

## **Making Decisions With Excel**

We can instruct a spreadsheet to make decisions on entered labels and values. This is achieved by using the IF function, which takes the form:

IF (something is true, do this, otherwise, do something else)

The IF function uses mathematical symbols (operators) to make comparisons:

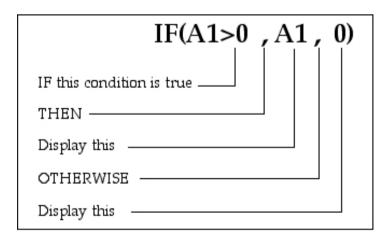
Operator	Meaning
<	less than
>	greater than
<=	less than or equal to
>=	greater than or equal to
=	equal to
<>	is not equal to

For example, look at the following formula:

=IF(A1>0,A1,0)

This formula reads: if the contents of cell A1 is greater than zero then display the contents of A1, otherwise display zero. The sections of an IF statement must be separated by commas. The commas stand for 'then' and 'otherwise'.

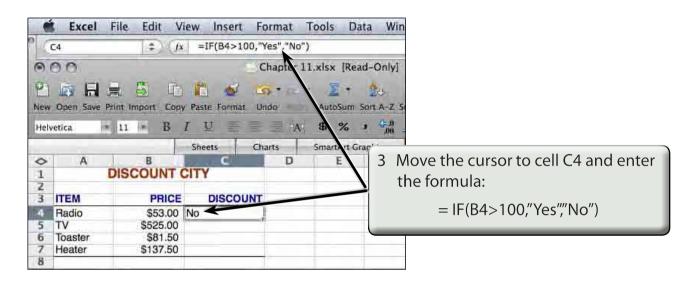
The following diagram shows the sections of the formula:



## The IF Command

A template for a company that gives discounts on items priced over \$100 will be used.

- 1 Load Microsoft Excel 2008 and select OPEN from the FILE Menu.
- 2 Access the EXCEL 2008 SUPPORT FILES, open the CHAPTER 11 folder and load the CHAPTER 11 file, selecting YES to the READ-ONLY message.



NOTE: The spreadsheet is being told that if the contents of the cell B4 is greater than 100, then display YES, otherwise display NO. Quotation marks are used because YES and NO are LABELS.

Ć	Excel	File Edit Vie	w Insert	Format	Tools	Data	Win	
	C4	() () ()	=IF(B4>100,	"Yes","No	o")			
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1		DISCOUNT CI	TY					
2		II III			1		r	next to prices over \$100.
3	ITEM	PRICE	DISCOUN	T_	/			•
4	Radio	\$53.00	No	1	/		- 10	
5	TV	\$525.00	Yes					1
6	Toaster	\$81.50	No					
7	Heater	\$137.50	Yes	K				1
8				a				1

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1	[	DISCOUNT CI	TY		\$95.60 and observe the change.
1					\$75.00 and observe the change.
3	ITEM	PRICE	DISCOUNT		
4	Radio	\$53.00	No	/	
5	TV	\$525.00	Yes		
б	Toaster	\$81.50	NO /		
7	Heater	\$95.60	No		
8					

6 Mathematical calculations can also be done within IF functions.

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	C4	2) (Jx)	=IF(B4>100	),B4*10%,	*")			
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0		A 5 G	6 🛷	3.	N Z	• 👲	*	
	Open Save	Print Import Copy F	Paste Format	Undo		um Sor		sition the cursor at cell C4, enter:
	A	B		Sheets	Charts			= IF(B4>100,B4*10%,"")
♦	A	DISCOUNT CI	C TY	D	/		the	en press the <return> key.</return>
23	ITEM	PRICE	DISCOUN	IT				
4	Radio	\$53.00						
5	TV	\$525.00	Yes					
6	Toaster	\$81.50	No					
7	Heater	\$95.60	No					
8				1				

## NOTE: i For the "", press the double quotation key twice.

- ii The formula reads: if the value in cell B4 is greater than 100, then work out and display B4 times 10%, otherwise display a blank space (two quotes entered next to one another).
- iii You should receive a blank space in cell C4 as the Radio costs less than \$100.

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A       1     DISC       2     3       3     ITEM       4     Radio       5     TV       6     Toaster       7     Heater       8	B         C           COUNT CITY         PRICE         DISCOUNT           \$53.00         \$52.50           \$81.50         \$55.60           \$95.60         \$52.50		FC	<u>-1</u>	A <sup>2</sup> A <sub>2</sub> Volumber Format: Currency Decimat: $G_{10} = 0$ Alignment and Spacing Borders and Shading	
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$\diamond$	A	B	C D	) E	1	to \$100. A discount is not given
1		DISCOUNT CI	TY	//	/	because the value is not over \$100.
23	ITEM	PRICE	DISCOUNT	//		
4	Radio	\$53.00				
5	TV	\$525.00	\$5.30			
6	Toaster	\$100.00	K 4			
7	Heater	\$95.60				