Excel Made Easy

A complete course, from the very beginning to the best tricks

10 lessons in plain words, with practice and quizzes

Practice workbook: excel-practice.xlsx
Website: excelcourse.pages.dev

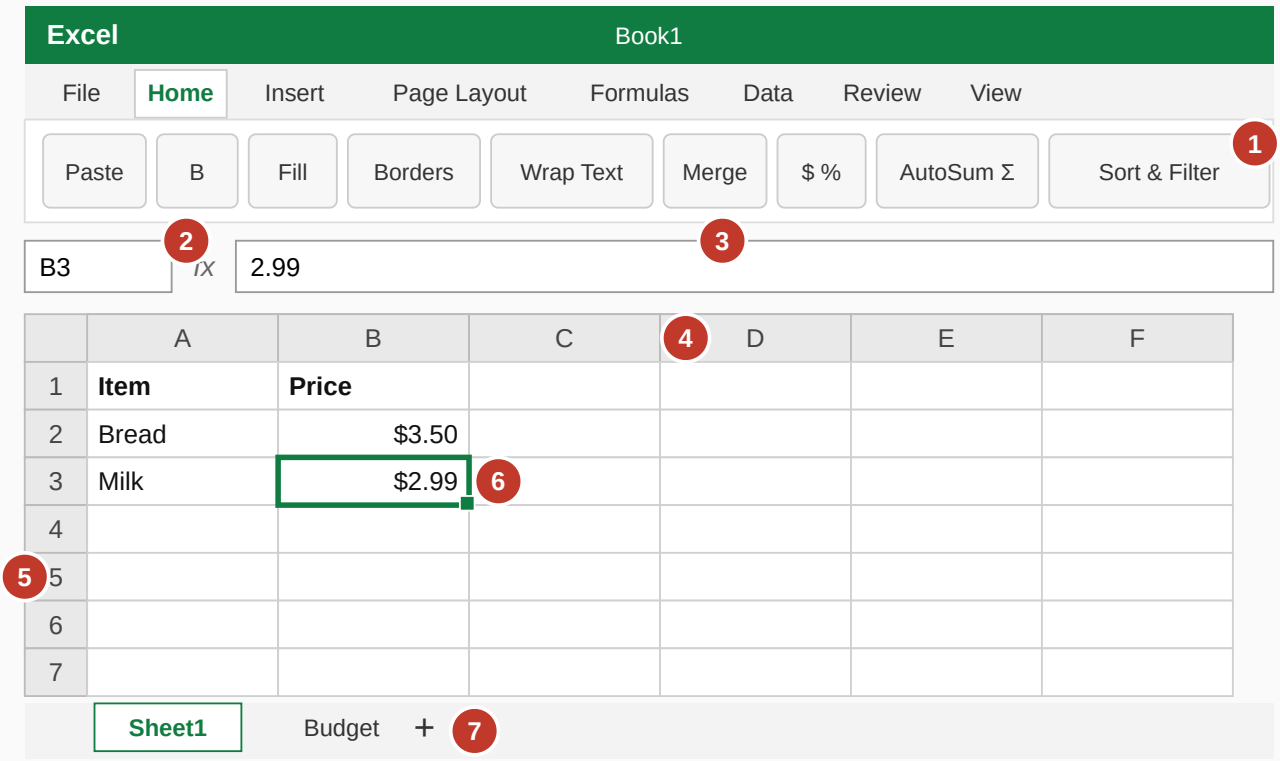
What is inside

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> **How to use it:** do one lesson at a time. Open the practice workbook in Excel and do the Try it part. Then answer the quiz. Windows Excel is shown, with short notes for Mac and for Excel on the web (free at office.com). Google Sheets works almost the same.

Lesson 1: Meet Excel

The screen, cells, sheets, and saving your work



1 Ribbon (tabs and buttons). 2 Name Box: the address of the cell you clicked. 3 Formula Bar: what is really inside the cell. 4 Column letters. 5 Row numbers. 6 The selected cell, B3. 7 Sheet tabs.

Excel is a program for lists and numbers. Think of it as a big sheet of graph paper that can do math for you. You can keep a shopping list, a budget, a customer list, or a price list in it. When you change a number, every total updates by itself.

The free ways to get Excel

- Excel on your computer. It comes with Microsoft 365. This course uses the Windows version.
- Excel on the web. It is free. Go to office.com, sign in with a free Microsoft account, and click Excel. It works in Chrome.
- Google Sheets. It is free at sheets.google.com. It works almost the same way. Most formulas in this course work there too.

The parts of the screen

Look at the picture in this lesson. These are the parts you will use every day.

- The Ribbon is the wide strip of buttons at the top. It has tabs: File, Home, Insert, Page Layout, Formulas, Data, Review, View. Click a tab to see its buttons. Home is the one you will use most.
- A cell is one little box. You type into cells.
- Columns go up and down. Each column has a letter at the top: A, B, C.
- Rows go side to side. Each row has a number on the left: 1, 2, 3.
- Every cell has an address. The cell in column B, row 3 is called B3. Letter first, then number.
- The Name Box is at the top left. It shows the address of the cell you clicked.
- The Formula Bar is the long white strip next to it. It shows what is really inside the cell.
- Sheet tabs are at the bottom. One file can hold many sheets, like pages in a notebook. The file is called a workbook.

Start a new workbook

1. Open Excel. Click the Start button on Windows, type Excel, and press Enter.
2. Click Blank workbook.
3. You now see an empty sheet called Sheet1.

Add, rename, and move sheets

1. To add a sheet, click the plus sign (+) next to the sheet tabs at the bottom.
2. To rename a sheet, double-click its tab, type a new name like Budget, and press Enter.
3. To move a sheet, click and hold its tab, then drag it left or right.
4. To delete a sheet, right-click its tab and click Delete.

Save your work

1. Click File at the top left.
2. Click Save As.
3. Click Browse (or This PC).
4. Pick a folder. Documents is a good place.
5. Type a name in the File name box, like My Budget.
6. Click Save.

After the first time, just press Ctrl+S to save again. Do it often.

Tip: Save As makes a copy with a new name. Use it when you want to keep the old version too.

Tip: Excel files end in .xlsx. To open one later, click File, then Open, then find the file. Or double-click the file in your Documents folder.

Tip: If your file is saved in OneDrive, a switch called AutoSave at the very top turns on. Then Excel saves by itself every few seconds.

Mac: On a Mac, press Cmd+S to save. Save As is under File in the menu at the top of the screen.

Web: Excel on the web saves by itself. There is no Save button. Files go to your free OneDrive. To get a copy on your computer, click File, then Save As, then Download a Copy.

