

Lesson 4-4: Create custom number formats

The built-in number formats are very quick and convenient but are also quite limited. For example, there was a credit note on 11-Mar-08 for 637.49 plus tax. You could easily miss the little minus sign to the left of the amount.

| | D | E | F | G |
|---|---------|----------|-------|----------|
| 6 | Germany | 500.00 | 17.5% | 587.50 |
| 7 | Italy | 637.49 | 17.5% | 749.05 |
| 8 | Italy | - 637.49 | 17.5% | - 749.05 |

Old-school accountants like to show brackets around negative values. You just can't miss those brackets! Here's what we want to see:

| | D | E | F | G |
|---|---------|----------|-------|----------|
| 6 | Germany | 500.00 | 17.5% | 587.50 |
| 7 | Italy | 637.49 | 17.5% | 749.05 |
| 8 | Italy | (637.49) | 17.5% | (749.05) |

There's one little problem with this requirement. For many locales, Excel 2013 doesn't support brackets in any of the built-in or pre-defined custom formats. Fortunately it is possible to create your own custom format when none of the built-in styles fit your requirement.

Overview of custom formats

There's plenty of documentation in the help system and on the Internet about the rather cryptic formatting codes provided with Excel 2013. Just about everything is possible once you've got to grips with the basic concepts.

To communicate the custom format to Excel, you must construct a custom format string.

Zeros mean "Display significant zeros". You tell Excel how many you want within the format string. For example, 0.00 means *display at least one leading zero and two decimal places*. The following examples should make things clear:

| Custom Format String | Value | Display |
|----------------------|---------|----------|
| 0 | 1234.56 | 1235 |
| 0.0 | 1234.56 | 1234.6 |
| | 1234.5 | 1234.5 |
| | .5 | 0.5 |
| 0.00 | 1234.56 | 1234.56 |
| | 1234.5 | 1234.50 |
| | .5 | 0.50 |
| 00.000 | 4.56 | 04.560 |
| 0.000 | 1234.56 | 1234.560 |

note

Use the ? custom format string symbol to make number values line up

The question mark inserts a space (when needed) in order to make sure that values that do not display a fixed number of decimal places line up properly.

I must admit that I've never had to use it in a real-world worksheet as I much prefer to pad numbers with trailing zeros.

For example, here's two numbers formatted with the default General format:

| |
|--------|
| 15.5 |
| 17.775 |

The decimal points don't line up because both numbers are, by default, right aligned.

The custom format:

0.??

Will cause the numbers to round to two places and display as follows:

| |
|-------|
| 15.5 |
| 17.78 |

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note

More about custom number formats

It is only possible to give you a broad overview of custom number formats in a single lesson. This should be all that you need to discover more using Excel's help system or the Internet.

Here are a couple of other insights that may help if you want to explore them further:

- You can embed colors into number formats. For example, to make every negative value red you could use:

0.00;[Red]0.00

- There are four possible parts to a number format:

Positive format; Negative format; Zero format; Text format. Applying the custom format string:

0.00;-0.00;"Zero";[Blue]

To these cells:

| | | | |
|------|---|---------|-----------|
| Mike | 0 | 120.119 | -345.5744 |
|------|---|---------|-----------|

Would result in:

| | | | |
|------|------|--------|---------|
| Mike | Zero | 120.12 | -345.57 |
|------|------|--------|---------|

(Text in first cell is colored blue).

note

Hiding values with the three semicolon trick

You will often want to hide the values in specific cells, even though you want other values in the same column to display.

A common way of doing this is to format the cell as a white foreground color upon a white background.

A better solution is to create a custom format consisting of three semicolons:

;;;

The hash symbol (#) is mainly used to add comma separators to thousands and millions.

| Custom Format String | Value | Display |
|----------------------|-----------------------------------|--------------------------------------|
| # | 123.4500 | 123 |
| ## | 123.45 123.50 | 123.45 123.5 |
| #, # | 1234.56 | 1,236 |
| #, #.## | 1234.56 1234.50 12341234.56 | 1,234.56 1,234.5 12,341,234.56 |

Because the hash symbol can be used in conjunction with zeroes it is also possible to indicate that you want both thousand separators *and* a specific number of leading or trailing zeroes.

| Custom Format String | Value | Display |
|----------------------|------------|---------------|
| #, #0.00 | 12341234.5 | 12,341,234.50 |

You can also specify two different format strings separated by a semi colon. The first provides formatting for positive values and the second for negative values. This information enables us to construct the custom format string required.

| Custom format string | Value | Display |
|----------------------|---------------------------|----------------------------------|
| #, #0.00; (#, #0.00) | 12341234.5 -12341234.5 | 12,341,234.50 (12,341,234.50) |

- Open *Sales Week Ended 14th March 2008-2* from your sample files folder (if it isn't already open).
- Select columns E and G.

This was covered in: *Lesson 2-6: Select adjacent and non-adjacent rows and columns.*
- Right-click anywhere in column E or G and then select *Format Cells...* from the shortcut menu.
- Select *Custom* from the *Category* list on the left of the dialog.
- Type the custom format: **#, #0.00; (#, #0.00)** into the box labeled *Type* and click the OK button.

| |
|----------------------|
| Type: |
| #, #0.00; (#, #0.00) |

The negative values on the worksheet are now surrounded by brackets.

| | | | |
|-------|----------|-------|----------|
| Italy | 637.49 | 17.5% | 749.05 |
| Italy | (637.49) | 17.5% | (749.05) |

- Save your work as *Sales Week Ended 14th March 2008-3*.