

Excel Fundamentals



Contents

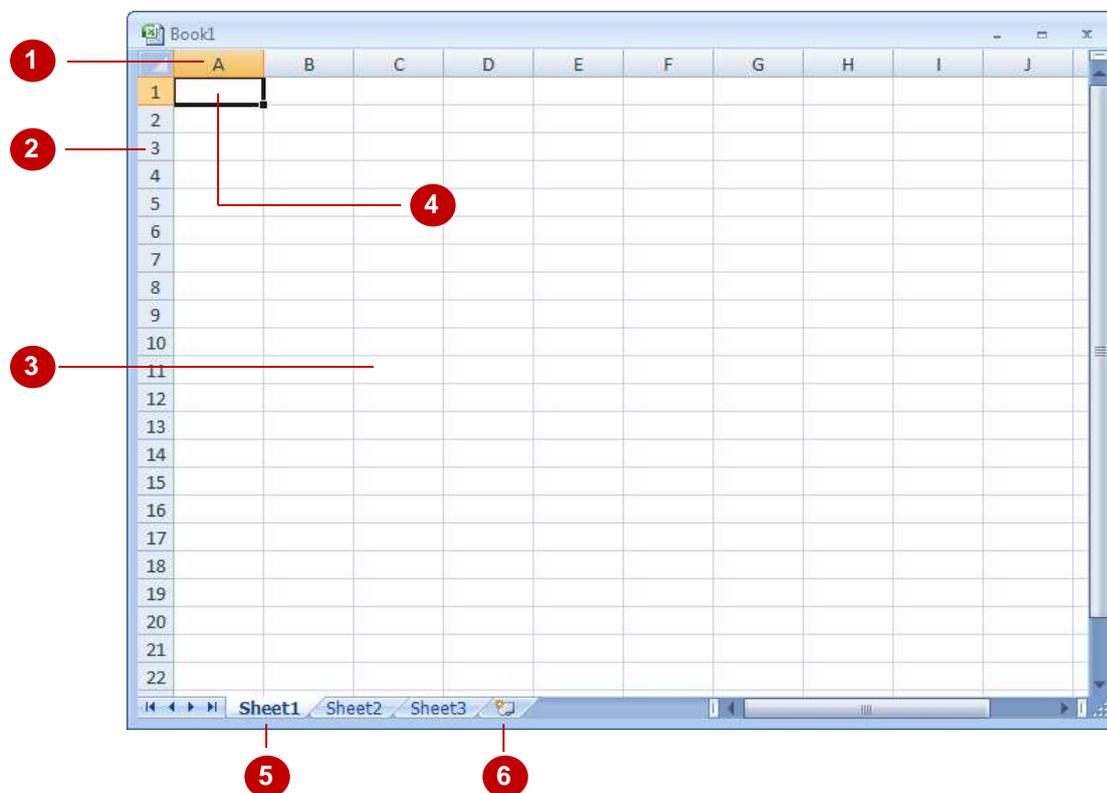
Understanding Workbooks	1
Navigating in a File	2
Typing Text or Numbers Into A Worksheet	3
Typing Simple Formulas In A Worksheet	4
Filling A Series	5
Inserting And Deleting Worksheets	6
Copying A Worksheet	7
Renaming A Worksheet	8
Moving or Copying A Sheet To Another Workbook	9
Changing Worksheet Tab Colours	10
Grouping Worksheets	11
Freezing Rows And Columns	12
Selecting Ranges	13
Selecting Rows	14
Selecting Columns	15
Understanding Formatting	16
Applying General Formatting	17
Changing Fonts	18
Changing Font Size	19
Understanding Borders	20
Applying A Border To A Range	21
Wrapping And Merging Text	22
PRACTICE EXERCISE	23
PRACTICE EXERCISE	24
PRACTICE EXERCISE	25
Understanding Functions	26
Using The SUM Function To Add	27
Calculating An Average	28
Finding A Minimum Value	29
Common Error Messages	30
PRACTICE EXERCISE	31
Understanding Quick Analysis	32
Quick Formatting	33
Quick Charting	34
Quick Totals	35
Quick Sparklines	36
Quick Tables	37
Practice Exercise	38
Printing A Worksheet	39

