

Excel Intermediate / Advanced

Part 1

Client name removed
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Introduction

The purpose of this session is, following on from the online survey, explore your capabilities with intermediate and some more advanced features within Excel through completing a series of activities. Tips and reminders and guidance are included in the booklet.

You are encouraged to make notes as and when required in the booklet which is yours to keep. The subject matter is not exhaustive or restricted, as it is designed to meet YOUR requirements. Any areas covered which are not included in this booklet will be provided in a supplementary document and revisited in the event of any subsequent sessions.

Where you see the Tip ways to complete a



icon, this gives you suggestions for alternative function.

You will be given a 'developing' electronic version of these notes so you can easily find information, and at the end, there is a list of [keyboard shortcuts](#) covering a range of Excel functions.

Introductory Activity

You have been given a spreadsheet called – production07.xls on your desktop.

Complete the spreadsheet so that it looks exactly like the table on the next page while adhering to the following points:

1. Complete all the missing totals using appropriate formulae
2. Add an internal singular border and external double border. Make all fonts Arial size 10
3. Use Conditional Formatting to make all cells containing no information a colour of your choice
4. Make all headings and totals bold
5. Set row height in all cells to 25
6. **Column A** should be 21 in width, **Columns B to H** should be 8.57 in width
7. Set all cells to vertical centre alignment and wrap text
8. Merge the cells in row 17
9. Add a document header - Activity One, Tracking Stock
10. Add a document footer – date on the left, page number in the middle and filename on the right.
11. Set the print area so only the table is printed and appears on a single page at 100%
12. Name the worksheet 'First 6 months'
13. Create a new worksheet and call it 'Second 6 months'
14. Change the tab colours of each sheet to two colours of your choice

Production	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Grand Totals
Product A	3,500	8,000	4,500	3,546	4,500	7,280	
Product B	2,500	4,678	4,462	2,654	4,468	4,654	
Total Production	6,000	12,678	8,962	6,200	8,968	11,934	54,742
Stock holding							
Carried forward							
Product A	600	204	1,829	433	94	935	
Product B	700	325	293	525	303	61	
Total Stockholding	1,300	529	2,122	958	397	996	6,302
Sales							
Product A	3,896	6,375	5,896	3,885	3,659	7,254	
Product B	2,875	4,710	4,230	2,876	4,710	3,895	
Total Sales	6,771	11,085	10,126	6,761	8,369	11,149	54,261
Stock remaining (carried forward)							
Product A	204	1,829	433	94	935	961	
Product B	325	293	525	303	61	820	
Total Stockholding	529	2,122	958	397	996	1,781	6,783

Merging Cells

To merge cells, firstly, select the range you want to merge (**NB:** If you merge cells containing data, all the data will be deleted apart from the originating cells)

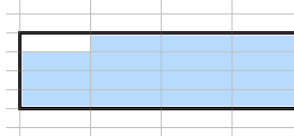


Figure 1: Cells selected for merging

Select the 'merge and center' icon  from the toolbars – and you cells will automatically merge.

If the icon appears unavailable, you can merge cells using the format cell option

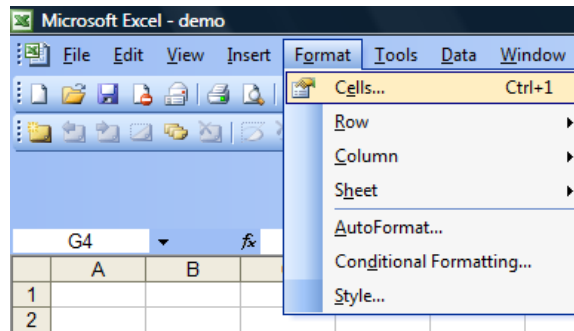


Figure 2: Format Cells Window

Select the 'Alignment' tab and check the box 'merge cells' under the text control heading

