

Function Reference

List of Supported Microsoft[®] Excel[™] Functions



KDCalc[™]

SpreadSheet Calculation Engine for Java and .NET
Version 5.1.x

Status Key	
S	Supported
P	Planned

Status	Function	Description
Operators		
S	+	Addition
S	-	Subtraction
S	-	Negation
S	*	Multiplication
S	/	Division
S	%	Percent
S	^	Exponentiation
S	=	Equal to
S	>	Greater Than
S	<	Less than
S	>=	Greater than or equal to
S	<=	Less than or equal to
S	<>	Not equal to
S	&	Connects, or concatenates, two values to produce one continuous text value
Math and Trigonometry functions		
S	Abs	Returns the absolute value of a number
S	Acos	Returns the arccosine of a number
S	Acosh	Returns the inverse hyperbolic cosine of a number
S	Asin	Returns the arcsine of a number
S	Asinh	Returns the inverse hyperbolic sine of a number
S	Atan	Returns the arctangent of a number
S	Atan2	Returns the arctangent from x- and y- coordinates
S	Atanh	Returns the inverse hyperbolic tangent of a number
S	Ceiling	Rounds a number to the nearest integer or to the nearest multiple of significance
S	Combin	Returns the number of combinations for a given number of objects
S	Cos	Returns the cosine of a number
S	Cosh	Returns the hyperbolic cosine of a number
S	Countif	Counts the number of nonblank cells within a range that meet the given criteria
S	Degrees	Converts radians to degrees
S	Even	Rounds a number up to the nearest even integer
S	Exp	Returns e raised to the power of a given number
S	Fact	Returns the factorial of a number
P	Factdouble	Returns the double factorial of a number
S	Floor	Rounds a number down, toward zero
P	Gcd	Returns the greatest common divisor
S	Int	Rounds a number down to the nearest integer
P	Lcm	Returns the least common multiple
S	Ln	Returns the natural logarithm of a number
S	Log	Returns the logarithm of a number to a specified base
S	Log10	Returns the base-10 logarithm of a number
P	Mdeterm	Returns the matrix determinant of an array
P	Minverse	Returns the matrix inverse of an array
P	Mmult	Returns the matrix product of two arrays
S	Mod	Returns the remainder from division
S	Mround	Returns a number rounded to the desired multiple
P	Multinomial	Returns the multinomial of a set of numbers

Status	Function	Description
S	Odd	Rounds a number up to the nearest odd integer
S	Pi	Returns the value of Pi
S	Power	Returns the result of a number raised to a power
S	Product	Multiplies its arguments
P	Quotient	Returns the integer portion of a division
S	Radians	Converts degrees to radians
S	Rand	Returns a random number between 0 and 1
S	Randbetween	Returns a random number between the numbers you specify
P	Roman	Converts an arabic numeral to roman, as text
S	Round	Rounds a number to a specified number of digits
S	Rounddown	Rounds a number down, toward zero
S	Roundup	Rounds a number up, away from zero
P	Seriessum	Returns the sum of a power series based on the formula
S	Sign	Returns the sign of a number
S	Sin	Returns the sine of the given angle
S	Sinh	Returns the hyperbolic sine of a number
S	Sqrt	Returns a positive square root
S	Sqrtpi	Returns the square root of (number * Pi)
S	Subtotal	Returns a subtotal in a list or database
S	Sum	Adds its arguments
S	Sumif	Adds the cells specified by a given criteria
S	Sumproduct	Returns the sum of the products of corresponding array components
S	Sumsq	Returns the sum of the squares of the arguments
P	Sumx2My2	Returns the sum of the difference of squares of corresponding values in two arrays
P	Sumx2Py2	Returns the sum of the sum of squares of corresponding values in two arrays
P	Sumxmy2	Returns the sum of squares of differences of corresponding values in two arrays
S	Tan	Returns the tangent of a number
S	Tanh	Returns the hyperbolic tangent of a number
S	Trunc	Truncates a number to an integer
Information functions		
P	Cell	Returns information about the formatting, location, or contents of a cell, ex: "format", "col", "row"
S	Countblank	Counts the number of blank cells within a range
P	Errortype	Returns a number corresponding to an error type
P	Info	Returns information about the current operating environment, ex: "directory", "memavail", "osversion", "system"
S	Isblank	Returns TRUE if the value is blank
S	Iserr	Returns TRUE if the value is any error value except #N/A
S	Iserror	Returns TRUE if the value is any error value
S	Iseven	Returns TRUE if the number is even
S	Islogical	Returns TRUE if the value is a logical value
S	Isna	Returns TRUE if the value is the #N/A error value
S	Isnontext	Returns TRUE if the value is not text
S	Isnumber	Returns TRUE if the value is a number
S	Isodd	Returns TRUE if the number is odd
S	Isref	Returns TRUE if the value is a reference
S	Istext	Returns TRUE if the value is text
S	N	Returns a value converted to a number
S	Na	Returns the error value #N/A
S	Type	Returns a number indicating the data type of a value
Logical functions		

