

**Guided Computer Tutorials**

**Learning  
Microsoft®  
Excel®  
2007**

**By Greg Bowden**

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# Learning Microsoft Excel 2007

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## Module 2 Project

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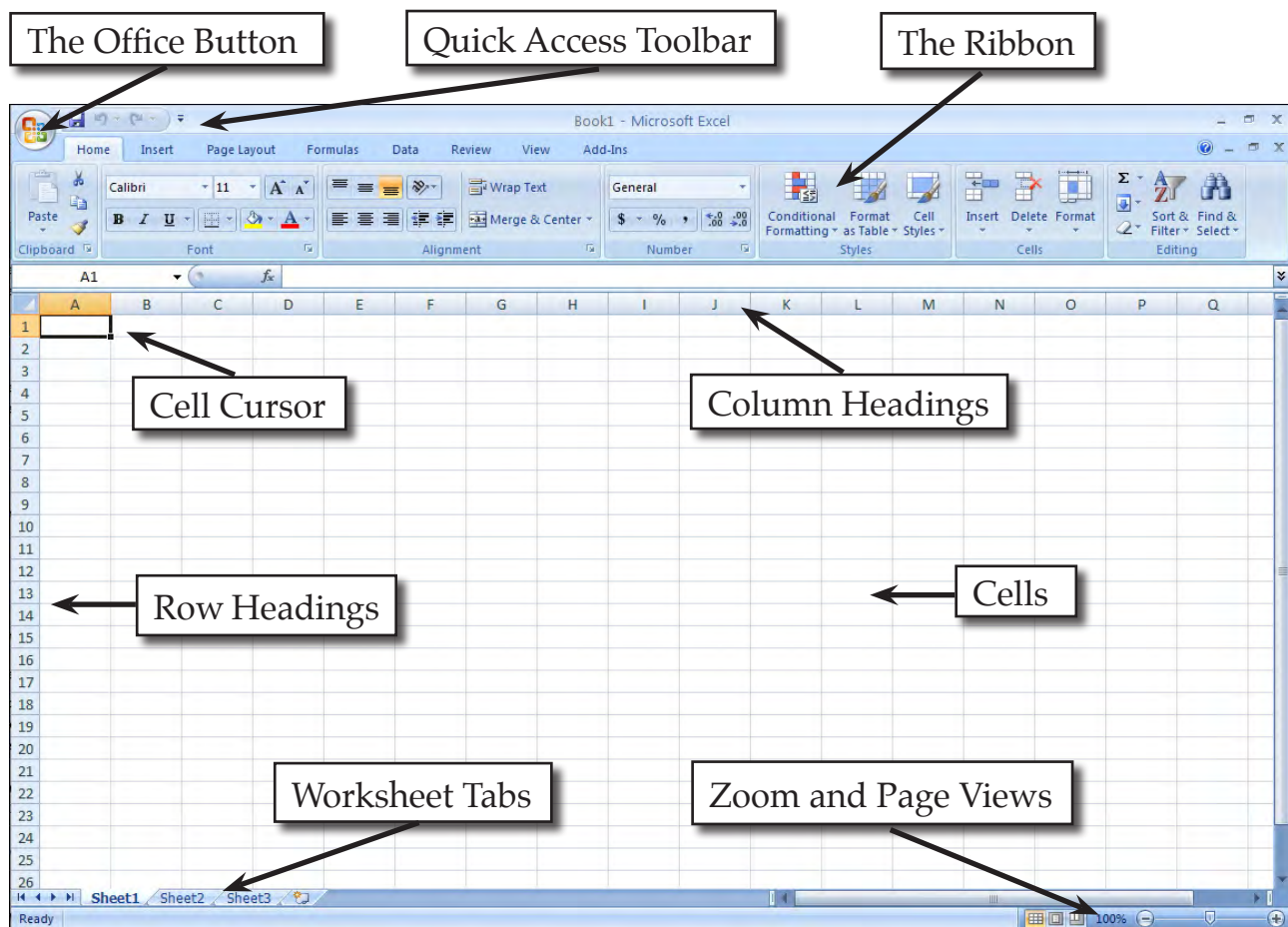


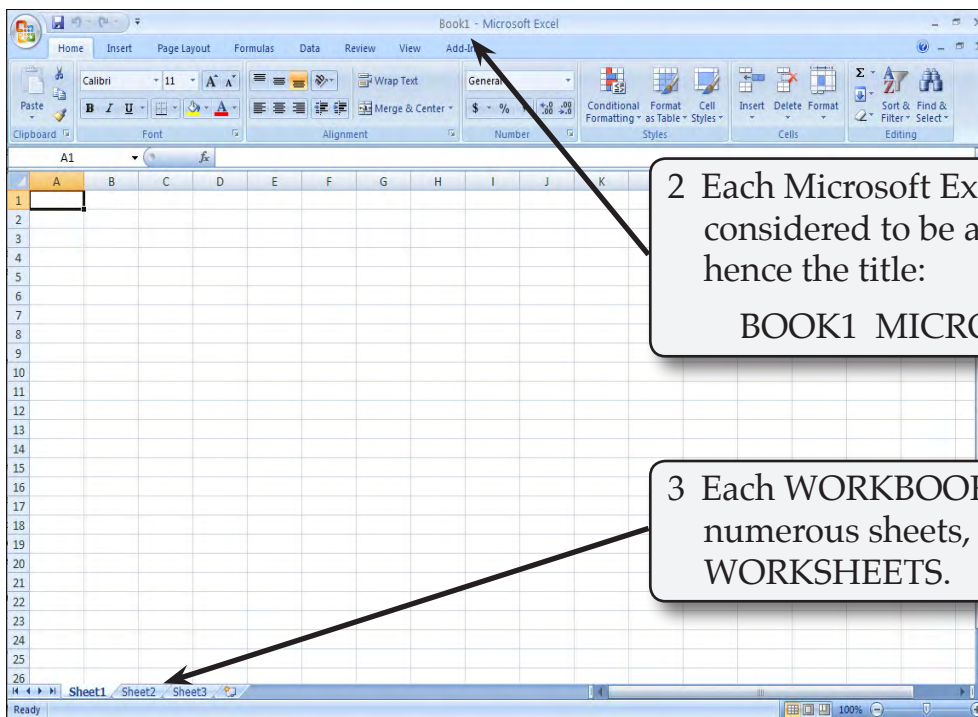
# Introduction to Microsoft Excel

A spreadsheet is a computer program that turns the computer into a very powerful calculator. Headings and comments can be entered along with detailed formulas. The spreadsheet screen is divided into **ROWS** and **COLUMNS**; the intersection between a row and a column is termed a **CELL**. Usually only a small section of the overall spreadsheet is displayed on the screen.

## The Microsoft Excel Screen

- 1 Load Microsoft Excel and you should receive the following screen. Read through its labelled sections.

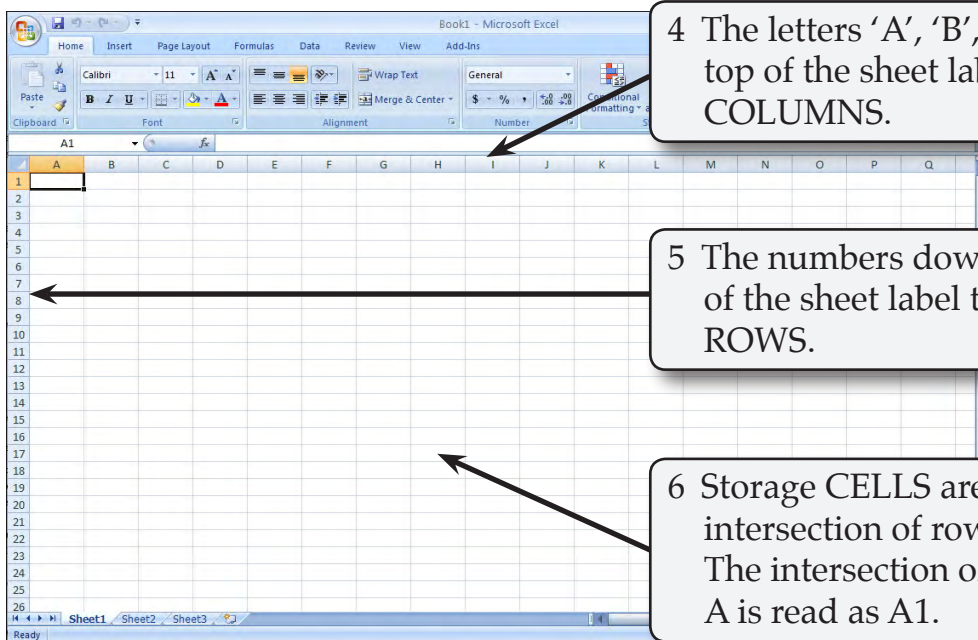




2 Each Microsoft Excel file is considered to be a **WORKBOOK** hence the title:

**BOOK1 MICROSOFT EXCEL**

3 Each **WORKBOOK** can have numerous sheets, called **WORKSHEETS**.



4 The letters 'A', 'B', 'C', etc. across the top of the sheet label the spreadsheet **COLUMNS**.

5 The numbers down the left edge of the sheet label the spreadsheet **ROWS**.

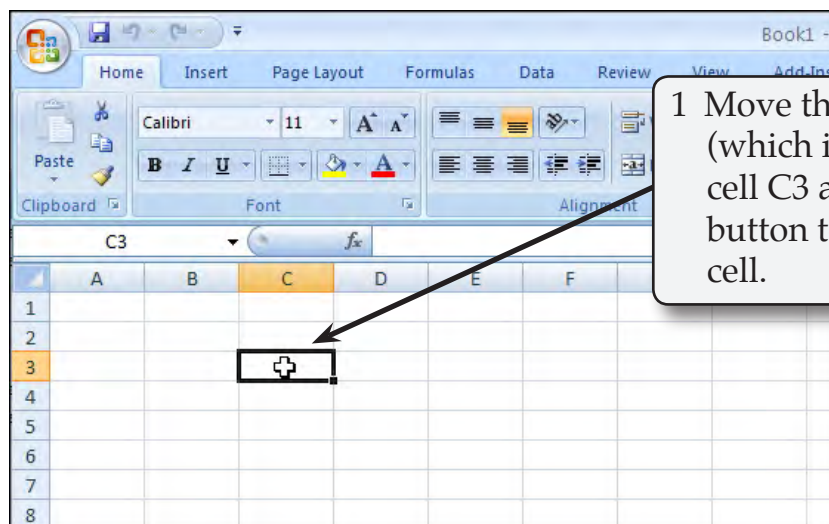
6 Storage **CELLS** are found at the intersection of rows and columns. The intersection of row 1 and column A is read as A1.

**NOTE:** At cell A1 you should see a rectangular bar. This bar is called the **CELL CURSOR** and it can be positioned over any storage cell. When you first start up Microsoft Excel the cell cursor will be positioned at cell A1.

## Moving the Cursor

The cursor can be moved in a number of different ways.