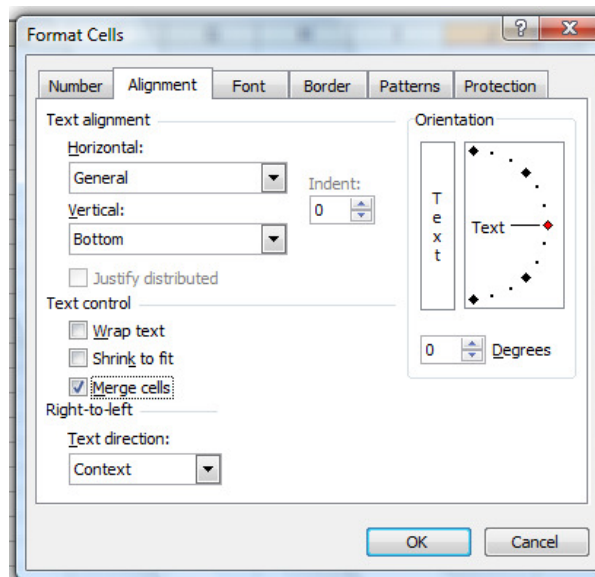


Figure 3: Merge cells selected in alignment window

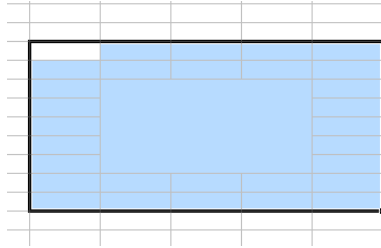


Figure 4: Cells merged

Conditional Formatting

Conditional formatting is a very useful method for highlighting specific features in Excel cells, for example, if you are looking at a large spreadsheet and wished to see all cells containing a value higher than £500. You are allowed to set up to a maximum of THREE conditions on any cell.

First – select the area you wish to add the conditional formatting to

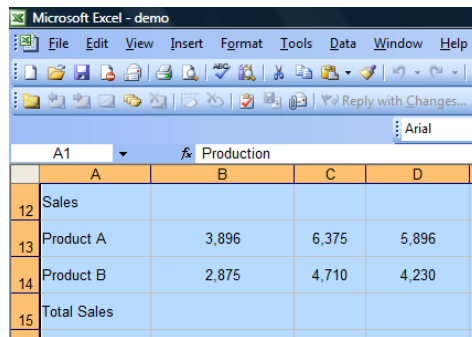


Figure 5: Selected area

Then select the Format menu, and select 'Conditional Formatting'.

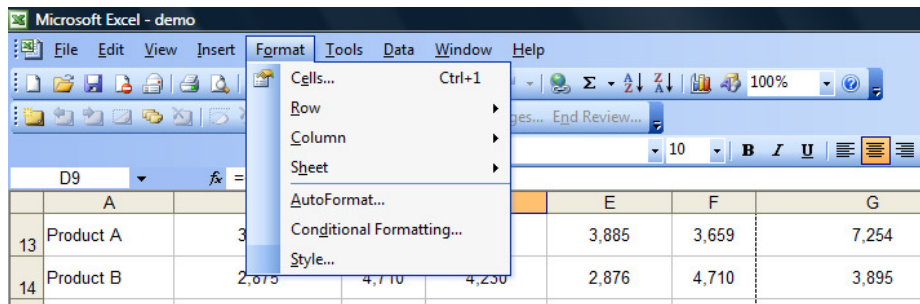


Figure 6: Conditional Formatting menu

You can now set your criteria by which you want to measure the cells for highlighting. You can choose between Cell Value and Formula

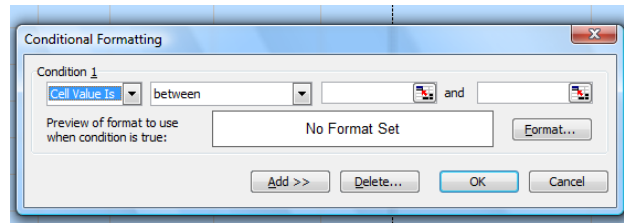


Figure 7: Conditional formatting options

And then specify your criteria:

- Between
- Not Between
- Equal to (NB: For conditional formatting purposes, a cell will be considered as 'equal to Zero' if it is blank).
- Not equal to
- Greater than
- Less than
- Greater than or equal to
- Less than or equal to

Once you have decided which formulae you wish to apply to a cell, you can then decide how you want to identify it, this could be by changing the cell colour, font colour or by placing a border around the cell.