Status	Function	Description
S	And	Returns TRUE if all its arguments are TRUE
S	False	Returns the logical value FALSE
S	If	Specifies a logical test to perform
S	Not	Reverses the logic of its argument
S	Or	Returns TRUE if any argument is TRUE
S	True	Returns the logical value TRUE
Lookup and Reference functions		
S	Address	Returns a reference as text to a single cell in a worksheet
P	Areas	Returns the number of areas in a reference
S	Choose	Chooses a value from a list of values
S	Column	Returns the column number of a reference
S	Columns	Returns the number of columns in a reference
S	Hlookup	Looks in the top row of an array and returns the value of the indicated cell
P	Hyperlink	Creates a shortcut or jump that opens a document stored on a network server, an intranet, or the Internet
S	Index	Uses an index to choose a value from a reference or array
S	Indirect	Returns a reference indicated by a text value
S	Lookup	Looks up values in a vector or array
S	Match	Looks up values in a reference or array
S	Offset	Returns a reference offset from a given reference
S	Row	Returns the row number of a reference
S	Rows	Returns the number of rows in a reference
P	Transpose	Returns the transpose of an array
S	Vlookup	Looks in the first column of an array and moves across the row to return the value of a cell
Text functions		
P	Asc	Changes full-width (double-byte) English letters or katakana within a character string to half-width (single-byte) characters.
S	Char	Returns the character specified by the code number
P	Clean	Removes all nonprintable characters from text
S	Code	Returns a numeric code for the first character in a text string
S	Concatenate	Joins several text items into one text item
S	Dollar	Converts a number to text, using currency format
S	Exact	Checks to see if two text values are identical
S	Find	Finds one text value within another (case-sensitive)
S	Fixed	Formats a number as text with a fixed number of decimals
P	Jis	Changes half-width (single-byte) English letters or katakana within a character string to full-width (double-byte) characters.
S	Left	Returns the leftmost characters from a text value
S	Len	Returns the number of characters in a text string
S	Lower	Converts text to lowercase
S	Mid	Returns a specific number of characters from a text string starting at the position you specify
P	Phonetic	Extracts the phonetic (furigana) characters from a text string.
S	Proper	Capitalizes the first letter in each word of a text value
S	Replace	Replaces characters within text
S	Rept	Repeats text a given number of times
S	Right	Returns the rightmost characters from a text value
S	Search	Finds one text value within another (not case-sensitive)
S	Substitute	Substitutes new text for old text in a text string
S	T	Converts its arguments to text
S	Text	Formats a number and converts it to text
S	Trim	Removes spaces from text
S	Upper	Converts text to uppercase