Try it

Open the practice workbook. Click the sheet called 1 Start. Click cell B3 and look at the Name Box. Does it say B3? Now add a new sheet, rename it My Practice, and save the file as Excel Practice in your Documents folder.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. What is the address of the cell in column C, row 5?

Answer: C5. The letter comes first, then the number.

2. Where do you see what is really inside a cell?

Answer: In the Formula Bar, the long strip above the column letters.

3. What is the quick way to save?

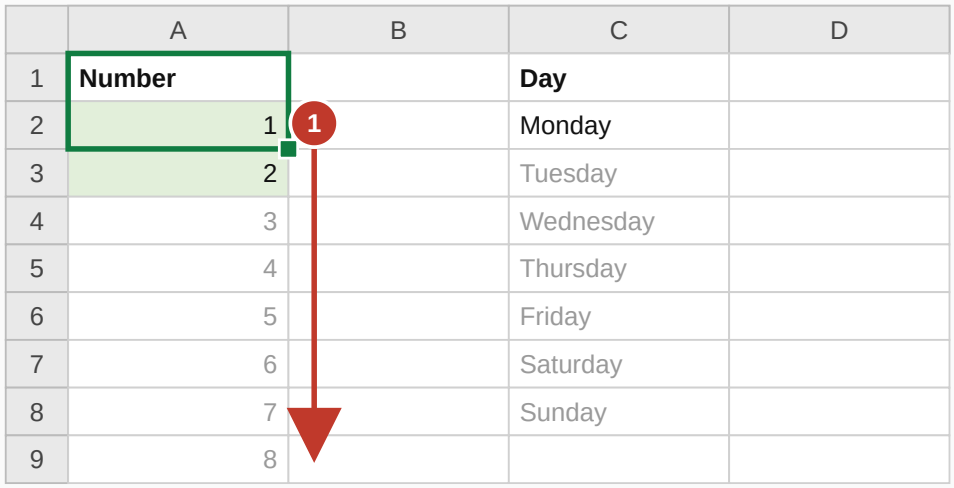
Answer: Press Ctrl+S (Cmd+S on a Mac).

4. Is there a free way to use Excel?

Answer: Yes. Excel on the web at office.com, or Google Sheets.

Lesson 2: Typing and Editing

Enter data, fix mistakes, copy, and let Excel fill in for you



Select 1 and 2, then drag the fill handle down. Excel counts on: 3, 4, 5... It does the same with days of the week.

Typing into a cell

1. Click a cell.
2. Type. For example, type Milk.
3. Press Enter to go down one cell. Press Tab to go right one cell.

Words line up on the left. Numbers line up on the right. That is how you can tell Excel sees a number.

Fixing a cell

- To replace everything in a cell, click it and just type the new thing. Press Enter.
- To fix only part of it, double-click the cell (or click it and press F2). A blinking line appears. Use the arrow keys, fix the mistake, and press Enter.
- To empty a cell, click it and press Delete.

- Made a mistake? Press Ctrl+Z to undo. Press it again to undo more. Ctrl+Y brings it back (redo).

> **Mac:** On a Mac, the edit key is Ctrl+U instead of F2. Undo is Cmd+Z and redo is Cmd+Y.

Copy, cut, and paste

1. Click the cell you want to copy. To pick many cells, click the first one, hold the mouse button, and drag.
2. Press Ctrl+C to copy. A moving dotted line appears around it.
3. Click where you want it to go.
4. Press Ctrl+V to paste.

To move something instead of copying it, use Ctrl+X (cut) in step 2. You can also use the Copy, Cut and Paste buttons on the Home tab, at the far left.

> **Tip:** Press Esc to make the dotted line go away when you are done pasting.

The fill handle: Excel's magic square

When you click a cell, look at its bottom right corner. There is a tiny square. That is the fill handle.

1. Type 1 in A1. Type 2 in A2.
2. Select both cells (click A1 and drag down to A2).
3. Point at the tiny square in the bottom right corner. The mouse turns into a thin black plus sign.
4. Hold the mouse button and drag down to A10. Let go.

Excel fills in 3, 4, 5, all the way to 10.

AutoFill for days and months

1. Type Monday in a cell.
2. Drag the fill handle down 6 cells.

Excel fills in Tuesday, Wednesday, and the rest of the week. It works for January, February, and so on too. It even works for Jan, Feb, Mar.

> **Tip:** If you drag one number, like 5, Excel copies 5 again and again. To count up, type two numbers first so Excel sees the pattern.

> **Tip:** Dragging the fill handle on a formula copies the formula to the other rows. You will use this a lot in Lesson 4.

Make a column wider

Sometimes words get cut off because the column is too narrow.

1. Go to the top, to the letters.
2. Point at the line between two letters, like between A and B. The mouse turns into a two-sided arrow.
3. Double-click. The column becomes just wide enough for the longest thing in it.

You can also click and drag that line to make it as wide as you want.

Wrap text

If a cell has a long sentence, you can make it show on several lines inside the cell.

1. Click the cell.
2. On the Home tab, click Wrap Text.

> **Tip:** To start a new line inside a cell yourself, press Alt+Enter while typing. On a Mac, it is Option+Return.

Insert or delete a row

1. Right-click the row number on the left, like 4.
2. Click Insert to add an empty row above it, or Delete to remove it.

The same works for columns: right-click a column letter.

Try it

Go to the sheet 2 Shopping List. In column A, fill in the missing items: type Eggs in A6 and Bread in A7. In C2 type 1 and in C3 type 2, then use the fill handle to count down to row 10. In E2 type Monday and drag it down to E8. Finally, double-click the line between column letters A and B to fit the words.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. You typed a number but you want to change one digit. What do you press?

Answer: F2 (or double-click the cell), then fix it and press Enter.

2. How do you undo a mistake?

Answer: Press Ctrl+Z.

3. What is the fill handle?

Answer: The tiny square at the bottom right corner of the selected cell. Drag it to fill or copy.

4. How do you get Excel to count 1, 2, 3?

Answer: Type 1 and 2 in two cells, select both, then drag the fill handle.

Lesson 3: Making It Look Nice

Bold, colors, borders, money and date formats, and freezing the top row



	A	B	C	D
1	My Price List			
2				
3	**Item**	**Price**	**Discount**	**Sale Price**
4	Notebook	$3.50	10%	$3.15
5	Pens, box of 10	$6.25	5%	$5.94
6	Scissors	$8.00	15%	$6.80
7	Tape	$2.75	0%	$2.75
8				

1 Title with Merge and Center. 2 Bold headings with a light fill. 3 Currency format. 4 Percent format. 5 All Borders.

Formatting changes how a cell looks. It does not change what is inside. Almost all of these buttons are on the Home tab.

