

500 Excel Formula Examples

Detailed formula examples for [key functions](#), including VLOOKUP, INDEX, MATCH, RANK, SUMPRODUCT, AVERAGE, SMALL, LARGE, LOOKUP, ROUND, COUNTIFS, SUMIFS, CHOOSE, FIND, SEARCH, DATE, and many more.

Count

[Count between dates by age range](#)

COUNTIFS FIND LEFT RIGHT SUMPRODUCT TEXTBEFORE

[Count birthdays by year](#)

SUMPRODUCT YEAR COUNTIFS BYROW UNIQUE SORT LET

[Count cells between dates](#)

COUNTIFS SUMPRODUCT

[Count cells between two numbers](#)

COUNTIFS SUMPRODUCT

Count cells equal to

[COUNTIF](#)[SUMPRODUCT](#)

Count cells equal to case sensitive

[SUMPRODUCT](#)[EXACT](#)

Count cells equal to one of many things

[COUNTIF](#)[SUMPRODUCT](#)[ISNUMBER](#)[MATCH](#)

Count cells equal to this or that

[COUNTIF](#)[SUM](#)[SUMPRODUCT](#)

Count cells greater than

[COUNTIF](#)[COUNTIFS](#)

Count cells less than

[COUNTIF](#)[COUNTIFS](#)

Count cells not between two numbers

[COUNTIF](#)[SUMPRODUCT](#)

Count cells not equal to

[COUNTIF](#)[COUNTIFS](#)

Count cells not equal to many things

[MATCH](#)[ISNA](#)[SUMPRODUCT](#)[COUNTA](#)[COUNTIF](#)

Count cells not equal to x or y

[COUNTIFS](#)[SUMPRODUCT](#)

Count cells over n characters

[SUMPRODUCT](#)[LEN](#)[N](#)

Count cells that are blank

[COUNTBLANK](#)[COUNTA](#)[COUNTIF](#)[SUMPRODUCT](#)

