Lists that miss

Stephen Wells only shops for what he needs, and to the nearest penny, 5p or 50p...

Numerous readers generously responded to the request by Barry McAleenan and Jim Turner in the October column for a way to make Excel print only those items in a list which are needed. The majority recommended using AutoFilter, which is found on the Data menu. Several readers also contributed macro listings.

There isn't space to detail more than one of these and the book token prize goes to Len Cordwell in Hampshire for his code [Fig 1]. It uses Barry's specific example of a shopping list. Thanks go to everybody else, though.

The way this macro works is that all the regularly purchased items are listed in column B (see Fig 2, opposite). The numbers of each required on the next trip are entered in column A. If any cell in column A is left blank, then that row doesn't get printed. The overall range (in this case A1 to B11) must be named List. Obviously, this can reach to B100 or more if you like.

Highlight all the row numbers in the range (to select these rows) and set their height at 13. The macro may get hung up if you don't. Make sure column B is wide enough to include the longest items or Excel may cut them short.

Save the worksheet. Press Alt+F11 and in the drop-down box at the left of the VBA toolbar, choose Module then enter the listing. Click the Save icon. Close the VBA window. Back on the Excel worksheet you can assign a shortcut key to run the macro or draw a button as I have done. Right-click the button, choose Assign macro, and then select 'HideRows'. When you want to print the latest version of the shopping list, click the button. You can see the unneeded rows disappear, then

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[FIG 1]

```
Sub HideRows()
Dim rv As Variant
Dim rh As Integer
Worksheets("Sheet1").Activate
With Range("List")
rh = .Rows.RowHeight
rc = .Rows.Count
For c = 1 To rc
  rv = .Cells(c, 1).Value
  If rv < 1 Then ↙
  Range("List").Rows(c).RowHeight = 0
  Next c
  Range("List").PrintOut
  For c = 1 To rc
  rv = .Cells(c, 1).Value
  If rv < 1 Then ↙
  Range("List").Rows(c).RowHeight = rh
Next c
End With
End Sub
```

(Key: ↙ code string continues)

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reappear on the screen – which some might object to, but I find it reassuring.

■ Floors and ceilings

Last month I suggested solutions to a couple of problems with rounding off numbers, using the functions ROUND and ROUNDDOWN. Several people have asked about rounding to a particular coin, like 5p, 10p, 20p, or 50p. If you enter 9.99 in cell A2 (as in Fig 3) and want this amount to be rounded down in cell B2 to the nearest 5p,

you would use =FLOOR(A2,0.05).

The second argument of this function is called the 'significance'. If the number and significance have different signs, FLOOR returns the #NUM! error value. So if you wish to enter –9.99 in A3, then you have to enter a minus sign before the second argument as =FLOOR(A3,-0.05). If you want to round up a negative amount in A4 you would use =CEILING(A4,-0.05).

To round £123.45 in A5 down to the nearest 50p you would use =FLOOR(A5,0.5). To round an amount in A6 up to the nearest 50p use =CEILING(A6,0.5).

Traditionally, shopkeepers have always liked rounding prices to end in 99p. An appliance retailing for £49.99 may appear to be a lot less than £50 to some customers. If you use =ROUND(A7+0.01,0)-0.01 then any price from £49.49 to £49.99 entered in A7 will display as £49.99. Also, if you enter £51, the formula will round down to the psychologically advantageous price of £50.99.
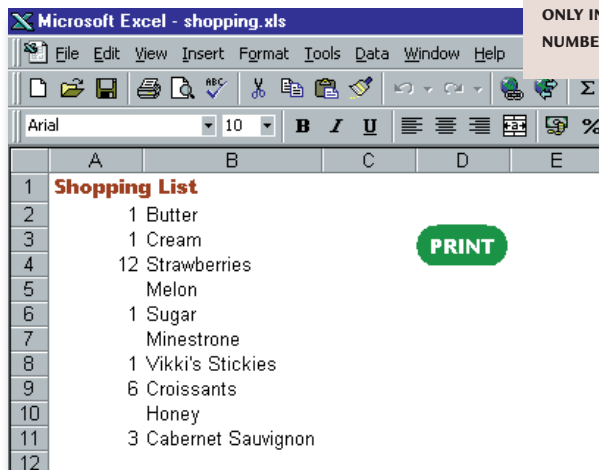
**There will often** be instances where you find it easier to use the MROUND function. If you can't find it in Excel, run the Set-up program to install the Analysis ToolPak. MROUND returns a number rounded to the desired multiple using the arguments MROUND(number,multiple). It rounds up, away from zero, if the remainder of dividing the number by the multiple is greater than or equal to half the value of the multiple. To give an example, if any value from £14.13 to £14.37 is in cell A8, then the formula =MROUND(A8,0.25) will display £14.25.