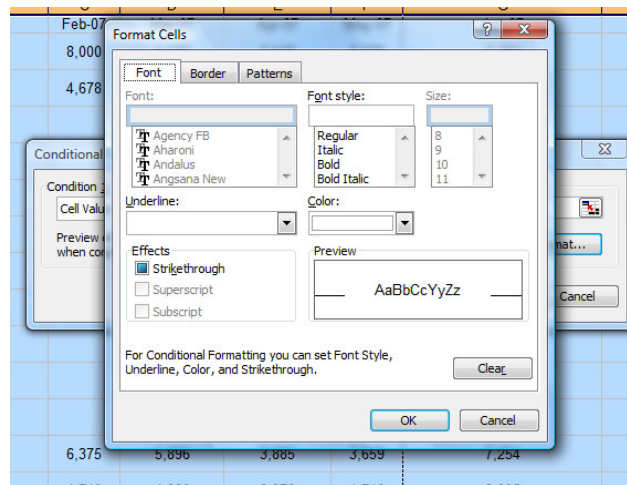


Figure 8: Conditional formatting style options

Setting Row Height

When you open Excel, all cells are set to a standard height of 12.75. You can set your row height to whatever you feel suitable, or you can set the cells so that the height will automatically adjust to fit the size of the content

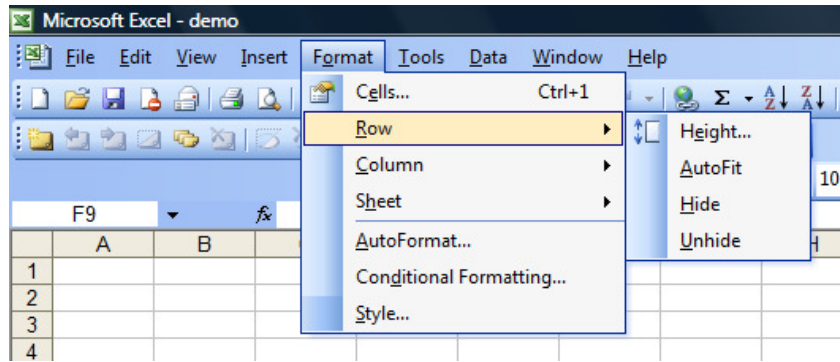


Figure 9: Row Height

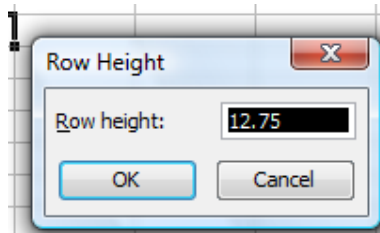


Figure 10: Change row height

Alternatively, you can select Autofit (this will automatically resize the row height to fit the contents – useful if you have multiple lines of wrapped text or are using a large font size)

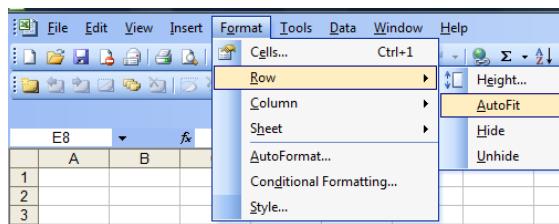


Figure 11: Autofit (Row)

Setting Column Width

When you open Excel, all cells are set to a standard width of 8.43. You can set your column width to whatever size you feel suitable (up to a maximum of 255), or you can set the cells so that the width will automatically adjust to fit the size of the content.

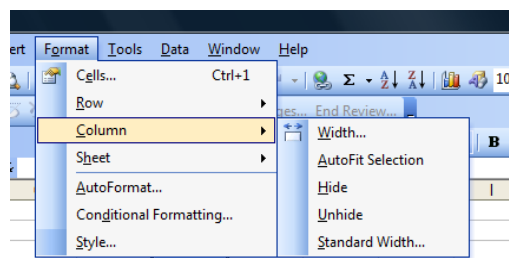


Figure 12: Column width

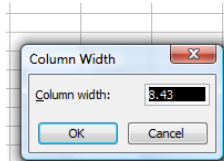


Figure 13: Column width

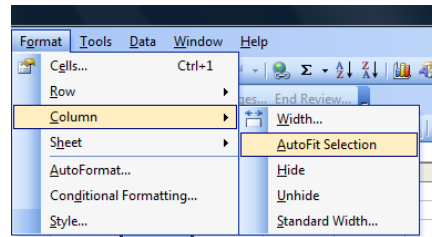


Figure 14: Autofit column width



You can 'autosize' a row or column by double-clicking the line alongside the cell you wish to resize