Count cells that are not blank

COUNTA COUNTBLANK COUNTIFS SUMPRODUCT

Count cells that begin with

COUNTIF SUMPRODUCT LEFT LEN EXACT

Count cells that contain case sensitive

SUMPRODUCT ISNUMBER FIND

Count cells that contain either x or y

SUMPRODUCT ISNUMBER FIND COUNTIF

Count cells that contain errors

SUMPRODUCT ISERROR ISERR ERROR.TYPE IFERROR

Count cells that contain n characters

COUNTIF SUMPRODUCT LEN REPT

Count cells that contain negative numbers

COUNTIF SUMPRODUCT

Count cells that contain numbers

COUNT SUMPRODUCT ISNUMBER

Count cells that contain odd numbers

SUMPRODUCT ISODD MOD ISEVEN

Count cells that contain positive numbers

COUNTIF SUMPRODUCT

Count cells that contain specific text

COUNTIF SUMPRODUCT SEARCH FIND ISNUMBER

Count cells that contain text

COUNTIF COUNTIFS SUMPRODUCT ISTEXT NOT

Count cells that do not contain

COUNTIF SUMPRODUCT SEARCH FIND NOT

Count cells that do not contain errors

ISERROR NOT SUMPRODUCT ISERR COUNTIF

Count cells that do not contain many strings

ISNUMBER SEARCH MMULT TRANSPOSE REDUCE

Count cells that end with

COUNTIF

Count columns that contain specific values

MMULT COLUMN TRANSPOSE BYCOL LAMBDA

Count dates by day of week

SUMPRODUCT WEEKDAY MATCH

Count dates in given year

YEAR SUMPRODUCT

Count if row meets internal criteria

SUMPRODUCT

Count if row meets multiple criteria

SUMPRODUCT

Count if two criteria match

COUNTIFS SUMPRODUCT

Count items in list

COUNTIFS

Count long numbers

SUMPRODUCT COUNTIF

Count matches between two columns

SUMPRODUCT

Count matching values in matching columns

SUMPRODUCT ISNUMBER MATCH SEARCH

Count non-blank cells by category

COUNTIFS

Count not equal to multiple criteria

SUMPRODUCT ISNA MATCH COUNTIFS

Count numbers by nth digit

SUMPRODUCT MID

Count numbers by range

COUNTIFS FREQUENCY DROP

Count numbers that begin with

SUMPRODUCT LEFT LEN COUNTIF

Count numbers with leading zeros

SUMPRODUCT COUNTIF SUMIF

Count occurrences in entire workbook

COUNTIF SUMPRODUCT VSTACK

Count or sum variance

SUMPRODUCT SUM ABS

Count or sum whole numbers only

MOD SUMPRODUCT

Count paired items in listed combinations

COUNTIFS CONCAT

Count rows that contain specific values

MMULT COLUMN TRANSPOSE BYROW LAMBDA

Count rows with at least n matching values

MMULT COLUMN TRANSPOSE

Count rows with multiple OR criteria

SUMPRODUCT

Count rows with OR logic

SUMPRODUCT

Count sold and remaining

COUNTA COUNTIF

Count total matches in two ranges

SUMPRODUCT COUNTIF MATCH ISNUMBER COUNT

Count unique dates

UNIQUE COUNT COUNTIF SUMPRODUCT

Count unique numeric values in a range

FREQUENCY SUM COUNTIF

Count unique numeric values with criteria

FREQUENCY SUM

Count unique text values in a range

FREQUENCY MATCH ROW SUMPRODUCT

Count unique text values with criteria

FREQUENCY MATCH ROW SUM

Count unique values in a range with COUNTIF

SUMPRODUCT COUNTIF

Count visible rows in a itered list

SUBTOTAL

Count visible rows with criteria

SUBTOTAL OFFSET SUMPRODUCT INDEX

COUNTIF with non-contiguous range

COUNTIF INDIRECT VSTACK

COUNTIFS with multiple criteria and OR logic

COUNTIFS

Histogram with FREQUENCY

FREQUENCY

Running count of occurrence in list

COUNTIF IF

Summary count by month with COUNTIFS

COUNTIFS EDATE

Summary count with COUNTIF

COUNTIF

Summary count with percentage breakdown

COUNTIF COUNTA

SUMPRODUCT count multiple OR criteria

SUMPRODUCT

Two-way summary count

COUNTIFS LET UNIQUE HSTACK VSTACK

Sum

Calculate running total

SUM SCAN

Subtotal by color

SUMIF COUNTIF

Subtotal by invoice number

SUMIF COUNTIF

Subtotal invoices by age

SUMIF COUNTIFS

Sum across multiple worksheets

SUM

Sum across multiple worksheets with criteria

SUMPRODUCT SUMIF INDIRECT

Sum and ignore errors

SUM SUMIF AGGREGATE IFERROR

Sum bottom n values

SUMPRODUCT SMALL SUM ROW INDIRECT

Sum bottom n values with criteria

SMALL SUM FILTER SEQUENCE

Sum by group

SUMIF SUMIFS IF

Sum by month

SUMIFS EDATE SUMPRODUCT TEXT

Sum by month ignore year

SUMPRODUCT MONTH

Sum by month in columns

SUMIFS EOMONTH

Sum by quarter

SUMIFS ROUNDUP MONTH SUMPRODUCT LET LAMBDA BYROW

Sum by week

SUMIFS LET LAMBDA UNIQUE WEEKDAY BYROW HSTACK VSTACK

Sum by week number

SUMIFS WEEKNUM LAMBDA LET BYROW UNIQUE VSTACK HSTACK

Sum by weekday

SUMPRODUCT TEXT WEEKDAY

Sum columns based on adjacent criteria

SUMPRODUCT

Sum entire column

SUM

Sum entire row

SUM

Sum every n rows

SUM OFFSET

Sum every nth column

FILTER SEQUENCE SUMPRODUCT COLUMN MOD

Sum every nth row

FILTER SEQUENCE MOD SUM SUMPRODUCT ROW

Sum first n matching values

FILTER SEQUENCE INDEX SUM

Sum formulas only

SUMPRODUCT ISFORMULA NOT

Sum if begins with

SUMIF SUMIFS

Sum if between

SUMIFS

Sum if by year

SUMIFS DATE

Sum if cell contains text in another cell

SUMIF SUMIFS

Sum if cells are equal to

SUMIF SUMIFS

Sum if cells are not equal to

SUMIF SUMIFS

Sum if cells contain an asterisk

SUMIF SUMIFS

Sum if cells contain both x and y

SUMIFS

Sum if cells contain either x or y

SUMIFS SUMPRODUCT ISNUMBER FIND SEARCH

Sum if cells contain specific text

SUMIF SUMIFS

Sum if date is between

SUMIFS DATE

Sum if date is greater than

SUMIF SUMIFS DATE

Sum if ends with

SUMIF SUMIFS

Sum if equal to either x or y

SUMIF SUMPRODUCT

Sum if equal to one of many things

SUMIF SUMPRODUCT ISNUMBER MATCH

Sum if greater than

SUMIF SUMIFS

Sum if less than

SUMIF SUMIFS

Sum if multiple criteria

SUMIFS

Sum if not blank

SUMIF SUMIFS

Sum if one criteria multiple columns

SUMPRODUCT

Sum last n columns

INDEX COLUMN SUM

Sum matching columns

SUMPRODUCT LEFT

Sum matching columns and rows

SUMPRODUCT

Sum sales in last 30 days by ID

SUMIFS TODAY

Sum through n months

OFFSET SUM

Sum top n values

SUMPRODUCT LARGE SUM ROW INDIRECT

Sum top n values with criteria

SUM LARGE FILTER SEQUENCE

Sum visible rows in a filtered list

SUBTOTAL

SUMIFS with horizontal range

SUMIFS

SUMIFS with multiple criteria and OR logic

SUMIFS SUM

SUMPRODUCT with IF

SUMPRODUCT

Average

Average and ignore errors

AVERAGEIF AGGREGATE AVERAGE IFERROR FILTER

Average by month

AVERAGEIFS EOMONTH

Average if criteria not blank

AVERAGEIFS

Average last 5 values

OFFSET COUNT AVERAGE

Average last 5 values in columns

OFFSET COUNT AVERAGE

Average numbers

AVERAGE

Average numbers ignore zero

AVERAGEIF AVERAGEIFS

Average pay per week

SUMPRODUCT COUNTIF

Average response time per month

AVERAGEIFS EOMONTH

Average the last 3 numeric values

LOOKUP LARGE ROW AVERAGE INDIRECT

Average top 3 scores

LARGE AVERAGE

Average with multiple criteria

AVERAGEIFS

Moving average formula

OFFSET AVERAGE MIN

Must pass 4 out of 6 subjects

IF COUNTIF AND

Weighted average

SUMPRODUCT SUM AVERAGE

Dynamic array

Basic `LET` example

FILTER

Biggest gainers and losers

FILTER LARGE SMALL SORT

Combine ranges

INDEX SEQUENCE ROWS COLUMNS LET

Count unique dates ignore time

INT UNIQUE COUNT LET LAMBDA SCAN

Count unique values

UNIQUE COUNTA

Count unique values with criteria

UNIQUE FILTER LEN SUM COUNTA

Detailed `LET` function example

LET VLOOKUP IF XLOOKUP

Distinct values

UNIQUE

Dynamic summary count

UNIQUE COUNTIF LET SORT SCAN LAMBDA

Dynamic two-way average

UNIQUE TRANSPOSE AVERAGEIFS

Dynamic two-way count

UNIQUE TRANSPOSE COUNTIFS LET HSTACK VSTACK

Dynamic two-way sum

[UNIQUE](#)[TRANSPOSE](#)[AVERAGEIFS](#)

Extract common values from two lists

[FILTER](#)[COUNTIF](#)[UNIQUE](#)[SORT](#)

Filter and transpose horizontal to vertical

[FILTER](#)[TRANSPOSE](#)

Filter by column, sort by row

[FILTER](#)[SORT](#)

Filter by date

[FILTER](#)[MONTH](#)

FILTER case-sensitive

[FILTER](#)[SEARCH](#)[ISNUMBER](#)

Filter contains one of many

[FILTER](#)[ISNUMBER](#)[MATCH](#)

Filter data between dates

[FILTER](#)

Filter every nth row

[FILTER](#)[SEQUENCE](#)[MOD](#)[ROW](#)

Filter exclude blank values

[FILTER](#)

Filter horizontal data

[FILTER](#)[TRANSPOSE](#)

FILTER last n valid entries

[FILTER](#)[SEQUENCE](#)[INDEX](#)

FILTER on first or last n values

[FILTER](#)[SEQUENCE](#)[INDEX](#)

FILTER on top n values

[FILTER](#)[LARGE](#)[SORT](#)

FILTER on top n values with criteria

[FILTER](#)[LARGE](#)[SORT](#)

Filter text contains

[FILTER](#)[SEARCH](#)[ISNUMBER](#)

Filter this or that

[FILTER](#)

Filter to extract matching values

[FILTER](#)[COUNTIF](#)[COUNTIFS](#)

FILTER to remove columns

[FILTER](#)[MATCH](#)[ISNUMBER](#)

FILTER to show duplicate values

[UNIQUE](#)[FILTER](#)[COUNTIF](#)

Filter values within tolerance

[FILTER](#)[ABS](#)

FILTER with complex multiple criteria

[FILTER](#)[LEFT](#)[MONTH](#)[NOT](#)

FILTER with multiple OR criteria

[FILTER](#)[ISNUMBER](#)[MATCH](#)

FILTER with partial match

[FILTER](#)[SEARCH](#)[ISNUMBER](#)

Generate random text strings

[SORTBY](#)[RANDARRAY](#)[COUNTA](#)[SEQUENCE](#)[CHAR](#)

Get column totals

[BYCOL](#)[LAMBDA](#)[MMULT](#)[ROW](#)[TRANSPOSE](#)[SEQUENCE](#)

Get row totals

[BYROW](#)[LAMBDA](#)[MMULT](#)[COLUMN](#)[TRANSPOSE](#)[SEQUENCE](#)

LAMBDA append range

[LAMBDA](#)[LET](#)[INDEX](#)[SEQUENCE](#)

LAMBDA append range horizontal

[LAMBDA](#)[LET](#)[INDEX](#)[SEQUENCE](#)

LAMBDA contains one of many

[LAMBDA](#)[SUMPRODUCT](#)[SUM](#)[ISNUMBER](#)[SEARCH](#)

LAMBDA contains which things

[LAMBDA](#)[LET](#)[ISNUMBER](#)[SEARCH](#)[SORTBY](#)

LAMBDA count words

[LAMBDA](#)[SUBSTITUTE](#)[TRIM](#)[LEN](#)

LAMBDA replace characters recursive

[LAMBDA](#)[LEFT](#)[MID](#)[LEN](#)

LAMBDA split text to array

[LAMBDA](#)[FILTERXML](#)[TRANSPOSE](#)

LAMBDA strip characters

[LAMBDA](#)[LET](#)[MID](#)[MATCH](#)[ISNUMBER](#)

LAMBDA strip trailing characters recursive

[LAMBDA](#)[MID](#)[LEN](#)

List upcoming birthdays

[SORTBY](#)[LET](#)[TEXT](#)[INDEX](#)[SEQUENCE](#)[XMATCH](#)

MAP with AND and OR logic

[MAP](#)[AND](#)[OR](#)

Minimum value if unique

[UNIQUE](#)[MIN](#)[COUNTIF](#)[IF](#)

Random list of names

[SORTBY](#)[RANDARRAY](#)[COUNTA](#)[SEQUENCE](#)

Random numbers without duplicates

[SEQUENCE](#)[SORTBY](#)[RANDARRAY](#)[INDEX](#)

Sequence of days

[SEQUENCE](#)[WORKDAY.INTL](#)

Sequence of months

[SEQUENCE](#)[EDATE](#)[EOMONTH](#)

