

IMPORTANT FUNCTIONS IN EXCEL

Now having mastered Data Filters, let us now move to a yet another powerful feature of Excel, called Functions are power tools which help you perform complex computations easily and quickly. Functions are like predefined formulas in which the user has to simply provide the values based upon which the calculations are done.

S. No.	A	B	C	D
1.	Value	Functions	Syntax	Answer
2.	3.786	Round()	=Round(A2,2)	3.79
3.	9	Sqrt()	=Sqrt(A3)	3
4.	81	Average()	=Average (A3:A4)	45
5.	75	Max()	=Max (A2:A5)	81
6.	75	Min()	=Min (A2:A6)	3.786
7.	55	Count()	=Count (A2 :A7)	6
8.	50	Sum()	= Sum (A2:A8)	348.786
9.	75	If()	= If(A9>100, "Greater than 100", "Less than 100")	Less than 100
10.	10	Sumif()	=Sumif (A2:A10, ">50")	361
11.		Countif()	=Countif(A2:A10, "<50")	3
12.	-45	Abs()	= Abs(A12)	45
13.	125	Roman()	=Roman (A13)	CXXV
14.	Big	Upper()	=Upper (A14)	BIG
15.	SMALL	Lower()	= Lower (A15)	Small
16.		Cell()	= Cell()	
17.		Today()	= Today()	
18.		Now()	= Now()	
19.	3	Power()	= Power (A19,2)	9

ROUND ()

The ROUND () functions rounds a number to the specified number of decimal places. In our example we have a number 3.786 which we want to round off to only two decimals. i.e. =round(A2,2) answer is 3.78

SQRT ()

The SQRT () function calculates the square root of any specified number. In our present example we have number 9 for which we want out the square root. i.e. = SQRT (A3) answer is 3

AVERAGE ()

The AVERAGE () function calculates the average of a series specified numbers. In the average i.e. Average (A3:A4) answer is 45.

MAX ()

The MAX () function finds out the maximum (highest) value from a series of specified numbers. In our present example we have a range of four cells A2 to A5 from which the highest number has to be found out i.e. =Max (A2:A5) answer is 81.

MIN ()

The MIN () function finds out the minimum (smallest) value from a series of specified numbers. In our present example we have a range of five cells A2 to A6 from which the smallest number has to be found out i.e. = Min (A2 : A6) answer is 3.786.

COUNT ()

The COUNT () function find out the number of entries in a specified range. In our present example we have a range A2 to A7 in which we want to count the number of entries i.e. =Count (A2 : A7) answer is 6

COUNTA()

The COUNTA function in Excel counts the number of **non-empty cells** in a range, including cells with text, numbers, error values, or even empty text

COUNTIF()

The Excel COUNTIF function counts cells in a range that meet a single, specific condition (criteria), using the syntax =COUNTIF(range, criteria)

SUM ()

The SUM () function calculate the sin (total) of entries in specified range. In our present example we have a range A2 to A8 for which we want to add up the numbers i.e. = Sum (A2 : A8) answer is 348.786.

IF ()

The IF () function is one of the most useful and powerful functions available in Excel. Through this function you can conduct conditional tests on values and formulas and execute some operation based upon the result of the test. The outcome of the test determines the value returned by the IF function. If the specified criterion or condition is satisfied IF returns a value T (for True) otherwise F (for False). You can specify two different actions to be performed – one for the true outcome and the other the False outcome. In our present example we have a number in cell A9. Based upon number in this cell we want to write down ‘Greater than 100’ or ‘Less than 100’ in cell C9. i.e. IF (A9>100,” Greater than100”, “Less than100”. Answer is “Less than 100” in cursor A9.

SUMIF ()

The SUMIF () function is a combination of SUM and IF function. Through this function you can add up a series of numbers from a specified range, provided the numbers satisfy the given criterion. Suppose you have a range of cells counting numbers and you want to add up only those numbers which qualify based upon a criteria specified by you, then SUMIF is the function to use. In our present example we have numbers in the cell range A2 to A10 and we want to add up only those numbers which are greater than 50 i.e. =SUMIF (A2 : A10, “>50”, A2 : A10) answer is 361.

