EXCEL IF FUNCTION

If function is quite useful in a spreadsheet. It is used when you want to test for more than one value. For example, has a bill been paid or not? If it has, you can deduct the amount from the money you have left to spend; if it hasn't, keep it on your debt list. Later you'll see how to use the if function to grade student exam scores. If the student has above 80, award an A grade; if the student has below 30, award a fail grade. First, here's what an if function look like:

If (logical_test, value_if_true, value_if_false)

The thing to note here is the three items between the round brackets of the if function. Here's what they mean:

logical_test: the first argument is what you want to test for. It is the number in the cell greater than 80, for example?

value_if_true: this is what you want to do if the answer to the argument is YES. (Award an A grade, for example).

value_if_false: this is what you want to do if the answer to the first argument is NO. (Award a F grade).

AND and OR in Excel

The Excel function, AND, takes at least two values and tells you whether or not they are true. As a simple example, take a sequence like this:

	A	B	C	D	E
1	Sequence	Won	Lost	Won	
2					
3					

You can use AND to see if this sentence is all "Won." Enter the following formula in cell E1:

= AND (B1="Won", C1="Won", D1="Won")

When you press the Enter Key on your keyboard, cell E1 will have a value of false. It's false because the AND function is checking each cell for a value of "Won." If just one of these values is not "Won", the whole AND function returns false. If you change the value in cell C1 to "Won" and press Enter Key, Cell E1 will have a value of True. With the AND function, each test for true or false needs to be separated with a comma.

Similar to AND, but if just one of your tests is true then Excel will return true for the whole OR function.

Using AND and OR in Excel If Statement

AND and OR are more useful when used with If statement. Try this create the simple spreadsheet below:

	A	B	C	D
1	Students	Maths	History	
2	Kay	A	A	
3	Kenny			

We first want to test if a student got straight A's. If so, we'll display a suitable message in the column.

Click inside cell D2. Enter the following formula:

= If (AND (B2="A", C2="A"), "Straight A student!", "Not a straight A student")

Now press the Enter Key. You will see that cell D2 contains the text "straight A student!"

Now click inside cell B2. Change the grade from A to B. Press Enter Key. You will notice that cell D2 will change to "Not a straight A student."

Let's try the OR function. Click into cell B3. Enter a capital F. In cell C3 enter a capital letter A. In cell D3, add the following formula:

=if (OR(B3= “F”, C3= “F”), “At least one F”, “Not a single F!”)

This time, we’ve use OR as the test for our If statement. Now only one of the conditions needs to be TRUE for the whole OR statement to evaluate as TRUE. If the OR statement is TRUE then the part after the first comma gets executed by Excel. This was to display the test “At least one F.” If neither cell B3 nor cell C3 contains a letter F then the part after the second comma gets executed. This is the text “Not a single F.”

Try it out. Change the F to a B, for example. You should see the text in cell D3 change.