Cell Borders

Firstly, select the cells you want to place the borders around:

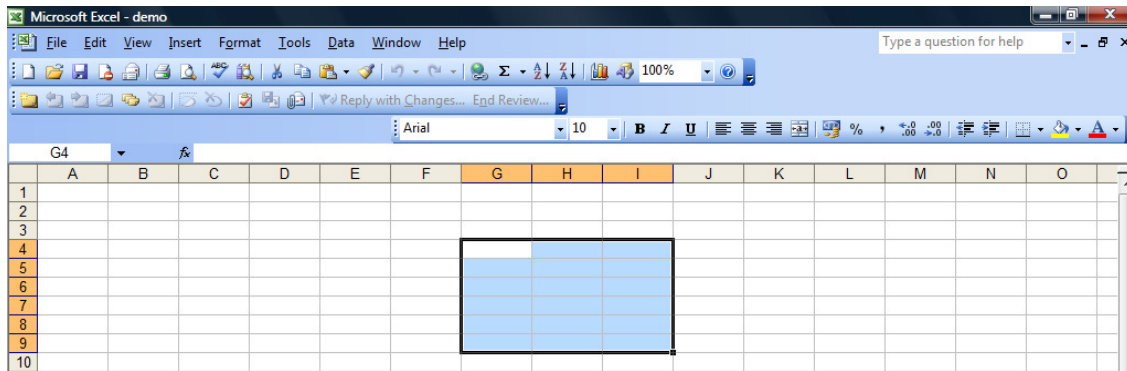


Figure 15: Excel cells selected

Then select cells from the Format menu (or press Ctrl + 1)

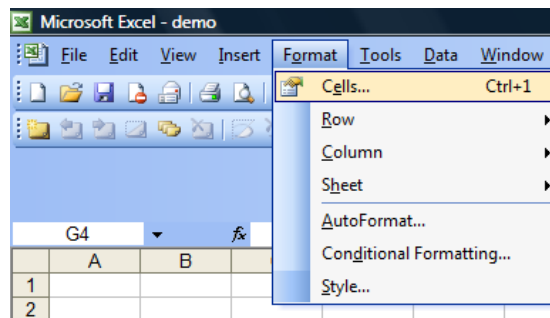


Figure 16: Format Cells

Then select Borders

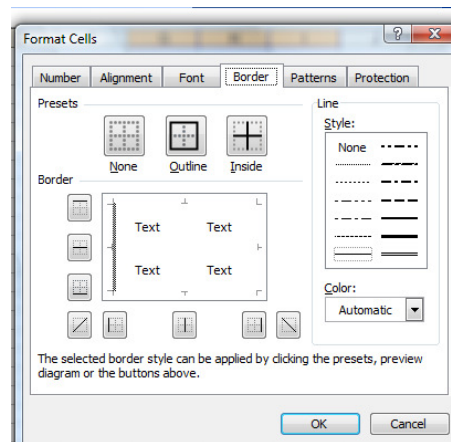


Figure 17: Border options

From here, you can change the cell borders to any of the displayed options, for example, a single border inside and a double border outside.

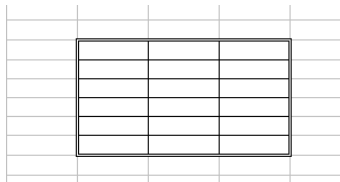


Figure 18: Excel cells with double outside border and single inside border

Editing Worksheet Tabs

If you are working in a spreadsheet with multiple worksheets, it can be useful to give them meaningful names rather than Sheet 1, Sheet 2 etc

Using the mouse, right click on the worksheet you want to change.