Status	Function	Description
S	Value	Converts a text argument to a number
P	Yen	Converts a number to text, using the ¥ (yen) currency format.
Date and Time functions		
S	Date	Returns the serial number of a particular date
S	Datedif	Calculates the number of days, months, or years between two dates.
S	Datevalue	Converts a date in the form of text to a serial number
S	Day	Converts a serial number to a day of the month
S	Days360	Calculates the number of days between two dates based on a 360-day year
S	Edate	Returns the serial number of the date that is the indicated number of months before or after the start date
S	Eomonth	Returns the serial number of the last day of the month before or after a specified number of months
S	Hour	Converts a serial number to an hour
S	Minute	Converts a serial number to a minute
S	Month	Converts a serial number to a month
P	Networkdays	Returns the number of whole workdays between two dates
S	Now	Returns the serial number of the current date and time
S	Second	Converts a serial number to a second
S	Time	Returns the serial number of a particular time
S	Timevalue	Converts a time in the form of text to a serial number
S	Today	Returns the serial number of today's date
S	Weekday	Converts a serial number to a day of the week
P	Weeknum	Returns a number that indicates where the week falls numerically within a year.
P	Workday	Returns the serial number of the date before or after a specified number of workdays
S	Year	Converts a serial number to a year
S	Yearfrac	Returns the year fraction representing the number of whole days between start_date and end_date
Financial functions		
P	Accrint	Returns the accrued interest for a security that pays periodic interest
P	Accrintm	Returns the accrued interest for a security that pays interest at maturity
P	Amordegrc	Returns the depreciation for each accounting period
P	Amorlinc	Returns the depreciation for each accounting period
P	Coupdaysbs	Returns the number of days from the beginning of the coupon period to the settlement date
P	Coupdays	Returns the number of days in the coupon period that contains the settlement date
P	Coupdaysnc	Returns the number of days from the settlement date to the next coupon date
P	Coupncd	Returns the next coupon date after the settlement date
P	Couponum	Returns the number of coupons payable between the settlement date and maturity date
P	Couppcd	Returns the previous coupon date before the settlement date
S	Cumipmt	Returns the cumulative interest paid between two periods
S	Cumprinc	Returns the cumulative principal paid on a loan between two periods
S	Db	Returns the depreciation of an asset for a specified period using the fixed-declining balance method

Status	Function	Description
S	Ddb	Returns the depreciation of an asset for a specified period using the double-declining balance method or some other method you specify
P	Disc	Returns the discount rate for a security
P	Dollarde	Converts a dollar price, expressed as a fraction, into a dollar price, expressed as a decimal number
P	Dollarfr	Converts a dollar price, expressed as a decimal number, into a dollar price, expressed as a fraction
P	Duration	Returns the annual duration of a security with periodic interest payments
P	Effect	Returns the effective annual interest rate
S	Fv	Returns the future value of an investment
P	Fvschedule	Returns the future value of an initial principal after applying a series of compound interest rates
P	Intrate	Returns the interest rate for a fully invested security
S	Ipmt	Returns the interest payment for an investment for a given period
S	Irr	Returns the internal rate of return for a series of cash flows
S	Ispmt	Calculates the interest paid during a specific period of an investment.
P	Mduration	Returns the Macauley modified duration for a security with an assumed par value of \$100
S	Mirr	Returns the internal rate of return where positive and negative cash flows are financed at different rates
P	Nominal	Returns the annual nominal interest rate
S	Nper	Returns the number of periods for an investment
S	Npv	Returns the net present value of an investment based on a series of periodic cash flows and a discount rate
P	Oddfprice	Returns the price per \$100 face value of a security with an odd first period
P	Oddfyield	Returns the yield of a security with an odd first period
P	Oddlprice	Returns the price per \$100 face value of a security with an odd last period
P	Oddlyield	Returns the yield of a security with an odd last period
S	Pmt	Returns the periodic payment for an annuity
S	Ppmt	Returns the payment on the principal for an investment for a given period
P	Price	Returns the price per \$100 face value of a security that pays periodic interest
P	Pricedisc	Returns the price per \$100 face value of a discounted security
P	Pricemat	Returns the price per \$100 face value of a security that pays interest at maturity
S	Pv	Returns the present value of an investment
S	Rate	Returns the interest rate per period of an annuity
P	Received	Returns the amount received at maturity for a fully invested security
S	Sln	Returns the straight-line depreciation of an asset for one period
S	Syd	Returns the sum-of-years' digits depreciation of an asset for a specified period
P	Tbillq	Returns the bond-equivalent yield for a Treasury bill
P	Tbillprice	Returns the price per \$100 face value for a Treasury bill
P	Tbillyield	Returns the yield for a Treasury bill
S	Vdb	Returns the depreciation of an asset for a specified or partial period using a declining balance method
S	Xirr	Returns the internal rate of return for a schedule of cash flows that is not necessarily periodic
P	Xnpv	Returns the net present value for a schedule of cash flows that is not necessarily periodic
P	Yield	Returns the yield on a security that pays periodic interest