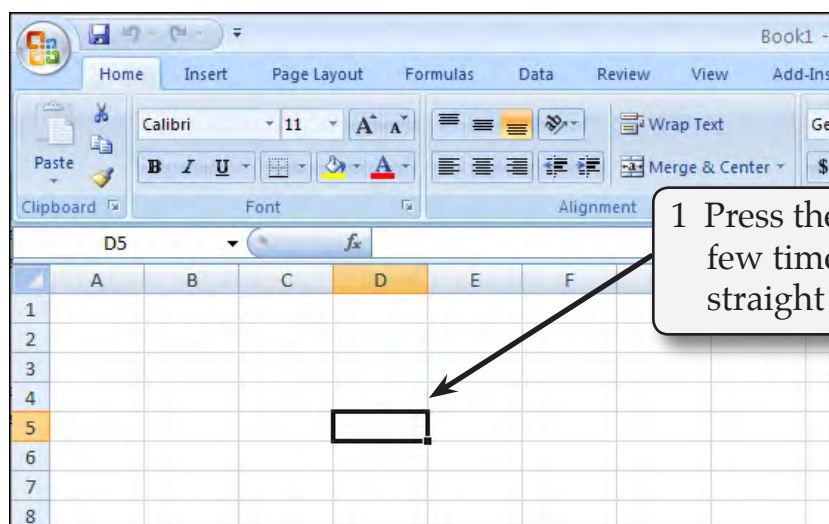
### A Using the Mouse



1 Move the mouse so that the pointer (which is a solid cross-hair) is over cell C3 and click the left mouse button to move the *cursor* to this new cell.

2 Try clicking the mouse button with the *cursor* over cell B4, then cell D2.

### B Using the Arrow Keys

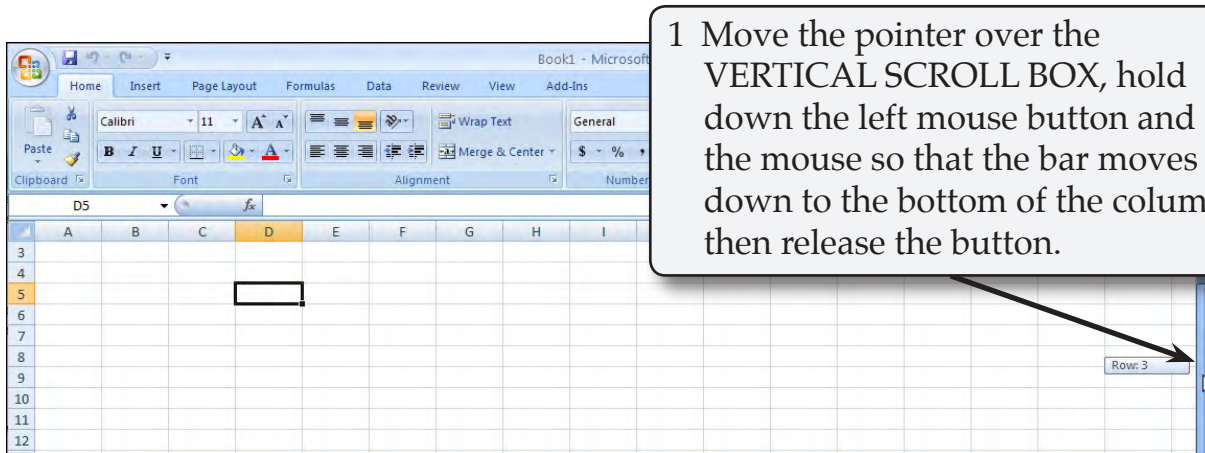


1 Press the DOWN ARROW KEY a few times. The cursor should move straight down.

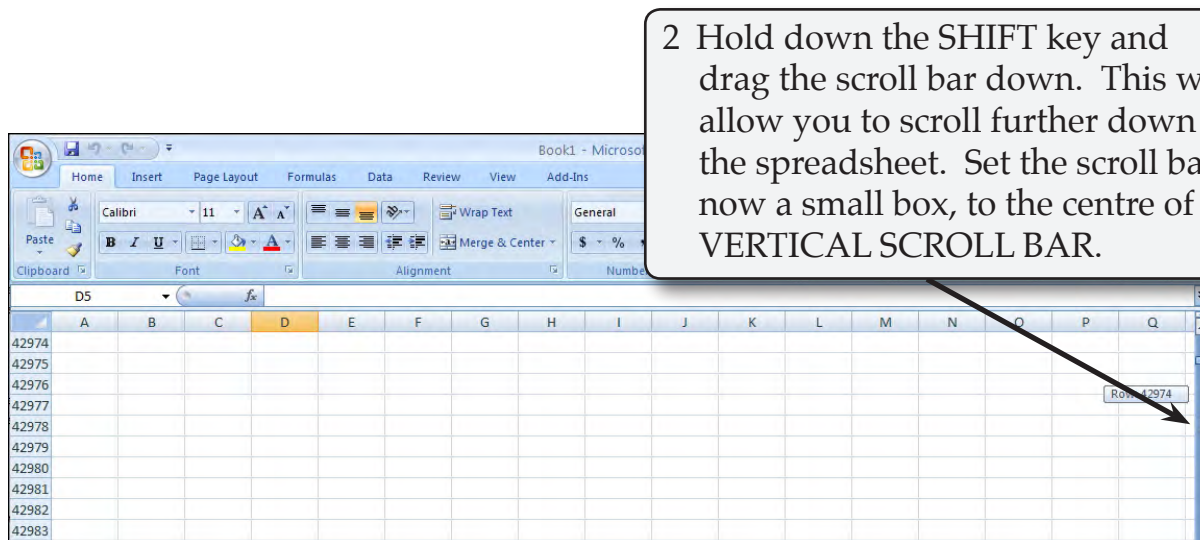
2 Try the other ARROW KEYS.

## C Using the Scroll Bars

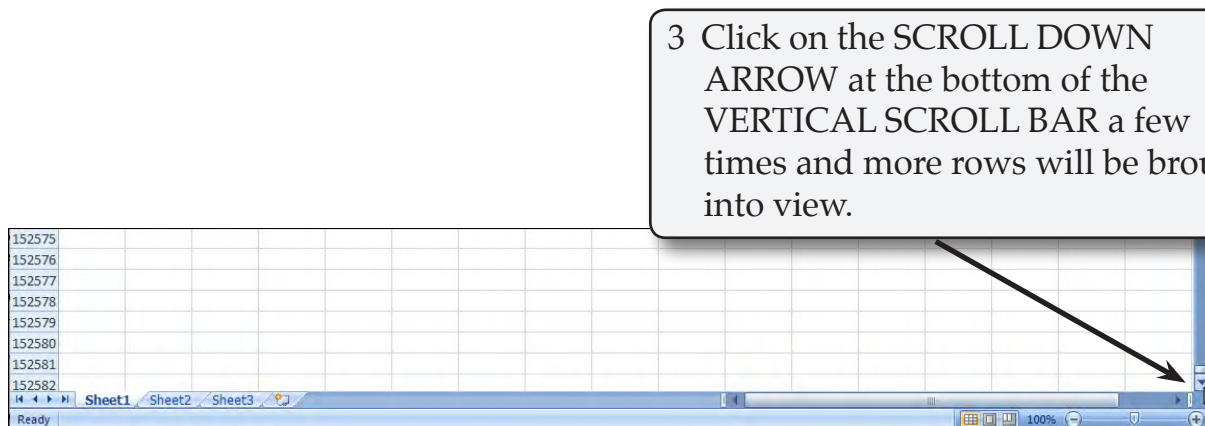
To move over larger distances, the HORIZONTAL and VERTICAL SCROLL BARS are used. The rectangular box in each bar is the SCROLL BOX.



1 Move the pointer over the VERTICAL SCROLL BOX, hold down the left mouse button and drag the mouse so that the bar moves down to the bottom of the column, then release the button.



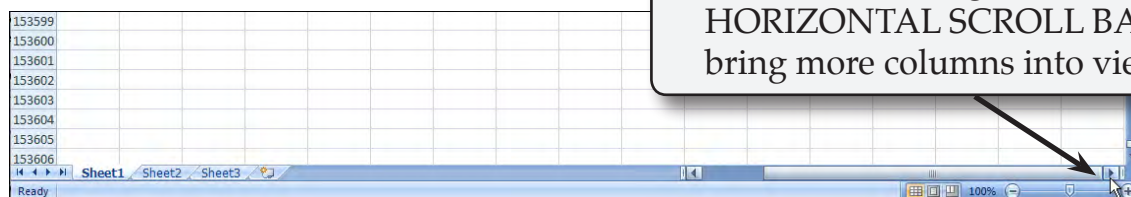
2 Hold down the SHIFT key and drag the scroll bar down. This will allow you to scroll further down the spreadsheet. Set the scroll bar, now a small box, to the centre of the VERTICAL SCROLL BAR.



3 Click on the SCROLL DOWN ARROW at the bottom of the VERTICAL SCROLL BAR a few times and more rows will be brought into view.



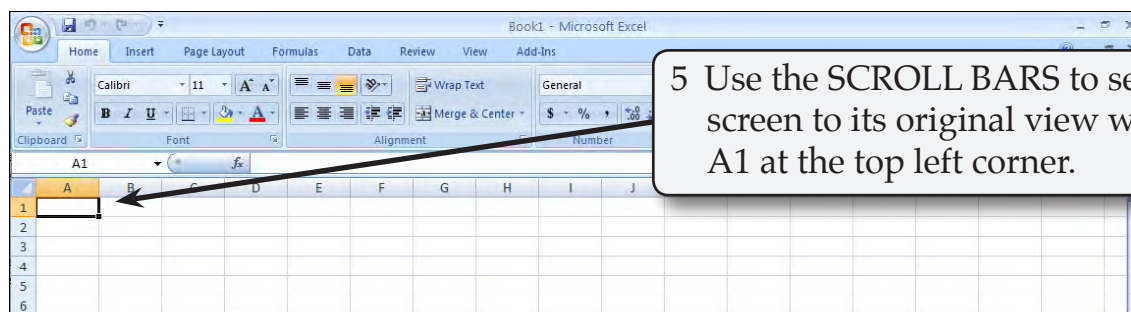
**NOTE:** There are over a million rows in the spreadsheet. The **SCROLL DOWN ARROW** at the bottom of the **VERTICAL SCROLL BAR** can be used to display more rows or you can press the **PAGE DOWN** key on the keyboard.



4 Click on the **SCROLL RIGHT ARROW** at the right of the **HORIZONTAL SCROLL BAR** to bring more columns into view.

**NOTE:**

- i There are over 1000 columns in the spreadsheet.
- ii The **HORIZONTAL SCROLL BAR** can also be used to bring more columns into view.



