

HelpSheet: IF Function

Introduction

Background

Many of the Functions contained in Excel are only partially used. Consequently their effect is diluted and the reports which use them are not as powerful as they should be.

Hit The Ground Sprinting are producing a series of videos which, when used in conjunction with a Helpsheet such as this, will fully explore not only individual Excel Functions but will also examine how different Functions can be combined for even more effective reporting and the introduction of End User interactivity.

Introduction

This helpsheet should be used in conjunction with the IF video produced by Hit The Ground Sprinting details of which can be found at www.hitthegroundsprinting.com

Function Purpose

The Function allows users to return different comments in one cell which are dependent on the values in a different cell.

Video Commentary

Watch the Video, read the Helpsheet. Watch the Video again and do examples.

This is a demonstration about the IF Function and also contains useful information about how Functions work and the messages that come up to help you when you are building them.

We start of by entering '=' in to cell 'D5', followed by and 'i'

When we do this all the functions starting with an 'i' appear, in an alphabetical list.

The screenshot shows an Excel spreadsheet with the following content:

Value	Comment
-1	
3	
-15	
28	
271	
-36	

Cell D5 contains the formula `=i`. A dropdown menu is open, showing a list of functions starting with 'i':

- IF
- IFERROR
- IMABS
- IMAGINARY
- IMARGUMENT
- IMCONJUGATE
- IMCOS
- IMDIV
- IMEXP
- IMLN
- IMLOG10
- IMLOG2

A tooltip for the IF function is visible: "Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE".

This and other Help sheets can be found at www.hitthegroundsprinting.com

To the right of the Function is an explanation of what the Function does (in this case it says 'Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE).

Going one Function down will cause this to disappear and another explanation to appear for the selected Function.

IF (And How To Use Functions) Demonstration
www.hitthegroundsprinting.com

Value	Comment
-1	
3	
-15	
28	
271	
-36	

Function List:

- IF
- IFERROR
- IMABS
- IMAGINARY
- IMARGUMENT
- IMCONJUGATE
- IMCOS
- IMDIV
- IMEXP
- IMLN
- IMLOG10
- IMLOG2

Tooltip: Returns value_if_error if expression is an error and the value of the expression itself otherwise

Adding an 'f' to get '=if' will filter the visible Functions to those starting with 'if'.

We are left with 'if' and 'iferror'

IF (And How To Use Functions) Demonstration
www.hitthegroundsprinting.com

Value	Comment
-1	
3	
-15	
28	
271	
-36	

Function List:

- IF
- IFERROR

Tooltip: Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE

Note: It does not matter whether the letters are in lower or upper case, or a mixture.

Put in an opening round bracket.

Below the Function is a breakdown of what should go in to the Function.

	A	B	C	D	E	F	G	H	I	J	
1	IF (And How To Use Functions) Demonstration										
2	www.hitthegroundsprinting.com										
3											
4				Value	Comment						
5					=if(
6				-1		IF(logical_test, [value_if_true], [value_if_false])					
7				3							
8				-15							
9				28							
10				271							
11				-36							
12											

The breakdown is split in to three, separated by commas.

Logical_test (which is in **bold** as it is the current element of the Function and awaits entry)

Value_if_true

Value_if_false

We will put in a reference to cell 'C5'

When we put in 'c' all the Functions beginning with a 'c' appear underneath because it is possible to nest functions.

	A	B	C	D	E	F	G	H	I	J	K	
1	IF (And How To Use Functions) Demonstration											
2	www.hitthegroundsprinting.com											
3												
4				Value	Comment							
5					=if(c							
6				-1		IF(logical_test, [value_if_true], [value_if_false]) number up, to the nearest multiple of significance						
7				3		<ul style="list-style-type: none"> CEILING.PRECISE CELL CHAR CHISQ.DIST CHISQ.DIST.RT CHISQ.INV CHISQ.INV.RT CHISQ.TEST CHOOSE CLEAN CODE 						
8				-15								
9				28								
10				271								
11				-36								
12												
13												

When the '5' is added the Functions starting with 'c' disappear the text 'c5' becomes Blue.

This and other Helpsheets can be found at www.hitthegroundsprinting.com

Look to the left and see that the cell 'C5' also has a blue border.