Status	Function	Description
P	Yelddisc	Returns the annual yield for a discounted security. For example, a Treasury bill
P	Yieldmat	Returns the annual yield of a security that pays interest at maturity
Statistical functions		
S	Avedev	Returns the average of the absolute deviations of data points from their mean
S	Average	Returns the average of its arguments
S	Averagea	Returns the average of its arguments, including numbers, text, and logical values
S	Betadist	Returns the cumulative beta probability density function
P	Betainv	Returns the inverse of the cumulative beta probability density function
P	Binomdist	Returns the individual term binomial distribution probability
P	Chidist	Returns the one-tailed probability of the chi-squared distribution
P	Chiinv	Returns the inverse of the one-tailed probability of the chi-squared distribution
P	Chitest	Returns the test for independence
P	Confidence	Returns the confidence interval for a population mean
S	Correl	Returns the correlation coefficient between two data sets
S	Count	Counts how many numbers are in the list of arguments
S	Counta	Counts how many values are in the list of arguments
S	Covar	Returns covariance, the average of the products of paired deviations
P	Critbinom	Returns the smallest value for which the cumulative binomial distribution is less than or equal to a criterion value
P	Devsq	Returns the sum of squares of deviations
P	Expondist	Returns the exponential distribution
P	Fdist	Returns the F probability distribution
P	Finv	Returns the inverse of the F probability distribution
P	Fisher	Returns the Fisher transformation
P	Fisherinv	Returns the inverse of the Fisher transformation
S	Forecast	Returns a value along a linear trend
P	Frequency	Returns a frequency distribution as a vertical array
P	Ftest	Returns the result of an F-test
P	Gammadist	Returns the gamma distribution
P	Gammainv	Returns the inverse of the gamma cumulative distribution
P	Gammaln	Returns the natural logarithm of the gamma function, G(x)
S	Geomean	Returns the geometric mean
P	Growth	Returns values along an exponential trend
P	Harmean	Returns the harmonic mean
P	Hypgeomdist	Returns the hypergeometric distribution
S	Intercept	Returns the intercept of the linear regression line
P	Kurt	Returns the kurtosis of a data set
S	Large	Returns the k-th largest value in a data set
P	Linest	Returns the parameters of a linear trend
P	Logest	Returns the parameters of an exponential trend
S	Loginv	Returns the inverse of the lognormal distribution
S	Lognormdist	Returns the cumulative lognormal distribution
S	Max	Returns the maximum value in a list of arguments
S	Maxa	Returns the maximum value in a list of arguments, including numbers, text, and logical values
S	Median	Returns the median of the given numbers
S	Min	Returns the minimum value in a list of arguments
S	Mina	Returns the smallest value in a list of arguments, including numbers, text, and logical values
S	Mode	Returns the most common value in a data set
P	Negbinomdist	Returns the negative binomial distribution