5 Use the **SCROLL BARS** to set the screen to its original view with cell A1 at the top left corner.

**NOTE:**

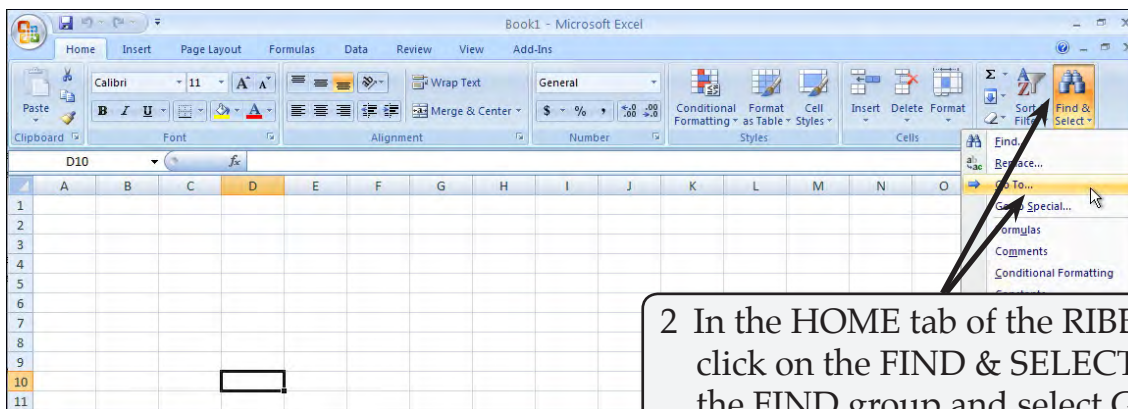
- i To move the cursor over small distances, use the **MOUSE** or the **ARROW KEYS**. The **TAB** key can be used to move the cursor one cell to the right. **SHIFT+TAB** moves the cursor one cell to the left.
- ii To move the cursor over larger distances, use the **SCROLL BARS**, the **SCROLL ARROWS** or the **PAGE UP** and **PAGE DOWN** keys.
- iii It might be helpful to think of the screen as a window that slides across the top of a very large sheet of cells.

## Moving to Specific Cells

Sometimes you will wish to move directly to a specific cell. This is achieved by using the GO TO command which is found in the FIND & SELECT icon in the HOME tab of the RIBBON, or by entering the cell reference directly in the CELL REFERENCE BOX.

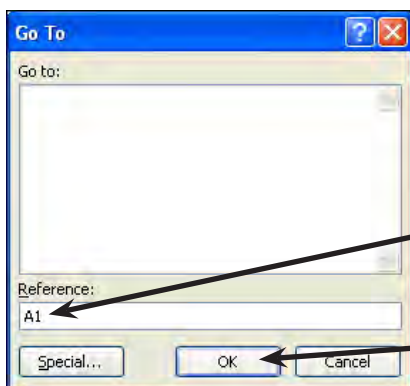
### A The GO TO Command

- 1 Position the cell cursor at cell D10.



- 2 In the HOME tab of the RIBBON click on the FIND & SELECT icon in the FIND group and select GO TO.

**NOTE:** The F5 key can also be pressed to display the GO TO dialogue box. You can also press CTRL+G.



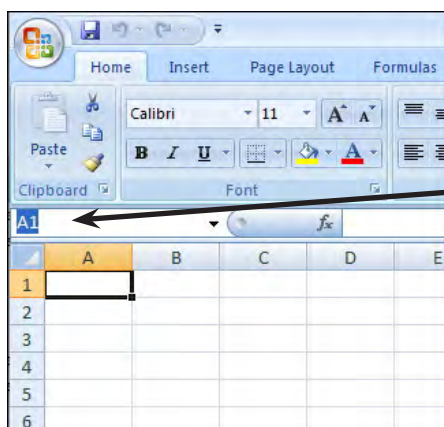
- 3 You should receive the GO TO dialogue box.

- 4 Enter: A1 in the REFERENCE box.

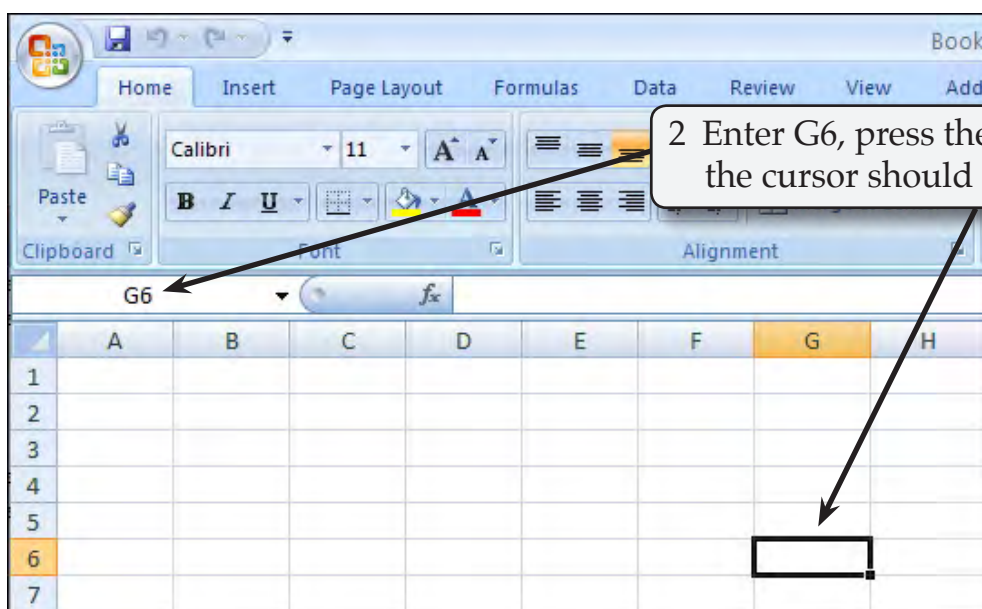
- 5 Press the <enter> key, or click on OK and the cursor will be positioned at cell A1.

- 6 Try using the GO TO command (or the F5 key) to move the cursor to the following cells: E95, AC276, AL490, A1.

## B Entering the Cell Reference



- 1 Move the pointer over the CELL REFERENCE BOX (which is also called the NAME BOX) just above COLUMN A's heading and click the mouse button. The A1 cell reference should highlight.



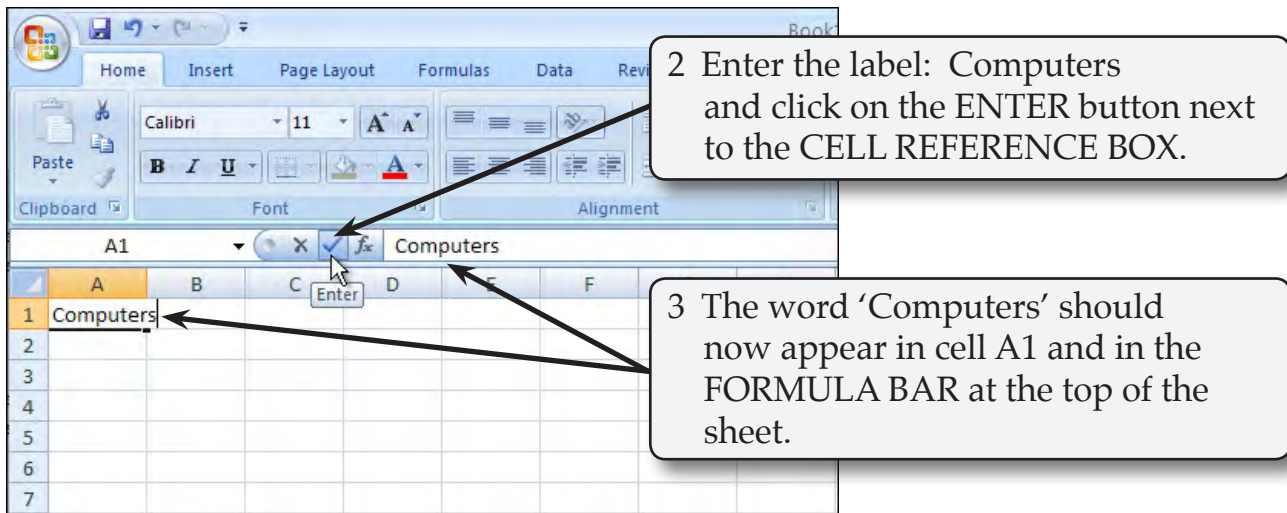
- 2 Enter G6, press the <enter> key and the cursor should move to cell G6.

- 3 Try moving to cells: C12, AB16, A1 using the CELL REFERENCE (or NAME) BOX.

## Placing Labels on the Spreadsheet

You will now learn how to enter letters and numbers onto the spreadsheet. We will start by entering a label (entries that contain letters are called labels).

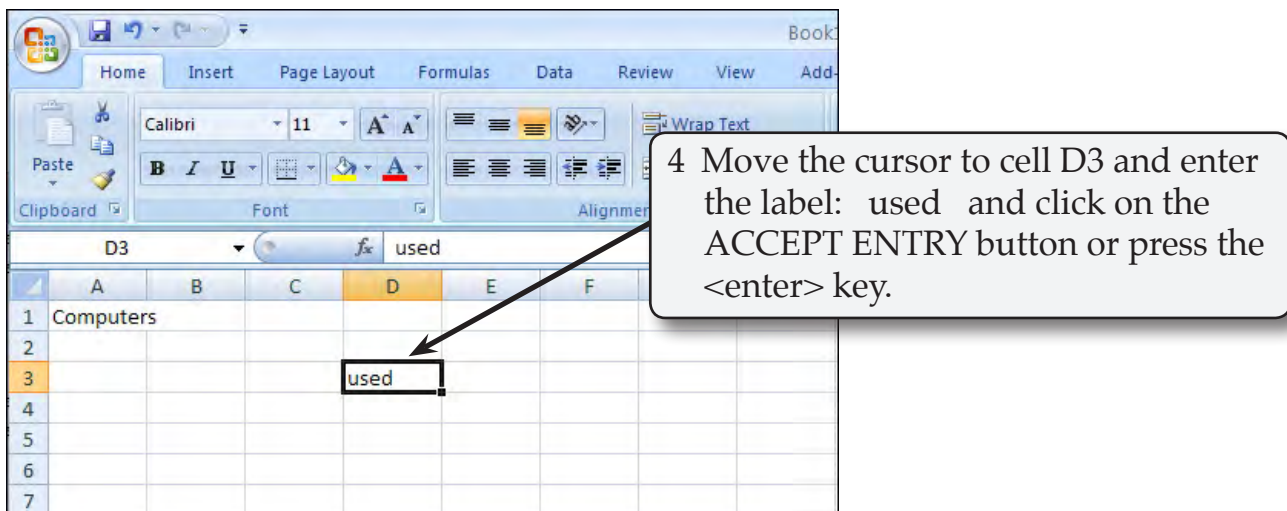
- 1 Move the cursor to cell A1, if it isn't there already.



2 Enter the label: Computers and click on the ENTER button next to the CELL REFERENCE BOX.

3 The word 'Computers' should now appear in cell A1 and in the FORMULA BAR at the top of the sheet.

- NOTE:**
- i If you make a mistake while entering text, you can delete using the BACKSPACE (or DELETE) key, click on the CANCEL symbol , or press the ESC (Escape) key and re-enter the text.
  - ii If you wish to change the contents of a cell, simply position the cursor over that cell and re-enter the required text.

