

EXCEL FUNCTIONS

Financial functions

| Function | Description |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| ACCRINT | Returns the accrued interest for a security that pays periodic interest |
| ACCRINTM | Returns the accrued interest for a security that pays interest at maturity |
| AMORDEGRC | Returns the depreciation for each accounting period by using a depreciation coefficient |
| AMORLINC | Returns the depreciation for each accounting period |
| COUPDAYBS | Returns the number of days from the beginning of the coupon period to the settlement date |
| COUPDAYS | Returns the number of days in the coupon period that contains the settlement date |
| COUPDAYSNC | Returns the number of days from the settlement date to the next coupon date |
| COUPNCD | Returns the next coupon date after the settlement date |
| COUPNUM | Returns the number of coupons payable between the settlement date and maturity date |
| COUPPCD | Returns the previous coupon date before the settlement date |
| CUMIPMT | Returns the cumulative interest paid between two periods |
| CUMPRINC | Returns the cumulative principal paid on a loan between two periods |
| DB | Returns the depreciation of an asset for a specified period by using the fixed-declining balance method |
| DDB | Returns the depreciation of an asset for a specified period by using the double-declining balance method or some other method that you specify |
| DISC | Returns the discount rate for a security |
| DOLLARDE | Converts a dollar price, expressed as a fraction, into a dollar price, expressed as a decimal number |
| DOLLARFR | Converts a dollar price, expressed as a decimal number, into a dollar price, expressed as a fraction |
| DURATION | Returns the annual duration of a security with periodic interest payments |
| EFFECT | Returns the effective annual interest rate |
| FV | Returns the future value of an investment |
| FVSCHEDULE | Returns the future value of an initial principal after applying a series of compound interest rates |
| INTRATE | Returns the interest rate for a fully invested security |
| IPMT | Returns the interest payment for an investment for a given period |
| IRR | Returns the internal rate of return for a series of cash flows |
| ISPMT | Calculates the interest paid during a specific period of an investment |
| MDURATION | Returns the Macauley modified duration for a security with an assumed par value of \$100 |
| MIRR | Returns the internal rate of return where positive and negative cash flows are financed at different rates |
| NOMINAL | Returns the annual nominal interest rate |
| NPER | Returns the number of periods for an investment |
| NPV | Returns the net present value of an investment based on a series of periodic cash flows and a discount rate |
| ODDFPRICE | Returns the price per \$100 face value of a security with an odd first period |
| ODDFYIELD | Returns the yield of a security with an odd first period |
| ODDLPRICE | Returns the price per \$100 face value of a security with an odd last period |
| ODDLYIELD | Returns the yield of a security with an odd last period |
| PMT | Returns the periodic payment for an annuity |
| PPMT | Returns the payment on the principal for an investment for a given period |
| PRICE | Returns the price per \$100 face value of a security that pays periodic interest |
| PRICEDISC | Returns the price per \$100 face value of a discounted security |
| PRICEMAT | Returns the price per \$100 face value of a security that pays interest at maturity |
| PV | Returns the present value of an investment |
| RATE | Returns the interest rate per period of an annuity |
| RECEIVED | Returns the amount received at maturity for a fully invested security |
| SLN | Returns the straight-line depreciation of an asset for one period |
| SYD | Returns the sum-of-years' digits depreciation of an asset for a specified period |
| TBILLEQ | Returns the bond-equivalent yield for a Treasury bill |
| TBILLPRICE | Returns the price per \$100 face value for a Treasury bill |
| TBILLYIELD | Returns the yield for a Treasury bill |
| VDB | Returns the depreciation of an asset for a specified or partial period by using a declining balance method |
| XIRR | Returns the internal rate of return for a schedule of cash flows that is not necessarily periodic |
| XNPV | Returns the net present value for a schedule of cash flows that is not necessarily periodic |
| YIELD | Returns the yield on a security that pays periodic interest |
| YIELDDISC | Returns the annual yield for a discounted security; for example, a Treasury bill |
| YIELDMAT | Returns the annual yield of a security that pays interest at maturity |

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Information functions

| Function | Description |
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| CELL | Returns information about the formatting, location, or contents of a cell |
| ERROR.TYPE | Returns a number corresponding to an error type |
| INFO | Returns information about the current operating environment |
| ISBLANK | Returns TRUE if the value is blank |
| ISERR | Returns TRUE if the value is any error value except #N/A |
| ISERROR | Returns TRUE if the value is any error value |
| ISEVEN | Returns TRUE if the number is even |
| ISLOGICAL | Returns TRUE if the value is a logical value |
| ISNA | Returns TRUE if the value is the #N/A error value |
| ISNONTEXT | Returns TRUE if the value is not text |
| ISNUMBER | Returns TRUE if the value is a number |
| ISODD | Returns TRUE if the number is odd |
| ISREF | Returns TRUE if the value is a reference |
| ISTEXT | Returns TRUE if the value is text |
| N | Returns a value converted to a number |
| NA | Returns the error value #N/A |
| TYPE | Returns a number indicating the data type of a value |