If you want to display a calculated result within a sentence, and round the

Microsoft Excel - shopping.xls

	A	B
1	**Shopping List**	
2	1	Butter
3	1	Cream
4	12	Strawberries
5		Melon
6	1	Sugar
7		Minestrone
8	1	Vikki's Stickies
9	6	Croissants
10		Honey
11	3	Cabernet Sauvignon
12		

PRINT

EXCEL-LENT TIPS

Extending a series
If you want to enter quickly a series of dates a certain period apart, enter one under the other; select both; hover over the lower-right corner of the second cell, then drag down the column. This
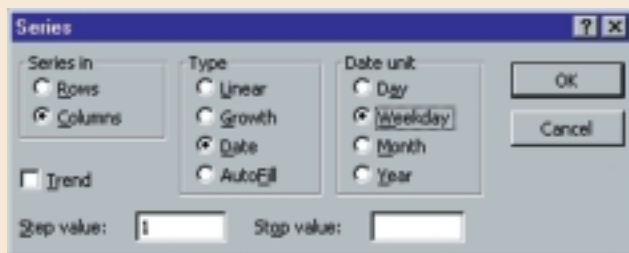
is useful for entering a lot of dates, say, 15 or 28 days apart.

▲ **Choose Weekday if you want to omit Saturdays and Sundays**

Nothing for the weekend
If you want to do the above but omit the Saturdays and Sundays from the series, press the right mouse-button, choose Series and then Weekday.

International format
You can create an international style date with the formula:

```
=DAY(B2)+↙
(MONTH(B2)↙
*100)↙
+(YEAR(B2)↙
*10000)
```

Format the cell, General. Using this arrangement of nested functions, the first day of the new year, 1/1/2000 becomes 20000101. If you enter 13/11/2000 in cell B2, the formula, in another cell, will turn it round to 20001113. In 1-2-3 and Quattro Pro the equivalent is:

```
@DAY(B2)+(@MONTH(B2)*100)+↙
(@YEAR(B8)*10000)
```

Calculating the month of a final payment
If the date of the first payment is in cell A1 (say, 31/1/2000) and the number of months of a loan (say, 30) is in B1, then enter:

```
=DATE(YEAR(A1),MONTH(A1)↙
+B1-1,DAY(A1))
```

in C1 and use the custom format mmmm yyyy for the answer, July 2002.

Intelligent number entry
Excel can tell the difference between an ordinary value entered and a telephone number if you use square brackets to create conditional statements in a Custom Format. For example, if you use:

```
[<=9999999] #,###,###;↙
0000-000-0000
```

any number entered up to 9,999,999 will display that way. For values above that, it will display in a telephone number format. Enter 01713169000 and it will display as 0171-316-9000.

number to decimal places at the same time, you can use a formula like

```
="Today's special price is ↙
£"&ROUND(A9,2)& " + VAT"
```

All you have to do is put ampersands (&) around the value and put double quotes around the text.

Following orders
Chris Milne writes: 'I wish that Excel would not automatically remove trailing zeros after the decimal point in General Format. If I type 0.10 in a cell I may mean 0.10 (ie between 0.095 and 0.105) and not 0.1 (ie between 0.05 and 0.15). But I don't want to force two decimal places for the whole column because further along the opposite might be true. In principle, it's quite simple: if I explicitly type it into a cell I want it to

In principle it's quite simple: if I explicitly type it into a cell I want it to stay

stay. But it won't. Excel is sometimes right, but I'd prefer to have the option.
   Quite right, Chris. The blimmin'

	A	B	C
1	**Amount**	**Result**	**Function**
2	£9.99	£9.95	=FLOOR(A2,0.05)
3	-£9.99	-£9.95	=FLOOR(A3,-0.05)
4	-£9.99	-£10.00	=CEILING(A4,-0.05)
5	£123.45	£123.00	=FLOOR(A5,0.5)
6	£123.45	£123.50	=CEILING(A6,0.5)
7	£49.57	£49.99	=ROUND(A7+0.01,0)-0.01
8	£14.13	£14.25	=MROUND(A8,0.25)
9	£9.99	Today's special price is £9.99 + VAT	="Today's special price is £"&ROUND(A9,2)& " + VAT"
10			

◄**Fig 3 Various ways of rounding values to a desired level, and displaying text with a value**

spreadsheet should do what it's told. And so it will if you use the right formatting option. We can't do anything about the default offering of Excel's General Format option but we can get Excel to mimic whatever you enter. All you have to do is format the cells concerned as Text. Then, whether you enter 0.1, or .100, or even 00.100, Excel will display it. You can align the number left, centre or to the right. Yes, you can

still multiply, divide or add this number in another cell because Excel stores such values as numeric data. The only proviso is that the characters which are recognised as numbers depend on the options you select in the Regional Settings of Control Panel.

PCW CONTACTS

Stephen Wells welcomes your comments on the Spreadsheets column. Contact him via the PCW editorial office or email spreadsheets@pcw.co.uk
◆ *Please do not send attached files unless they have been requested.*