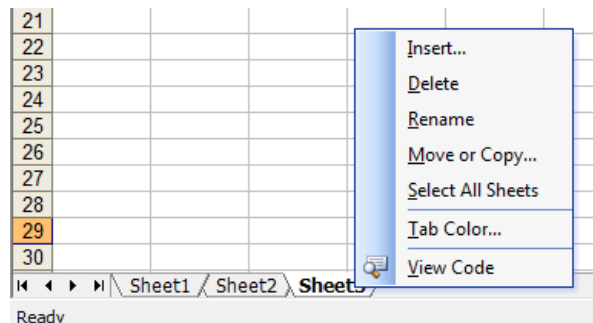


Figure 19: Worksheet editing options

You can see from this menu, you can insert, delete, rename, move or copy the worksheet, or change the tab colour.

Insert simply adds another worksheet, whereas delete will remove the selected one (NB: if you delete a worksheet, this cannot be undone). You will always be presented with a window asking you to confirm you wish to delete the sheet.

Here, we have selected 'Rename' and changed Sheet 3 to 'Production A'

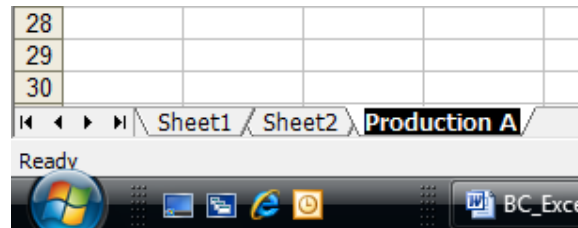


Figure 20: Renamed work sheet

And we have changed the tab colour to pink

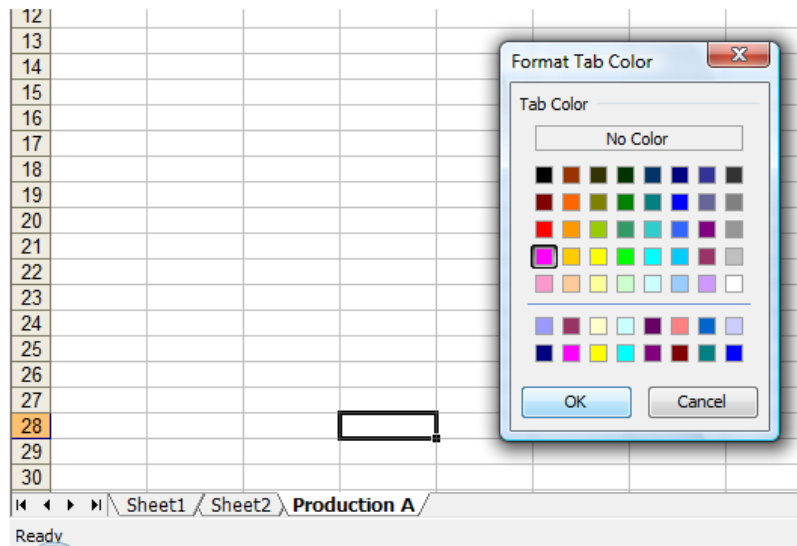


Figure 21: Changing the colour of a worksheet tab

NOTE: You will not see the full effect of the tab colour change until you move to a different worksheet

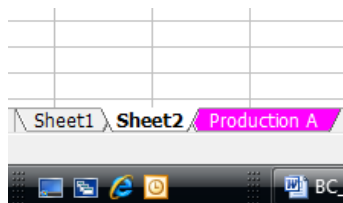
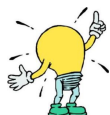


Figure 22: A coloured tab



You can edit a worksheet tab by double clicking on it using the left mouse button

Headers and Footers

Headers and Footers can be useful ways to identify and track documents and enhance their professionalism. They are simple to do in Excel, but can be restrictive in terms of positioning.