=if(A9>=70, “First” , if(A9>=60, “Second” , if(A9>= 50, “Pass” , “Fail”)))

ABS ()

The ABS () function is used to get the absolute value of a number. The absolute of a number means the number without plus or minus sign. In our present we have a number -45 in the cell A12 for which we want to get the absolute value. i.e. = ABS (A12) answer is 45.

ROMAN ()

The ROMAN () function is used to convert an Arabic numerical into digits. In cell A13 we have number 125 which we want to convert into Roman digits. i.e. = ROMAN (A12) answer is CXXV.

UPPER ()

The UPPER () function is used to convert lower text entry upper case, i.e. capital letters. In cell A14 there is a text entry 'big' which has to be converted to caps. i.e. =UPPER (A14) answer is BIG.

LOWER ()

The function is used to convert an upper-case text lower case, i.e. small letters. In cell A15 there is text entry 'SMALL' which has to be convert to small letters i.e. = LOWER (A15) answer is small.

CELL ()

The CELL () function returns information about the formatting, location, or contents of the upper left cell in a reference. This is the fairly useful command and give you all kinds or information about a cell or the current file. In cell C16 we would try to get the name and path of our current file. i.e. =CELL ("File name").

TODAY ()

The TODAY () function is one of the few function that do not require any user argument. It simply returns the current date (internally as a serial number, i.e. the numbers of day which have elapsed from 1st January 1900 till the current date.) i.e. = TODAY () answer is 01-11-2010.

NOW ()

The NOW () function is another of those few function which does not require any user argument. It simply returns the current Date & Time i.e. = NOW () answer is 01-11-2010. 10:23am.

POWER ()

Returns the result of number raised to a power. i.e. =POWER (A19, 2) answer is 9.

FACT ()

Returns the factorial of a number. The Factorial of a number is equal to $1*2*3* \dots * \text{numbers}$. i.e. =FACT (Cell No.)

AND ()

Returns TRUE value if all its argument are TRUE; returns FALSE Value if all its arguments are FALSE i.e. AND (A9>10) Ans is True if A9>10

NOT ()

Reverse the value of its argument. Use NOT when you want to make sure a value is not equal to one particular value.

= AND (A9>10) ans is False if A9 <10. where logical is a value or a value or an expression that can be evaluated to TRUE or FALSE. If logical FALSE, NOT returns TRUE and Vice – Versa.

FIND()

The FIND function in Excel locates a specific text string (substring) within a larger text string

SORT()

The Excel SORT function dynamically sorts a range or array of data, returning a new sorted array that updates automatically when the source data changes, using the syntax =SORT(array, [sort_index], [sort_order], [by_col])

FILTER()

The FILTER function in Excel is a powerful dynamic array function that extracts data from a range or [array](#) based on criteria you set, returning matching results that "spill" into adjacent cells, updating automatically when source data changes. Its syntax is =FILTER(array, include, [if_empty])

LEN()

The Excel LEN function counts the total number of characters in a text string or cell, including letters, numbers, symbols, and spaces, using the syntax =LEN(text)

Tocol()

The TOCOL function in Excel transforms a range or array into a single column, effectively "flattening" data, with optional arguments to ignore blanks/errors or scan by column instead of the default row-by-row. Its syntax is TOCOL(array, [ignore], [scan_by_column])

Torow()

The TOROW function in Excel transforms an array or range of cells into a single, flat row, useful for restructuring data, with optional arguments to ignore blanks/errors and to scan data column-wise instead of the default row-wise. Its syntax is =TOROW(array, [ignore], [scan_by_column])

Sequence()

The SEQUENCE function in Excel generates an array (list) of sequential numbers, dates, or other values in a specified number of rows and columns, making it great for creating dynamic lists without dragging, with syntax =SEQUENCE(rows, [columns], [start], [step])

Transpose()

The TRANSPOSE function in Excel swaps rows and columns for a range of data, converting vertical data to horizontal or vice versa, and can be used as a dynamic formula (=TRANSPOSE(array))