

Excel 2003—Functions

Insert Function Tool

The **Insert Function** button  in the Formula bar provides assistance when building common and/or complex functions.

Clicking on **Help on this function** will display detailed information about the function and supply example data.

Insert a Function/Formula

- Select the Cell where the function result is to be displayed
- Click on the **Insert Function** button in the Formula bar** or select **Insert > Function...** from the Menu bar
- The **Insert Function** dialog will appear
- Search for a function by entering the function or a key word in the field provided. Click **Go**
- Choose the function from the list and click **OK**
- Click on the collapse  button for each parameter of the function
- Select the range of cells for the function to evaluate
- Click on the return  button and Click **OK**

If the formula bar is not visible, select **View/Formula Bar in the Main menu

Logical Functions

If Function returns one value if the condition specified (logical test) evaluates to *True* and another value if the condition specified (logical test) evaluates to *False*.

IF Function—Structure

=IF(logical_test , value_if_true , value_if_false)

Logical_test—any value or expression that can be evaluated to TRUE or FALSE

Value_if_true—value returned if logical test is TRUE

Value_if_false—value returned if logical test is FALSE

COUNTIF Function

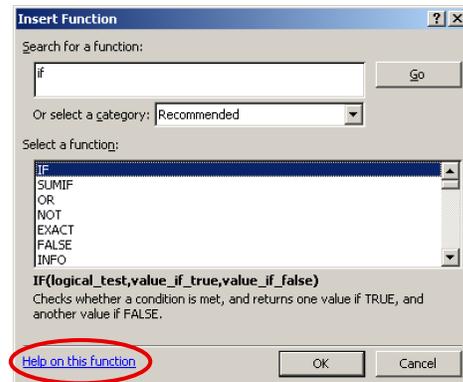
CountIF Function counts the number of cells in the defined range where the condition specified (Criteria) is met

Structure

=COUNTIF(range , Criteria)

Range—is the range of cells from which you want to count cells

Criteria—number, expression, or text that defines which cells will be counted



Additional Functions:

=Concatenate(text1,text2...)

=Trim(text)

=Left(text,num_chars)

=Right(text,num_chars)

If Function Example

	A	B	C
1			
2	Average Bill	\$500.00	
3			
4	If average bill is over \$400 I need more money	I need money	
5	Function:		
6	=IF(B2>400,"I need money","I'm OK")		

Countif Function Example

	A	B
1		
2	Customer	Invoice Amt
3	Amy Adams	613
4	Angelina Jolie	1,500
5	Annette Benning	770
6	Brad Pitt	2,689
7	Brian Cliff	248
8	Carrie Thomson	2,200
9	Chris Rock	651
10	Count Invoices >\$1,000	3
11	=COUNTIF(B3:B9,">1000")	←Function

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Formula Auditing Toolbar



- 1) **Error Checking**—Checks the active worksheet for errors. If your worksheet contains errors then the Error Checking dialog box is displayed
- 2) **Trace Precedents**—Draws tracer arrows from the cells that supply values directly to the formula in the active cell. You can press this button multiple times to see additional levels
- 3) **Remove Precedent Arrows**—Removes tracer arrows from one level of dependents on the active worksheet
- 4) **Trace Dependents**—Draws a tracer arrow to the active cell from formulas that depend on the value in the active cell. You can press this button multiple times to see additional levels
- 5) **Remove Dependent Arrows**—Removes tracer arrows from one level of dependents on the active worksheet
- 6) **Remove All Arrows**—Removes all tracer arrows from the active worksheet
- 7) **Trace Error**—Traces cells with error values. If the active cell contains an error value then tracer arrows are drawn to the cells that may have caused the error
- 8) **New Comments**—Inserts a comment in the active cell
- 9) **Circle Invalid Data**—Draws red circles around any cells that contain values that are outside the limits you set by using Data Validation. To see what data restrictions and messages are in effect for a cell, click the circled cell, and then select (Data > Validation)
- 10) **Clear Validation Circles**—Removes circles around cells that contain values outside the limits you set by selecting (Data > Validation). To see what data restrictions and messages are in effect for a cell before you remove circles, click the circled cell, and select (Data > Validation)
- 11) **Show Watch Window**—Displays the Watch Window that can be used to keep a close eye on certain formulas as you make changes to other parts of the worksheet
- 12) **Evaluate Formula**—Displays the (Tools > Formula Auditing > Evaluate Formula) dialog box that enables you to evaluate parts of a formula

Keyboard shortcuts

To do this	Press
Start a formula.	= (equal sign)
Move the insertion point into the Formula Bar when editing in a cell is turned off.	F2
In the Formula Bar, delete one character to the left.	BACKSPACE
Complete a cell entry from the cell or Formula Bar.	ENTER
Cancel an entry in the cell or Formula Bar.	ESC
In a formula, display the Insert Function dialog box.	SHIFT+F3
Insert an AutoSum formula with the SUM function.	ALT+= (equal sign)
Copy the value from the cell above the active cell into the cell or the Formula Bar.	CTRL+SHIFT+" (quotation mark)
Copies a formula from the cell above the active cell into the cell or the Formula Bar.	CTRL+' (apostrophe)

To do this	Press
Alternate between displaying cell values and displaying formulas.	CTRL+' (tilde (~) key)
Calculate all worksheets in all open workbooks.	F9
Calculate the active worksheet.	SHIFT+F9
Calculate all worksheets in all open workbooks, regardless of whether they have changed since the last calculation.	CTRL+ALT+F9
Rechecks dependent formulas and then calculates all cells in all open workbooks, including cells not marked as needing to be calculated.	CTRL+ALT+SHIFT+F9