Bold and colors

1. Select the cells. For a whole row, click the row number on the left.
2. Press Ctrl+B for bold. Or click the B button on the Home tab.
3. To color the inside of the cells, click the little arrow next to the paint bucket (Fill Color). Pick a light color.
4. To color the letters, click the little arrow next to the red A (Font Color). Pick a color.

> **Tip:** Light fill colors with black letters are the easiest to read. Dark fill needs white letters.

Borders (lines around cells)

1. Select the cells.

2. On the Home tab, click the little arrow next to the Borders button. It looks like a small square with lines.
3. Click All Borders. Now every cell has a thin line around it, and it prints that way too.

Number formats: money, percent, and dates

Excel can show a number as money, a percent, or a date. The number stays the same. Only the look changes.

1. Select the cells with prices.
2. On the Home tab, find the Number group. Click the box that says General.
3. Pick Currency. Now 12.5 shows as $12.50.
4. For percent, select the cells and click the % button. 0.25 becomes 25%.
5. For dates, pick Short Date (like 11/15/2026) or Long Date (like Sunday, November 15, 2026).

> **Tip:** The two buttons with zeros and arrows (Increase Decimal and Decrease Decimal) add or remove numbers after the dot.

> **Tip:** Ctrl+1 opens the Format Cells window. It has every format choice in one place.

> **Mac:** On a Mac, Format Cells is Cmd+1.

Format Painter: copy the look

Format Painter copies the look of one cell to other cells. It does not copy the words.

1. Click a cell that looks the way you like.
2. On the Home tab, click Format Painter. It looks like a paintbrush.
3. Click and drag over the cells you want to look the same.

> **Tip:** Double-click the paintbrush to paint many places. Press Esc when you are done.

Merge and Center (for a title)

1. Type a title in A1, like My Price List.
2. Select A1 across to the last column of your list, for example A1 to D1.
3. On the Home tab, click Merge and Center.

The title now sits in the middle, over the whole list.

> **Tip:** Use merge only for titles at the top. Merged cells inside a list cause trouble when you sort.

Freeze the top row

In a long list, the headings scroll away. Freezing keeps them in view.

1. Click the View tab.
2. Click Freeze Panes.
3. Click Freeze Top Row.

Now scroll down. Row 1 stays at the top. To undo it, go to View, Freeze Panes, Unfreeze Panes.

> **Mac:** On a Mac, click View, then Freeze Top Row.

Try it

Go to the sheet 3 Price List. Make row 3 (the headings) bold with a light blue fill. Put All Borders on the whole list. Make the Price column show as Currency, and the Discount column show as a percent. Merge and center the title in row 1 across A1 to D1. Then freeze the top row and scroll down to see it.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. Does changing a number to Currency change the number itself?

Answer: No. It only changes how it looks. 12.5 is still 12.5 inside.

2. What does Format Painter copy?

Answer: The look of a cell (colors, bold, borders, number format), not the words.

3. Where is Freeze Top Row?

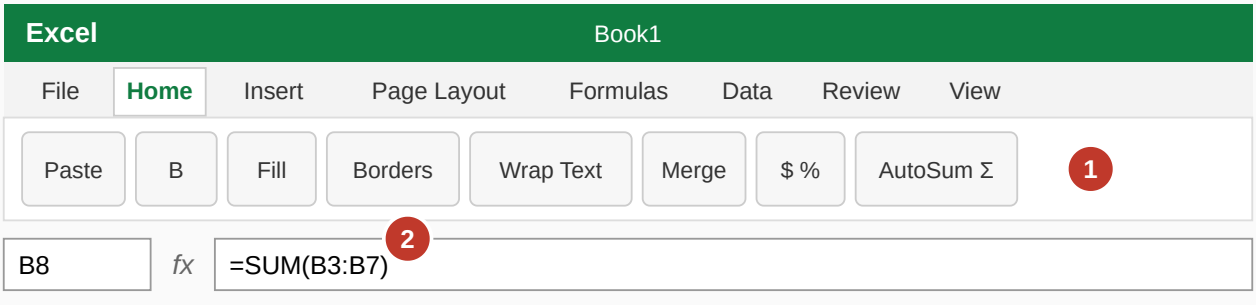
Answer: View tab, then Freeze Panes, then Freeze Top Row.

4. What is the shortcut for bold?

Answer: Ctrl+B.

Lesson 4: Your First Formulas

Let Excel do the math: plus, minus, SUM, AVERAGE and more



	A	B	C	D
2	**Category**	**Planned**	**Spent**	
3	Rent	1800	1800	
4	Food	700	756.4	
5	Electric	120	98.15	
6	Phone	60	60	
7	Gas for car	150	171.3	
8	**Total**	**3280**		

3

1 AutoSum button

2 The formula

3 The cells it adds (the dotted box)

Click under the numbers and press AutoSum. Excel writes =SUM(B3:B7) and adds them up: 3280.

A formula is a math question you give Excel. Every formula starts with an equals sign (`=`). Excel shows the answer in the cell. The formula itself shows in the Formula Bar.

The math signs

- Plus is +. Example: `=5+3` shows 8.
- Minus is -. Example: `=10-4` shows 6.
- Times is * (Shift+8). Example: `=6*2` shows 12.
- Divide is / (the key next to the right Shift). Example: `=20/4` shows 5.

Use cell addresses, not numbers

The real power is using cell addresses. Say A2 has 40 and B2 has 3.

1. Click C2.
2. Type `=A2*B2`
3. Press Enter. C2 shows 120.

Now change B2 to 4. C2 changes to 160 by itself. That is why we use addresses.

> **Tip:** Instead of typing A2, you can click on cell A2 while writing the formula. Excel types the address for you.

SUM: add up a list

1. Click the empty cell under your list of numbers.
2. Type `=SUM(`
3. Select the numbers with the mouse, for example B2 to B8. Excel writes B2:B8. The colon means "from B2 to B8."
4. Type) and press Enter.

The whole formula is `=SUM(B2:B8)`.

AutoSum: the fastest way

1. Click the empty cell right under a column of numbers.
2. On the Home tab, at the far right, click AutoSum. It looks like a big Greek E (Σ).
3. Excel guesses the cells and draws a dotted box. If it is right, press Enter.

Even faster: click the cell and press Alt and = together.

> **Mac:** On a Mac, AutoSum is `Cmd+Shift+T`.