Logical functions

| Function | Description |
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| AND | Returns TRUE if all of its arguments are TRUE |
| FALSE | Returns the logical value FALSE |
| IF | Specifies a logical test to perform |
| IFERROR | Returns a value you specify if a formula evaluates to an error; otherwise, returns the result of the formula |
| NOT | Reverses the logic of its argument |
| OR | Returns TRUE if any argument is TRUE |
| TRUE | Returns the logical value TRUE |

Lookup and reference functions

| Function | Description |
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| ADDRESS | Returns a reference as text to a single cell in a worksheet |
| AREAS | Returns the number of areas in a reference |
| CHOOSE | Chooses a value from a list of values |
| COLUMN | Returns the column number of a reference |
| COLUMNS | Returns the number of columns in a reference |
| HLOOKUP | Looks in the top row of an array and returns the value of the indicated cell |
| HYPERLINK | Creates a shortcut or jump that opens a document stored on a network server, an intranet, or the Internet |
| INDEX | Uses an index to choose a value from a reference or array |
| INDIRECT | Returns a reference indicated by a text value |
| LOOKUP | Looks up values in a vector or array |
| MATCH | Looks up values in a reference or array |
| OFFSET | Returns a reference offset from a given reference |
| ROW | Returns the row number of a reference |
| ROWS | Returns the number of rows in a reference |
| RTD | Retrieves real-time data from a program that supports COM automation (Automation: A way to work with an application's objects from another application or development tool. Formerly called OLE Automation, Automation is an industry standard and a feature of the Component Object Model (COM).) |
| TRANSPOSE | Returns the transpose of an array |
| VLOOKUP | Looks in the first column of an array and moves across the row to return the value of a cell |

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Math and trigonometry functions

| Function | Description |
|--------------|-----------------------------------------------------------------------------------|
| ABS | Returns the absolute value of a number |
| ACOS | Returns the arccosine of a number |
| ACOSH | Returns the inverse hyperbolic cosine of a number |
| ASIN | Returns the arcsine of a number |
| ASINH | Returns the inverse hyperbolic sine of a number |
| ATAN | Returns the arctangent of a number |
| ATAN2 | Returns the arctangent from x- and y-coordinates |
| ATANH | Returns the inverse hyperbolic tangent of a number |
| CEILING | Rounds a number to the nearest integer or to the nearest multiple of significance |
| COMBIN | Returns the number of combinations for a given number of objects |
| COS | Returns the cosine of a number |
| COSH | Returns the hyperbolic cosine of a number |
| DEGREES | Converts radians to degrees |
| EVEN | Rounds a number up to the nearest even integer |
| EXP | Returns e raised to the power of a given number |
| FACT | Returns the factorial of a number |
| FACTDOUBLE | Returns the double factorial of a number |
| FLOOR | Rounds a number down, toward zero |
| GCD | Returns the greatest common divisor |
| INT | Rounds a number down to the nearest integer |
| LCM | Returns the least common multiple |
| LN | Returns the natural logarithm of a number |
| LOG | Returns the logarithm of a number to a specified base |
| LOG10 | Returns the base-10 logarithm of a number |
| MDETERM | Returns the matrix determinant of an array |
| MINVERSE | Returns the matrix inverse of an array |
| MMULT | Returns the matrix product of two arrays |
| MOD | Returns the remainder from division |
| MROUND | Returns a number rounded to the desired multiple |
| MULTINOMIAL | Returns the multinomial of a set of numbers |
| ODD | Rounds a number up to the nearest odd integer |
| PI | Returns the value of pi |
| POWER | Returns the result of a number raised to a power |
| PRODUCT | Multiplies its arguments |
| QUOTIENT | Returns the integer portion of a division |
| RADIANS | Converts degrees to radians |
| RAND | Returns a random number between 0 and 1 |
| RANDBETWEEN | Returns a random number between the numbers you specify |
| ROMAN | Converts an arabic numeral to roman, as text |
| ROUND | Returns a number to a specified number of digits |
| ROUNDDOWN | Rounds a number down, toward zero |
| ROUNDUP | Rounds a number up, away from zero |
| SERIESSUM | Returns the sum of a power series based on the formula |
| SIGN | Returns the sign of a number |
| SIN | Returns the sine of the given angle |
| SINH | Returns the hyperbolic sine of a number |
| SQRT | Returns a positive square root |
| SQRTPI | Returns the square root of (number * pi) |
| SUBTOTAL | Returns a subtotal in a list or database |
| SUM | Adds its arguments |
| SUMIF | Adds the cells specified by a given criteria |
| SUMIFS | Adds the cells in a range that meet multiple criteria |
| SUMPRODUCT | Returns the sum of the products of corresponding array components |
| SUMSQ | Returns the sum of the squares of the arguments |