The Charting Process	40
Choosing The Right Chart	41
Using A Recommended Chart	42
Creating A New Chart From Scratch	43
Working With An Embedded Chart.....	44
Resizing A Chart	45
Repositioning A Chart.....	46
Printing An Embedded Chart.....	47
Creating A Chart Sheet.....	48
Changing The Chart Type	49
Changing The Chart Layout	50
Changing The Chart Style	51
Printing A Chart Sheet	52
Embedding A Chart Into A Worksheet.....	53
Deleting A Chart	54
PRACTICE EXERCISE	55
PRACTICE EXERCISE SAMPLE	56

UNDERSTANDING WORKBOOKS

In Microsoft Excel the data you enter, whether it consists of numbers, text, or formulas, is stored in a file known as a **workbook**. Workbooks are just like huge electronic books with pages (or

sheets) that have been ruled into columns and rows. Before using Excel it is helpful to know what the various parts and elements that make up a workbook are.



- 1 A worksheet (or page) in a workbook contains 16,384 **columns** that are labelled using letters of the alphabet. The first column in a worksheet is labelled column **A**, while the last is labelled **XFD**
- 2 A worksheet (or page) in a workbook contains 1,048,576 **rows** that are labelled using numbers from 1 to 1,048,576
- 3 Where a column and row intersect we get what is known as a **cell**. You enter your data into these cells. Each cell in a worksheet can hold up to 32,767 characters – although it would be unrealistic to ever push it this far. Cells are referred to by their column and row labels. For example, in the screen above the cell we are pointing to is **C11** – this reference is known as the **cell address** and is most important as it is frequently used in commands and formulas
- 4 When you start typing something, you want it to appear somewhere in the worksheet. As a consequence when the Status Bar shows **Ready** mode, at least one cell in the worksheet will be highlighted – this is known as the **active cell**. In the screen above, the active cell is cell **A1** – notice that the column label and the row label also appears coloured to indicate the active cell. You can have more than one active cell – when this occurs you have what is known as a **range**
- 5 A workbook (as you would expect) is made up of pages known as **worksheets**. You can have as many sheets in a workbook as your computer resources can accommodate. As a default, a new blank workbook normally has 3 worksheets labelled *Sheet1*, *Sheet2*, and *Sheet3*. Of course these labels are pretty boring and meaningless and can be changed to something more relevant
- 6 The **Insert Worksheet** button here will insert another worksheet into the current workbook should you need it

NAVIGATING IN A FILE

Arrow Keys	Move one cell to the right, left, up or down
Tab	Move once cell to the right
Ctrl+Home	To beginning file
Ctrl+End	To end of typed information
Home	Beginning of a line
End	End of a line
Page Down	Down one screen
Page Up	Up one screen
F5	To a specific page
Scroll bars	Appear at the right and on the bottom of the screen. You may click the scroll arrows, drag the scroll box or click the scroll bar to move through the document.

TYPING TEXT OR NUMBERS INTO A WORKSHEET

Generally when you start a new spreadsheet project, the first task is to enter some headings into rows and columns. To type anything into a worksheet you need to make the cell into which

you wish to enter the data active. This can be done in a number of ways but the most common is to click in it first before typing.

Try This Yourself:

Before you begin ensure that there is a blank workbook on the screen...

