

Specific Formulas

Subject : Excel Data Entry

Application (Version): Microsoft Excel 2007

Task Description: Specific Formulas

Tutorial: 08 March, 2010, by Nathan Smith

Specific Formulas or Functions

SUM

AVERAGE

MIN, MAX

IF

COUNT,

COUNTA,

COUNTIF

COUNTBLANK

IF

SIN

COS

TAN

SUM FUNCTION

The screenshot shows the Microsoft Excel interface with the 'Home' tab selected. The formula bar displays the formula `=sum(F4:F10)`. The worksheet grid shows the following data:

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4						78				
5						22				
6						43				
7						14				
8						62				
9						30				
10						5				
11						=sum(F4:F10)				
12										
13										
14										

The SUM formula which is most widely used can be used with ease on Excel. The Sum function takes all of the values in each of the specified cells

= SUM (first value, second value, etc)

AVERAGE

The screenshot shows the Microsoft Excel interface with the following data in the worksheet:

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3											
4						78					
5						22					
6						43					
7						14					
8						62					
9						30					
10						5					
11						=AVERAGE(F4:F10)					
12											
13											
14											
15											
16											
17											

The average function computes the average of the specified data.
= AVERAGE (first value, second value, etc.)

MAX FUNCTION

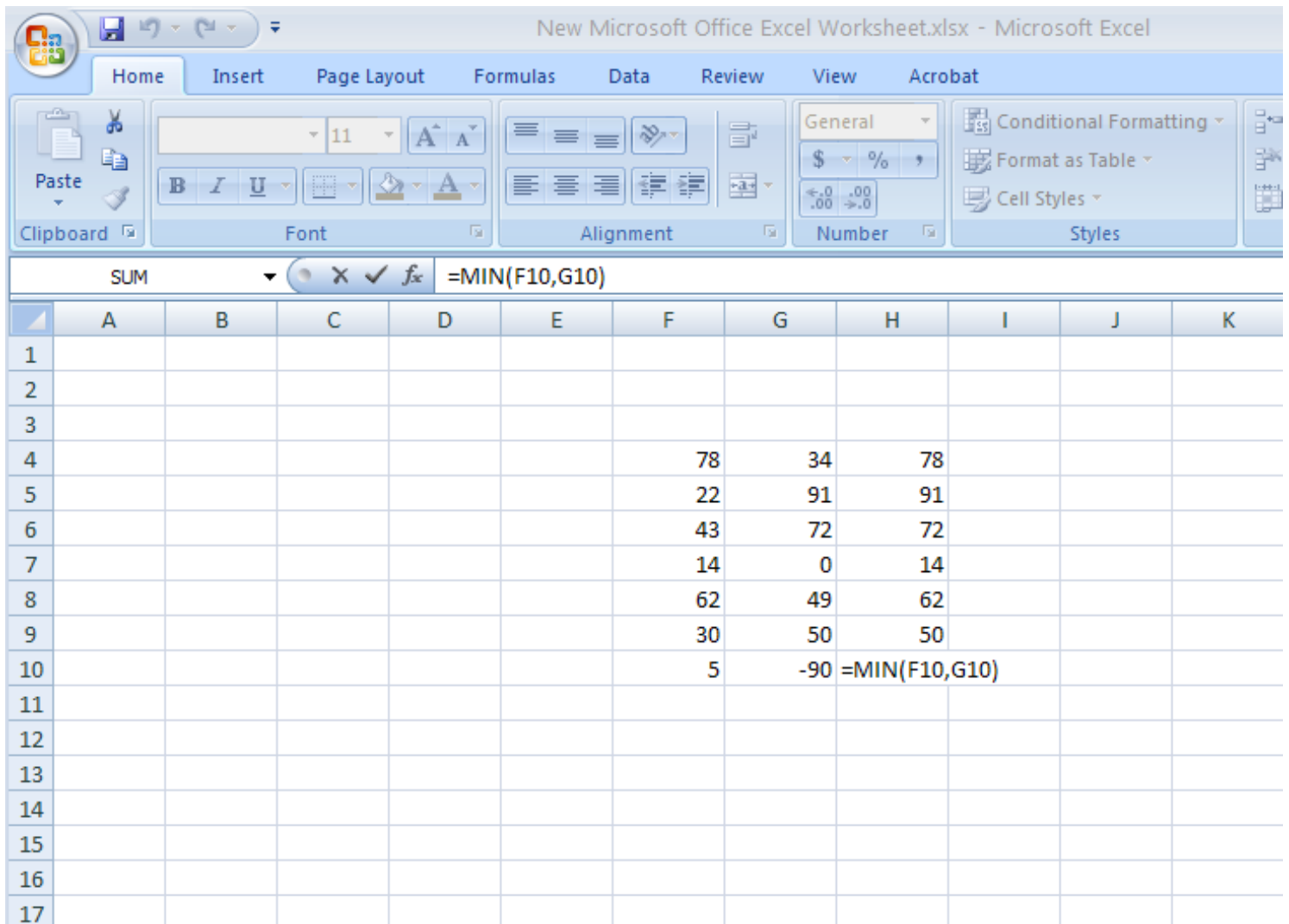
The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4						78	34	78		
5						22	91	91		
6						43	72	72		
7						14	0	14		
8						62	49	62		
9						30	50	50		
10						5	-90	=MAX(F10,G10)		
11										
12										
13										
14										
15										