AVERAGE, MIN, MAX, COUNT

They work just like SUM.

- `=AVERAGE(B2:B8)` gives the average, the normal middle amount.
- `=MIN(B2:B8)` gives the smallest number.
- `=MAX(B2:B8)` gives the biggest number.
- `=COUNT(B2:B8)` counts how many cells have numbers.

> **Tip:** Click the little arrow next to AutoSum to pick Average, Count Numbers, Max, or Min from a list.

> **Tip:** Select some numbers and look at the bottom right of the window. Excel shows the Average, Count, and Sum there, with no formula at all.

Copy a formula down

If C2 has `=A2*B2` and you drag its fill handle down, C3 gets `=A3*B3`, C4 gets `=A4*B4`, and so on. Excel moves the addresses for you. This is called a relative reference. It is what you want most of the time.

When you do NOT want it to move: the dollar sign

Sometimes every row must use the same one cell, like a tax rate in cell F1. If you copy `=B2*F1` down, the next row becomes `=B3*F2`. But F2 is empty. That is wrong.

The fix is to lock it with dollar signs: `=B2*$F$1`. The dollar signs mean "always use F1, never move." This is called an absolute reference.

1. While typing the formula, click F1.
2. Press F4. Excel adds the dollar signs for you: $F$1.
3. Finish the formula and copy it down.

Tip: An easy way to remember: the dollar sign is a lock. $F$1 is locked in place.

Mac: On a Mac, press Cmd+T instead of F4 to add the dollar signs.

Try it

Go to the sheet 4 Budget. In D3, type `=B3-C3` to find what is left of the planned money, then copy it down to D10. In B11 use AutoSum to add up the Planned column, and do the same for C11. In B13 find the biggest spending with `=MAX(C3:C10)`, and in B14 the average spending with `=AVERAGE(C3:C10)`. Last, in E3 type `=B3*$H$2` to work out how much to save (H2 holds 10%), and copy it down. Click E10 and check that it still uses H2.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. What does every formula start with?

Answer: An equals sign (`=`).

2. What does `=SUM(B2:B6)` do?

Answer: Adds up all the numbers from B2 to B6.

3. What is the shortcut for AutoSum?

Answer: Alt and = together (Cmd+Shift+T on a Mac).

4. What do the dollar signs in $F$1 do?

Answer: They lock the address, so it stays F1 when you copy the formula. Press F4 to add them.

Lesson 5: Smart Functions

IF, COUNTIF, SUMIF, TODAY, joining text, cleaning text, ROUND, and XLOOKUP

D2 | *fx* | =IF(B2>=C2,"Paid","Owes")

	A	B	C	D
1	**Name**	**Paid**	**Price**	**Status**
2	Sara Klein	$80	$80	Paid
3	Devorah Stein	$50	$120	Owes
4	Rivka Green	$150	$150	Paid
5	Leah Adler	$0	$80	Owes

If Paid is at least the Price, show Paid.

If not, show Owes.

IF makes a choice: =IF(B2>=C2,"Paid","Owes").

A function is a ready-made formula with a name, like SUM. Here are the most useful ones after SUM. The parts inside the brackets are separated by commas.

IF: make a choice

IF checks something and gives one answer if it is true and another if it is false.

```
=IF(C2>=100,"Paid in full","Owes money")
```

Read it like this: if C2 is 100 or more, show "Paid in full". If not, show "Owes money".

- Words must be inside quote marks.
- Signs you can use: = equal, > bigger than, < smaller than, >= at least, <= at most, <> not equal.

COUNTIF: count only some cells

`=COUNTIF(D2:D20,"Paid")` counts how many cells in D2 to D20 say Paid.

`=COUNTIF(C2:C20,">50")` counts how many numbers are over 50.

SUMIF: add up only some cells

`=SUMIF(D2:D20,"Paid",C2:C20)` looks in D for the word Paid, and adds up the matching amounts in C.

Read it like this: where to look, what to look for, what to add.

TODAY: the date of today

`=TODAY()` shows today's date. It updates every day by itself. The brackets stay empty.

To see how many days until a date in B2: `=B2-TODAY()`

> **Tip:** To type today's date so it never changes, press Ctrl and ; (semicolon) together.

Joining text: & and CONCAT

Say A2 has Sara and B2 has Klein.

- `=A2&" "&B2` gives Sara Klein. The " " adds a space in the middle.
- `=CONCAT(A2," ",B2)` gives the same thing.

> **Tip:** The & sign is Shift+7. It works in every version of Excel.

Cleaning text: TRIM, PROPER, UPPER, LOWER

- `=TRIM(A2)` removes extra spaces before, after, and in the middle.
- `=PROPER(A2)` makes each word start with a capital: sara klein becomes Sara Klein.
- `=UPPER(A2)` makes ALL CAPITALS. `=LOWER(A2)` makes all small letters.

> **Tip:** After cleaning, you may want to replace the old messy column. Copy the clean cells, right-click the old ones, and choose Paste Values (the clipboard with 123). This pastes the words, not the formula.

ROUND: tidy numbers

`=ROUND(B2,2)` rounds to 2 numbers after the dot, like money. 12.3456 becomes 12.35.

`=ROUND(B2,0)` rounds to a whole number.

XLOOKUP: find something in a list

XLOOKUP is like looking up a name in a phone book. You give it what to find, where to find it, and what to bring back.

Say a price list has items in A2:A20 and prices in B2:B20. To find the price of the item typed in E2:

```
=XLOOKUP(E2,A2:A20,B2:B20,"Not found")
```

Read it like this: find E2, in the items, bring back the price. If it is not there, show "Not found".

> **Tip:** Lock the lists with dollar signs before copying it down: `=XLOOKUP(E2,$A$2:$A$20,$B$2:$B$20,"Not found")`

VLOOKUP: the older way

Older Excel (2019 and before) has no XLOOKUP. Use VLOOKUP instead:

```
=VLOOKUP(E2,A2:B20,2,FALSE)
```

Read it like this: find E2 in the first column of A2:B20, bring back column 2, and FALSE means exact match only. Always type FALSE at the end.

> **Tip:** VLOOKUP can only look to the right. The thing you search for must be in the first column.

> **Web:** XLOOKUP works in Excel on the web and in Google Sheets.

Try it

Go to the sheet 5 Customers. In F2 type `=IF(D2>=E2,"Paid","Owes")` and copy it down. In I2 count how many are Paid with COUNTIF. In I3 add up what was paid by Paid customers with SUMIF. In G2 clean the messy name with `=PROPER(TRIM(A2))` and

copy it down. On the sheet 5b Lookup, use XLOOKUP in B3 to find the price of the item typed in A3.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. What does `=IF(B2>10,"Big","Small")` show when B2 is 4?

