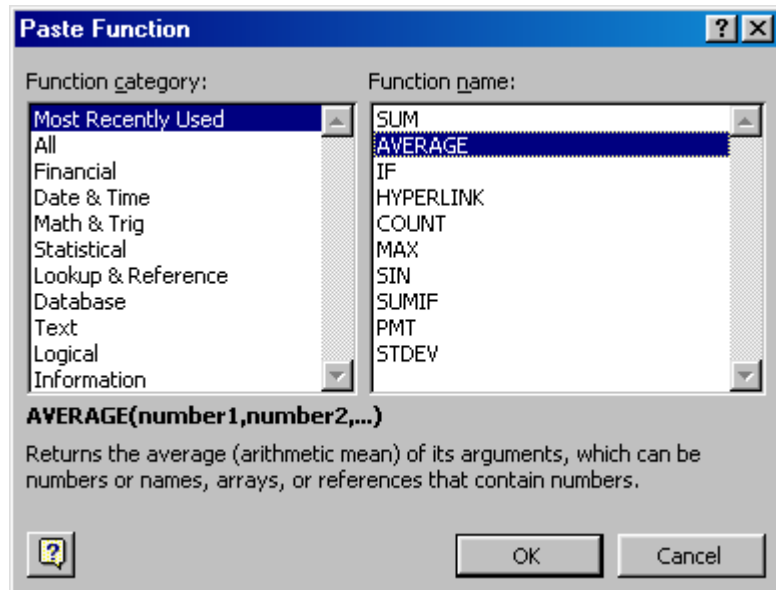


## Working with Functions

Functions are a special type of formula, they automate repetitious procedures and perform mathematical calculations, such as Average or Sum or Cosine.

If you are unsure about a particular function and its use, you can utilise the Function dialog, which is found in the Insert menu. To activate this option highlight the cell that you wish the calculation to be shown in, then from the Menu bar select Insert - Function. The following dialog will be displayed with descriptions for the use of each function.



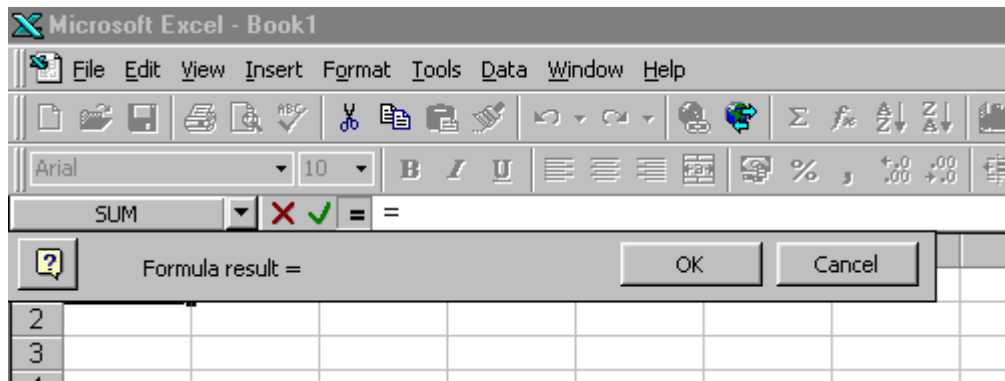
The table below briefly outlines the capabilities of each of the most common functions included in this dialog.

<b>Function</b>	<b>Description</b>
SUM	Returns the total of the arguments (cells supplied to the function). A shortcut button is available on the toolbar for this function $\Sigma$
AVERAGE	Returns the average
IF	Returns a value depending on a logical question e.g. IF(B1<100,B2=21,B2=12.5) This means "if B1 is less than 100 then B2 gets the value 21 otherwise B2 gets the value 12.5
HYPERLINK	Creates a link (shortcut) to a file or location either local, network, intranet or Internet
MAX	Returns the largest of a set of values
COUNT	Counts the number of cells in the arguments that contain something
SIN	Trig function - Returns SINE of an angle
STDEV	Estimates the standard deviation of a range of cells
COS	Trig function - Returns the COSINE of an angle
ROUND	Rounds a number to a specified number of digits e.g. ROUND(6.334455123,4) gives the value 6.3345. Also see ROUNDUP and ROUNDDOWN.
SQRT	Returns the square root of a number