- 1 Click in cell **A3** to make this the active cell, type **Garden Settings** and press **Enter**

*When you press **Enter** the next cell down automatically becomes the active cell. By the way, even though the text looks like it is in cells A3 and B3 it really only is in cell A3 – since there is nothing in B3, Excel allows the spill over to be displayed giving the illusion it is in 2 cells...*

- 2 Type **Pool Covers** and press **Enter**
- 3 Repeat the above steps and enter the remaining text in column **A** as shown

- 4 Click in cell **B2** to make this the active cell, type **UK** and press **Tab**

*When you press **Tab** the cell to the right becomes the active cell...*

- 5 Enter the remaining text in row **2** as shown

	A	B	C	D
1				
2				
3	Garden Settings			
4				
5				
6				
7				

1

	A	B	C	D
1				
2				
3	Garden Settings			
4	Pool Covers			
5				
6				
7				

2

	A	B	C	D	E
1					
2					
3	Garden Settings				
4	Pool Covers				
5	Fountains				
6	Large Tubs				
7	Fencing				
8					
9					

3

	A	B	C	D	E
1					
2		UK			
3	Garden Settings				
4	Pool Covers				
5	Fountains				
6	Large Tubs				
7	Fencing				
8					
9					

4

	A	B	C	D	E	F
1						
2		UK	AUS	NZ	SPAIN	
3	Garden Settings					
4	Pool Covers					
5	Fountains					
6	Large Tubs					
7	Fencing					
8						

5

For Your Reference...

To **save a new document**:

1. Click on the **File Tab** and select **Save As**
2. Locate the storage folder in the **Navigation pane**
3. Type a **File name** and click on **[Save]**

Handy to Know...

- In the exercise above we have named the workbook **Garden Department Sales** and filed it in **C:\Course Files for Excel 2010**. Each time you start Excel it will most likely assume you want to file your workbooks in a folder called **Documents** which is associated with the user name you use on the computer.

TYPING SIMPLE FORMULAS IN A WORKSHEET

The whole idea behind Excel is to get it to perform calculations. In order for it to do this you need to type **formulas** in the worksheet. Usually these formulas reference existing numbers, or

even other formulas, already in the worksheet using the cell addresses of these numbers rather than the actual value in them. Formulas must be typed beginning with an equal sign (=).

Try This Yourself:

Continue using the previous file with this exercise...

- 1 Click in cell **B8** to make this the active cell
- 2 Type **=B3+B4+B5+B6+B7** and examine what is happening on the screen
- 3 Press **Tab** to enter the formula and move to the next cell

Notice that a calculation has now been performed. We have entered a formula in B8 that says "add the values in B3, B4, B5, B6, and B7 and show them here"...

- 4 Ensure that **C8** is the active cell, type **=SUM(C3:C7)** and press **Tab**

This is an alternative type of formula known as a "function". Again a calculation will appear in the cell...

- 5 Click in cell **B8** and notice that the formula you typed appears in the Formula Bar, while the result of the calculation appears in the worksheet
- 6 Repeat step 5 with cell **C8**
- 7 Click on the **File Tab**  and select **Save** to save the additions that have been made

2

	A	B	C	D	E
1					
2		UK	AUS	NZ	SPAIN
3	Garden Setti	17200	17850	18100	63598
4	Pool Covers	21412	25942	24944	53624
5	Fountains	20824	31288	37456	48569
6	Large Tubs	20722	29782	35963	25126
7	Fencing	49254	64750	125811	75863
8		=B3+B4+B5+B6+B7			
9					

3

	A	B	C	D	E
1					
2		UK	AUS	NZ	SPAIN
3	Garden Setti	17200	17850	18100	63598
4	Pool Covers	21412	25942	24944	53624
5	Fountains	20824	31288	37456	48569
6	Large Tubs	20722	29782	35963	25126
7	Fencing	49254	64750	125811	75863
8		129412			
9					
10					

5

	A	B	C	D	E
1					
2		UK	AUS	NZ	SPAIN
3	Garden Setti	17200	17850	18100	63598
4	Pool Covers	21412	25942	24944	53624
5	Fountains	20824	31288	37456	48569
6	Large Tubs	20722	29782	35963	25126
7	Fencing	49254	64750	125811	75863
8		129412	169612		
9					

6

	A	B	C	D	E
1					
2		UK	AUS	NZ	SPAIN
3	Garden Setti	17200	17850	18100	63598
4	Pool Covers	21412	25942	24944	53624
5	Fountains	20824	31288	37456	48569
6	Large Tubs	20722	29782	35963	25126
7	Fencing	49254	64750	125811	75863
8		129412	169612		
9					

For Your Reference...