Sequence of times

[SEQUENCE](#)[TIME](#)

Sequence of years

[SEQUENCE](#)[YEAR](#)[MONTH](#)[DAY](#)

Sort birthdays by month and day

[SORTBY](#)[TEXT](#)

Sort by custom list

[SORTBY](#)[MATCH](#)

Sort by one column

[SORT](#)

Sort by random

[SORTBY](#)[RANDARRAY](#)[COUNTA](#)

Sort by two columns

[SORTBY](#)

Sort text by length

[SORTBY](#)[LEN](#)

Sort values by columns

[SORT](#)[SORTBY](#)

Sum numbers with text

[TEXTBEFORE](#)[TEXTAFTER](#)[UNIQUE](#)[LET](#)[LAMBDA](#)[BYROW](#)

Unique rows

[UNIQUE](#)[SORT](#)

Unique values

[UNIQUE](#)

Unique values by count

[UNIQUE](#)[FILTER](#)[COUNTIF](#)

Unique values from multiple ranges

[UNIQUE](#)[VSTACK](#)

Unique values ignore blanks

[UNIQUE](#)[FILTER](#)

Unique values with criteria

[UNIQUE](#)[FILTER](#)

Unique values with multiple criteria

[UNIQUE](#)[FILTER](#)

UNIQUE with non-adjacent columns

FILTER

UNIQUE

SORT

XLOOKUP match any column

MMULT

SEQUENCE

COLUMNS

Min and Max

Cap percentage between 0 and 100

MIN

MAX

MEDIAN

IF

First in, last out times

MINIFS

MAXIFS

MAX

IF

Large with criteria

LARGE

Larger of two values

MAX

Max of every nth column

MAX

COLUMN

MOD

Max value ignore all errors

AGGREGATE

MAXIFS

Max value in given month

MAX

IF

AGGREGATE

TEXT

INDEX

MATCH

Max value on given weekday

MAX

IF

AGGREGATE

Max value with variable column

INDEX

MATCH

MAX

FILTER

COUNTIF

Maximum if multiple criteria

[MAX](#) [IF](#) [MAXIFS](#)

Maximum value

[MAX](#) [MAXIFS](#)

Maximum value if

[MAX](#) [IF](#) [MAXIFS](#)

Minimum difference if not blank

[MIN](#) [IF](#) [MINIFS](#)

Minimum if multiple criteria

[MIN](#) [IF](#) [MINIFS](#)

Minimum value

[MIN](#)

Minimum value if

[MIN](#) [IF](#) [MINIFS](#)

Name of nth largest value

[LARGE](#) [INDEX](#) [MATCH](#) [XLOOKUP](#)

Name of nth largest value with criteria

[LARGE](#) [INDEX](#) [MATCH](#) [IF](#) [XLOOKUP](#)

nth largest value

[LARGE](#)

nth largest value with criteria

[LARGE](#)

nth largest value with duplicates

[MAX](#) [IF](#)

nth smallest value

SMALL

nth smallest value with criteria

SMALL

Smaller of two values

MIN

Lookup

Approximate match with multiple criteria

INDEX MATCH IF

Basic INDEX MATCH approximate

INDEX MATCH

Basic INDEX MATCH exact

INDEX MATCH

Basic Tax Rate calculation with VLOOKUP

VLOOKUP

Break ties with helper column and COUNTIF

SMALL INDEX MATCH

Calculate grades with VLOOKUP

VLOOKUP

Calculate shipping cost with VLOOKUP

VLOOKUP

Case sensitive lookup

EXACT INDEX MATCH XLOOKUP

Case-sensitive INDEX and MATCH

INDEX

MATCH

EXACT

XLOOKUP

Case-sensitive lookup with SUMPRODUCT

SUMPRODUCT

EXACT

Commission split formula example

VLOOKUP

Count missing values

COUNTIF

SUMPRODUCT

MATCH

ISNA

Extract all matches with helper column

INDEX

MATCH

AND

SUM

Extract all partial matches

INDEX

AGGREGATE

ISNUMBER

SEARCH

Extract multiple matches into separate columns

INDEX

SMALL

IFERROR

ROW

COLUMNS

Extract multiple matches into separate rows

INDEX

SMALL

IFERROR

ROW

ROWS

Faster VLOOKUP with 2 VLOOKUPS

VLOOKUP

NA

Find closest match

INDEX

MATCH

ABS

MIN

XLOOKUP

Find longest string in column

INDEX

MATCH

MAX

LEN

Find longest string with criteria

INDEX

MATCH

MAX

LEN

Find lowest n values

[SMALL](#) [INDEX](#) [MATCH](#)

Find missing values

[COUNTIF](#) [VLOOKUP](#) [MATCH](#)

First match in range with wildcard

[INDEX](#) [MATCH](#)

Get address of lookup result

[INDEX](#) [MATCH](#) [CELL](#)

Get cell content at given row and column

[ADDRESS](#) [INDIRECT](#) [INDEX](#)

Get employee information with VLOOKUP

[VLOOKUP](#)

Get first match cell contains

[INDEX](#) [MATCH](#) [ISNUMBER](#) [SEARCH](#) [AGGREGATE](#)

Get first non-blank value in a list

[INDEX](#) [MATCH](#) [ISBLANK](#)

Get first text value in a list

[VLOOKUP](#)

Get first text value with HLOOKUP

[HLOOKUP](#)

Get information corresponding to max value

[MAX](#) [MATCH](#) [INDEX](#)

Get last match

[INDEX](#) [MATCH](#) [MAX](#) [ROW](#)

Get last match cell contains

[LOOKUP](#)[SEARCH](#)

Get location of value in 2D array

[SUMPRODUCT](#) [ROW](#) [COLUMN](#)

Get nth match

[SMALL](#) [IF](#) [MIN](#) [ROW](#)

Get nth match with INDEX / MATCH

[INDEX](#) [SMALL](#)

Get nth match with VLOOKUP

[VLOOKUP](#) [COUNTIF](#)

INDEX and MATCH advanced example

[INDEX](#) [MATCH](#) [LEFT](#)

INDEX and MATCH descending order

[INDEX](#) [MATCH](#)

Index and match on multiple columns

[MMULT](#) [COLUMN](#) [TRANSPOSE](#) [INDEX](#)

INDEX and MATCH with multiple criteria

[INDEX](#) [MATCH](#)

INDEX with variable array

[INDEX](#) [MATCH](#) [CHOOSE](#)

Join tables with INDEX and MATCH

[INDEX](#) [MATCH](#)

Left lookup with INDEX and MATCH

[INDEX](#) [MATCH](#)

Left lookup with VLOOKUP

[VLOOKUP](#) [CHOOSE](#)

Look up entire column

[XLOOKUP](#) [INDEX](#) [MATCH](#)

Look up entire row

[XLOOKUP](#) [INDEX](#) [MATCH](#)

Lookup and sum column

[INDEX](#) [MATCH](#) [SUM](#)

Lookup first negative value

[XLOOKUP](#) [FILTER](#) [TAKE](#) [INDEX](#) [MATCH](#)

Lookup last few versions

[LOOKUP](#) [ISNUMBER](#) [FIND](#)

Lookup latest price

[LOOKUP](#)

Lookup lowest Monday tide

[INDEX](#) [MATCH](#) [IF](#) [MIN](#) [XLOOKUP](#)

Lookup lowest value

[INDEX](#) [MATCH](#) [MIN](#)

Lookup number plus or minus N

[XLOOKUP](#) [ABS](#) [INDEX](#) [MATCH](#)

Lookup up cost for product or service

[VLOOKUP](#)

Lookup value between two numbers

[LOOKUP](#)

Lookup with variable sheet name

[VLOOKUP](#)[INDIRECT](#)

Match `rst` does not begin with

[INDEX](#)[MATCH](#)[LEFT](#)

Match `rst` error

[MATCH](#)[ISERROR](#)

Match `rst` occurrence does not contain

[INDEX](#)[MATCH](#)[ISNUMBER](#)[SEARCH](#)