To add a header and / or footer, select 'Page Setup' from the file menu

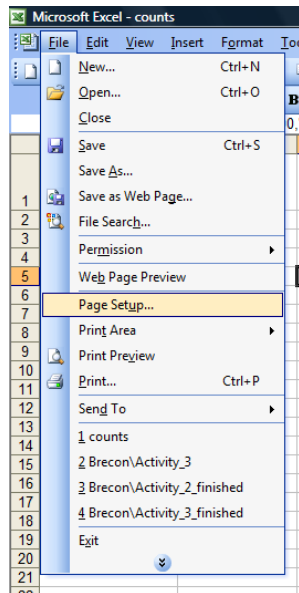


Figure 23: Page Setup on File menu

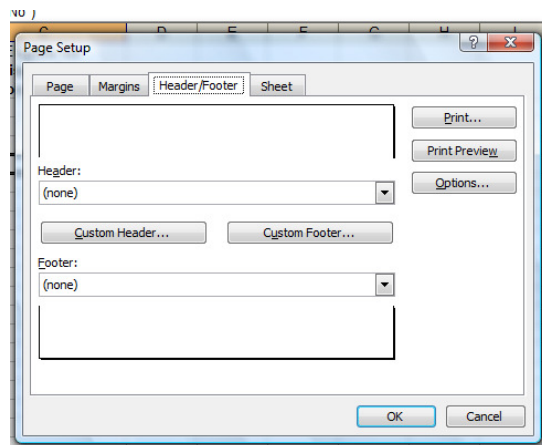


Figure 24: Select the Header / Footer Tab

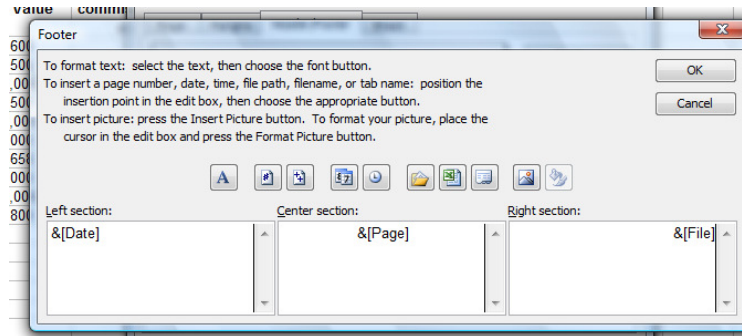


Figure 25: Footer Set-up

13/08/2008	1	counts
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Figure 26: Footer output

AutoSum Options

The AutoSum function is most commonly associated with calculating the total of the numbers in the adjacent cells (above or alongside)

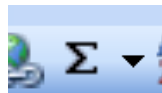


Figure 27: Autosum icon

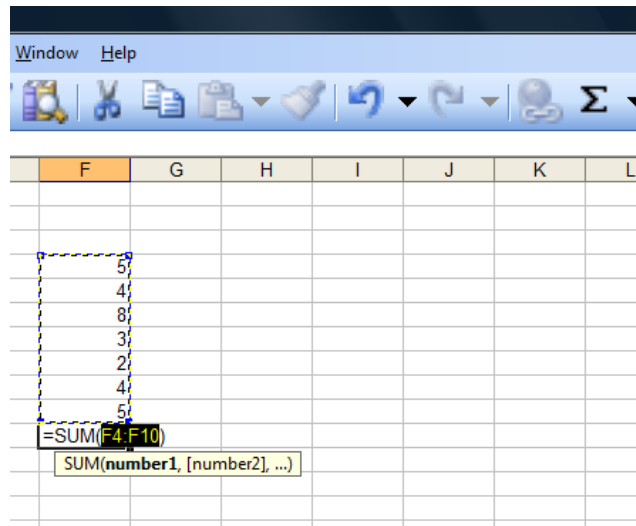


Figure 28: Auto-sum of numbers

As well as adding together rows of numbers, by using the drop down menu (activated by the arrow) alongside the AutoSum icon, it will also calculate (default setting) the

- Minimum number in a range
- Maximum number in a range
- Count how many numbers are in a range and
- Work out the average of a range

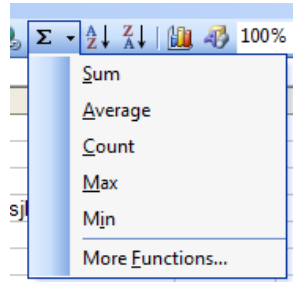


Figure 29: AutoSum options

Activity Two

Activity 2 tests your use of the most common AutoSum functions. Activity 2 Finished shows what your answers should be.