The MAX function which stands for maximum returns the largest (max value) in the specified cells.
= MAX (first value, second value, etc.)

NOTE: Blank & Text entries are not included in the MAX function

MIN FUNCTION



The screenshot shows the Microsoft Excel interface with the following data in the worksheet:

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3											
4						78	34	78			
5						22	91	91			
6						43	72	72			
7						14	0	14			
8						62	49	62			
9						30	50	50			
10						5	-90	=MIN(F10,G10)			
11											
12											
13											
14											
15											
16											
17											

The MIN function which stands for minimum returns the (min value) in the specified cells.

= MIN (first value, second value, etc.)

NOTE: Blank & Text entries are not included in the MIN function

COUNT FUNCTION

The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

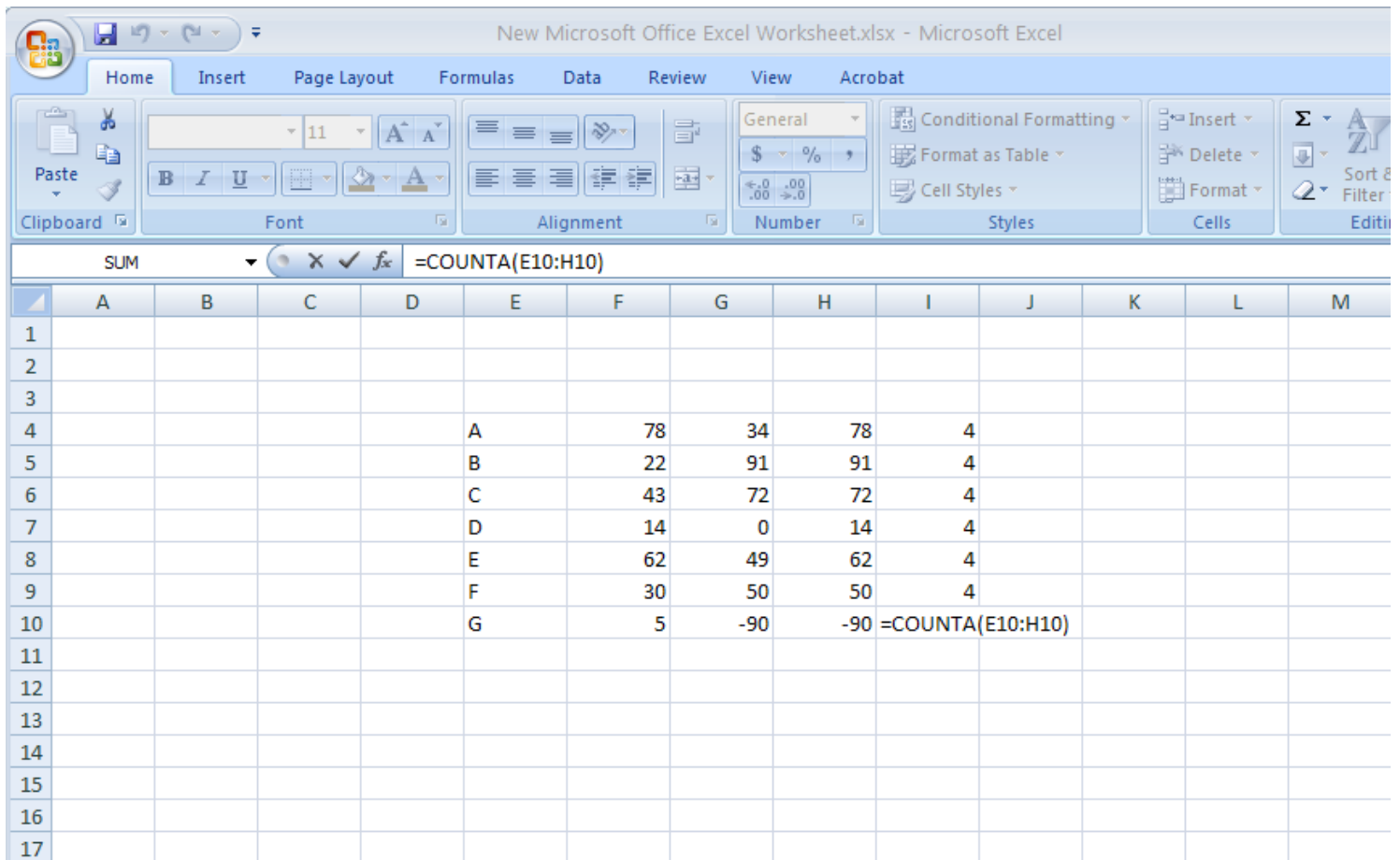
	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2													
3													
4						78	34	78	3				
5						22	91	91	3				
6						43	72	72	3				
7						14	0	14	3				
8						62	49	62	3				
9						30	50	50	3				
10						5	-90	-90	=COUNT(F10:H10)				
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