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| SUMX2MY2 | Returns the sum of the difference of squares of corresponding values in two arrays |
| SUMX2PY2 | Returns the sum of the sum of squares of corresponding values in two arrays |
| SUMXMY2 | Returns the sum of squares of differences of corresponding values in two arrays |
| TAN | Returns the tangent of a number |
| TANH | Returns the hyperbolic tangent of a number |
| TRUNC | Truncates a number to an integer |

Statistical functions

| Function | Description |
|----------------|----------------------------------------------------------------------------------------------------------------------|
| AVEDEV | Returns the average of the absolute deviations of data points from their mean |
| AVERAGE | Returns the average of its arguments |
| AVERAGEA | Returns the average of its arguments, including numbers, text, and logical values |
| AVERAGEIF | Returns the average (arithmetic mean) of all the cells in a range that meet a given criteria |
| AVERAGEIFS | Returns the average (arithmetic mean) of all cells that meet multiple criteria. |
| BETADIST | Returns the beta cumulative distribution function |
| BETAINV | Returns the inverse of the cumulative distribution function for a specified beta distribution |
| BINOMDIST | Returns the individual term binomial distribution probability |
| CHIDIST | Returns the one-tailed probability of the chi-squared distribution |
| CHIINV | Returns the inverse of the one-tailed probability of the chi-squared distribution |
| CHITEST | Returns the test for independence |
| CONFIDENCE | Returns the confidence interval for a population mean |
| CORREL | Returns the correlation coefficient between two data sets |
| COUNT | Counts how many numbers are in the list of arguments |
| COUNTA | Counts how many values are in the list of arguments |
| COUNTBLANK | Counts the number of blank cells within a range |
| COUNTIF | Counts the number of cells within a range that meet the given criteria |
| COUNTIFS | Counts the number of cells within a range that meet multiple criteria |
| COVAR | Returns covariance, the average of the products of paired deviations |
| CRITBINOM | Returns the smallest value for which the cumulative binomial distribution is less than or equal to a criterion value |
| DEVSQ | Returns the sum of squares of deviations |
| EXPONDIST | Returns the exponential distribution |
| FDIST | Returns the F probability distribution |
| FINV | Returns the inverse of the F probability distribution |
| FISHER | Returns the Fisher transformation |
| FISHERINV | Returns the inverse of the Fisher transformation |
| FORECAST | Returns a value along a linear trend |
| FREQUENCY | Returns a frequency distribution as a vertical array |
| FTEST | Returns the result of an F-test |
| GAMMADIST | Returns the gamma distribution |
| GAMMAINV | Returns the inverse of the gamma cumulative distribution |
| GAMMALN | Returns the natural logarithm of the gamma function, $\Gamma(x)$ |
| GEOMEAN | Returns the geometric mean |
| GROWTH | Returns values along an exponential trend |
| HARMEAN | Returns the harmonic mean |
| HYPGEOMDIST | Returns the hypergeometric distribution |
| INTERCEPT | Returns the intercept of the linear regression line |
| KURT | Returns the kurtosis of a data set |
| LARGE | Returns the k-th largest value in a data set |
| LINEST | Returns the parameters of a linear trend |
| LOGEST | Returns the parameters of an exponential trend |
| LOGINV | Returns the inverse of the lognormal distribution |
| LOGNORMDIST | Returns the cumulative lognormal distribution |
| MAX | Returns the maximum value in a list of arguments |
| MAXA | Returns the maximum value in a list of arguments, including numbers, text, and logical values |
| MEDIAN | Returns the median of the given numbers |