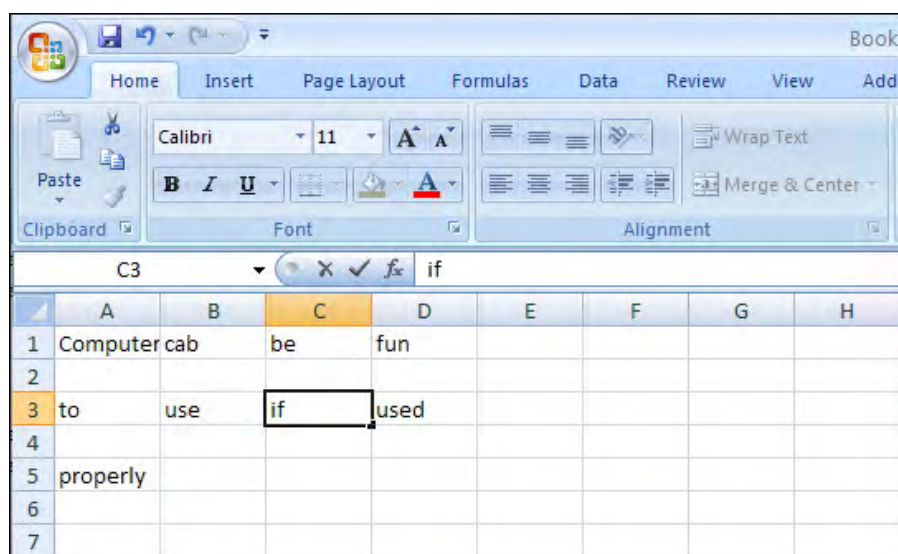


4 Move the cursor to cell D3 and enter the label: used and click on the ACCEPT ENTRY button or press the <enter> key.



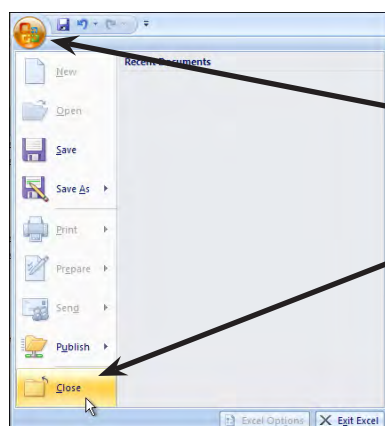
5 Try entering the following labels in the given cells:

A5: properly      B1: can  
B3: use      A3: to  
D1: fun      C3: if  
C1: be

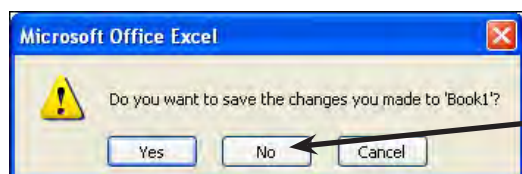


## Closing the Spreadsheet

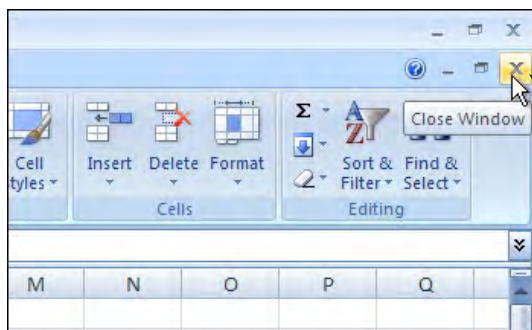
Once you have finished using a workbook, it can be closed.



1 Click on the OFFICE BUTTON at the top left of the screen and select CLOSE. ALT+F can also be pressed and you will receive a warning dialogue box asking whether you wish to save the file.



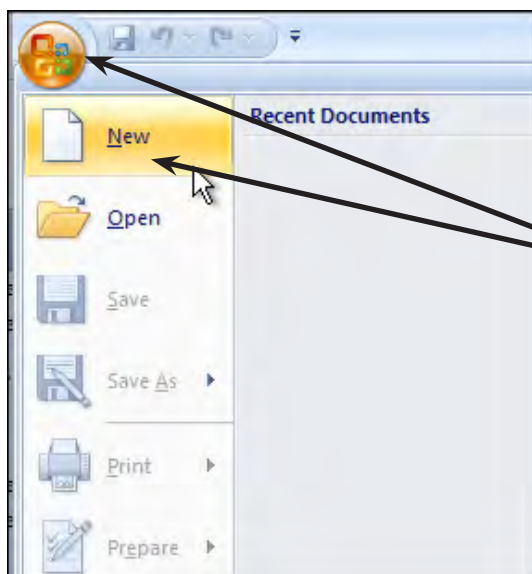
2 In this case we do not need to save the spreadsheet so click on the NO button and the file will be closed.



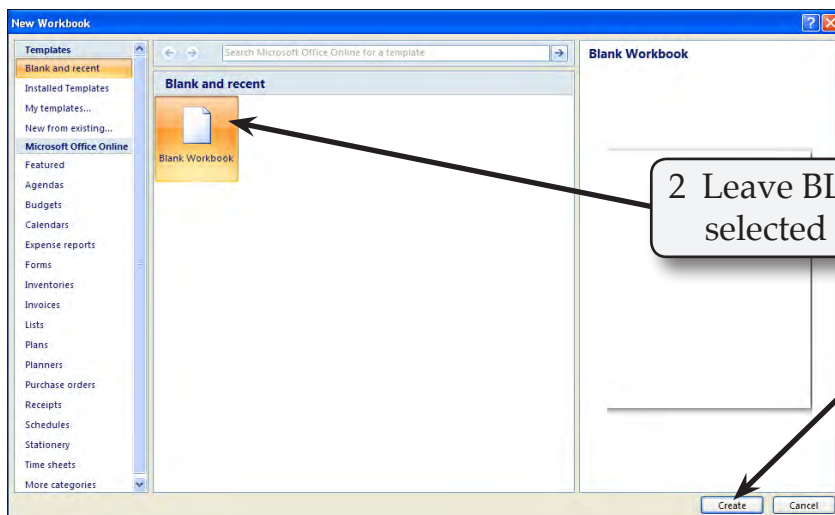
3 You can also click in the CLOSE WINDOW button at the top right of the spreadsheet screen to close the file.

## Entering Values into the Spreadsheet

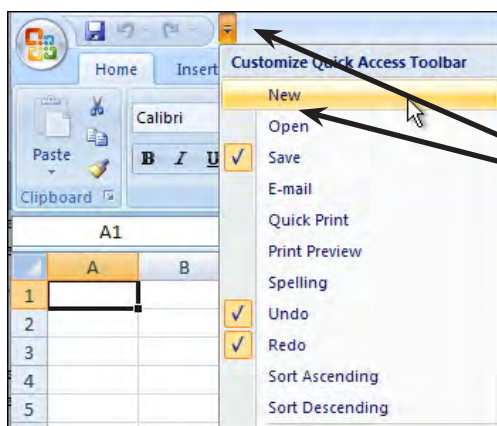
A new worksheet will be started.



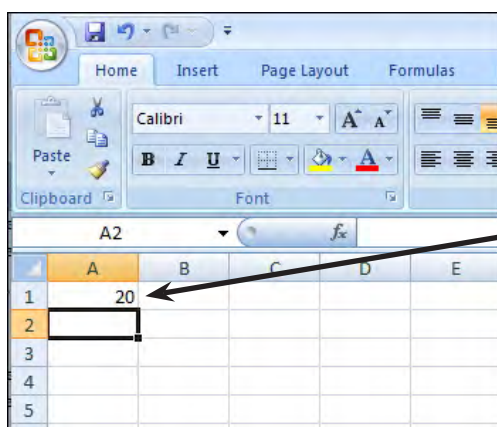
1 Click on the OFFICE button and select NEW.



2 Leave BLANK WORKBOOK selected and click on CREATE.

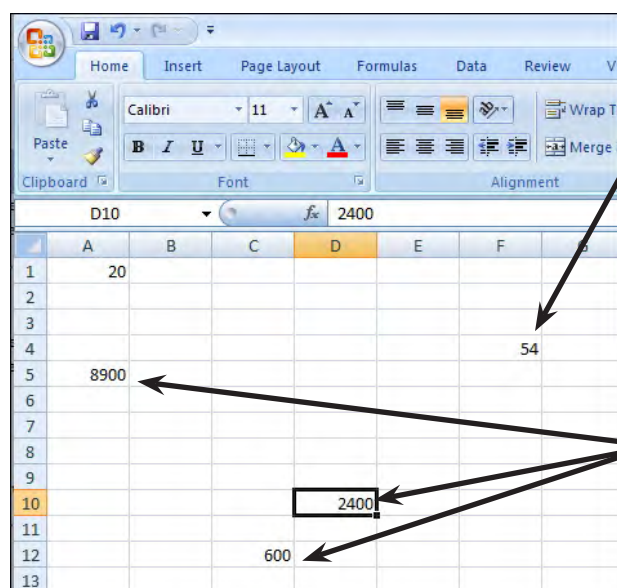


- 3 You can add buttons from the OFFICE BUTTON to the QUICK ACCESS TOOLBAR by clicking on the CUSTOMISE QUICK ACCESS TOOLBAR arrows and selecting the required button.



- 4 Enter the value: 20 in cell A1 and press the <enter> key. Notice that Microsoft Excel automatically recognises this as a value and places it at the right of the cell. Labels (text) are placed at the left of a cell.

**NOTE:** When you press the <enter> key the *cursor* moves down to the next cell.



- 5 Move the cursor to F4 and enter the value: 54

- 6 Use this procedure to enter the following values in the respective cells:

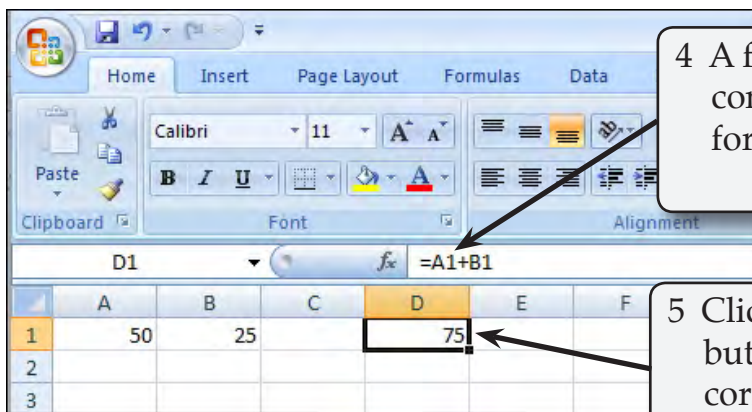
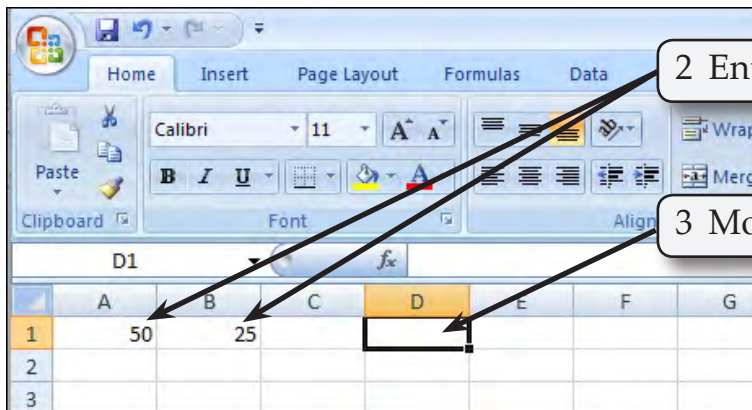
C12: 600    A5: 8900    D10: 24000

**NOTE:** Click on the ENTER button in the FORMULA BAR if you wish to stay at the same cell, or simply enter a value or label and use the MOUSE, TAB key or ARROW keys to move to the next required cell.