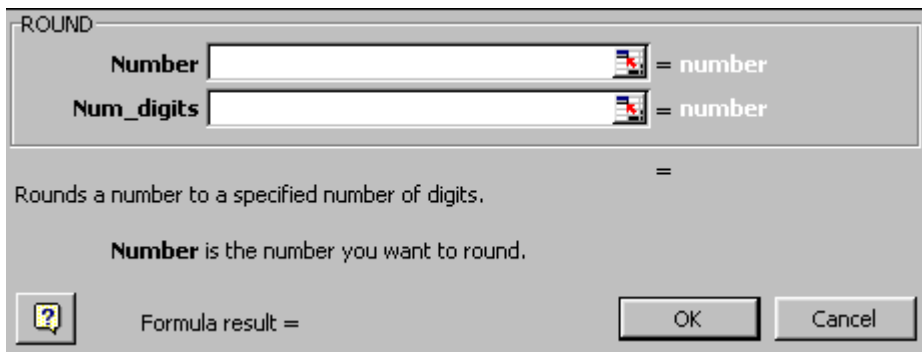
TODAY

Inserts the current date e.g. 08/11/1999 - Note that this is a VOLATILE function in that the data will change every time you open the spreadsheet and reflect the current date

Another method available for use of functions is to click on the = in the formula toolbar as if you were adding a formula to a cell, where a drop down menu will appear below it. To select a different function than that displayed, click the drop down arrow and a list will be displayed.



The drop down function helper will also display a small window in which you are asked to input the required details e.g. Here is the dialog for the function ROUND :



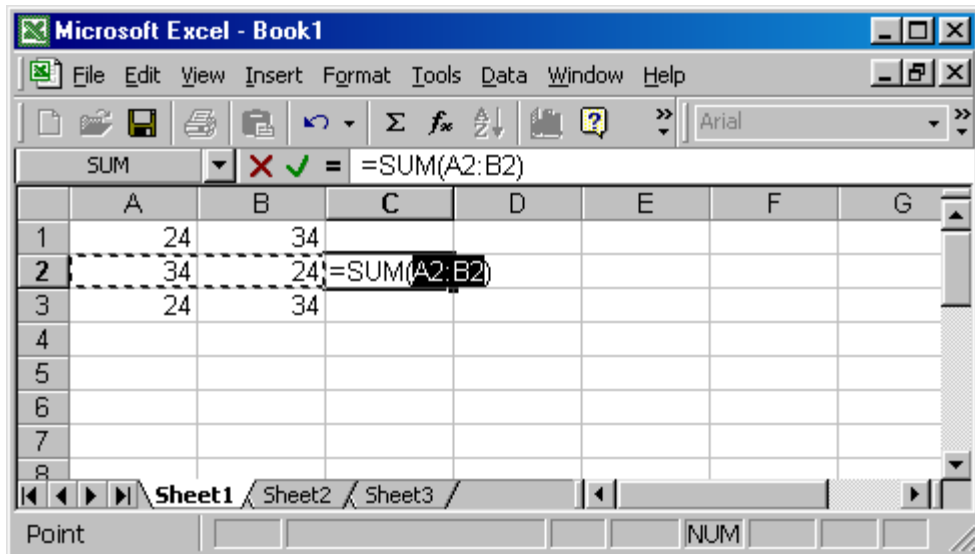
You can see that the result is also displayed for you to test the function as you enter your data.

## Using the sum function

$\Sigma$  The SUM function is used so widely, it has its own toolbar button, as can be seen on the left. It is sometimes known as the AutoSum function.

To use the AutoSum function select the cell that the sum is to be entered into by clicking once on it, then, click on the AutoSum button. A formula will be entered automatically into the cell with a dotted line running around the circumference of those cells that Excel believes you would like to total.

If a cell to the right is selected the contents of the row before that cell is automatically selected such as the following:



Or, if a cell at the bottom of a column is selected, then all cells previous to that cell in the column are selected as follows :