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| MIN | Returns the minimum value in a list of arguments |
| MINA | Returns the smallest value in a list of arguments, including numbers, text, and logical values |
| MODE | Returns the most common value in a data set |
| NEGBINOMDIST | Returns the negative binomial distribution |
| NORMDIST | Returns the normal cumulative distribution |
| NORMINV | Returns the inverse of the normal cumulative distribution |
| NORMSDIST | Returns the standard normal cumulative distribution |
| NORMSINV | Returns the inverse of the standard normal cumulative distribution |
| PEARSON | Returns the Pearson product moment correlation coefficient |
| PERCENTILE | Returns the k-th percentile of values in a range |
| PERCENTRANK | Returns the percentage rank of a value in a data set |
| PERMUT | Returns the number of permutations for a given number of objects |
| POISSON | Returns the Poisson distribution |
| PROB | Returns the probability that values in a range are between two limits |
| QUARTILE | Returns the quartile of a data set |
| RANK | Returns the rank of a number in a list of numbers |
| RSQ | Returns the square of the Pearson product moment correlation coefficient |
| SKEW | Returns the skewness of a distribution |
| SLOPE | Returns the slope of the linear regression line |
| SMALL | Returns the k-th smallest value in a data set |
| STANDARDIZE | Returns a normalized value |
| STDEV | Estimates standard deviation based on a sample |
| STDEVA | Estimates standard deviation based on a sample, including numbers, text, and logical values |
| STDEVP | Calculates standard deviation based on the entire population |
| STDEVPA | Calculates standard deviation based on the entire population, including numbers, text, and logical values |
| STEYX | Returns the standard error of the predicted y-value for each x in the regression |
| TDIST | Returns the Student's t-distribution |
| TINV | Returns the inverse of the Student's t-distribution |
| TREND | Returns values along a linear trend |
| TRIMMEAN | Returns the mean of the interior of a data set |
| TTEST | Returns the probability associated with a Student's t-test |
| VAR | Estimates variance based on a sample |
| VARA | Estimates variance based on a sample, including numbers, text, and logical values |
| VARP | Calculates variance based on the entire population |
| VARPA | Calculates variance based on the entire population, including numbers, text, and logical values |
| WEIBULL | Returns the Weibull distribution |
| ZTEST | Returns the one-tailed probability-value of a z-test |

Text functions

| Function | Description |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------|
| ASC | Changes full-width (double-byte) English letters or katakana within a character string to half-width (single-byte) characters |
| BAHTTEXT | Converts a number to text, using the ₴ (baht) currency format |
| CHAR | Returns the character specified by the code number |
| CLEAN | Removes all nonprintable characters from text |
| CODE | Returns a numeric code for the first character in a text string |
| CONCATENATE | Joins several text items into one text item |
| DOLLAR | Converts a number to text, using the \$ (dollar) currency format |
| EXACT | Checks to see if two text values are identical |
| FIND, FINDB | Finds one text value within another (case-sensitive) |
| FIXED | Formats a number as text with a fixed number of decimals |
| JIS | Changes half-width (single-byte) English letters or katakana within a character string to full-width (double-byte) characters |
| LEFT, LEFTB | Returns the leftmost characters from a text value |
| LEN, LENB | Returns the number of characters in a text string |
| LOWER | Converts text to lowercase |

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| MID, MIDB | Returns a specific number of characters from a text string starting at the position you specify |
| PHONETIC | Extracts the phonetic (furigana) characters from a text string |
| PROPER | Capitalizes the first letter in each word of a text value |
| REPLACE, REPLACEB | Replaces characters within text |
| REPT | Repeats text a given number of times |
| RIGHT, RIGHTB | Returns the rightmost characters from a text value |
| SEARCH, SEARCHB | Finds one text value within another (not case-sensitive) |
| SUBSTITUTE | Substitutes new text for old text in a text string |
| T | Converts its arguments to text |
| TEXT | Formats a number and converts it to text |
| TRIM | Removes spaces from text |
| UPPER | Converts text to uppercase |
| VALUE | Converts a text argument to a number |

Date and time functions

| Function | Description |
|-------------|-------------------------------------------------------------------------------------------------------------|
| DATE | Returns the serial number of a particular date |
| DATEVALUE | Converts a date in the form of text to a serial number |
| DAY | Converts a serial number to a day of the month |
| DAYS360 | Calculates the number of days between two dates based on a 360-day year |
| EDATE | Returns the serial number of the date that is the indicated number of months before or after the start date |
| EOMONTH | Returns the serial number of the last day of the month before or after a specified number of months |
| HOUR | Converts a serial number to an hour |
| MINUTE | Converts a serial number to a minute |
| MONTH | Converts a serial number to a month |
| NETWORKDAYS | Returns the number of whole workdays between two dates |
| NOW | Returns the serial number of the current date and time |
| SECOND | Converts a serial number to a second |
| TIME | Returns the serial number of a particular time |
| TIMEVALUE | Converts a time in the form of text to a serial number |
| TODAY | Returns the serial number of today's date |
| WEEKDAY | Converts a serial number to a day of the week |
| WEEKNUM | Converts a serial number to a number representing where the week falls numerically with a year |
| WORKDAY | Returns the serial number of the date before or after a specified number of workdays |
| YEAR | Converts a serial number to a year |
| YEARFRAC | Returns the year fraction representing the number of whole days between start_date and end_date |