## Entering Formulas into the Spreadsheet

Formulas allow Microsoft Excel to do calculations.

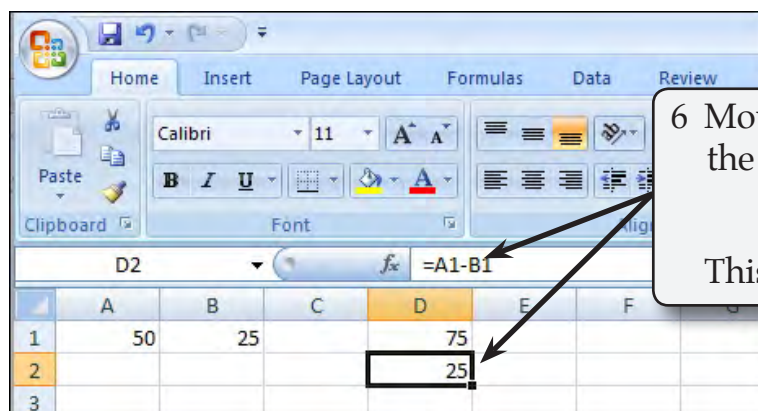
- 1 Close the current workbook without saving and start a NEW workbook.



- 5 Click on the ACCEPT ENTRY button and, if you have done things correctly, 75 should appear in cell. D1.

**NOTE:** To enter a formula in Microsoft Excel the = sign must first be pressed.

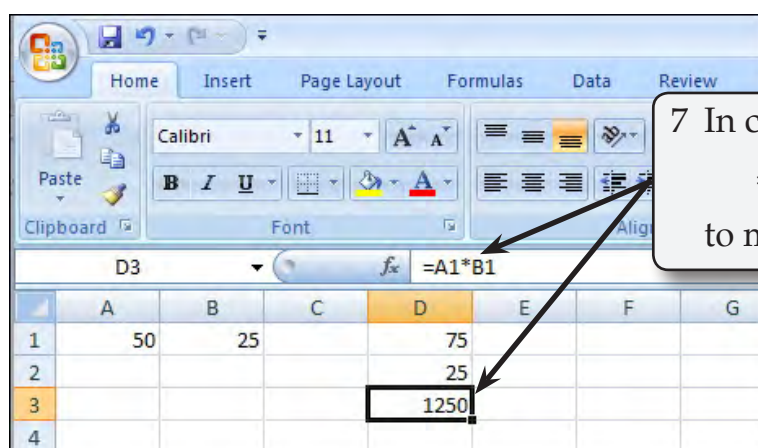




6 Move the cursor to cell D2 and enter the formula:

=A1 - B1 <enter>

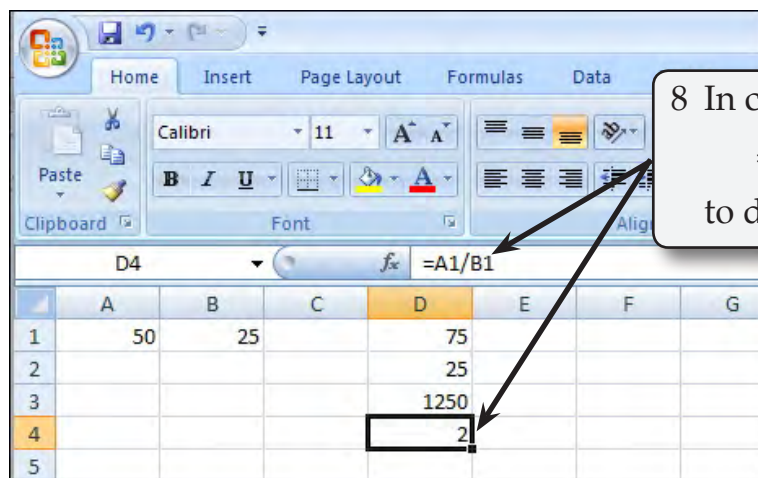
This will subtract the two numbers.



7 In cell D3 enter:

=A1 \* B1 <enter>

to multiply the two numbers.

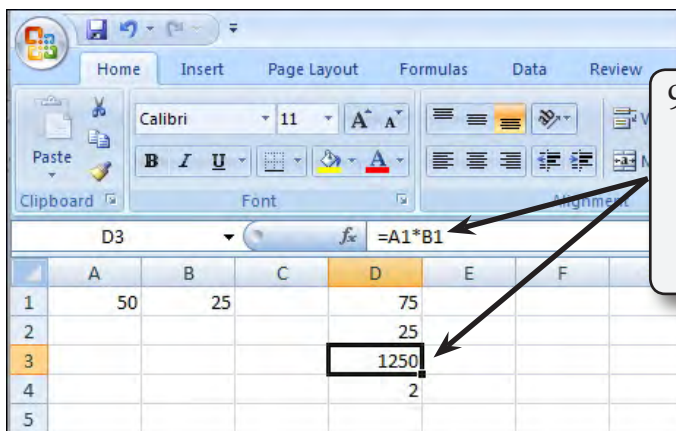


8 In cell D4 enter:

=A1 / B1 <enter>

to divide A1 by B1.

**NOTE:** You should now have 4 numbers in column D (75, 25, 1250 and 2), but you may have forgotten what each number represents.

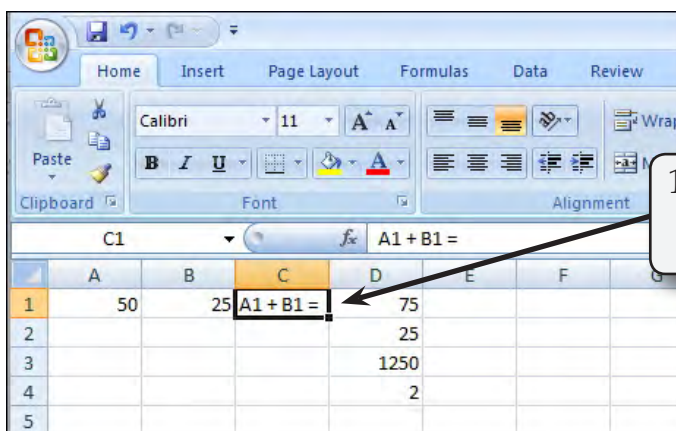


9 Use the mouse to click in each of the 4 cells in column D. The cell coordinates and formula are listed in the FORMULA BAR just above the COLUMN HEADINGS.

**NOTE:** We can tell that the cell contents are formulas, not text, because there is an = sign before the letters.

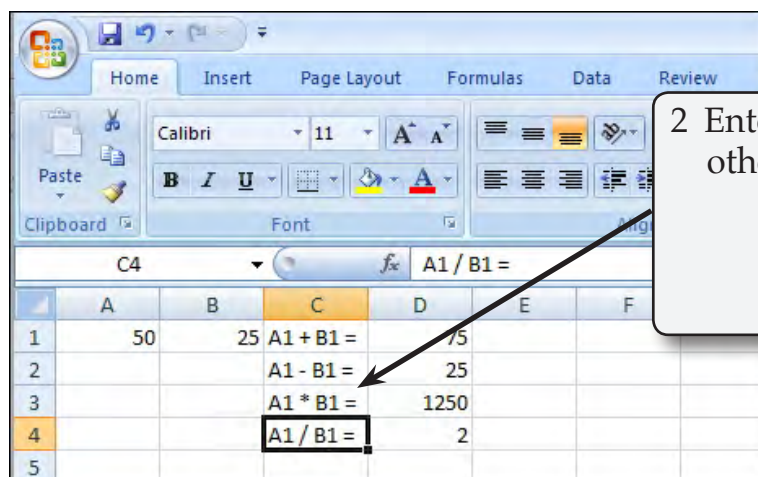
## Adding Labels to Formulas

At the moment the numbers in column D have little meaning. Let's add some explanations to them.



1 Move the cursor to cell C1 and enter:  
A1 + B1 =

**NOTE:** No calculation is made with this entry because an = sign was not entered at the start of the entry.



2 Enter the following labels into the other cells in column C:

at cell C2: A1 - B1 =

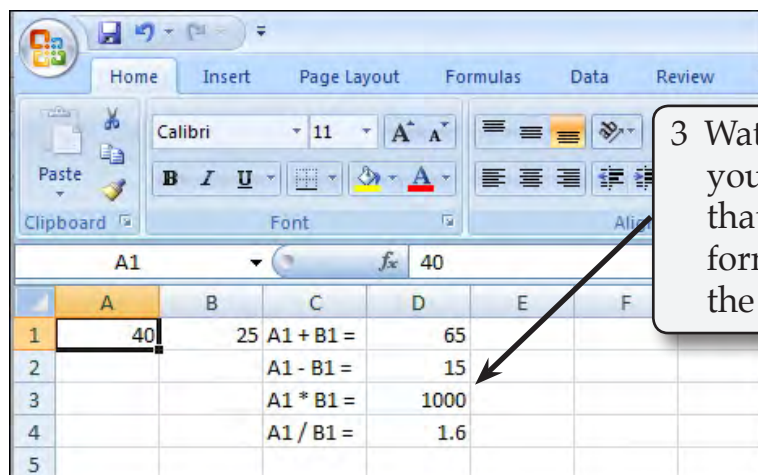
at cell C3: A1 \* B1 =

at cell C4: A1 / B1 =

## The Value of a Spreadsheet

Now let's see the value of a spreadsheet:

- 1 Move the cursor to cell A1.
- 2 Enter 40, BUT DO NOT PRESS THE <ENTER> KEY.



3 Watch the values in COLUMN D as you press the <enter> key. Notice that each number changes as the formulas recalculate to account for the new entry.

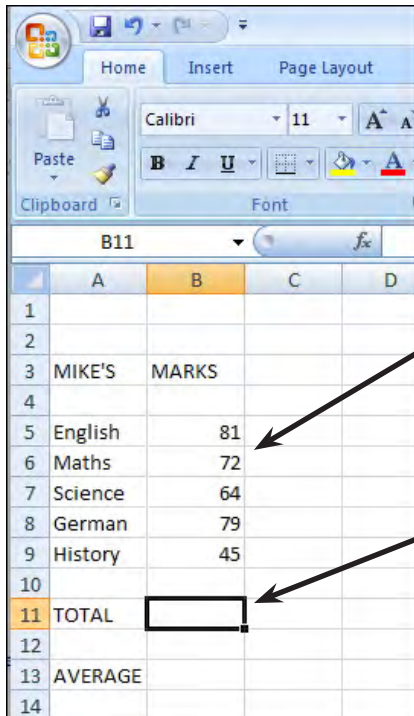
- 4 Try changing the contents of B1 to 70, then 200 and observe the changes in column D.