To **enter a formula**:

1. Click the cell pointer on the desired cell and type the formula commencing with =
2. Press **Enter**, an arrow key or **Tab** to confirm the data entry and to move the cell pointer to another cell

Handy to Know...

Operators

- | | |
|---|-----------------------|
| + | Addition |
| - | Subtraction |
| * | Multiplication |
| / | Division |

FILLING A SERIES

A **series** refers to a sequence of ordered entries in adjacent cells, such as the days of the week or months of the year. The **fill** technique can be used to create these in a worksheet for you,

reducing the amount of time taken for data entry, and ensuring that the spelling is correct. Excel provides days and months as special built-in **series** that you can access.

Try This Yourself:

Open
File

Before starting this exercise you **MUST** open the file E707 Filling_1.xlsx...

- 1 Click on cell **A4**
- 2 Move the mouse pointer to the small square (the **fill handle**) at the bottom right corner of the cell until the mouse pointer appears as a thin, black cross
- 3 Drag the mouse pointer to column **F**
Excel will fill the range with the first six months of the year...
- 4 Click on cell **A5** and repeat steps 2 and 3 to create the series of months with their full names
You can also fill more than one row at a time...
- 5 Select the range **A6:A12**
- 6 Repeat steps 2 and 3 to fill across to column **F**
- 7 Examine each of the series created by the filling process

2

	A	B	C	D	E	F	G
1							
2							
3	Normal Series						
4	Jan						
5	January						
6	Mon						
7	Monday						
8	Quarter 1						
9	Qtr 1						
10	Q1						
11	1st Day						
12	Serial 002						
13							

3

	A	B	C	D	E	F	G
1							
2							
3	Normal Series						
4	Jan	Feb	Mar	Apr	May	Jun	
5	January						
6	Mon						
7	Monday						
8	Quarter 1						
9	Qtr 1						
10	Q1						
11	1st Day						
12	Serial 002						
13							

6

	A	B	C	D	E	F	G
1							
2							
3	Normal Series						
4	Jan	Feb	Mar	Apr	May	Jun	
5	January	February	March	April	May	June	
6	Mon	Tue	Wed	Thu	Fri	Sat	
7	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
8	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	
9	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	
10	Q1	Q2	Q3	Q4	Q1	Q2	
11	1st Day	2nd Day	3rd Day	4th Day	5th Day	6th Day	
12	Serial 002	Serial 003	Serial 004	Serial 005	Serial 006	Serial 007	
13							
14	Growth Series						

For Your Reference...

To **fill** a **series**:

1. Click on the first cell in the series
2. Drag from the fill handle across as many columns as required

Handy to Know...

- As you drag the fill handle across, a **tool tip** appears below the fill pointer displaying the current value in the series. This is really handy when you want to end on a particular month, day or value.

INSERTING AND DELETING WORKSHEETS

Once you've decided on a structure for your workbook, you may find that there are some worksheets that can be **deleted**. Alternatively, you may find that you need additional blank

worksheets **inserted**. However, remember that deletion of worksheets is permanent and can't be undone using **Undo**, so always save your workbook before making these changes.

Try This Yourself:

Open File

Before starting this exercise you **MUST** open the file *E1324 Worksheet Techniques_1.xlsx...*

1 Examine the workbook – it currently contains one worksheet named **Sheet1**

2 Click on the **New Sheet** icon at the end of the worksheet tabs

A new worksheet named *Sheet2* will be inserted. You can also use the keyboard shortcut...

