

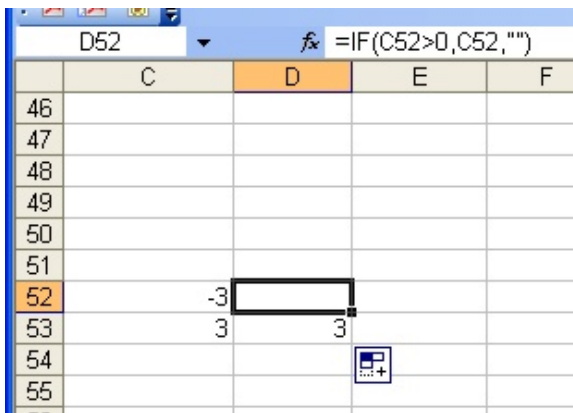
## Week 02 readings – Some slightly more advanced Excel functions

### Conditionals

Conditionals are tests to see if values meet some condition (i.e. a logical test). For instance, if you have a list of numbers, you might want to know which of these values are positive and which are negative. The main function in Excel for this is “IF”, and it has the following form:

IF(logical\_test, value\_if\_true, value\_if\_false)

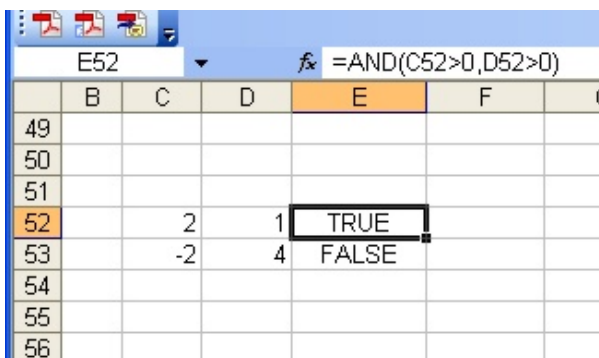
Look at the following example:



	C	D	E	F
46				
47				
48				
49				
50				
51				
52	-3			
53	3	3		
54				
55				

In the C column, we have two values, -3 and 3 and in the D column we have our conditionals (IF statement). In D52, the IF statement has the logical test to see if C52 is greater than zero. If it is, then cell D52 displays the value in C52. If it is not, then it shows no value (use two sets of quotation marks “” to return no value). So D52 shows no value, because -3 is not greater than zero, and D53 shows the value in C53, because 3 is greater than zero.

Two other useful functions are AND and OR. These compare multiple logical tests.



	B	C	D	E	F	G
49						
50						
51						
52		2	1	TRUE		
53		-2	4	FALSE		
54						
55						
56						

In the case above, the AND function in E52 asks if both C52 *and* D52 are greater than zero. Because they are positive, a value of TRUE was returned. The AND function in

E53 asks the same for C53 *and* D53, and in this case returned a value of FALSE. The OR function works in a similar way, which should be self-evident.

In many cases it can be helpful to nest AND/OR functions in IF statements:

	B	C	D	E	F	G	H
49							
50							
51							
52		2	1	TRUE	2		
53		-2	4	FALSE			
54							
55							
56							
57							
58							

In the case above, the IF statement in F52 asks if both C52 and D52 are greater than zero, using the AND function. If the AND function is true, then the IF statement returns the value in C52 (and if not, it returns nothing). You can see that because the AND statement is true, F52 is now the value of C52. The same function is in F53, but because that AND statement is false, it returned nothing.

### Basic statistics

Just a quick reminder of some very basic statistical functions, most of which should be self-evident:

COUNT - returns how many values are in a group of cells

SUM

MIN

MAX

AVERAGE (not MEAN!)

MEDIAN

STDEV

### Goal Seek

The Goal Seek function is a way of finding which input value in a user-defined function leads to the function returning a certain value. In other words, if you know the output value of some function, but not the input value for it, you can use Goal Seek to find the input value. It is a clever tool that is potentially quite useful in many circumstances.

The Excel help files provide a decent explanation of this, possibly better than I can provide. So I encourage you to search the help files for Goal Seek and check this out. If you still don't understand it, we will go over it together in class.