Linking Worksheet Data

A useful feature of Excel is its ability to automatically update data copied from another cell or worksheet; this avoids the need to revise large amounts of information if, for example, your sales projections or production capacity for a specific product changes.

The simplest way to add a single figure is to enter the + sign in the cell you want to include the total, and then go to the worksheet containing the information you require, and then simply press the enter key

6	Area 4	£411,972	
7	Total Sales	£1,170,388	
8			
9			
10	Products by area	Product A	
11	Area 1	£62,236	
12	Area 2	+	
13	Area 3		
14	Area 4		
15			

Figure 30: Setting up the cell to automatically copy information

	J	K	L	M	N
07	Sep-07	Oct-07	Nov-07	Dec-07	
59	3,489	5,457	6,984	4,875	62,236
54	9,997	1,247	6,476	8,812	
64	2,245	4,566	3,368	5,478	
77	6,478	7,897	6,589	9,987	
354	22,209	19,167	23,417	29,152	

Figure 31: Selecting the cell the data is coming from

You can also take this transfer of information a step further, and use features such as Autosum (total, count, average, and minimum, maximum) in the same manner

So a formula for the total of product three for Area 1 would read '=SUM('Area 1'!B5:M5)'

Activity Three

Activity 3 is a spreadsheet of five pages with annual sales of four products in four different areas. There is also an Activity 3 finished spreadsheet showing how your spreadsheet should look when completed.

Where the spreadsheet contains shaded areas, use appropriate formulae to fill the missing amounts

- Use conditional formatting to highlight monthly sales below £1000 and above £7500. When you have finished, try changing different amounts to see what happens to the cell
- Change row heights to 25 – and titles to AutoFit
- Colour the individual workbook sheets to colours of your choice

Count Functions

Countif

Countif can be a very useful function if you need to know the number of items that meet a certain criteria within a lot of data

A Countif Formula could look like this - =COUNTIF(B1:B14,"<1200")

Here – we want to know how many numbers in a range are below 1200, Five are below

654
3548

	24154
	3214
	23154
	1
	587
	3547
	2178
	21783
	2477
	1472
	145
	999
Countif	5

Some people with analytical minds will often try to input relatively complex formulae in a cell manually; this can be messy, complicated and frustrating. Excel offers a function insertion facility on the Insert menu.

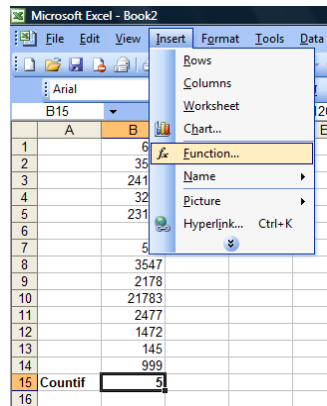


Figure 32: Function Menu

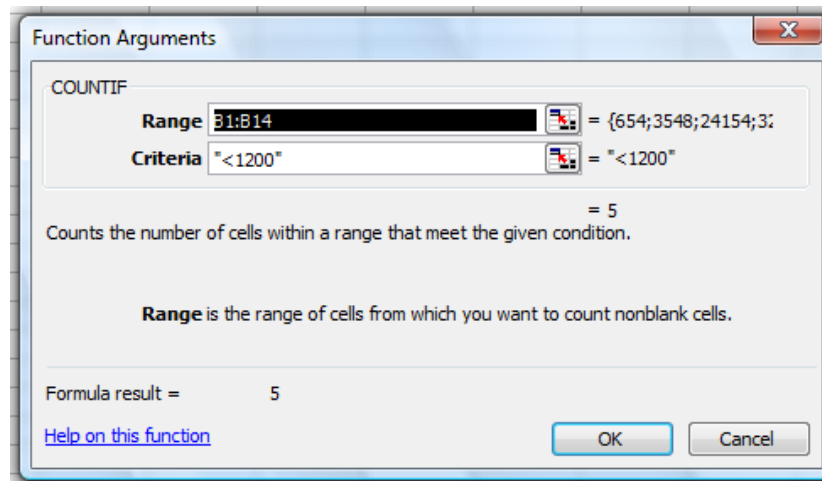


Figure 33: Easy function insert interface (Countif)

Counta

Counta will count any cell in a range irrespective of whether it contains numbers or text

	654
	Test
	sdf
	sdf
	xb
	1
	zv
	2178
	zx
	2477
	1472
	145
	999
Counta	13

A Counta formula could look like this: =COUNTA(B1:B14)

IF Function

The IF function can be very useful if you are trying to measure eligibility criteria, for example, if you have a sales force team who are paid commission for sales over a certain amount.