## Other Types of Formulas

Microsoft Excel has built in functions that allow sums and averages to be calculated (as well as many other functions).

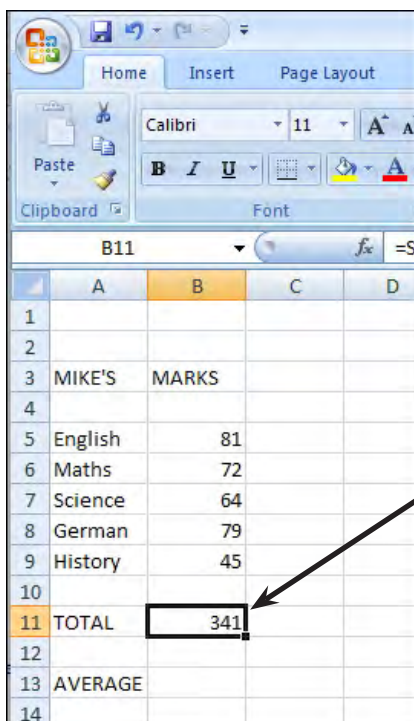
- 1 Close the workbook without saving, start a NEW BLANK workbook.



|    | A       | B     | C | D |
|----|---------|-------|---|---|
| 1  |         |       |   |   |
| 2  |         |       |   |   |
| 3  | MIKE'S  | MARKS |   |   |
| 4  |         |       |   |   |
| 5  | English | 81    |   |   |
| 6  | Maths   | 72    |   |   |
| 7  | Science | 64    |   |   |
| 8  | German  | 79    |   |   |
| 9  | History | 45    |   |   |
| 10 |         |       |   |   |
| 11 | TOTAL   | 341   |   |   |
| 12 |         |       |   |   |
| 13 | AVERAGE |       |   |   |
| 14 |         |       |   |   |

2 Enter the labels and values in the indicated cells.

3 Move the cursor to cell B11.



|    | A       | B     | C | D |
|----|---------|-------|---|---|
| 1  |         |       |   |   |
| 2  |         |       |   |   |
| 3  | MIKE'S  | MARKS |   |   |
| 4  |         |       |   |   |
| 5  | English | 81    |   |   |
| 6  | Maths   | 72    |   |   |
| 7  | Science | 64    |   |   |
| 8  | German  | 79    |   |   |
| 9  | History | 45    |   |   |
| 10 |         |       |   |   |
| 11 | TOTAL   | 341   |   |   |
| 12 |         |       |   |   |
| 13 | AVERAGE |       |   |   |
| 14 |         |       |   |   |

4 Enter the formula:  
`=SUM(B5:B9)`  
and click on the ACCEPT ENTRY button.

=SUM(B5:B9)

Start adding  
from this cell

Finish adding  
from this cell

5 The formula tells Excel to add the contents of the cells from B5 to B9, including all the cells in between them. The ':' is read as 'to'.

**NOTE:**

- i Formulas should not have any spaces in them.
- ii You should have the sum of the cells (341) placed in the cell B11.

|    | A       | B     | C | D | E |
|----|---------|-------|---|---|---|
| 1  |         |       |   |   |   |
| 2  |         |       |   |   |   |
| 3  | MIKE'S  | MARKS |   |   |   |
| 4  |         |       |   |   |   |
| 5  | English | 81    |   |   |   |
| 6  | Maths   | 72    |   |   |   |
| 7  | Science | 64    |   |   |   |
| 8  | German  | 79    |   |   |   |
| 9  | History | 45    |   |   |   |
| 10 |         |       |   |   |   |
| 11 | TOTAL   | 341   |   |   |   |
| 12 |         |       |   |   |   |
| 13 | AVERAGE | 68.2  |   |   |   |
| 14 |         |       |   |   |   |

6 Move the cursor to cell B13 and enter the formula to average the marks:  
= AVERAGE(B5:B9)

7 When you press the <enter> key you should receive the value 68.2.

**NOTE:** The AVERAGE function tells Microsoft Excel to add the numbers between B5 and B9 then divide by the number of values added.

|    | A       | B     | C | D |
|----|---------|-------|---|---|
| 1  |         |       |   |   |
| 2  |         |       |   |   |
| 3  | MIKE'S  | MARKS |   |   |
| 4  |         |       |   |   |
| 5  | English | 81    |   |   |
| 6  | Maths   | 72    |   |   |
| 7  | Science | 75    |   |   |
| 8  | German  | 79    |   |   |
| 9  | History | 45    |   |   |
| 10 |         |       |   |   |
| 11 | TOTAL   | 352   |   |   |
| 12 |         |       |   |   |
| 13 | AVERAGE | 70.4  |   |   |
| 14 |         |       |   |   |

8 Change the value in cell B7 to 75 and watch the TOTAL and AVERAGE cells change accordingly.

|    | A       | B     | C | D |
|----|---------|-------|---|---|
| 1  |         |       |   |   |
| 2  |         |       |   |   |
| 3  | MIKE'S  | MARKS |   |   |
| 4  |         |       |   |   |
| 5  | English | 48    |   |   |
| 6  | Maths   | 80    |   |   |
| 7  | Science | 75    |   |   |
| 8  | German  | 92    |   |   |
| 9  | History | 55    |   |   |
| 10 |         |       |   |   |
| 11 | TOTAL   | 350   |   |   |
| 12 |         |       |   |   |
| 13 | AVERAGE | 70    |   |   |
| 14 |         |       |   |   |

9 Make the following changes and observe the effect on the TOTAL and AVERAGE:

|         |    |
|---------|----|
| ENGLISH | 48 |
| MATHS   | 80 |
| GERMAN  | 92 |
| HISTORY | 55 |

10 Click on the SAVE button in the QUICK ACCESS TOOLBAR and save the file in your STORAGE folder under the file name:

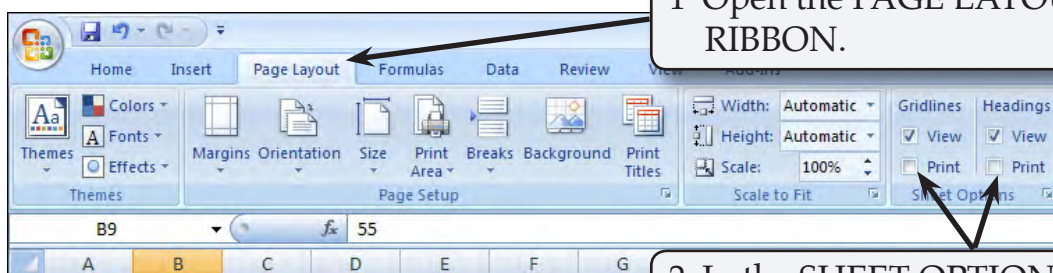
Chapter 1

## Printing Spreadsheets

Before printing the spreadsheet you should check that the page settings are correct.

### A Gridlines and Headings

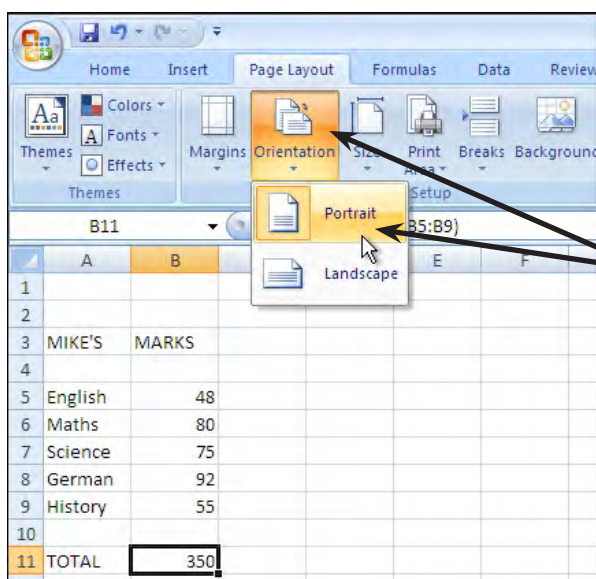
The gridlines and row and column headings that make up the spreadsheet should not be printed.

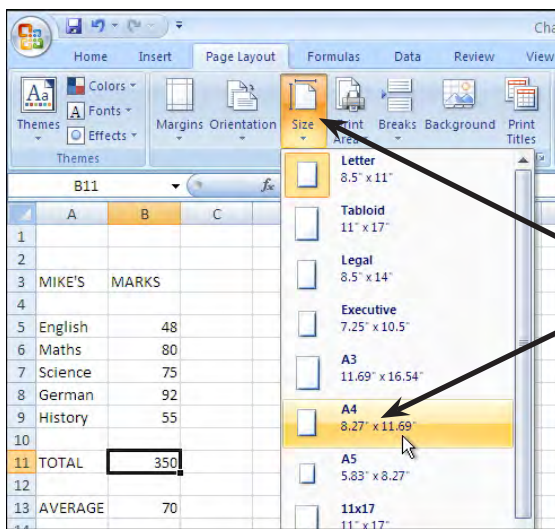


2 In the SHEET OPTIONS group check that the PRINT options for GRIDLINES and HEADINGS are turned off.

### B Page Setup

The ORIENTATION of the sheet and the PAPER SIZE should be checked.

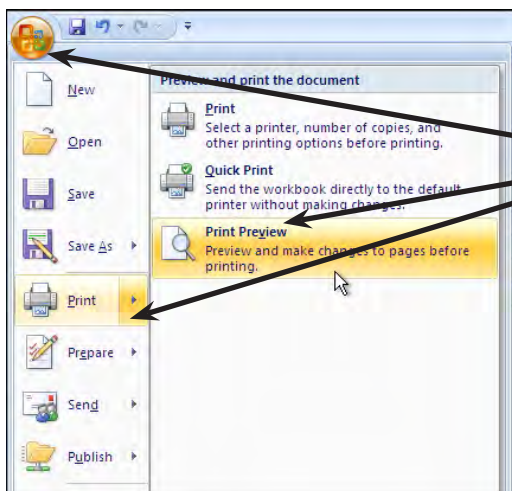




2 Click on the SIZE icon in the PAGE LAYOUT tab and select the PAPER SIZE that your printer uses. It is probably A4.

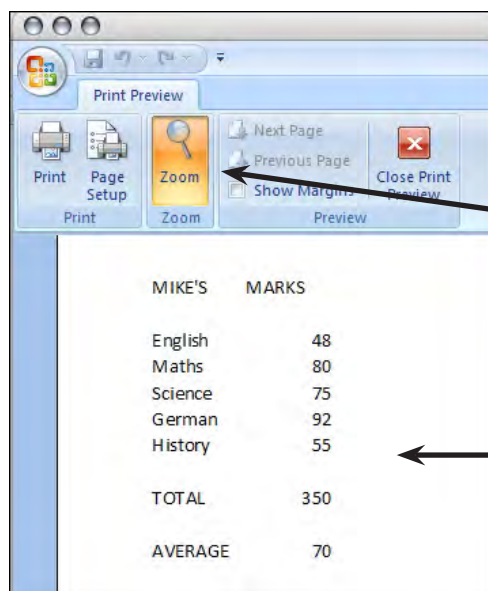
### C Print Preview

It is a good idea to look at a screen preview of what the printout will look like. You may see some problems with your workbook that you wish to fix before you print.