The count function will return the number of entries in the selected range of cells

= COUNT(first value, second value, etc.)

NOTE: Blank & Text entries are not included in the COUNT function

COUNTA FUNCTION



The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2													
3													
4					A	78	34	78	4				
5					B	22	91	91	4				
6					C	43	72	72	4				
7					D	14	0	14	4				
8					E	62	49	62	4				
9					F	30	50	50	4				
10					G	5	-90	-90	=COUNTA(E10:H10)				
11													
12													
13													
14													
15													
16													
17													

The Counta function will return the number of entries (counts each cell that has a **number** or a **text**) in the selected range of cells.

=COUNTA(first value, second value, etc)

NOTE: Blank entries are not counted

COUNTIF FUNCTION

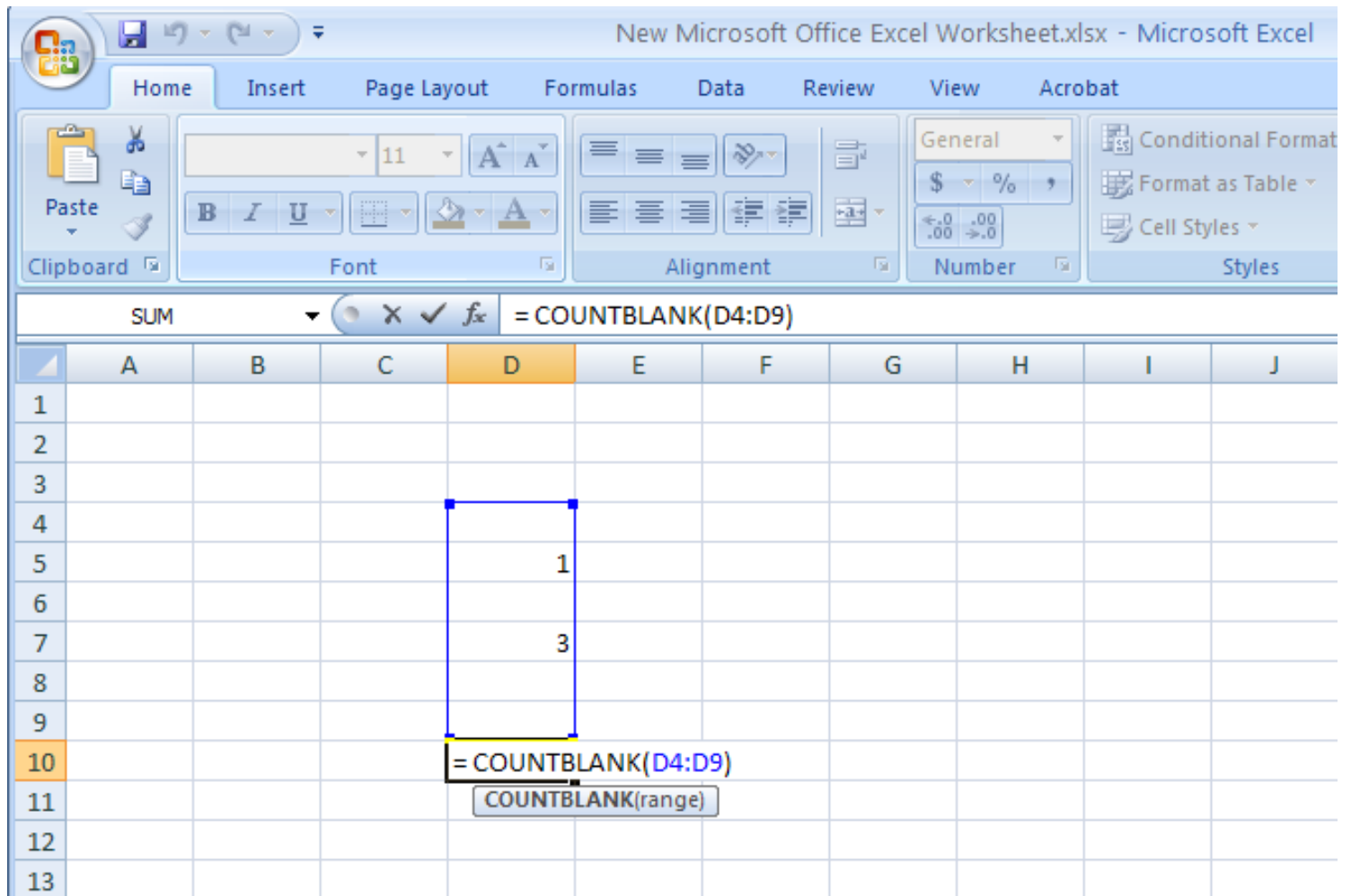
The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2													
3													
4					A	78	34	=COUNTIF(F4:G4, ">=25")					
5					B	22	91	1					
6					C	43	72	2					
7					D	14	0	0					
8					E	62	49	2					
9					F	30	50	2					
10					G	5	-90	0					
11													
12													
13													
14													
15													
16													
17													

The countif statement counts the number of entries that meets the specific criteria.

For example, =COUNTIF(F4: G4, ">=25") counts the entries for numbers greater than or equal to 25.

COUNTBLANK FUNCTION



The screenshot displays the Microsoft Excel interface. The title bar reads "New Microsoft Office Excel Worksheet.xlsx - Microsoft Excel". The ribbon is set to "Home", with the "Formulas" tab active. The formula bar shows the formula `= COUNTBLANK(D4:D9)`. The worksheet grid shows a range of cells from D4 to D9, with D4 containing "1" and D7 containing "3". A tooltip for the formula is visible, showing `= COUNTBLANK(range)`.

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5				1						
6										
7				3						
8										
9										
10				= COUNTBLANK(D4:D9)						
11										
12										
13										

The countblank statement counts the number of blank entries in the specified number of range of cells.
= COUNTBLANK (first value, second value, etc)

IF FUNCTION

The screenshot shows the Microsoft Excel interface with the following data in the spreadsheet:

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3												
4						78	34	1				
5						22	91	0				
6						43	72	0				
7						14	0	1				
8						62	49	1				
9						30	50	0				
10						5	-90	=IF(F10>G10,1,0)				
11												
12												
13												
14												