	Sales Value	Eligible for commission (i.e. sales over 5,500)
Salesman 1	£3,600	No
Salesman 2	£8,500	Yes
Salesman 3	£16,000	Yes
Salesman 4	£7,500	Yes
Salesman 5	£16,000	Yes
Salesman 6	£3,000	No
Salesman 7	£1,658	No
Salesman 8	£8,000	Yes
Salesman 9	£16,000	Yes
Salesman 10	£1,800	No

The above formula could look like this - =IF(B3 > 5500,"Yes","No")

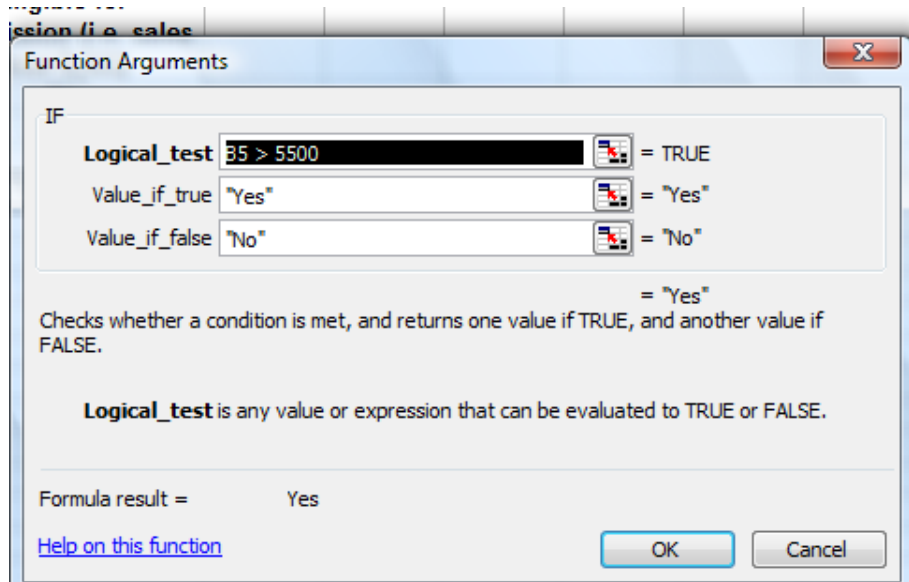


Figure 34: If function

Logical Test:	We are testing each cell to establish if it is above 5,500 in Value
Value if True:	If the value is above 5,500, then the sales person is eligible for a bonus
Value if False:	If the value is below 5,500, then the sales person is not eligible for a bonus

Keyboard Shortcuts

Keyboard	Function
F1	Help function
F4	Repeat last action
F7	Spell check
F8	Start selection (use arrow keys to expand selection)
Ctrl + A	Select the entire worksheet
Ctrl + B	Bold
Ctrl + C	Copy
Ctrl + D	Copy the contents of the cell above
Ctrl + F	Find
Ctrl + G	Go to a specific cell reference
Ctrl + H	Search and Replace
Ctrl + I	Italics
Ctrl + K	Insert a hyperlink
Ctrl + L	Create a List
Ctrl + N	Start a new workbook
Ctrl + O	Open an existing document
Ctrl + P	Print
Ctrl + S	Save
Ctrl + U	Underline
Ctrl + V	Paste
Ctrl + W	Close Workbook
Ctrl + X	Cut
Ctrl + Y	Repeat last action
Ctrl + Z	Undo last action
Ctrl + 1	Format cells menu
Ctrl + Home	Return to the start of the worksheet
Ctrl + End	Go to the end of the worksheet
Home	Go to the start of the row
End	Go to the end of the row
Shift + Arrow key (any direction)	Start selection
Alt + Enter	Start a new line in a cell