This indicates that the 'c5' in the Function and the cell 'C5' are linked.

Each time a different part of the Function is linked to a cell (or range of cells) then the colour of the text in the Function changes and the cell or cells in question have a border of the same colour.

Will now put in '>0', so we are looking to see that whatever is in cell 'C5' is greater than 0.

Value	Comment
	=if(c5>0
-1	IF(logical_test, [value_if_true], [value_if_false])
3	
-15	
28	
271	
-36	

We then put in a comma, which will divide the first two parts.

The first part is now finished and we are on to the second part, which is the value if it is true.

Note that [value_if_true] has now become **bold** as this is the part of the Function being worked upon.

As we are going to put text in we will enclose it in quotation marks. It would also be possible to put in a number, True or False, or even a reference to a different cell.

We are going to put in "Positive".

This and other Helpsheets can be found at www.hitthegroundsprinting.com

	A	B	C	D	E	F	G	H	I
1				IF (And How To Use Functions) Demonstration					
2				www.hitthegroundsprinting.com					
3									
4				Value	Comment				
5				=if(c5>0,"Positive"					
6				-1	IF(logical_test, [value_if_true], [value_if_false])				
7				3					
8				-15					
9				28					
10				271					
11				-36					
12									
13									
14									

This means that if cell 'C5' contains a value greater than 0 we are going to put the word 'Positive' in cell 'D5'

As we have finished this part of the Function we put in another comma, [value_if_true] is no longer bold and [value_if_false] is bold.

We put 'Negative' in quotation marks.

	A	B	C	D	E	F	G	H	I	J
1				IF (And How To Use Functions) Demonstration						
2				www.hitthegroundsprinting.com						
3										
4				Value	Comment					
5				=if(c5>0,"Positive","Negative"						
6				3	IF(logical_test, [value_if_true], [value_if_false])					
7				-15						
8				28						
9				271						
10				-36						
11										
12										
13										
14										

This is the end of the Function.

This and other Helpsheets can be found at www.hitthegroundsprinting.com

We must now put in a closing round bracket and when we do so the explanation underneath the Function disappears.

	A	B	C	D	E	F	G	H	I	J																		
1				IF (And How To Use Functions) Demonstration																								
2				www.hitthegroundsprinting.com																								
3																												
4				<table border="1"><thead><tr><th>Value</th><th>Comment</th></tr></thead><tbody><tr><td><code>=if(c5>0,"Positive","Negative")</code></td><td></td></tr><tr><td>-1</td><td></td></tr><tr><td>3</td><td></td></tr><tr><td>-15</td><td></td></tr><tr><td>28</td><td></td></tr><tr><td>271</td><td></td></tr><tr><td>-36</td><td></td></tr></tbody></table>	Value	Comment	<code>=if(c5>0,"Positive","Negative")</code>		-1		3		-15		28		271		-36									
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14																												
15																												

Also note that the closing bracket is Black in colour. If Functions are nested each separate Function has different colour brackets. More of this in a different video when the subject arises. A Black bracket will indicate that all the Functions have been completed.

To recap what the Function does.

- 1) The Function is situated in Cell 'D5'
- 2) It is therefore going to return its result in to Cell 'D5'
- 3) It is going to look at the value in Cell 'C5' and determine if it is greater than '0'.
- 4) If it is greater than '0' it is going to put the word 'Positive' in to Cell 'D5'.
- 5) If it is less than '0' it will put the word 'Negative' in to Cell 'D5'.

We will now copy down the Function by dragging it between Cells 'D5' and 'D11'.

We do this by putting the cursor over the box at the bottom right of Cell 'D5' (the cursor MUST be in Cell 'D5' for this to show), and when the shape changes to a cross we right click the mouse then drag the cell down to 'D11' and when we are there we release the cursor.

As practice makes perfect apply the above at every practical opportunity

Finally

This Helpsheet was written by Norman of Hit The Ground Sprinting Ltd. Its distribution is Free but please acknowledge the author and company in any communications concerning it. Further it is intended for guidance purposes only. For more information and other Helpsheets please check out the website www.hitthegroundsprinting.com or contact by email on norman@hitthegroundsprinting.com