Answer: Small, because 4 is not bigger than 10.

2. What does `=COUNTIF(A1:A10,"Yes")` do?

Answer: Counts how many cells from A1 to A10 say Yes.

3. How do you join a first name in A2 and a last name in B2 with a space?

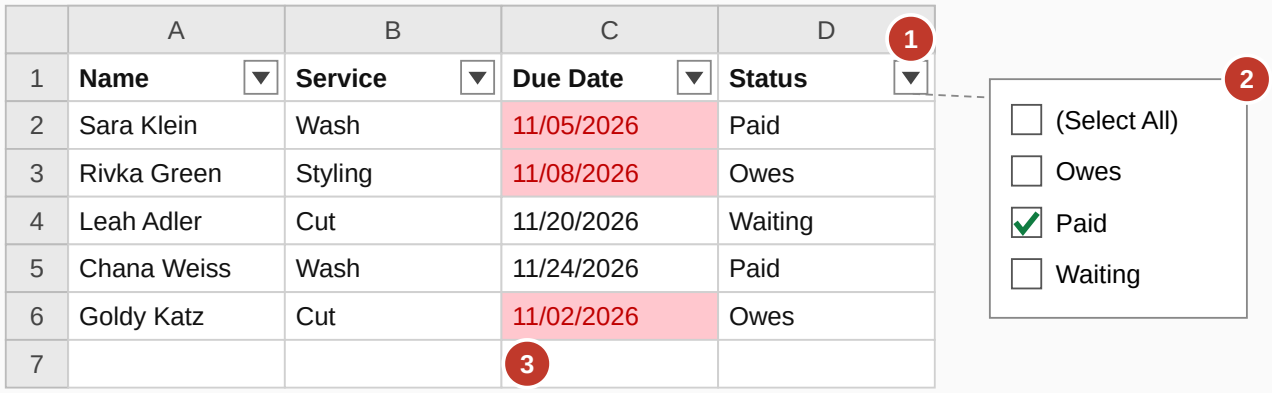
Answer: `=A2&" "&B2`

4. What do the three main parts of XLOOKUP mean?

Answer: What to find, where to look, and what to bring back.

Lesson 6: Organizing Your Lists

Sort, filter, remove duplicates, find and replace, tables, and colors that warn you



1 Filter arrows in the headings. 2 Check only what you want to see. 3 Conditional Formatting colors past due dates red.

These tools work best on a neat list: one heading row at the top, one row per thing, and no empty rows in the middle.

Sort: put the list in order

1. Click any one cell in the column you want to sort by, like the Name column.
2. Click the Data tab.
3. Click A to Z (the small button with A on top and Z under it). For numbers, it goes smallest to biggest. Click Z to A for the other way.

Excel moves the whole row together, so nothing gets mixed up.

> **Tip:** Never select just one column before sorting. Click one cell only. If you select one column, Excel may ask; choose Expand the selection.

> **Tip:** To sort by two things (like date, then time), click Data, then the big Sort button, then Add Level.

Filter: show only some rows

1. Click any cell in your list.
2. Press Ctrl+Shift+L, or click Data, then Filter.
3. Small arrow buttons appear in every heading.
4. Click the arrow in the Status heading.
5. Uncheck Select All, then check only Paid. Click OK.

Now you see only the Paid rows. The others are hidden, not deleted. Click the arrow again and choose Clear Filter to see everything.

> **Mac:** On a Mac, the filter shortcut is Cmd+Shift+F.

Remove Duplicates

1. Click any cell in the list.
2. Click Data, then Remove Duplicates.
3. Check the columns that must match for two rows to count as the same, like Name and Phone.
4. Click OK. Excel tells you how many it removed.

> **Tip:** Save a copy first, or be ready to press Ctrl+Z. Removed rows are gone.

Find and Replace

1. Press Ctrl+H. (Or Home tab, Find and Select, Replace.)
2. In Find what, type the old words, like Ave.
3. In Replace with, type the new words, like Avenue.
4. Click Replace All.

To just find something, press Ctrl+F, type it, and click Find Next.

> **Mac:** On a Mac, Find is Cmd+F and Replace is Ctrl+H.

Format as Table: the best trick in this lesson

A table makes a plain list smart. It adds colors, filter buttons, and grows by itself when you add rows.

1. Click any cell in your list.
2. Press Ctrl+T. (Or Home tab, Format as Table, then pick a style.)
3. Make sure My table has headers is checked. Click OK.

> **Tip:** Type in the row right under the table, and the table grows to include it. A formula typed in one row of a table copies down the whole column by itself.

Conditional Formatting: colors that warn you

Conditional Formatting colors a cell only when something is true. It is perfect for late payments.

Color dates that are already past:

1. Select the Due Date cells.
2. Home tab, click Conditional Formatting.
3. Point at Highlight Cells Rules, then click Less Than.
4. In the box, type `=TODAY()`
5. Pick Light Red Fill with Dark Red Text. Click OK.

Now every date before today turns red. Tomorrow it checks again by itself.

Color the 3 biggest amounts:

1. Select the Amount cells.

2. Home tab, Conditional Formatting, Top/Bottom Rules, Top 10 Items.
3. Change 10 to 3. Click OK.

> **Tip:** To take colors off, click Conditional Formatting, Clear Rules, Clear Rules from Selected Cells.

> **Tip:** Data Bars (also under Conditional Formatting) draw a little bar in each cell. Bigger number, longer bar.

Try it

Go to the sheet 6 Appointments. Turn it into a table with `Ctrl+T`. Sort it by Date, oldest first. Filter the Status column to show only Waiting, then clear the filter. Use Remove Duplicates on Name and Phone (there are 2 repeats). Use Find and Replace to change every "Wash" to "Wash and Set". Color all Due Dates before today in red, and the top 3 amounts in green.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. Before sorting, what should you click?

Answer: One cell in the column you want to sort by. Not the whole column.

2. What is the shortcut to turn filters on and off?

Answer: `Ctrl+Shift+L`.

3. Does a filter delete rows?

Answer: No. It only hides them. Clear the filter to see them again.