Match long text

[MATCH](#)[LEFT](#)[MID](#)[EXACT](#)

Match next highest value

[INDEX](#)[MATCH](#)

Max if criteria match

[MAX](#)[IF](#)[MAXIFS](#)

Merge tables with VLOOKUP

[VLOOKUP](#)

Multi-criteria lookup and transpose

[INDEX](#)[MATCH](#)

Multiple chained VLOOKUPs

[VLOOKUP](#)[IFERROR](#)

Multiple matches in comma separated list

[TEXTJOIN](#)

Nearest location with XMATCH

[INDEX](#)[XMATCH](#)

Next largest match with the MATCH function

[INDEX](#) [MATCH](#)

Partial match with numbers and wildcard

[MATCH](#) [TEXT](#)

Partial match with VLOOKUP

[VLOOKUP](#)

Position of first partial match

[MATCH](#) [INDEX](#)

Position of max value in list

[MAX](#) [MATCH](#)

Rank and score with INDEX and MATCH

[RANK](#) [INDEX](#) [MATCH](#)

Reverse VLOOKUP example

[VLOOKUP](#) [CHOOSE](#) [INDEX](#) [MATCH](#) [XLOOKUP](#)

Self-contained VLOOKUP

[VLOOKUP](#)

Sum lookup values using SUMIF

[SUMIF](#) [SUMPRODUCT](#)

Sum range with INDEX

[INDEX](#) [SUM](#)

SUMIFS multiple criteria lookup in table

[SUMIFS](#)

Two-way approximate match multiple criteria

[INDEX](#) [MATCH](#) [IF](#)

Two-way lookup with INDEX and MATCH

[INDEX](#) [MATCH](#)

Two-way lookup with VLOOKUP

[VLOOKUP](#) [MATCH](#)

VLOOKUP by date

[VLOOKUP](#)

VLOOKUP case-sensitive

[VLOOKUP](#) [EXACT](#) [CHOOSE](#)

VLOOKUP from another sheet

[VLOOKUP](#)

VLOOKUP from another workbook

[VLOOKUP](#)

VLOOKUP if blank return blank

[VLOOKUP](#) [IF](#)

VLOOKUP override output

[VLOOKUP](#)

VLOOKUP with 2 lookup tables

[VLOOKUP](#)

VLOOKUP with multiple criteria

[VLOOKUP](#)

VLOOKUP with multiple criteria advanced

[VLOOKUP](#) [CHOOSE](#)

VLOOKUP with numbers and text

[VLOOKUP](#) [ISTEXT](#) [IFERROR](#)

VLOOKUP with two client rates

VLOOKUP

VLOOKUP with variable table array

[INDIRECT](#) [VLOOKUP](#) [IF](#)

VLOOKUP without #N/A error

[VLOOKUP](#) [IFERROR](#) [IFNA](#)

XLOOKUP basic approximate match

[XLOOKUP](#)

XLOOKUP basic exact match

[XLOOKUP](#)

XLOOKUP case-sensitive

[XLOOKUP](#) [EXACT](#)

XLOOKUP date of max value

[XLOOKUP](#) [INDEX](#) [MATCH](#)

XLOOKUP horizontal lookup

[XLOOKUP](#)

XLOOKUP last match

[XLOOKUP](#)

XLOOKUP latest by date

[XLOOKUP](#) [MAX](#)

XLOOKUP lookup left

[XLOOKUP](#)

XLOOKUP lookup row or column

[XLOOKUP](#)

XLOOKUP match text contains

[XLOOKUP](#)[SEARCH](#)[FIND](#)[ISNUMBER](#)

XLOOKUP rearrange columns

[XLOOKUP](#)

XLOOKUP return blank if blank

[XLOOKUP](#)[IF](#)[LET](#)

XLOOKUP two-way exact match

[XLOOKUP](#)[INDEX](#)[MATCH](#)

XLOOKUP wildcard match example

[XLOOKUP](#)[TRANSPOSE](#)

XLOOKUP with Boolean OR logic

[XLOOKUP](#)[INDEX](#)[MATCH](#)

XLOOKUP with complex multiple criteria

[FILTER](#)[LEFT](#)[MONTH](#)[NOT](#)

XLOOKUP with logical criteria

[XLOOKUP](#)

XLOOKUP with multiple criteria

[XLOOKUP](#)

XMATCH reverse search

[XMATCH](#)[INDEX](#)

Zodiac sign lookup

[INDEX](#)[MATCH](#)[TEXT](#)[DATEVALUE](#)[IFNA](#)[YEAR](#)

If

If cell begins with x, y, or z

[SUM](#)[COUNTIF](#)

If cell contains

[IF](#)

if cell contains this or that

[COUNTIF](#)[SUM](#)

If cell equals

[IF](#)

If cell is blank

[IF](#)[ISBLANK](#)

If cell is greater than

[IF](#)

If cell is not blank

[IF](#)[ISBLANK](#)[NOT](#)

If cell is this OR that

[IF](#)[OR](#)

If cell is x or y and z

[IF](#)[OR](#)[AND](#)

If date is between two dates

[IF](#)[AND](#)

If else

[IF](#)

If not blank multiple cells

[IF](#)[ISBLANK](#)[NOT](#)

If NOT this or that

IF **OR** **NOT**

If this AND that

IF **AND**

If this AND that OR that

IF **AND** **OR**

IF with boolean logic

IF

IF with other calculations

IF **SUM** **AND** **AVERAGE**

IF with wildcards

IF

Invoice status with nested if

IF **TODAY**

Nested IF function example

IF

Nested IF with multiple AND

IF **AND** **OR**

Only calculate if not blank

IF **ISBLANK** **COUNTBLANK** **AND** **OR** **COUNT**

Return blank if

IF **ISBLANK** **COUNTBLANK**

Show checkmark if complete

IF **ISBLANK** **NOT**

Tax rate calculation with fixed base

IF

Two-tier sales tax calculation

IF

Win loss points calculation

VLOOKUP IF

Grouping

Categorize text with keywords

INDEX MATCH ISNUMBER SEARCH XLOOKUP

Group arbitrary text values

VLOOKUP

Group numbers at uneven intervals

LOOKUP

Group numbers with VLOOKUP

VLOOKUP

Group times into 3 hour buckets

FLOOR

Group times into unequal buckets

VLOOKUP

If cell contains one of many things

INDEX MATCH ISNUMBER SEARCH

Map inputs to arbitrary values

VLOOKUP CHOOSE

Map text to numbers

VLOOKUP

Running count group by n size

COUNTA CEILING

Conditional formatting

Highlight 3 smallest values with criteria

SMALL AND

Conditional formatting based on another cell

Conditional formatting based on another column

Conditional formatting column is blank

OR AND NOT

Conditional formatting date past due

TODAY

Conditional formatting dates overlap

SUMPRODUCT

Conditional formatting highlight target percentage

Conditional formatting last n rows

Find duplicate values in two columns

COUNTIF AND

Gantt chart

AND

Gantt chart by week

AND

Gantt chart time schedule

AND OR

Gantt chart with weekends

WEEKDAY

Highlight approximate match lookup conditional formatting

LOOKUP OR AND

Highlight blank cells

ISBLANK LEN

Highlight bottom values

SMALL

Highlight cells that begin with

COUNTIF FIND IFERROR

Highlight cells that contain

SEARCH FIND ISNUMBER

Highlight cells that contain one of many

SEARCH FIND ISNUMBER SUMPRODUCT

Highlight cells that end with

COUNTIF RIGHT LEN EXACT

Highlight cells that equal

EXACT

Highlight column differences

EXACT NOT

Highlight data by quartile

QUARTILE

Highlight dates between

DATE AND

Highlight dates greater than

DATE

Highlight dates in same month and year

DATE TEXT

Highlight dates in the next N days

TODAY AND

Highlight dates that are weekends

WEEKDAY OR

Highlight duplicate columns

SUMPRODUCT COUNTIF

Highlight duplicate rows

COUNTIFS COUNTIF SUMPRODUCT

Highlight duplicate values

COUNTIF

Highlight entire rows

Highlight every other row

ISEVEN ISODD ROW MOD

Highlight integers only

MOD

Highlight many matching values

COUNTIF

Highlight missing values

COUNTIF**Highlight multiples of specific value****MOD****Highlight numbers that include symbols****ISNUMBER MID****Highlight row and column intersection exact match****OR AND****Highlight rows that contain****SEARCH FIND****Highlight rows with blank cells****COUNTBLANK****Highlight rows with dates between****DATE AND****Highlight top values****LARGE****Highlight unique values****COUNTIF****Highlight unprotected cells****CELL****Highlight values between****AND****Highlight values greater than****Highlight values not between X and Y****AND NOT**