1 Click on the OFFICE BUTTON, highlight PRINT and select PRINT PREVIEW.





2 Click on the ZOOM icon in the RIBBON to take a closer look at your worksheet.

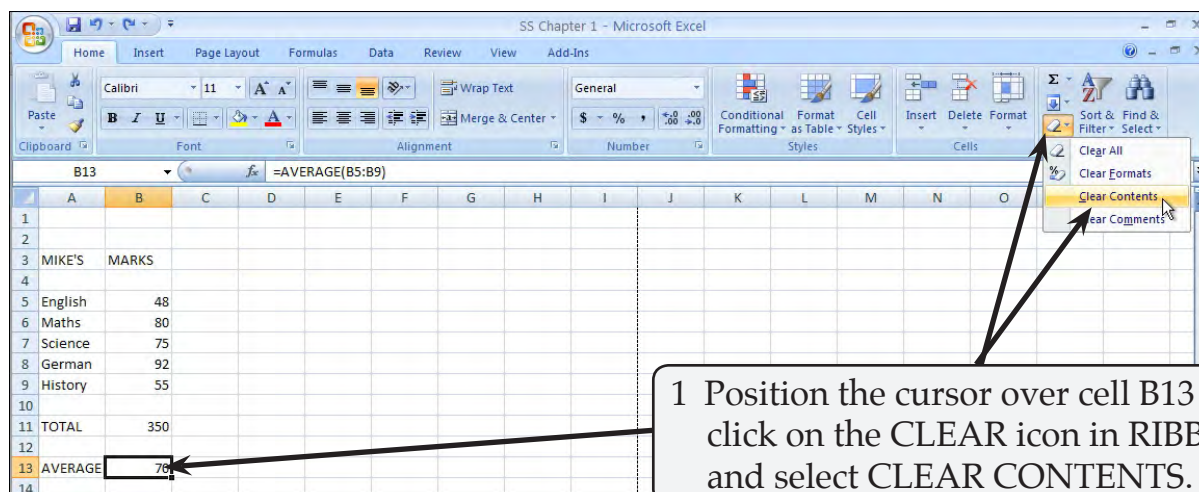
3 This is how the workbook will print.

- 4 If everything looks correct, click on the PRINT icon in the RIBBON to print the worksheet. If adjustments are required, click on the CLOSE PRINT PREVIEW icon in the RIBBON, make the adjustments, then print the worksheet.

**NOTE:** Check over your printout and make any corrections. If any corrections were required, print another copy.

## Erasing the Contents of a Cell

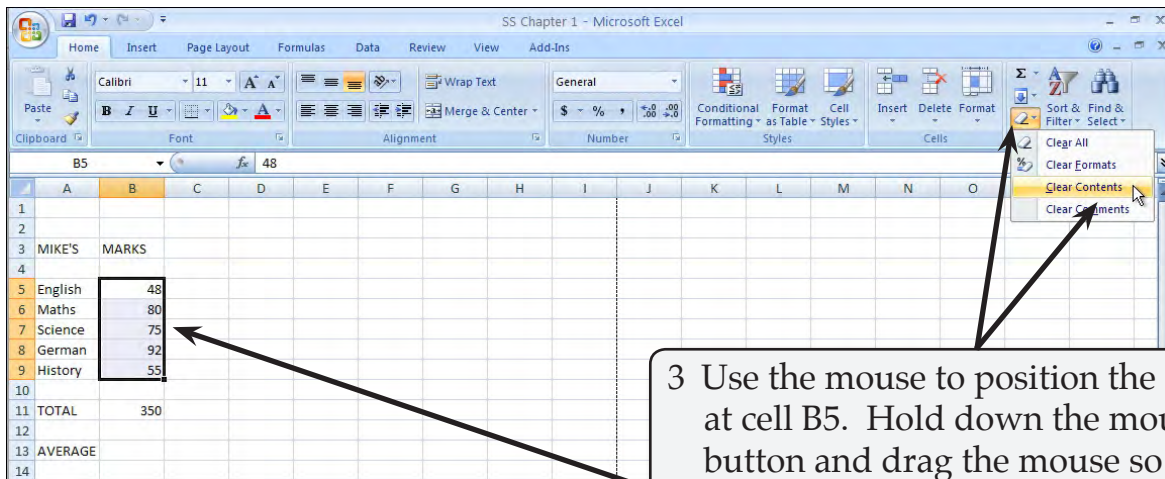
If you wish to erase the contents of a cell and not replace it with anything else, the CLEAR command can be used, or use the DELETE (or DEL) key.



1 Position the cursor over cell B13 then click on the CLEAR icon in RIBBON and select CLEAR CONTENTS.



- 2 If you need to clear more than one cell, the required cells must first be highlighted before CLEAR (or DELETE) is selected.



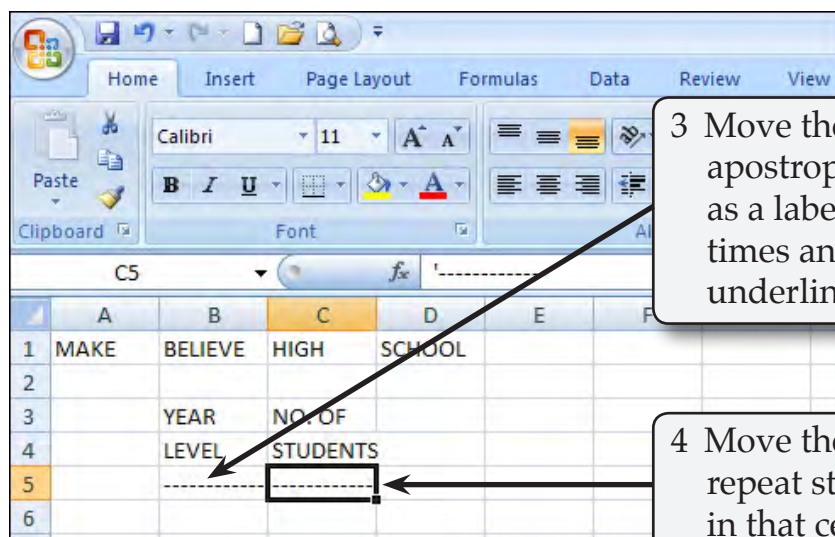
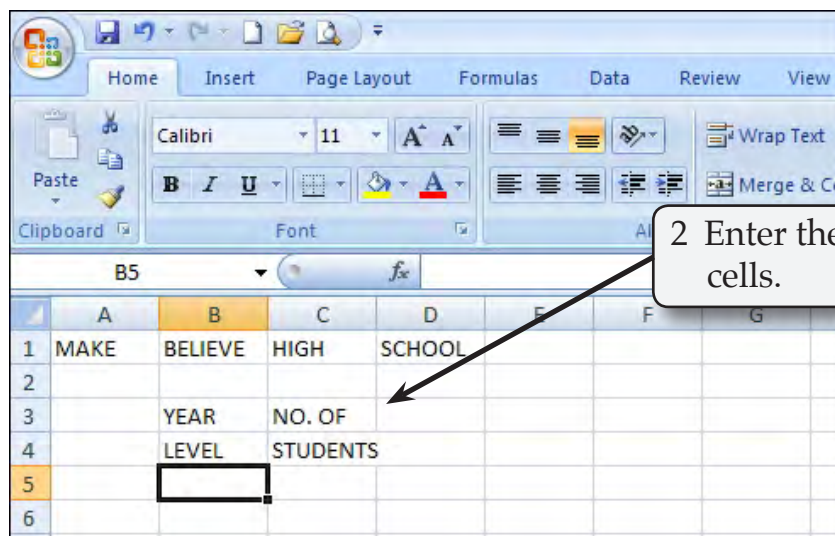
- 3 Use the mouse to position the cursor at cell B5. Hold down the mouse button and drag the mouse so that the cursor is moved to B9. then click on the CLEAR icon in HOME tab and select CLEAR CONTENTS.

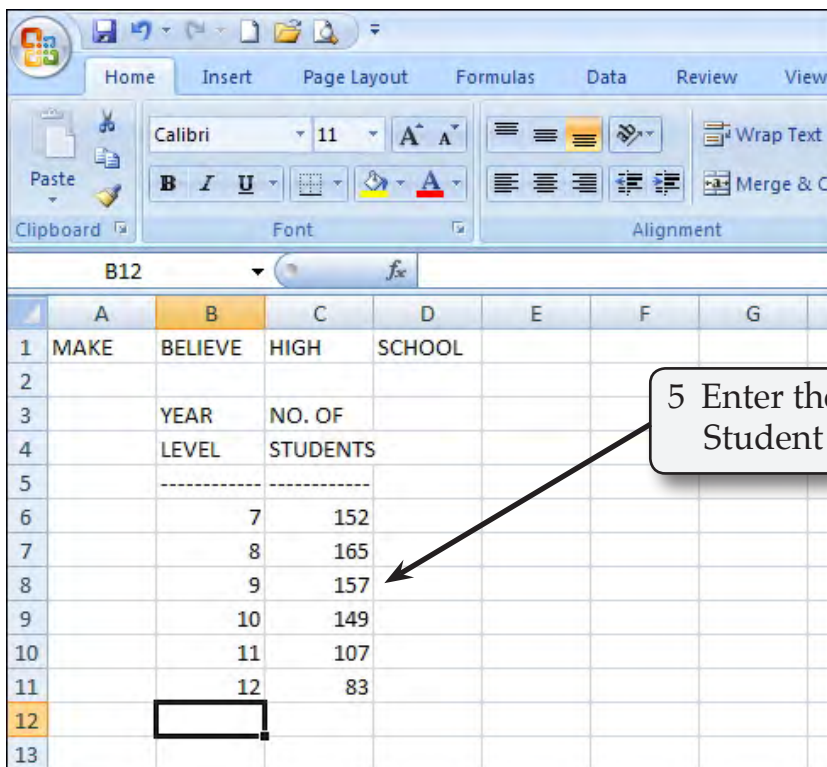
**NOTE:** The DELETE key can be used to clear the cells. If you use the BACKSPACE key instead of DELETE, just the first cell is cleared and you will receive the ACCEPT ENTRY or CANCEL buttons in the FORMULA BAR.

## Spreadsheets Exercise 1-1

In this Exercise you will enter a spreadsheet that allows you to keep track of the total number of students in a school.