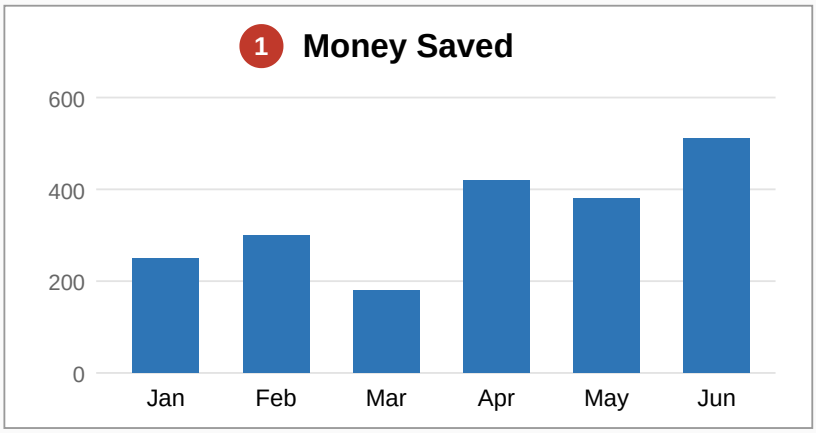
4. How do you make overdue dates turn red?

Answer: Select the dates, then Conditional Formatting, Highlight Cells Rules, Less Than, type `=TODAY()` and pick red.

Lesson 7: Charts

Turn numbers into a picture: column, pie, and line charts

	A	B
1	**Month**	**Saved**
2	Jan	250
3	Feb	300
4	Mar	180
5	Apr	420
6	May	380
7	Jun	510



Select the months and amounts, then Insert, Column chart. 1 Click the title to change it.

A chart shows your numbers as a picture. It is easier to see what is biggest or what is going up.

Which chart to use

- Column chart: to compare things side by side, like spending on food, rent, and gas.
- Pie chart: to show parts of one whole, like how a budget is split. Use it for one column only, with a few slices.
- Line chart: to show change over time, like money saved each month.

Make a column chart

1. Select your data, including the headings. For example, select A3 to B9 (the months and the amounts).
2. Click the Insert tab.
3. In the Charts group, click the Column chart button (it shows small bars). Click the first picture, Clustered Column.
4. The chart appears on top of the sheet.

Tip: Not sure which chart? Click Insert, then Recommended Charts. Excel shows you good choices.

Make a pie chart

1. Select the names and one column of numbers, like the Category and Amount columns.
2. Click Insert, then the Pie chart button (it looks like a round circle). Click the first pie.

Make a line chart

1. Select the months and the amounts.
2. Click Insert, then the Line chart button. Click the first line.

Change the title

1. Click on the words Chart Title at the top of the chart.
2. Click again so a blinking line appears, or just start typing.
3. Type your new title, like Money Saved in 2026, and click outside the chart.

Other easy changes

- Move the chart: click its edge and drag it.
- Make it bigger or smaller: drag a corner circle.
- Show the numbers on the chart: click the chart, click the plus sign (+) that appears next to it, and check Data Labels.
- Change the colors: click the chart, then click the paintbrush button next to it and pick a style.
- Delete a chart: click its edge and press Delete.

Tip: The chart is linked to your numbers. Change a number in the sheet and the chart changes too.

> **Mac:** On a Mac, the plus and paintbrush buttons are not there. Click the chart and use the Chart Design tab instead.

> **Web:** In Excel on the web, after you insert a chart, a Chart panel opens on the right where you can change the title and colors.

Try it

Go to the sheet 7 Monthly Money. Select A3:B9 and make a column chart of money saved each month. Change its title to Money Saved. Then select A3:A9 and C3:C9 (hold Ctrl while you select the second part) and make a line chart of spending. Last, use the Category table in E3:F8 to make a pie chart, and turn on Data Labels.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. Which chart is best to show change over time?

Answer: A line chart.

2. Which chart shows parts of one whole?

Answer: A pie chart.

3. Where are the chart buttons?

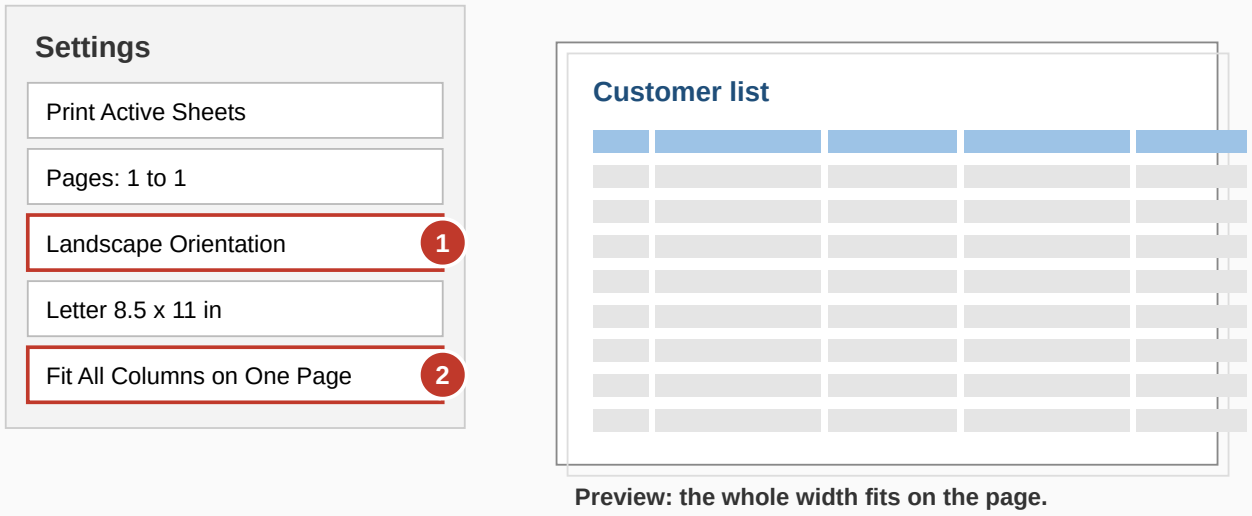
Answer: On the Insert tab, in the Charts group.

4. If you change a number in the sheet, what happens to the chart?

Answer: It updates by itself.

Lesson 8: Printing and Sharing

Print neatly on one page, save as PDF, share a link, and protect your sheet



File, Print. 1 Turn the page sideways (Landscape). 2 Fit All Columns on One Page.

See it before you print

1. Click File, then Print. (Or press Ctrl+P.)
2. On the right, you see a preview of the page. Use the arrows under it to see the other pages.

Fit everything on one page

1. Click File, then Print.
2. Under Settings, find the last box. It says No Scaling.
3. Click it and choose Fit Sheet on One Page.

Other choices there: Fit All Columns on One Page is good for long lists, so nothing is cut off on the right.

> **Tip:** To turn the page sideways, click Portrait Orientation in the same Settings list and pick

> Landscape. Wide lists fit better.