Shade alternating groups of n rows

ROW CEILING ISEVEN ISODD

Data validation

Data validation allow numbers only

ISNUMBER

Data validation allow text only

ISTEXT

Data validation allow uppercase only

UPPER EXACT AND

Data validation allow weekday only

YEAR TODAY

Data validation date in next 30 days

AND TODAY

Data validation date in specific year

YEAR TODAY

Data validation don't exceed total

SUM

Data validation exists in list

COUNTIF

Data validation must begin with

EXACT LEFT COUNTIF

Data validation must contain specific text

FIND ISNUMBER

Data validation must not contain

ISNUMBER SEARCH SUMPRODUCT

Data validation must not exist in list

COUNTIF

Data validation no punctuation

FIND COUNT

Data validation number multiple 100

MOD

Data validation only dates between

AND DATE

Data validation require unique number

AND ISNUMBER COUNTIF

Data validation speci c characters only

MATCH COUNT LEN MID INDIRECT

Data validation unique values only

COUNTIF

Data validation whole percentage only

TRUNC AND

Data validation with conditional list

IF

Rank

Rank function example

RANK

Rank if formula

COUNTIFS RANK

Rank race results

RANK

Rank values by month

LARGE INDEX MATCH TEXT IF

Rank with ordinal suffix

CHOOSE ABS MOD

Rank without ties

RANK COUNTIF

Round

Get decimal part of a number

TRUNC

Get integer part of a number

TRUNC INT

Get number at place value

MOD

Round a number

ROUND

Round a number down

ROUNDDOWN

Round a number down to nearest multiple

FLOOR

Round a number to n significant digits

ROUND LOG10 INT ABS

Round a number to nearest multiple

MROUND

Round a number up

ROUNDUP

Round a number up to nearest multiple

CEILING

Round a number up to next half

CEILING

Round a price to end in .99

ROUND MROUND

Round by bundle size

CEILING

Round price to end in .45 or .95

CEILING

Round time to nearest 15 minutes

MROUND CEILING FLOOR

Round to nearest 1000

ROUND

Round to nearest 5

MROUND CEILING FLOOR

Date and Time

Add business days to date

WORKDAY NETWORKDAYS

Add days exclude certain days of week

WORKDAY.INTL

Add days to date

DAY

Add decimal hours to time

TIME MOD

Add decimal minutes to time

TIME MOD

Add months to date

EDATE

Add workdays no weekends

WORKDAY.INTL NETWORKDAYS

Add workdays to date custom weekends

WORKDAY.INTL NETWORKDAYS

Add years to date

DATE YEAR MONTH DAY

Assign points based on late time

IF VALUE

Basic timesheet formula with breaks

MOD

Calculate date overlap in days

MAX MIN

Calculate days open

TODAY IF ISBLANK

Calculate days remaining

TODAY

Calculate expiration date

EOMONTH EDATE

Calculate number of hours between two times

IF MOD

Calculate retirement date

EDATE YEARFRAC SIGN

Calculate years between dates

YEARFRAC INT

Convert date string to date time

DATEVALUE LEFT MID TIMEVALUE

Convert date to Julian format

DATE YEAR TEXT

Convert date to month and year

TEXT

Convert date to text

TEXT

Convert decimal hours to Excel time

Convert decimal minutes to Excel time

Convert decimal seconds to Excel time

Convert Excel time to decimal hours

Convert Excel time to decimal minutes

Convert Excel time to decimal seconds

Convert Excel time to Unix time

DATE

Convert text date dd/mm/yy to mm/dd/yy

DATE LEFT MID RIGHT TRIM

Convert text timestamp into time

TIME MID

Convert text to date

DATE LEFT MID RIGHT

Convert time to money

Convert time to time zone

MOD

Convert Unix time stamp to Excel date

DATE

Count birthdays by month

SUMPRODUCT MONTH

Count calls at specific times

COUNTIFS

Count dates in current month

COUNTIFS EOMONTH SUMPRODUCT N

Count day of week between dates

WEEKDAY

ROW

INDIRECT

SUMPRODUCT

SEQUENCE

Count holidays between two dates

SUMPRODUCT

Count times in a specific range

COUNTIFS

TIME

Create date range from two dates

TEXT

IF

Custom weekday abbreviation

WEEKDAY

CHOOSE

Date is same month

MONTH

Date is same month and year

MONTH

YEAR

Date is workday

WORKDAY

WORKDAY.INTL

Days in month

DAY

EOMONTH

Days until expiration date

Display the current date

TODAY

Display the current date and time

NOW

Due date by category

VLOOKUP

WORKDAY

XLOOKUP

Dynamic calendar formula

WEEKDAY CHOOSE TODAY SEQUENCE DATE

Dynamic calendar grid

WEEKDAY CHOOSE TODAY

Dynamic date list

TODAY ROWS

Extract date from a date and time

INT TRUNC

Extract time from a date and time

MOD

Filter on dates expiring soon

FILTER SORT AND TODAY

Future time intervals

Get age from birthday

DATEDIF TODAY DATE YEARFRAC INT

Get date from day number

DATE RIGHT LEFT

Get day from date

DAY

Get day name from date

TEXT WEEKDAY CHOOSE

Get days before a date

TODAY

Get days between dates

[TODAY](#) [DAYS](#)

Get days between dates ignoring years

[DATEDIF](#)

Get days, hours, and minutes between dates

[INT](#) [TEXT](#)

Get days, months, and years between dates

[DATEDIF](#) [LET](#)

Get earliest and latest project dates

[MINIFS](#) [MAXIFS](#) [MIN](#) [MAX](#) [IF](#)

Get first day of month

[DAY](#) [EOMONTH](#)

Get first day of previous month

[EOMONTH](#)

Get fiscal quarter from date

[MONTH](#) [CHOOSE](#)

Get fiscal year from date

[MONTH](#) [YEAR](#)

Get last day of month

[EOMONTH](#) [DATE](#)

Get last weekday in month

[EOMONTH](#) [WEEKDAY](#)

Get last working day in month

[WEEKDAY](#) [EOMONTH](#)

Get Monday of the week

WEEKDAY

Get month from date

MONTH DATE

Get month name from date

MONTH CHOOSE TEXT

Get months between dates

DATEDIF

Get most recent day of week

MOD

Get next day of week

WEEKDAY

Get next scheduled event

MIN IF MINIFS INDEX MATCH

Get nth day of week in month

DAY WEEKDAY

Get nth day of year

DATE YEAR

Get percent of year complete

YEARFRAC YEAR DATE

Get previous Sunday

WEEKDAY CHOOSE

Get project end date

WORKDAY WORKDAY.INTL

Get project midpoint

[WORKDAY](#)[WORKDAY.INTL](#)

Get project start date

[WORKDAY](#)[WORKDAY.INTL](#)

Get quarter from date

[MONTH](#)[ROUNDUP](#)

Get same date next month

[EDATE](#)

Get same date next year

[EDATE](#)

Get week number from date

[WEEKNUM](#)[ISOWEEKNUM](#)

Get work hours between dates

[NETWORKDAYS](#)[NETWORKDAYS.INTL](#)

Get work hours between dates and times

[NETWORKDAYS](#)[NETWORKDAYS.INTL](#)

