



EXCEL CHEAT SHEET

TRAVIS CUZICK

HEEELLLOOOO!

I'm Andrei Neagoie, Founder and Lead Instructor of the [Zero To Mastery Academy](#).

After working as a Senior Software Developer over the years, I now dedicate 100% of my time to teaching others valuable software development skills, help them break into the tech industry, and advance their careers.

In only a few years, **over 600,000 students** around the world have taken Zero To Mastery courses and many of them are now working at top tier companies like [Apple, Google, Amazon, Tesla, IBM, Facebook, and Shopify](#), just to name a few.

This cheat sheet, created by our Excel instructor (Travis Cuzick) provides you with the key Excel formulas, functions, and shortcuts that you need to know and remember.

If you want to not only learn Excel but also get the exact steps to build your own projects and get hired as a Data Analyst or Data Scientist, then check out our [Career Paths](#).

Happy Coding!

Andrei

A stylized, handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke.

Founder & Lead Instructor, Zero To Mastery

Andrei Neagoie



P.S. I also recently wrote a book called Principles For Programmers. You can [download the first five chapters for free here](#).

Excel Cheat Sheet

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Apply complex logical conditions with IF + AND,

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Common Formula Errors

Common Formula Errors

Keyboard Shortcuts

Navigating Worksheets

Excel for Windows	Shortcut Description	Excel for Mac
Ctrl+Home	Navigates to cell A1 of the given worksheet.	Fn+Ctrl+Left Arrow
Ctrl+Right Arrow	Navigates to the right edge of the current row, in the current data region.	Ctrl+Right Arrow
Ctrl+Left Arrow	Navigates to the left edge of the current row, in the current data region.	Ctrl+Left Arrow
Ctrl+Up Arrow	Navigates to the top edge of the current column, in the current data region.	Ctrl+Up Arrow
Ctrl+Down Arrow	Navigates to the bottom edge of the current column, in the current data region.	Ctrl+Down Arrow
Ctrl+End	Navigates to the last cell used in the current worksheet.	Ctrl+End

Selecting Cells

Excel for Windows	Excel for Mac	Shortcut Description
Ctrl+Spacebar	Ctrl+Spacebar	Selects an entire worksheet column.
Shift+Spacebar	Shift+Spacebar	Selects an entire worksheet row.
Ctrl+Shift+Up Arrow	Ctrl+Shift+Up Arrow	Extends the selection of cells to the last cell at the top edge of the current data region.
Ctrl+Shift+Down Arrow	Ctrl+Shift+Down Arrow	Extends the selection of cells to the last cell at the bottom edge of the current data region.
Ctrl+Shift+Right Arrow	Ctrl+Shift+Right Arrow	Extends the selection of cells to the last cell at the right edge of the current data region.
Ctrl+Shift+Left Arrow	Ctrl+Shift+Left Arrow	Extends the selection of cells to the last cell at the left edge of the current data region.
Ctrl+Shift+Home	Fn+Ctrl+Right Arrow	Extends the selection of cells up and to the left, to cell A1.

Excel for Windows	Excel for Mac	Shortcut Description
Ctrl+Shift+End	Fn+Ctrl+Shift+Right Arrow	Extends the selection of cells down and to the right, to the last used cell in the worksheet.
Ctrl+A	Command+A	Selects all the cells in the current data region of the worksheet.

Editing Cells

Excel for Windows	Excel for Mac	Shortcut Description
Ctrl+C	Command+C	Copies the selected cells or content.
Ctrl+V	Command+V	Pastes the copied cells or content.
Ctrl+Alt+V	Command+Ctrl+V	Displays the Paste Special dialog box; available only after something has been copied to the clipboard.
Ctrl+X	Command+X	Cuts the selected cells or content.
Ctrl+F	Command+F	Displays the Find and Replace dialog, with the Find tab selected.
Ctrl+H	Ctrl+H	Displays the Find and Replace dialog, with the Replace tab selected.

Formatting Cells

Excel for Windows	Excel for Mac	Shortcut Description
Ctrl+1	Ctrl+1	Displays the format cells dialog box.
Ctrl+B	Command+B	Applies or removes bold formatting.
Ctrl+U	Command+U	Applies or removes underline formatting.
Ctrl+I	Command+I	Applies or removes italic formatting.

Editing Data & Formulas

Excel for Windows	Excel for Mac	Shortcut Description
Alt+Enter	Ctrl+Option+Return	Moves the cursor to a new line in the cell being edited.

Excel for Windows	Excel for Mac	Shortcut Description
Shift+Right Arrow	Shift+Right Arrow	Selects a character to the right of cursor.
Shift+Left Arrow	Shift+Left Arrow	Selects a character to the left of cursor.
F2	Control+U	Edits (places the cursor in) the active cell.
F9	Fn+F9	Calculates all worksheets in all open workbooks.
F4	F4	Cycles through combinations of absolute and relative references for the selected cell reference.

Working With Worksheets & Workbooks

Excel for Windows	Excel for Mac	Shortcut Description
Ctrl+O	Command+O	Displays the menu for opening a workbook.
Ctrl+N	Command+N	Creates a new workbook.
Ctrl+W	Command+W	Closes the active workbook window.
Ctrl+S	Command+S	Saves the current workbook.
Shift+F11	Fn+Shift+F11	Inserts a new worksheet.