Print only part of the sheet

1. Select the cells you want to print.
2. Click the Page Layout tab.
3. Click Print Area, then Set Print Area.

Now only those cells print. To undo it: Page Layout, Print Area, Clear Print Area.

Repeat the headings on every page

1. Click Page Layout, then Print Titles.
2. Click in the box Rows to repeat at top, then click row 1 on the sheet.
3. Click OK. Now every printed page shows the headings.

Save it as a PDF

A PDF looks the same on every phone and computer, and nobody can change it by mistake.

1. Click File, then Export.
2. Click Create PDF/XPS.
3. Pick a folder, type a name, and click Publish.

You can also do File, Save As, and change Save as type to PDF.

> **Mac:** On a Mac, click File, Save As, and pick PDF in the File Format list.

> **Web:** In Excel on the web, click File, then Export, then Download as PDF.

Share a link

1. Save the file in OneDrive first (File, Save As, OneDrive).
2. Click Share at the top right of the window.
3. Type the person's email, or click Copy link.
4. Choose if they can edit or only view.

> **Tip:** Or just attach the .xlsx file or the PDF to an email, like any other file.

Protect a sheet so nobody breaks it

1. Click the Review tab.
2. Click Protect Sheet.
3. Type a password if you want (write it down somewhere safe!). Click OK.

Now nobody can change the cells. To change them again: Review, Unprotect Sheet.

> **Tip:** To let people type in some cells but not others, first select the cells they may change, press Ctrl+1, open the Protection tab, uncheck Locked, and click OK. Then protect the sheet.

Try it

Go to the sheet 8 Print Me. Open File, Print and look at the preview. Change it to Landscape and Fit All Columns on One Page. Set a print area for A1:E20 only. Set row 3 to repeat at the top. Then save the sheet as a PDF on your computer, and protect the sheet with no password. Try typing in a cell to see that it is locked, then unprotect it.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. How do you fit a sheet on one page?

Answer: File, Print, then change No Scaling to Fit Sheet on One Page.

2. Where is Set Print Area?

Answer: Page Layout tab, then Print Area, then Set Print Area.

3. How do you save as a PDF?

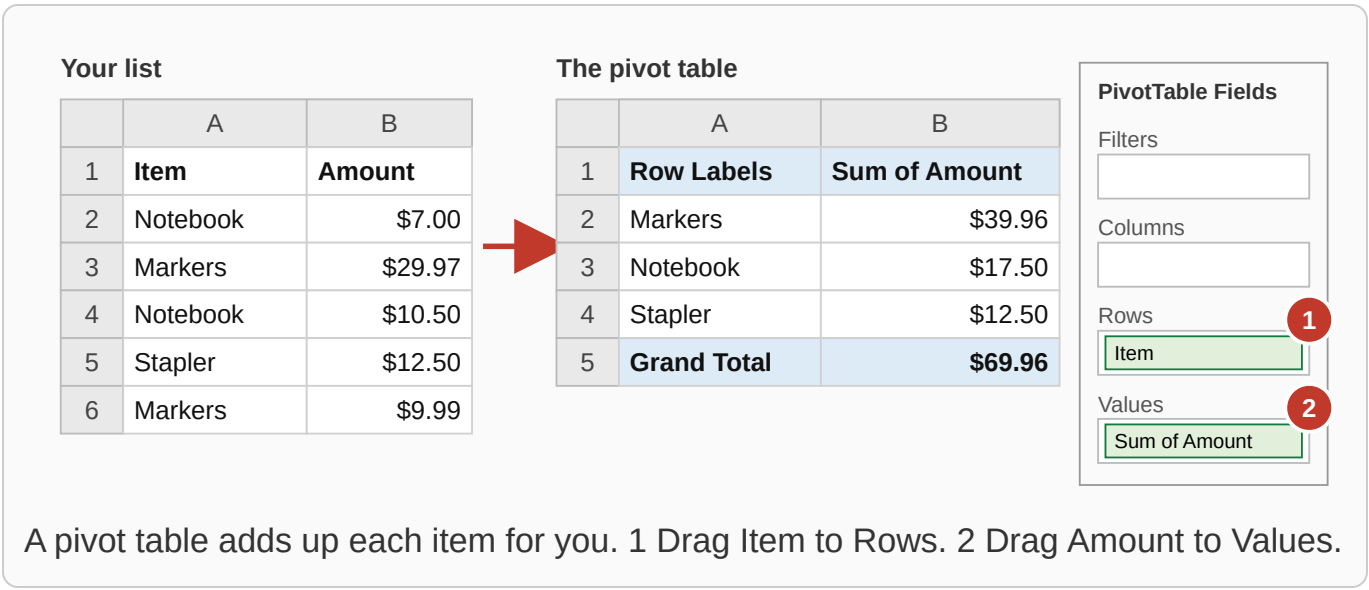
Answer: File, Export, Create PDF/XPS, then Publish.

4. Where is Protect Sheet?

Answer: On the Review tab.

Lesson 9: Pivot Tables, Made Gentle

Summarize a long list in a few clicks, with no formulas



A pivot table adds up each item for you. 1 Drag Item to Rows. 2 Drag Amount to Values.

A pivot table sounds scary, but it is just a fast summary. Say you have a long list of sales, one row per sale. You want to know: how much did each item bring in? How much each month? A pivot table answers in a few clicks, with no formulas.

Before you start

Your list needs headings in row 1 (like Date, Item, Customer, Amount), and no empty rows in the middle.

Make a pivot table

1. Click any one cell in your list.
2. Click the Insert tab.
3. Click PivotTable. (In some versions, then click From Table/Range.)
4. A small window opens. Excel already selected your list. Leave New Worksheet checked.
5. Click OK.

A new sheet opens. On the right side is a panel called PivotTable Fields. It lists your headings.

Fill it in: drag the fields

The panel has four boxes at the bottom: Filters, Columns, Rows, and Values.

1. Drag Item into the Rows box. Each item now shows once, on the left.
2. Drag Amount into the Values box. Next to each item you now see its total.

That's it. You made a pivot table.

> **Tip:** You can also just check the box next to a field. Words go to Rows, numbers go to Values.

Try other questions

- Drag Customer into Rows instead of Item, to see how much each customer spent.
- Drag Month into the Columns box, to see each item by month, side by side.
- Drag a field out of a box to remove it.

Count instead of add

1. In the Values box, click the arrow on Sum of Amount.
2. Click Value Field Settings.
3. Pick Count and click OK.

Now it shows how many sales, not how much money.

