



# TechMentors

## Custom Number Formats

### Excel Quick Reference Guide

Access custom number formats: select cells → Ctrl+1 → Number tab → Custom. A custom format only changes how a value LOOKS — it never changes the value stored in the cell.

## 1. The Four-Section Format Code

A custom format can have up to four sections, separated by semicolons, in this order:

**POSITIVE ; NEGATIVE ; ZERO ; TEXT**

| Sections Provided | Result                                                                   |
|-------------------|--------------------------------------------------------------------------|
| One section       | That format applies to ALL values (positive, negative, and zero)         |
| Two sections      | First = positive & zero, Second = negative                               |
| Three sections    | First = positive, Second = negative, Third = zero                        |
| Four sections     | First = positive, Second = negative, Third = zero, Fourth = text entries |

**Example:**

`#,##0.00;[Red](#,##0.00);"-";[Blue]@` → shows negatives in red parentheses, zero as a dash, and text in blue.

## 2. Digit Placeholders

| Symbol | Behavior                                                           | Example | Result                               |
|--------|--------------------------------------------------------------------|---------|--------------------------------------|
| 0      | Shows insignificant zeros                                          | 0.00    | 3 → 3.00                             |
| #      | Hides insignificant zeros                                          | ###     | 3.10 → 3.1                           |
| ?      | Adds a space for insignificant zeros (aligns decimals in a column) | ???     | 3.1 and 22.15 line up on the decimal |

## 3. Separators, Scaling & Percent

| Symbol | Purpose                                      | Example | Result         |
|--------|----------------------------------------------|---------|----------------|
| ,      | Thousands separator (when between digits)    | ###0    | 12000 → 12,000 |
| ,      | Scales down by 1,000 for each trailing comma | ###0,   | 12000 → 12     |
| ,      | Two trailing commas = scale by 1,000,000     | 0.0,,   | 1234567 → 1.2  |
| .      | Decimal point                                | 0.00    | 3 → 3.00       |
| %      | Multiplies by 100 and adds %                 | 0.0%    | 0.5 → 50.0%    |

## 4. Currency Formats

| Format Code                                                       | Result                                    | Notes                                                                                       |
|-------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------|
| \$#,##0.00                                                        | \$1,234.56                                | Basic currency                                                                              |
| \$#,##0.00;[Red]-\$#,##0.00                                       | \$1,234.56 / -\$1,234.56 (red)            | Negatives flagged in red                                                                    |
| \$#,##0.00;(\$#,##0.00)                                           | \$1,234.56 / (\$1,234.56)                 | Accounting-style negative                                                                   |
| _(\$* #,##0.00_);<br>_(\$* (#,##0.00);<br>_(\$* "-"??_);<br>_(@_) | Aligned \$ signs & decimals down a column | The built-in Accounting format — underscores add spacing, asterisk repeats a fill character |

## 5. Date & Time Codes

| Code   | Displays                      |
|--------|-------------------------------|
| m      | Month, no leading zero (1)    |
| mm     | Month, leading zero (01)      |
| mmm    | Month abbreviation (Jan)      |
| mmm    | Month abbreviation (Jan)      |
| mmmm   | Full month name (January)     |
| mmmm   | First letter of month (J)     |
| h / hh | Hour                          |
| s / ss | Seconds                       |
| [h]    | Elapsed hours over 24 (total) |

| Code         | Displays                          |
|--------------|-----------------------------------|
| d            | Day, no leading zero (5)          |
| dd           | Day, leading zero (05)            |
| ddd          | Day abbreviation (Mon)            |
| dddd         | Full day name (Monday)            |
| yy / yyyy    | 2-digit / 4-digit year            |
| m / mm       | Minutes (after h or before s)     |
| AM/PM or A/P | 12-hour clock indicator           |
| [m] / [s]    | Elapsed minutes / seconds (total) |

Elapsed time example: [h]:mm:ss displays a duration like 32:15:09 instead of resetting at 24 hours — useful for timesheets or project totals.

## 6. Color

### Named colors

[Black] [Blue] [Cyan] [Green] [Magenta] [Red] [White] [Yellow] — or [Color1] through [Color56] for the full palette. Place the color code first in its section.

### Conditional color

Excel allows up to two custom conditions (in brackets) plus a catch-all section:

[Red][<0]0.00;[Green][>0]0.00;[Black]0.00

Negative values appear red, positive values appear green, and zero (the catch-all) appears black. This works without setting up a separate Conditional Formatting rule.

## 7. Text & Special Characters

| Symbol         | Meaning                                                       | Example                                            |
|----------------|---------------------------------------------------------------|----------------------------------------------------|
| @              | Placeholder for the cell's original text                      | "Customer: "@ → Customer: Acme Co.                 |
| "text"         | Literal text, shown exactly as typed                          | 0" units" → 5 units                                |
| \              | Escapes the next character (shows it literally)               | 0\% → shows a literal % without multiplying by 100 |
| _ (underscore) | Skips a space the width of the next character (for alignment) | _ ) → reserves space for a closing parenthesis     |
| *              | Repeats the next character to fill the column width           | *. → fills remaining space with periods            |

## 8. Handy Patterns

| Format Code    | Use Case                                                 | Example Result    |
|----------------|----------------------------------------------------------|-------------------|
| (###) ###-#### | Phone numbers                                            | (435) 555-0192    |
| 000-00-0000    | SSN-style masking with leading zeros                     | 012-34-5678       |
| 00000          | Zip codes / IDs that need leading zeros kept             | 00501             |
| # ??/??        | Fractions                                                | 3 1/4             |
| ;;;            | Hides all values in a cell (still there, just invisible) | (nothing shown)   |
| 0.00,,"M"      | Display large numbers in millions                        | 2,400,000 → 2.40M |

### Try It Yourself

Enter 4500000, 1250, -1250, 0, and the word Pending in five cells, then apply each format code below (Ctrl+1 → Custom) and compare the results:

| # | Format Code                    | What to Look For                                                                      |
|---|--------------------------------|---------------------------------------------------------------------------------------|
| 1 | #,##0;[Red](#,##0);"—";[Blue]@ | Negative in red parentheses, zero as a dash, text in blue                             |
| 2 | \$#,##0.00_);(\$#,##0.00)      | Accounting-style alignment for positive vs. negative                                  |
| 3 | mmmm d, yyyy                   | Apply to a date value — spells out the full month name                                |
| 4 | 0.0,,"M"                       | Apply to a value like 4500000 — displays 4.5M                                         |
| 5 | #,##0                          | Apply to a value like 2450000 — displays 2,450,000 (thousands separators, no scaling) |

### A caution: date formats on negative numbers

Excel stores dates as serial numbers counting up from January 1, 1900 (day 1). A date format like mmmm d, yyyy works because it translates that positive serial number into a calendar date. A negative number has no corresponding date — there's no "day -5." So instead of showing a date, Excel displays the error ##### filling the cell (the same error you see when a column is too narrow to display a valid date). It is not a calculation error and it does not change the underlying value — it is Excel telling you the format and the value don't match. Widening the column will not fix it; the fix is to remove the date format or make the value positive.