Get work hours between dates custom schedule

[MID](#)[ROW](#)[INDIRECT](#)[WEEKDAY](#)[SUMPRODUCT](#)

Get workdays between dates

[NETWORKDAYS](#)[NETWORKDAYS.INTL](#)

Get year from date

[YEAR](#)

Happy birthday message

[TEXT](#)[TODAY](#)[IF](#)[AND](#)[MONTH](#)[DAY](#)

If Monday, roll back to Friday

WEEKDAY

IF

Join date and text

TEXT

Last n days

AND TODAY

Last n months

AND TODAY EOMONTH

Last n weeks

AND TODAY WEEKDAY

Last updated date stamp

TEXT TODAY

List holidays between two dates

TEXTJOIN IF

Month number from name

MONTH DATEVALUE

Next anniversary date

EDATE DATEDIF

Next biweekly payday from date

CEILING

Next business day 6 months in future

WORKDAY WORKDAY.INTL

Next working day

WORKDAY WORKDAY.INTL

Pad week numbers with zeros

[TEXT](#)[WEEKNUM](#)

Parse time string to time

[TIME](#)[RIGHT](#)[LEFT](#)[MID](#)

Remove time from timestamp

[INT](#)[TRUNC](#)

Sum by scal year

[MONTH](#)[YEAR](#)[SUMPRODUCT](#)[SUMIF](#)

Sum race time splits

[SUM](#)

Sum time

[SUM](#)[SUMIF](#)

Sum time by week and project

[SUMIFS](#)

Sum time over 30 minutes

[SUMPRODUCT](#)[TIME](#)[SUMIFS](#)[COUNTIFS](#)

Sum time with SUMIFS

[SUMIFS](#)

Time difference in hours as decimal value

[MOD](#)

Time duration with days

[TIME](#)

Time since start in day ranges

[IFS](#)[IF](#)

Timesheet overtime calculation formula

MIN

Total hours that fall between two times

MIN MAX

Workdays per month

NETWORKDAYS NETWORKDAYS.INTL EOMONTH

Working days in year

NETWORKDAYS NETWORKDAYS.INTL DATE TODAY

Working days left in month

NETWORKDAYS NETWORKDAYS.INTL TODAY

Year is a leap year

DATE YEAR MONTH

Date series

Series of dates by custom days

WORKDAY.INTL

Series of dates by day

Series of dates by month

DAY MONTH YEAR DATE EOMONTH

Series of dates by weekends

WORKDAY.INTL WEEKDAY

Series of dates by workdays

WORKDAY NETWORKDAYS.INTL IF WEEKDAY

Series of dates by year

DAY MONTH YEAR DATE

Text

10 most common text values

UNIQUE COUNTIF HSTACK SORT TAKE

Abbreviate names or words

TEXTJOIN MID ROW CODE LEN INDIRECT

Add a line break with a formula

CHAR

Add line break based on OS

INFO CHAR

Capitalize first letter

LEFT MID LEN

Cell contains all of many things

SUMPRODUCT ISNUMBER SEARCH COUNTA

Cell contains number

FIND COUNT

Cell contains one of many things

SUMPRODUCT ISNUMBER SEARCH

Cell contains one of many with exclusions

SUMPRODUCT ISNUMBER SEARCH

Cell contains some words but not others

COUNT SEARCH AND

Cell contains specific text

SEARCH ISNUMBER FIND

Cell contains which things

SEARCH ISNUMBER FILTER TEXTJOIN

Cell equals one of many things

SUMPRODUCT

Clean and reformat telephone numbers

SUBSTITUTE

Compare two strings

EXACT

Conditional message with REPT function

REPT IF AND

Convert numbers to text

TEXT

Convert string to array

MID ROW LEN INDIRECT

Convert text to numbers

VALUE LEFT RIGHT

Count keywords cell contains

SUMPRODUCT MATCH ISNUMBER SEARCH

Count line breaks in cell

LEN SUBSTITUTE CHAR ISBLANK

Count specific characters in a cell

LEN SUBSTITUTE UPPER

Count specific characters in a range

LEN SUBSTITUTE UPPER SUMPRODUCT

Count specific words in a cell

LEN SUBSTITUTE UPPER

Count specific words in a range

LEN SUBSTITUTE UPPER SUMPRODUCT

Count total characters in a cell

LEN

Count total characters in a range

LEN SUMPRODUCT

Count total words in a cell

LEN SUBSTITUTE TRIM

Count total words in a range

SUMPRODUCT LEN SUBSTITUTE TRIM

Double quotes inside a formula

CHAR

Extract last two words from cell

MID LEN SUBSTITUTE FIND

Extract multiple lines from a cell

TRIM MID SUBSTITUTE REPT LEN

Extract nth word from text string

TRIM MID SUBSTITUTE REPT LEN

Extract substring

MID

Extract text between parentheses

MID SEARCH

Extract word containing specific text

MID MAX FIND SUBSTITUTE REPT TRIM

Extract word that begins with specific character

MID LEN FIND SUBSTITUTE REPT TRIM

Find and replace multiple values

SUBSTITUTE INDEX

Find nth occurrence of character

SUBSTITUTE FIND CHAR

Get first word

LEFT FIND ISERROR

Get last line in cell

TRIM SUBSTITUTE RIGHT REPT CHAR

Get last word

TRIM SUBSTITUTE RIGHT REPT

Join cells with comma

TRIM SUBSTITUTE TEXTJOIN

MAC address format

TEXTJOIN SEQUENCE MID

Make words plural

IF IFNA VLOOKUP

Most frequent text with criteria

INDEX MATCH MODE IF

Most frequently occurring text

INDEX MATCH MODE

Normalize text

SUBSTITUTE TRIM LOWER

Pad text to equal length

REPT LEN

Position of 2nd 3rd etc instance of character

SUBSTITUTE FIND

Remove characters from right

LEFT LEN VALUE

Remove .le extension from lename

LEFT FIND

Remove .rst character

REPLACE RIGHT LEN LEFT

Remove last word

MID FIND SUBSTITUTE LEN

Remove leading and trailing spaces from text

CLEAN TRIM SUBSTITUTE

Remove line breaks

SUBSTITUTE CLEAN

Remove text by matching

SUBSTITUTE

Remove text by position

REPLACE

Remove text by variable position

REPLACE FIND

Remove unwanted characters

SUBSTITUTE CHAR CODE LEFT

Replace one character with another

SUBSTITUTE

Reverse text string

TEXTJOIN MID INDIRECT SEQUENCE

Sort comma separated values

FILTERXML SUBSTITUTE TEXTJOIN SORT

Split dimensions into three parts

LEFT RIGHT MID LEN SUBSTITUTE

Split dimensions into two parts

SUBSTITUTE LEFT RIGHT FIND

Split numbers from units of measure

MAX LEFT RIGHT ISNUMBER VALUE MID

Split text and numbers

FIND MIN RIGHT LEFT

Split text string at specific character

LEFT RIGHT LEN FIND

Split text with delimiter

TRIM MID SUBSTITUTE REPT LEN

Strip html from text or numbers

MID LEN

Strip non-numeric characters

TEXTJOIN MID ROW INDIRECT

Strip numeric characters from cell

TEXTJOIN MID ROW INDIRECT SEQUENCE LET

Text split to array

FILTERXML SUBSTITUTE TRANSPOSE

Translate letters to numbers

TEXTJOIN VLOOKUP MID ROW T

Trim text to n words

LEFT SUBSTITUTE FIND

Financial

Annual compound interest schedule

FV

Annuity solve for interest rate

RATE

Bond valuation example

PV FV PRICE

CAGR formula examples

GEOMEAN RRI

Calculate compound interest

FV

Calculate cumulative loan interest

CUMIPMT

Calculate cumulative loan principal payments

CUMPRINC

Calculate interest for given period

PPMT

Calculate interest rate for loan

RATE

Calculate loan interest in given year

CUMIPMT

Calculate original loan amount

PV

Calculate payment for a loan

PMT

Calculate payment periods for loan

NPER

Calculate periods for annuity

PMT PV FV

Calculate principal for given period

PPMT

Calculate simple interest

Compare effect of compounding periods

FV

Currency exchange rate example

STOCKHISTORY

Effective annual interest rate

EFFECT RRI

Estimate mortgage payment

PMT PV FV

Future value of annuity

FV PV

Future value vs. Present value

PV FV

Get current stock price

FIELDVALUE STOCKHISTORY

Get stock price (latest close)