When your list changes

A pivot table does not update by itself. After you add or change rows in the list:

1. Click inside the pivot table.
2. Right-click and choose Refresh.

Tip: If your list is a table (Ctrl+T from Lesson 6), new rows are included when you refresh. That is another reason to use tables.

Tip: If the PivotTable Fields panel disappears, click inside the pivot table and it comes back.

Web: Excel on the web can make pivot tables too: Insert, then PivotTable.

Try it

Go to the sheet 9 Sales Log. Click one cell in it, then Insert, PivotTable, OK. Drag Item to Rows and Amount to Values. Which item brought in the most money? Then drag Month to Columns. Last, change Sum of Amount to Count, to see how many sales each item had. You can check your answers on the Answers sheet.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. What is a pivot table for?

Answer: To quickly summarize a long list, like totals per item, with no formulas.

2. Where is the PivotTable button?

Answer: On the Insert tab.

3. To see the total for each item, where do you drag Item and Amount?

Answer: Item to Rows, Amount to Values.

4. You added new sales to the list. How do you update the pivot table?

Answer: Right-click inside it and click Refresh.

Lesson 10: All the Tricks

Shortcuts, Flash Fill, quick tricks, and how to fix common errors

	A	B
1	**You see**	**Means**
2	#DIV/0!	Divided by zero or an empty cell
3	#N/A	Lookup could not find it
4	#VALUE!	Math with words
5	########	Column too narrow
6	#NAME?	Misspelled function

The errors you will meet most. The table below shows how to fix each one.

The shortcut keys worth learning

Hold the first key, then tap the second. On a Mac, use Cmd where it says Ctrl, unless the table says something else.

Keys	What it does	Mac
Ctrl+C	Copy	Cmd+C
Ctrl+X	Cut	Cmd+X
Ctrl+V	Paste	Cmd+V
Ctrl+Z	Undo	Cmd+Z
Ctrl+Y	Redo	Cmd+Y
Ctrl+S	Save	Cmd+S
Ctrl+P	Print	Cmd+P
Ctrl+B	Bold	Cmd+B
Ctrl+F	Find	Cmd+F
Ctrl+H	Find and Replace	Ctrl+H

Ctrl+A	Select everything	Cmd+A
Ctrl+Arrow key	Jump to the end of the list in that direction	Cmd+Arrow
Ctrl+Shift+Arrow key	Select to the end of the list	Cmd+Shift+Arrow
Ctrl+Home	Jump back to cell A1	Fn+Ctrl+Left-Arrow
Ctrl+Shift+L	Filter on or off	Cmd+Shift+F
Ctrl+T	Make a table	Cmd+T
Ctrl+1	Format Cells window	Cmd+1
Ctrl+;	Type today's date	Ctrl+;
Ctrl+Shift+;	Type the time now	Cmd+;
Alt+=	AutoSum	Cmd+Shift+T
F2	Edit the cell	Ctrl+U
F4	Add $ signs (lock an address)	Cmd+T
Ctrl+E	Flash Fill	Data, then Flash Fill
Alt+Enter	New line inside a cell	Option+Return
Ctrl+D	Copy the cell above down	Cmd+D
Ctrl+Space	Select the whole column	Ctrl+Space
Shift+Space	Select the whole row	Shift+Space
Ctrl+Page Down / Page Up	Go to the next or previous sheet	Option+Right / Left Arrow

Flash Fill: Excel copies your pattern

Flash Fill is like magic. You show Excel one or two examples, and it does the rest.

Say column A has full names like Sara Klein, and you want only the first names.

1. In B2, type the first name yourself: Sara.
2. Click B3 and press Ctrl+E.

Excel fills in all the other first names. It works for last names, phone numbers, capital letters, and joining two columns too.

> **Tip:** If Flash Fill guesses wrong, type one more example in the next row and press Ctrl+E again.

> **Tip:** Flash Fill is also on the Data tab, in the Data Tools group.

Quick tricks

- Double-click the fill handle to copy a formula all the way down your list, without dragging.
- Select numbers and look at the bottom bar for Sum, Average and Count, with no formula.
- Double-click the line between two column letters to fit the width.
- Hold Ctrl and click to select cells that are not next to each other.
- Right-click a sheet tab, then Move or Copy, check Create a copy, to copy a whole sheet.
- Paste Values: right-click, then the clipboard with 123. It pastes answers, not formulas.
- Paste Transpose: copy a row, right-click, Paste Special, check Transpose. The row becomes a column.
- Press Ctrl+` (the key above Tab) to see all formulas instead of answers. Press again to go back.
- Drop-down list: select cells, click Data, then Data Validation. Under Allow pick List. In Source type Paid,Owes,Waiting and click OK. Now each cell has a little menu.
- Click a cell, then Review, New Note, to add a sticky note to it.

Common errors and how to fix them

You see	What it means	How to fix it
#####	The column is too narrow to show the number or date	Double-click the line between the column letters to make it wider

#DIV/0!	You divided by zero or by an empty cell	Put a number in that cell, or use `=IFERROR(A2/B2,0)`
#N/A	XLOOKUP or VLOOKUP could not find it	Check the spelling and extra spaces (use TRIM). Add "Not found" at the end of XLOOKUP
#VALUE!	You did math with words, like `="ten"+5`	Make sure the cells hold numbers, not words or spaces
#NAME?	Excel does not know that word	Check the spelling of the function, and put words in quote marks
#REF!	The formula points to a cell that was deleted	Press Ctrl+Z to undo the delete, or write the formula again

Tip: IFERROR hides any error and shows something nicer: `=IFERROR(your` formula,"") shows an empty cell instead.

Tip: Click a cell with an error. A small yellow diamond with an exclamation mark appears. Click it to see help for that error.

Try it

Go to the sheet 10 Tricks. In column B, type the first name from A2, then press Ctrl+E for the rest. Do the same in C for last names. Then fix the four red error cells in rows 14 to 17 using the error table. Last, add a drop-down list in F2:F10 with Paid,Owes,Waiting. Practice five shortcuts from the table today: Ctrl+Z, Ctrl+S, Alt+`=`, Ctrl+T and Ctrl+;.

Use the practice workbook, excel-practice.xlsx.

Quiz

1. What does Ctrl+E do?

Answer: Flash Fill. It copies the pattern you started.

2. What does ##### in a cell mean?

Answer: The column is too narrow. Make it wider.

3. What does #DIV/0! mean?

Answer: You divided by zero or by an empty cell.

4. How do you see all the formulas at once?

Answer: Press Ctrl+` (the key above Tab).

5. What shortcut types today's date?

Answer: Ctrl and ; (semicolon) together.