3 Press **Shift + F11** to insert another new worksheet

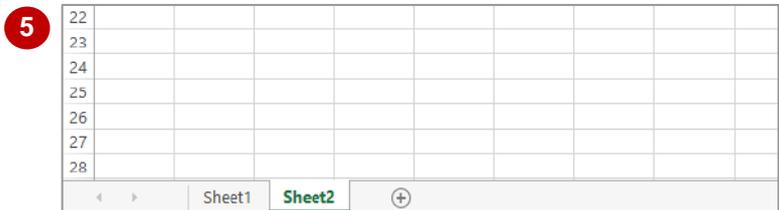
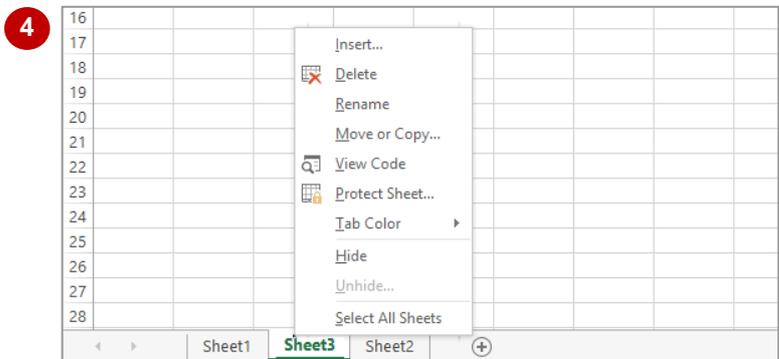
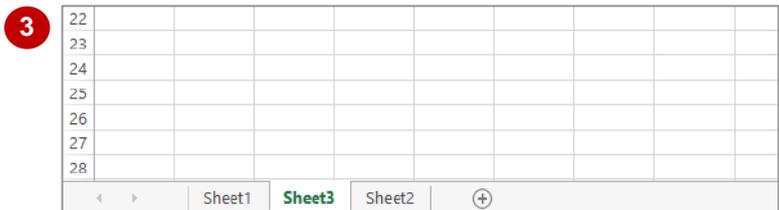
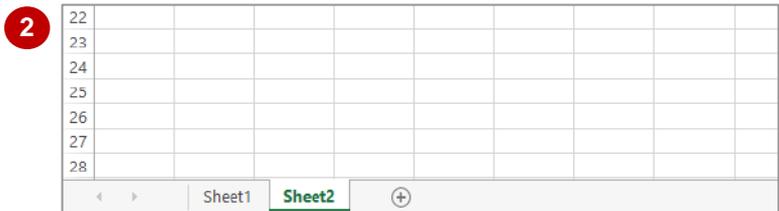
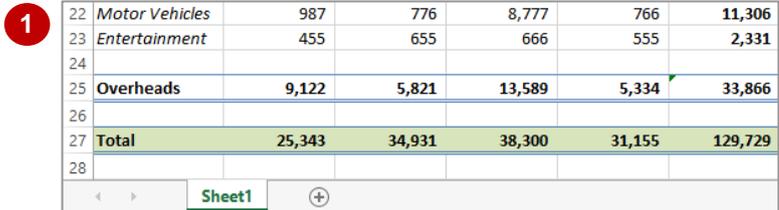
This sheet is named *Sheet3* and is inserted before the currently selected sheet. Now let's delete a sheet...

4 Right-click on the **Sheet3** worksheet tab to display the shortcut menu

5 Select **Delete** to remove the worksheet

As the worksheet contains no data, the sheet will be deleted immediately. If a worksheet contains data, Excel will ask you to confirm your actions...

6 Repeat steps 4 and 5 to delete **Sheet2**



For Your Reference...

To **insert** a **new worksheet** into a **workbook**:

- Click on the **New Sheet** icon to the right of the worksheet tabs

To **delete** a **worksheet** from a **workbook**:

- Right click on the worksheet tab, then select **Delete**

Handy to Know...

- To insert a worksheet between existing worksheets, right-click on the worksheet tab before which you want to insert a new sheet, then click on **Insert** to display the **Insert** dialog box. Select **Worksheet** and click on **[OK]**.