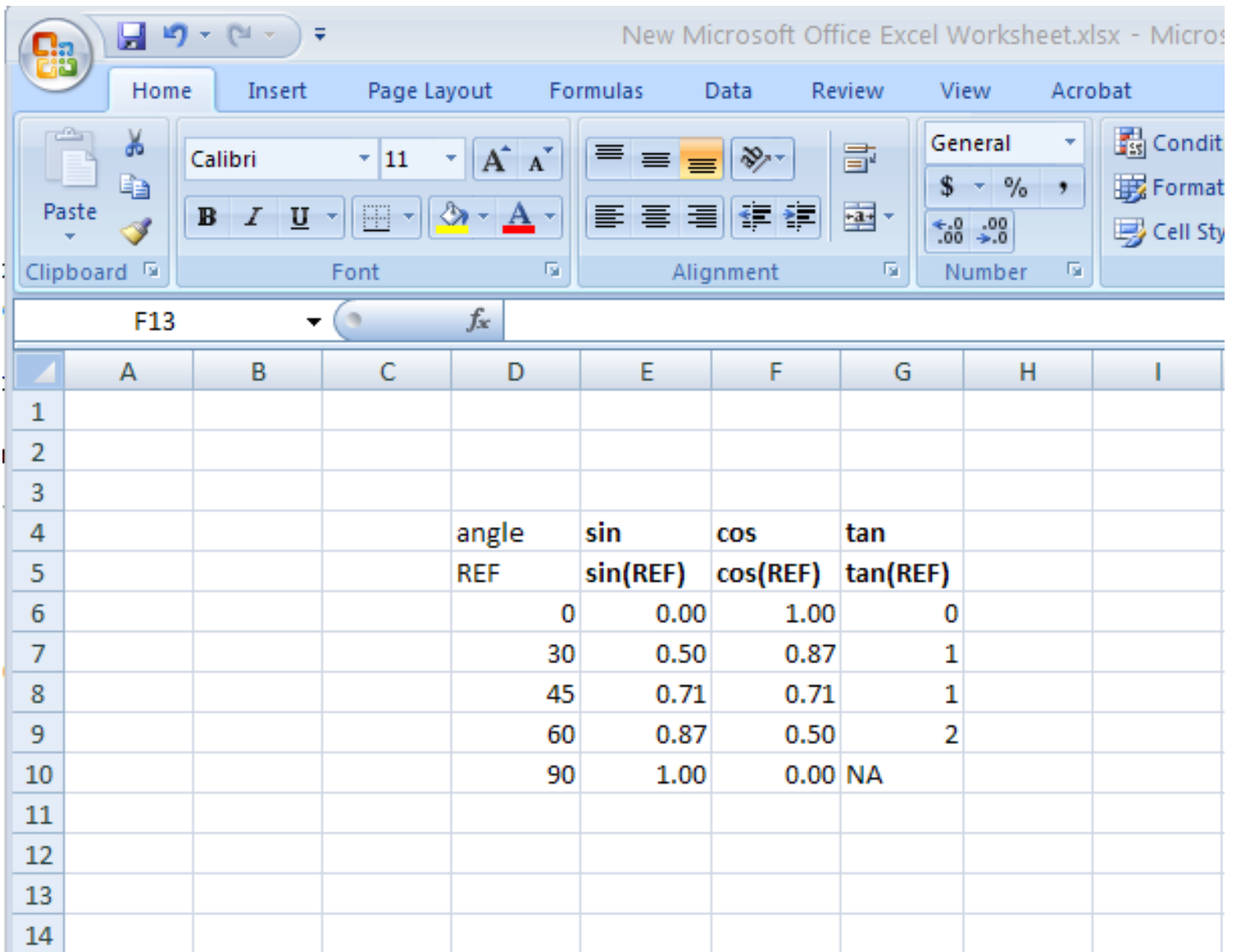
The formula bar shows the formula: `=IF(F10>G10,1,0)`. A tooltip for the IF function is visible over cell H10, showing the syntax: `IF(logical_test, [value if true], [value if false])`.

The IF function will check the logical condition of a statement and return a value (to be specified) if true and another value (to be specified again) if false.

= IF(condition, value-if-true, value-if-false)

NOTE: The value returned can be a number or text (must be in quotes)

SIN COS TAN FUNCTION



The screenshot shows the Microsoft Excel interface with the Home ribbon selected. The worksheet contains a table of trigonometric values for angles from 0 to 90 degrees. The columns are labeled 'angle', 'sin', 'cos', and 'tan'. The rows are numbered 1 through 14. The data is as follows:

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4				angle	sin	cos	tan		
5				REF	sin(REF)	cos(REF)	tan(REF)		
6				0	0.00	1.00	0		
7				30	0.50	0.87	1		
8				45	0.71	0.71	1		
9				60	0.87	0.50	2		
10				90	1.00	0.00	NA		
11									
12									
13									
14									

The SIN COS TAN are the trigonometric functions in the excel.

To calculate the trig functions in degrees formula = sin (angle*PI()/180) and in radians formula = sin (angle)