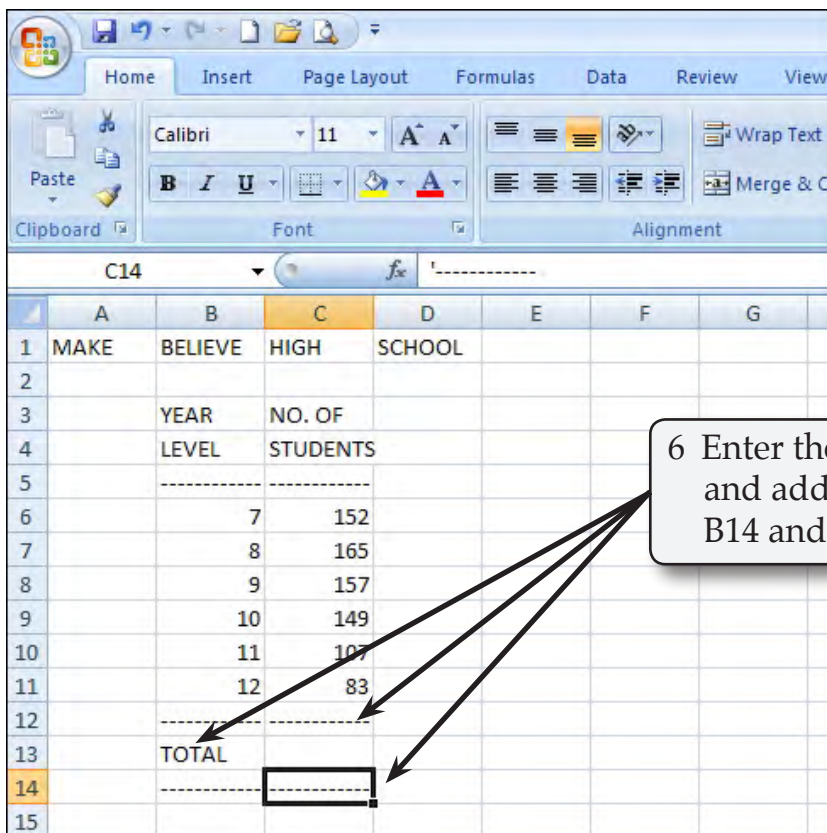
- 1 Load Microsoft Excel, or close the current file and start a NEW BLANK workbook.





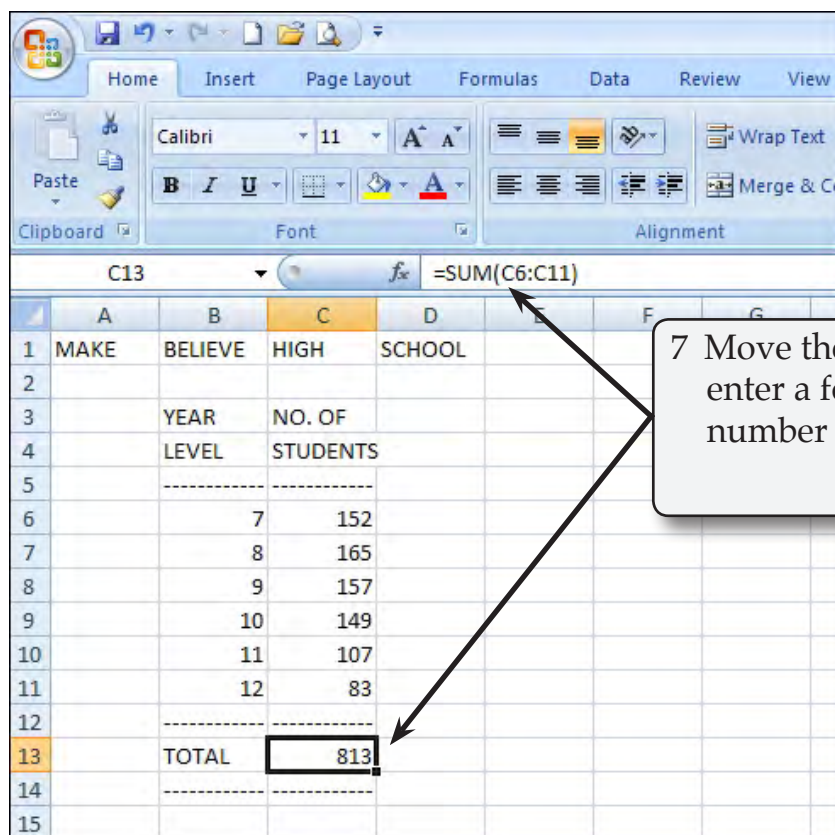
5 Enter the Year Level numbers and Student Numbers in these cells.

|    | A    | B       | C        | D      |
|----|------|---------|----------|--------|
| 1  | MAKE | BELIEVE | HIGH     | SCHOOL |
| 2  |      |         |          |        |
| 3  |      | YEAR    | NO. OF   |        |
| 4  |      | LEVEL   | STUDENTS |        |
| 5  |      | -----   |          |        |
| 6  |      | 7       | 152      |        |
| 7  |      | 8       | 165      |        |
| 8  |      | 9       | 157      |        |
| 9  |      | 10      | 149      |        |
| 10 |      | 11      | 107      |        |
| 11 |      | 12      | 83       |        |
| 12 |      |         |          |        |
| 13 |      |         |          |        |



6 Enter the TOTAL label in cell B13 and add underlines in cells B12, C12, B14 and C14.

|    | A    | B       | C        | D      |
|----|------|---------|----------|--------|
| 1  | MAKE | BELIEVE | HIGH     | SCHOOL |
| 2  |      |         |          |        |
| 3  |      | YEAR    | NO. OF   |        |
| 4  |      | LEVEL   | STUDENTS |        |
| 5  |      | -----   |          |        |
| 6  |      | 7       | 152      |        |
| 7  |      | 8       | 165      |        |
| 8  |      | 9       | 157      |        |
| 9  |      | 10      | 149      |        |
| 10 |      | 11      | 107      |        |
| 11 |      | 12      | 83       |        |
| 12 |      |         |          |        |
| 13 |      | TOTAL   |          |        |
| 14 |      |         |          |        |
| 15 |      |         |          |        |



7 Move the cursor to cell C13 and enter a formula that will add the number of students in the school:

`=SUM(C6:C11)`

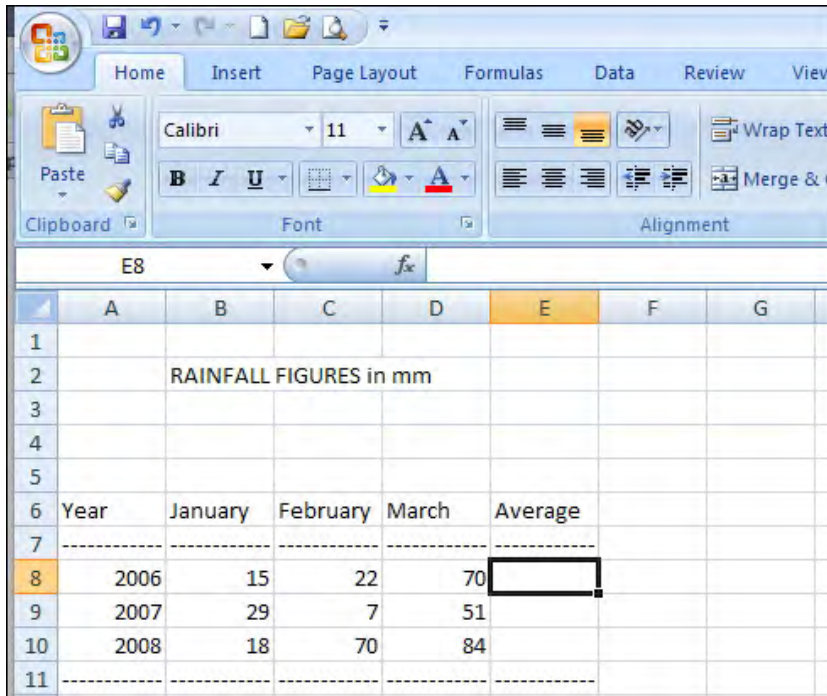
- 8 Two students have left from Year 12, so move the cursor to C11, enter 81 and press the <enter> key. The total should adjust to 811.
- 9 Save the workbook under the file name: SS Exercise 1-1
- 10 Check that the PAGE SETUP is correct for your printer (see page 1.19).
- 11 Use PRINT PREVIEW to check the workbook and make any necessary adjustments.
- 12 Print the workbook and ask your teacher to check it.

**NOTE:** Don't worry if the underlines do not fill the columns when printed. You will learn a more effective way of underlining in the next chapter.



## Spreadsheets Exercise 1-2

Start a NEW BLANK workbook and enter the following labels and values showing the monthly rainfall for 3 years:



|    | A     | B                      | C        | D     | E       | F | G |
|----|-------|------------------------|----------|-------|---------|---|---|
| 1  |       |                        |          |       |         |   |   |
| 2  |       | RAINFALL FIGURES in mm |          |       |         |   |   |
| 3  |       |                        |          |       |         |   |   |
| 4  |       |                        |          |       |         |   |   |
| 5  |       |                        |          |       |         |   |   |
| 6  | Year  | January                | February | March | Average |   |   |
| 7  | ----- | -----                  | -----    | ----- | -----   |   |   |
| 8  | 2006  | 15                     | 22       | 70    |         |   |   |
| 9  | 2007  | 29                     | 7        | 51    |         |   |   |
| 10 | 2008  | 18                     | 70       | 84    |         |   |   |
| 11 | ----- | -----                  | -----    | ----- | -----   |   |   |

**NOTE:** The double underline for the Rainfall heading can be created by using the = sign. Remember to press the ' key first.

- 1 Use formulas to complete the COLUMN E, for example:  

$$= \text{AVERAGE}(B8:D8)$$
- 2 Save the workbook under the file name: SS Exercise 1-2
- 3 Check that the PAGE SETUP is correct for your printer (see page 1.19).
- 4 Use PRINT PREVIEW to check the workbook and make any necessary adjustments.
- 5 Print the workbook and ask your teacher to check it.

## Spreadsheets Assignment 1

You have been placed in charge of a fund-raising drive conducted over a long weekend. You are required to produce a summary of the funds raised from the particular activities.

Start a new workbook and enter the following template, but DO NOT enter the \*\*\*\*\*

Ask your teacher to widen the first column for you so that the headings will fit, or set the font size for the whole spreadsheet to 8 point.

| WECARE<br>=====            |          |        |        |        |
|----------------------------|----------|--------|--------|--------|
| FUNDRAISERS                |          |        |        |        |
|                            | Saturday | Sunday | Monday | Totals |
| Door Knock<br>Donations \$ | 1296     | 1955   | 960    | *****  |
| Badge Sale<br>Profits \$   | 256      | 399    | 125    | *****  |
| Toffee Stall<br>Profits \$ | 155      | 142    | 170    | *****  |
| Total Cash<br>Received \$  | *****    | *****  | *****  | *****  |

- 1 Use formulas to complete the sections marked with \*\*\*\*\*. Each formula should add either a row or column of numbers.
- 2 Save the workbook under the file name: SS Assignment 1
- 3 Check that the PAGE SETUP is correct for your printer (see page 1.19).
- 4 Use PRINT PREVIEW to check the workbook and make any necessary adjustments.
- 5 Print the workbook and make any further adjustments.
- 6 Reprint a final copy, if necessary, and submit it for marking.