apply to top and bottom edges only.
   Reflection: How do styled borders affect visual hierarchy?

🧹 How Can I Remove Borders?

- Select the desired cell range.
- Use the **Borders drop-down** → Select **No Border**.
  Or use the Format Cells dialog → Border tab → Click to remove edges.

💡 **TechMentor Tip**
Use borders sparingly—too many lines can clutter your layout. Highlight key areas like headers, totals, or sections instead of outlining everything.

Using Styles

In this chapter, you will explore how to apply, create, edit, and merge cell styles in Excel. Styles help maintain consistency, save time, improve readability, and support branded formatting across worksheets and workbooks.

What Is a Style?

A **style** is a predefined set of formatting options—including font, size, color, borders, and number formats—that can be applied to cells with one click.

- Styles ensure consistency across headings, data, totals, and notes.
- They're especially useful in branded templates and instructional materials.

Common Built-In Styles

Style Name	Purpose
Heading 1	Major titles
Heading 2	Subheadings
Title	Document title
Total	Summary values
Input	User-entered data
Calculation	Formula cells
Note	Explanatory comments
Warning Text	Alerts or cautions

How Can I Apply a Style?

- Select the desired cell or cells.
- Go to **Home** → **Styles** → **Cell Styles**.
- Hover over each style to preview.
- Click the style you like to apply.

Hands-On Exercise: Apply a Style

Objective: Use built-in styles to format a worksheet.

1. Type "Total Sales" in cell A1 and "$1,250" in A2.
2. Select A1 → Apply the **Heading 1** style.
3. Select A2 → Apply the **Total** style.

How Can I Create a New Style?

1. Plan your style by answering the following:
   - What will you name your style?

- What will the style look like? In other words will the style include any of the following attribute, and if so what settings are they?
  - Number format
  - Alignment
  - Font
  - Borders
  - Fill
  - Protection

2. Select or create a cell that has the formats you desire.
3. Go to **Home** → **Cell Styles** → **New Cell Style**.
4. Enter the style name.
5. Check the style attributes you want included. Uncheck all others.
6. Click **Format…** and verify the format settings you want are included.
7. Click **OK** to close the Format Cells dialog box.
8. Click **OK** to close the Style dialog box.

How Can I Edit a Style?

1. Go to **Home** → **Cell Styles** → **Right-click a style** → **Modify**.
2. Update the formatting as needed.
3. Click **OK** to close the Format Cells dialog box.
4. Click **OK** to close the Style dialog box.
   Note: All cells using that style will update automatically.

Hands-On Exercise: Modify a Style

Objective: Refine an existing style.

1. Modify the "Total" style to use bold red text.
2. Apply it to a summary cell.
3. Change it again to use green fill.
   Reflection: How does style editing support consistency?

How Can I Merge Styles Between Workbooks?

1. Open both workbooks.
2. In the destination workbook, go to **Home** → **Cell Styles** → **Merge Styles**.
3. Select the source workbook and click **OK**.
4. Imported styles will appear in the Cell Styles gallery.

TechMentor Tip

Use styles to lock in your visual branding—especially when building reusable curriculum. It's the fastest way to ensure consistency across documents.

Excellent, Tom—Chapter 11 is a great way to round out the foundational skills. **Using Help** empowers learners to become self-sufficient explorers of Excel, tapping into built-in support, AI tools, and trusted resources. This module will show them how to find answers, troubleshoot issues, and keep learning beyond the course.

Using Help

In this chapter, you will discover how to access Excel's built-in help features, use search tools, and explore intelligent assistance like Microsoft Copilot. You will also learn where to find reliable online resources and how to ask for help from a TechMentor.

How Can I Get Help in Excel?

F1 Keystroke

- Press `F1` to open the Help pane.
- Search for topics, browse categories, or view suggested articles.

Search Option

- In the **Tell Me** or **Search** bar that is above the Ribbon, type what you want to do (e.g., "insert chart") and Excel will guide you.

Hands-On Exercise: Built-In Help

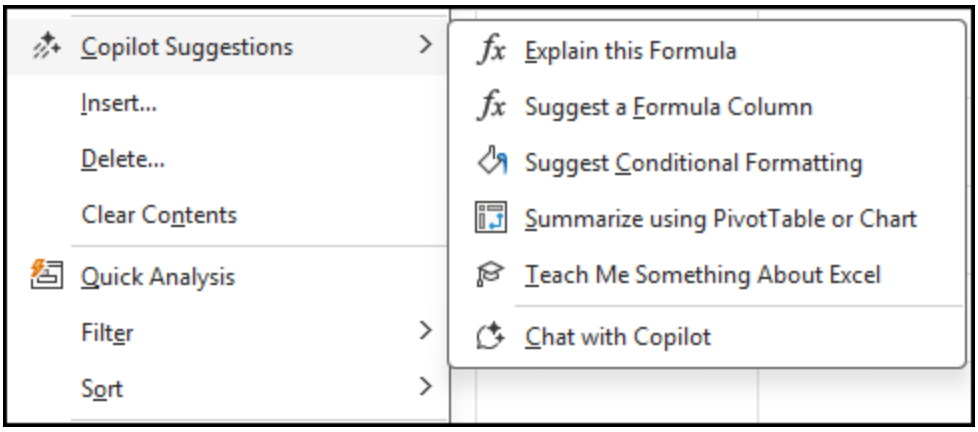
Objective: Use Excel's help tools to solve a problem.

1. Press `F1` and search for "Create a style"and then press `ENTER`.
2. Click in the Search bar and type "How do I add a blue thick border?" then click the Get Help option.

Artificial Intelligence in Excel

Microsoft Copilot

- Copilot is an AI assistant built into Excel.
- In Excel, it only works with files that have AutoSave turned on, which also requires the file be saved in a folder that syncs with Microsoft Onedrive.
- It can explain formulas, generate summaries, and suggest actions.
- Use it to ask questions like:
    - "Please tell me what formula I should use to calculate the commission for the sales people. Please use the commission rate that is in cell C1."
    - "Explain this formula"
    - "Create a chart from this data"
    - "Summarize this table"
- You can also right-click on a cell, choose Copilot suggestions, and then pick an option from the submenu.



Where Can I Learn More?

Resource	Web address	Description
Microsoft Support	https://support.microsoft.com/en-us/excel	Official Excel documentation
ExcelJet	https://exceljet.net/	Quick tips and keyboard shortcuts
Contextures	https://contexturesblog.com/	Blog with How To articles and videos
Ablebits	https://www.ablebits.com/	Add-ins and advanced Excel tools
TechMentors	https://theTechMentors.com	How to blog, training courses, and more

Ask a TechMentor

Sometimes the best help is a human one. Feel free to email your questions to info@theTechMentors. Or if you want to schedule a one-on-one consultation, go to https://thetechmentors.com/contact/.

💡 TechMentor Tip

Learning Excel is like learning a language—use the built-in help and AI tools as your phrasebook, but don't be afraid to ask a native speaker when you're stuck.