STOCKHISTORY TODAY LOOKUP INDEX

Get stock price last n days

STOCKHISTORY SORT

Get stock price last n months

STOCKHISTORY TODAY EDATE INDEX

Get stock price on specific date

STOCKHISTORY

Income tax bracket calculation

VLOOKUP

NPV formula for net present value

NPV

Payment for annuity

PMT PV FV

Present value of annuity

PV FV

Geometry

Area of a circle

[PI](#)[POWER](#)

Area of a parallelogram

Area of a trapezoid

Area of a triangle

Circumference of a circle

[PI](#)

Distance formula

[SQRT](#)

Pythagorean theorem

Surface area of a cone

[PI](#)[POWER](#)

Surface area of a cylinder

[PI](#)[POWER](#)

Surface area of a sphere

[PI](#)[POWER](#)

Volume of a cone

[PI](#)[POWER](#)

Volume of a cylinder

[PI](#)[POWER](#)

Volume of a rectangular prism

Volume of a sphere

PI

POWER

Workbook

Dynamic workbook reference

INDIRECT

Dynamic worksheet reference

INDIRECT

Get full workbook name and path

CELL

Get sheet name only

CELL MID FIND

Get workbook name and path without sheet

CELL LEFT FIND SUBSTITUTE LET

Get workbook name only

CELL MID FIND LET

Get workbook path only

CELL LEFT FIND LET

Indirect named range different sheet

INDIRECT

List sheet index numbers

SHEET

List sheet names with formula

INDEX MID ROW NOW T

Worksheet name exists

[ISREF](#)[INDIRECT](#)

Internet

Create email address from name

[LEFT](#)[LOWER](#)

Create email address with name and domain

[LEFT](#)[LOWER](#)

Create email with display name

[CONCAT](#)[CONCATENATE](#)[TEXTJOIN](#)

Get domain from email address

[RIGHT](#)[LEN](#)[FIND](#)

Get domain name from URL

[LEFT](#)[FIND](#)

Get name from email address

[LEFT](#)[FIND](#)

Get page from URL

[TRIM](#)[RIGHT](#)[SUBSTITUTE](#)[REPT](#)

Get top level domain (TLD)

[RIGHT](#)[LEN](#)[SUBSTITUTE](#)[FIND](#)

Remove trailing slash from url

[LEN](#)[RIGHT](#)[LEFT](#)

Strip protocol and trailing slash from URL

[MID](#)[RIGHT](#)[LEN](#)[FIND](#)

Names

Get first name from name

LEFT FIND

Get first name from name with comma

RIGHT LEN FIND

Get last name from name

RIGHT LEN SUBSTITUTE FIND

Get last name from name with comma

LEFT FIND

Get middle name from full name

MID LEN TRIM

Join first and last name

CONCATENATE

Put names into proper case

PROPER TRIM

Percentage

Calculate percent variance

ABS

Calculate percentage of number

Decrease by percentage

Difference is within specific percentage

IF ABS

Get amount with percentage

Get original number from percent change

Get original price from percentage discount

Get percent change

Get percentage discount

Get percentage of total

Get profit margin percentage

Get total from percentage

Increase by percentage

Percent of goal

Percent of students absent

Percent sold

Project complete percentage

COUNTA

Random

Random date between two dates

RANDBETWEEN WORKDAY

Random number between two numbers

RANDBETWEEN

Random number from fixed set of options

[CHOOSE](#)[RANDBETWEEN](#)

Random number weighted probability

[RAND](#)[MATCH](#)[INDEX](#)

Random text values

[CHOOSE](#)[RANDBETWEEN](#)

Random times at specific intervals

[RAND](#)

Random value from list or table

[INDEX](#)[RANDBETWEEN](#)[ROWS](#)

Randomly assign data to groups

[RANDBETWEEN](#)[CHOOSE](#)

Randomly assign people to groups

[RAND](#)[ROUNDUP](#)[CEILING](#)

Range

Add row numbers and skip blanks

[COUNTA](#)[IF](#)[ISBLANK](#)

Address of first cell in range

[ADDRESS](#)[ROW](#)[COLUMN](#)[CELL](#)

Address of last cell in range

[ADDRESS](#)[ROW](#)[COLUMN](#)[ROWS](#)[COLUMNS](#)

All cells in range are blank

[SUMPRODUCT](#)

All values in a range are at least

[COUNTIF](#) [NOT](#)

Combine ranges with CHOOSE

[CHOOSE](#)

Count visible columns

[CELL](#) [N](#) [SUM](#)

COUNTIFS with variable range

[COUNTIFS](#) [OFFSET](#) [ADDRESS](#) [INDIRECT](#) [ROW](#)

Define range based on cell value

[INDEX](#) [OFFSET](#)

Dynamic named range with INDEX

[INDEX](#) [COUNTA](#)

Dynamic named range with OFFSET

[OFFSET](#) [COUNTA](#)

First column number in range

[ROWS](#) [MIN](#)

First match between two ranges

[INDEX](#) [MATCH](#) [COUNTIF](#)

First row number in range

[ROW](#) [MIN](#)

Get address of named range

[ADDRESS](#) [ROW](#) [COLUMN](#) [ROWS](#) [COLUMNS](#) [LET](#) [TAKE](#)

Get relative column numbers in range

[COLUMN](#) [SEQUENCE](#) [COLUMNS](#)

Get relative row numbers in range

[ROW](#) [SEQUENCE](#) [ROWS](#)

Last column number in range

[COLUMN](#) [COLUMNS](#) [MIN](#)

Last n rows

[ROW](#) [ROWS](#) [INDEX](#)

Last row in mixed data with blanks

[MATCH](#)

Last row in mixed data with no blanks

[COUNTA](#)

Last row in numeric data

[MATCH](#)

Last row in text data

[MATCH](#) [REPT](#)

Last row number in range

[ROW](#) [ROWS](#) [MIN](#)

Multiple cells are equal

[AND](#) [EXACT](#)

Multiple cells have same value

[COUNTIF](#)

Multiple cells have same value case sensitive

[EXACT](#) [SUMPRODUCT](#) [COUNTA](#)

Multiple columns are equal

[AND](#) [COUNTIF](#)

Range contains a value not in another range

[SUMPRODUCT](#)[MATCH](#)[ISNA](#)

Range contains numbers

[SUMPRODUCT](#)[ISNUMBER](#)

Range contains specific date

[COUNTIFS](#)[DATE](#)[TODAY](#)

Sequential row numbers

[ROW](#)

Total cells in a range

[ROWS](#)[COLUMNS](#)

Total columns in range

[COLUMNS](#)

Total rows in range

[ROWS](#)

Tables

Automatic row numbers in Table

[ROW](#)[INDEX](#)

Average last N values in a table

[INDEX](#)[AVERAGE](#)[ROWS](#)

Basic inventory formula example

[SUMIFS](#)

Count table columns

[COLUMNS](#)

Count table rows

ROWS

COUNTIFS with variable table column

[COUNTIFS](#) [INDEX](#) [MATCH](#) [INDIRECT](#)

Dynamic reference to table

[INDIRECT](#)

Get column index in Excel Table

[MATCH](#)

Get column name from index in table

[INDEX](#)

Percentile IF in table

[PERCENTILE](#)

Running count in Table

[INDEX](#) [SUM](#)

Running total in Table

[INDEX](#) [SUM](#)

Sum multiple tables

[SUM](#)

SUMIFS vs other lookup formulas

[SUMIFS](#) [INDEX](#) [MATCH](#) [LOOKUP](#) [XLOOKUP](#) [SUMPRODUCT](#)