Status	Function	Description
S	Normdist	Returns the normal cumulative distribution
S	Norminv	Returns the inverse of the normal cumulative distribution
S	Normsdist	Returns the standard normal cumulative distribution
S	Normsinv	Returns the inverse of the standard normal cumulative distribution
S	Pearson	Returns the Pearson product moment correlation coefficient
S	Percentile	Returns the k-th percentile of values in a range
S	Percentrank	Returns the percentage rank of a value in a data set
S	Permut	Returns the number of permutations for a given number of objects
P	Poisson	Returns the Poisson distribution
P	Prob	Returns the probability that values in a range are between two limits
S	Quartile	Returns the quartile of a data set
S	Rank	Returns the rank of a number in a list of numbers
S	Rsqr	Returns the square of the Pearson product moment correlation coefficient
S	Skew	Returns the skewness of a distribution
S	Slope	Returns the slope of the linear regression line
S	Small	Returns the k-th smallest value in a data set
P	Standardize	Returns a normalized value
S	Stdev	Estimates standard deviation based on a sample
S	Stdeva	Estimates standard deviation based on a sample, including numbers, text, and logical values
S	Stdevp	Calculates standard deviation based on the entire population
S	Stdevpa	Calculates standard deviation based on the entire population, including numbers, text, and logical values
S	Steyx	Returns the standard error of the predicted y-value for each x in the regression
S	Tdist	Returns the Student's t-distribution
P	Tinv	Returns the inverse of the Student's t-distribution
P	Trend	Returns values along a linear trend
P	Trimmean	Returns the mean of the interior of a data set
S	Ttest	Returns the probability associated with a Student's t-test
S	Var	Estimates variance based on a sample
S	Vara	Estimates variance based on a sample, including numbers, text, and logical values
S	Varp	Calculates variance based on the entire population
S	Varpa	Calculates variance based on the entire population, including numbers, text, and logical values
P	Weibull	Returns the Weibull distribution
P	Ztest	Returns the two-tailed P-value of a z-test
Engineering functions		
P	Besseli	Returns the modified Bessel function $I_n(x)$
P	Besselj	Returns the Bessel function $J_n(x)$
P	Besselk	Returns the modified Bessel function $K_n(x)$
P	Bessely	Returns the Bessel function $Y_n(x)$
S	Bin2Dec	Converts a binary number to decimal
S	Bin2Hex	Converts a binary number to hexadecimal
S	Bin2Oct	Converts a binary number to octal
P	Complex	Converts real and imaginary coefficients into a complex number
P	Convert	Converts a number from one measurement system to another
S	Dec2Bin	Converts a decimal number to binary
S	Dec2Hex	Converts a decimal number to hexadecimal
S	Dec2Oct	Converts a decimal number to octal
P	Delta	Tests whether two values are equal
P	Erf	Returns the error function
P	Erfc	Returns the complementary error function

Status	Function	Description
P	Gestep	Tests whether a number is greater than a threshold value
S	Hex2Bin	Converts a hexadecimal number to binary
S	Hex2Dec	Converts a hexadecimal number to decimal
S	Hex2Oct	Converts a hexadecimal number to octal
P	Imabs	Returns the absolute value (modulus) of a complex number
P	Imaginary	Returns the imaginary coefficient of a complex number
P	Imargument	Returns the argument theta, an angle expressed in radians
P	Imconjugate	Returns the complex conjugate of a complex number
P	Imcos	Returns the cosine of a complex number
P	Imdiv	Returns the quotient of two complex numbers
P	Imexp	Returns the exponential of a complex number
P	Imln	Returns the natural logarithm of a complex number
P	Imlog10	Returns the base-10 logarithm of a complex number
P	Imlog2	Returns the base-2 logarithm of a complex number
P	Impower	Returns a complex number raised to an integer power
P	Improduct	Returns the product of two complex numbers
P	Imreal	Returns the real coefficient of a complex number
P	Imsin	Returns the sine of a complex number
P	Imsqrt	Returns the square root of a complex number
P	Imsub	Returns the difference of two complex numbers
P	Imsum	Returns the sum of complex numbers
S	Oct2Bin	Converts an octal number to binary
S	Oct2Dec	Converts an octal number to decimal
S	Oct2Hex	Converts an octal number to hexadecimal
Database and List Management functions		
S	Daverage	Returns the average of selected database entries
S	Dcount	Counts the cells that contain numbers in a database
S	Dcounta	Counts nonblank cells in a database
S	Dget	Extracts from a database a single record that matches the specified criteria
S	Dmax	Returns the maximum value from selected database entries
S	Dmin	Returns the minimum value from selected database entries
S	Dproduct	Multiplies the values in a particular field of records that match the criteria in a database
S	Dstdev	Estimates the standard deviation based on a sample of selected database entries
S	Dstdevp	Calculates the standard deviation based on the entire population of selected database entries
S	Dsum	Adds the numbers in the field column of records in the database that match the criteria
S	Dvar	Estimates variance based on a sample from selected database entries
S	Dvarp	Calculates variance based on the entire population of selected database entries
P	Getpivotdata	Returns data stored in a PivotTable
DDE and External functions		
P	Call	Calls a procedure in a dynamic link library (DLL) or code resource
P	Sql.Request	Connects with an external data source and runs a query from a worksheet, then returns the result as an array without the need for macro programming