SUMIFS with Excel Table

[SUMIFS](#)

Two-way lookup VLOOKUP in a Table

[VLOOKUP](#) [MATCH](#)

Two-way summary with SUMIFS

SUMIFS

Errors

[How to fix a circular reference error](#)

[How to fix the ##### \(hashtag\) error](#)

[How to fix the #CALC! error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

[How to fix the #DIV/0! error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

[How to fix the #N/A error](#)

[VLOOKUP](#) [IFERROR](#) [MATCH](#)

[How to fix the #NAME? error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

[How to fix the #NULL! error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

[How to fix the #NUM! error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

[How to fix the #REF! error](#)

[ISREF](#) [IFERROR](#)

[How to fix the #SPILL! error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

[How to fix the #VALUE! error](#)

[IFERROR](#) [ISERROR](#) [ERROR.TYPE](#)

Miscellaneous

Abbreviate state names

VLOOKUP INDEX MATCH

Add leading zeros to numbers

TEXT

All dates in chronological order

IF SUMPRODUCT SORT

Basic array formula example

MAX MIN

Basic attendance tracking formula

COUNTIF

Basic error trapping example

IFERROR

Basic in-cell histogram

REPT CHAR

Basic numeric sort formula

RANK COUNTIF

Basic outline numbering

COUNTA MID FIND LEN

Basic text sort formula

RANK COUNTIF

BMI calculation formula

CONVERT POWER

Build hyperlink with VLOOKUP

[HYPERLINK](#)[VLOOKUP](#)

Calculate a ratio from two numbers

[GCD](#)

Calculate win loss tie totals

[SUMPRODUCT](#)

Cap percentage at 100

[MIN](#)

Cap percentage at specific amount

[MIN](#)

Carry-on baggage Inches to centimeters

[CONVERT](#)

Cash denomination calculator

[SUMPRODUCT](#)[INT](#)[FLOOR](#)

Celsius to Fahrenheit conversion

[CONVERT](#)

Change negative numbers to positive

[ABS](#)

Check register balance

[IF](#)[AND](#)[ISBLANK](#)

Coefficient of variation

[STDEV.P](#)[STDEV.S](#)[AVERAGE](#)

Conditional median with criteria

[MEDIAN](#)

Conditional mode with criteria

MODE

Convert column letter to number

COLUMN INDIRECT

Convert column number to letter

ADDRESS SUBSTITUTE TEXTBEFORE

Convert expense time units

INDEX MATCH

Convert feet and inches to inches

LEFT FIND MID SUBSTITUTE

Convert inches to feet and inches

INT MOD TRUNC ABS

Convert negative numbers to zero

MAX

Convert numbers to 1 or 0

IF

Convert pounds to kilograms

CONVERT

Copy value from every nth column

OFFSET COLUMN

Copy value from every nth row

OFFSET ROW

Cost of living adjustment

Count consecutive monthly orders

FREQUENCY MAX IF

Count values out of tolerance

SUMPRODUCT ABS

Count with repeating values

ROUNDUP COLUMN ROW

Course completion status summary

COUNTIFS

Course completion summary with criteria

COUNTIFS

Create array of numbers

INDIRECT ROW

Cube root of number

POWER

Customer is new

COUNTIFS

Display sorted values with helper column

INDEX MATCH ROWS

Dropdown sum with all option

SUMIF SUM IF

Easy bundle pricing with SUMPRODUCT

SUMPRODUCT

Expense begins on specific month

IF

Extract unique items from a list

INDEX MATCH COUNTIF LOOKUP

Filter values in array formula

ISNUMBER MATCH

Find and retrieve missing values

INDEX MATCH ISNA

Fixed value every N columns

MOD COLUMN

Flag first duplicate in a list

COUNTIF COUNTIFS

Flip table rows to columns

TRANSPOSE

Forecast vs actual variance

SUMIFS

Formula with locked absolute reference

INDIRECT

Get date associated with last entry

LOOKUP

Get first entry by month and year

INDEX MATCH TEXT

Get last entry by month and year

LOOKUP TEXT

Get pivot table grand total

GETPIVOTDATA

Get pivot table subtotal

GETPIVOTDATA

Get pivot table subtotal grouped date

GETPIVOTDATA

Get value of last non-empty cell

LOOKUP

Hyperlink to first blank cell

HYPERLINK CELL INDEX MATCH

Hyperlink to first match

HYPERLINK CELL INDEX MATCH

Increment a calculation with ROW or COLUMN

ROW COLUMN

Increment a number in a text string

RIGHT TEXT

Increment cell reference with INDIRECT

INDIRECT CELL

Leave a comment in a formula

N

Link to multiple sheets

HYPERLINK CELL INDEX MATCH

List most frequently occurring numbers

MODE ISNUMBER MATCH

Longest winning streak

FREQUENCY MAX IF

Lookup last file revision

SEARCH ISERROR MAX INDEX IF ROW

Mark rows with logical tests

COUNTIFS IF

Most frequently occurring number

MODE

Multiplication table formula

New customers per month

COUNTIFS EOMONTH

Nightly hotel rate calculation

SUMPRODUCT FILTER INDEX MATCH

Normalize size units to Gigabytes

MATCH LEFT RIGHT

nth root of number

POWER

Number is whole number

MOD TRUNC INT

Odometer gas mileage log

SUM MAX MIN

One or the other not both

XOR

Pad a number with zeros

TEXT REPT

Parse XML with formula

FILTERXML

Random sort formula

[INDEX](#)[MATCH](#)

Range contains duplicates

[OR](#)[COUNTIF](#)[SUMPRODUCT](#)

Range contains one of many substrings

[SUMPRODUCT](#)[COUNTIF](#)

Range contains one of many values

[SUMPRODUCT](#)[ISNUMBER](#)[SEARCH](#)

Range contains specific text

[COUNTIF](#)

Repeat fixed value every 3 months

[MOD](#)[DATEDIF](#)

Return array with INDEX function

[INDEX](#)[MATCH](#)[N](#)

Reverse a list or range

[INDEX](#)[COUNTA](#)[ROW](#)[SORTBY](#)[SEQUENCE](#)

Risk Matrix Example

[INDEX](#)[MATCH](#)

Score quiz answers with key

[SUM](#)[COUNTA](#)

Search entire worksheet for value

[COUNTIF](#)

Search multiple worksheets for value

[COUNTIF](#)[INDIRECT](#)

Send email with formula

HYPERLINK**Show formula text with formula****FORMULATEXT** **IFERROR** **ISFORMULA****Simple currency conversion****VLOOKUP** **INDEX** **MATCH****Sort and extract unique values****MMULT** **TRANSPOSE** **INDEX** **MATCH****Sort numbers ascending or descending****SMALL** **LARGE****Sort text and numbers with formula****RANK** **COUNTIF** **COUNT****Split payment across months****AND****Square root of number****SQRT** **POWER** **ABS****Standard deviation calculation****STDEV.P** **STDEV.S** **STDEV** **STDEVP****Student class enrollment with table****IF** **COUNTIF****Sum every 3 cells****OFFSET** **COLUMN****Sum Roman numbers****ARABIC** **ROMAN** **SUMPRODUCT** **SUM****Sum text values like numbers**

[INDEX](#) [MATCH](#) [N](#)

Text is greater than number

[COUNTIF](#) [COUNTIFS](#) [SUMPRODUCT](#) [ISNUMBER](#)

Transpose table without zeros

[TRANSPOSE](#) [IF](#)

Unwrap column into cells

[OFFSET](#) [TRANSPOSE](#) [ROW](#)

Validate input with check mark

[IF](#) [COUNTIF](#)

Value exists in a range

[COUNTIF](#) [MATCH](#)

Value is between two numbers

[AND](#) [MAX](#) [MIN](#)

Value is within tolerance

[IF](#) [ABS](#)

Volunteer hours requirement calculation

[AND](#) [COUNTIF](#) [SUM](#)