Miscellaneous

Excel for Windows	Excel for Mac	Shortcut Description
Ctrl+Z	Command+Z	Undo last action.
Ctrl+Y	Command+Y	Redo last action.
Ctrl+Shift+L	Command+Shift+F	Adds or removes Autofilters from the current data region.
Ctrl+T	Ctrl+T	Inserts a table based on either the current selection or the current data region.
Alt+F11	Fn+Option+F11	Displays the VBA Editor.
F1	F1	Displays the Excel Help task pane.
F7	F7	Displays the Spellcheck dialog box.

The 10% of Excel Functions You'll Use 99% of the Time

Brackets surrounding an argument in function syntax (e.x., [argument1]) indicate that the argument is optional.

Date & Time Functions

Function	Description	Syntax
DATE	Returns a date based on inputs of year, month, and day.	DATE(year,month,day)
DATEDIF	Calculates the number of days, months, or years between two dates.	DATEDIF(start_date,end_date,unit)
DAY	Converts a date value to a day of the month.	DAY(serial_number)
EOMONTH	Returns the date value of the last day of the month before or after a specified number of months.	EOMONTH(start_date, months)
MONTH	Converts a date value to a month.	MONTH(serial_number)
NETWORKDAYS	Returns the number of whole workdays between two dates.	NETWORKDAYS(start_date, end_date, [holidays])
NOW	Returns the current date and time.	NOW() - The NOW function syntax has no arguments.
TODAY	Returns today's date.	TODAY() - The TODAY function syntax has no arguments.
WEEKDAY	Converts a date value to a day of the week.	WEEKDAY(serial_number, [return_type])
YEAR	Converts a date value to a year.	YEAR(date_value)

Financial Functions

Function	Description	Syntax
FV	Returns the future value of an investment based on periodic, constant payments and a constant interest rate.	FV(rate,num_periods,payment, [present_value],[type])

Function	Description	Syntax
PMT	Calculates the payment on a loan based on constant payments and a constant interest rate.	PMT(rate, num_periods, present_value, [future_value], [type])

Information Functions

Function	Description	Syntax
ISBLANK	Checks whether a value is blank, and returns TRUE or FALSE.	ISBLANK(value)
ISERROR	Checks whether a value is an error, and returns TRUE or FALSE.	ISERROR(value)
ISNUMBER	Checks whether a value is a number, and returns TRUE or FALSE.	ISNUMBER(value)

Logical Functions

Function	Description	Syntax
AND	Tests whether all arguments are TRUE, and returns TRUE if so, FALSE if not.	AND(logical1,logical2,...)
IF	Returns one value if a specified logical condition is met, and an alternate value if it is not.	IF(logical_test,value_if_true,value_if_false)
IFERROR	Returns a value you specify if a formula evaluates to an error; otherwise, returns the result of the formula.	IFERROR(value, value_if_error)
NOT	Changes FALSE to TRUE, and TRUE to FALSE.	NOT(logical)
OR	Tests whether any arguments are TRUE, and returns TRUE if so, FALSE if not.	OR(logical1,logical2,...)

Lookup Functions

Function	Description	Syntax
HLOOKUP	Searches for a lookup value in the top row of an range; if a match is found, HLOOKUP returns the value of a cell in the same column, but offset a specified number of rows down.	HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup])
INDEX	Uses an index to choose a value from a reference or array.	INDEX(array, row_num, [column_num])
MATCH	Looks up values in a reference or array, and returns their position.	MATCH(lookup_value, lookup_array, [match_type])
VLOOKUP	Searches for a lookup value in the first column of a range; if a match is found, VLOOKUP returns the value of a cell in the same row, but offset a specified number of columns to the right.	VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

Mathematical Functions

Function	Description	Syntax
ABS	Returns the absolute value of a number.	ABS(number)
MOD	Returns the remainder after a number is divided by another number.	MOD(number, divisor)
ROUND	Rounds a number to a specified number of digits.	ROUND(number, num_digits)
ROUNDDOWN	Rounds a number down, toward zero.	ROUNDDOWN(number, num_digits)
ROUNDUP	Rounds a number up, away from zero.	ROUNDUP(number, num_digits)
RAND	Returns a random real number between 0 and 1.	The RAND function syntax has no arguments.
RANDBETWEEN	Returns a random integer between two integers you specify.	RANDBETWEEN(bottom, top)

Function	Description	Syntax
SUM	Adds all the numbers in a range of cells.	SUM(number1,[number2],...)
SUMIF	Sums the values in a range that meet criteria that you specify.	SUMIF(range, criteria, [sum_range])
SUMIFS	Adds all of its arguments that meet multiple criteria.	SUMIFS(sum_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)
SUMPRODUCT	Returns the sum of the products of corresponding ranges or arrays.	SUMPRODUCT(array1, [array2], [array3], ...)

Statistical Functions

Function	Description	Syntax
AVERAGE	Returns the average (arithmetic mean) of the arguments.	AVERAGE(number1, [number2], ...)
AVERAGEIF	Returns the average (arithmetic mean) of all the cells in a range that meet a given criteria.	AVERAGEIF(range, criteria, [average_range])
AVERAGEIFS	Returns the average (arithmetic mean) of all cells that meet multiple criteria.	AVERAGEIFS(average_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)
COUNT	Counts how many numbers are in the list of arguments.	COUNT(value1, [value2], ...)
COUNTA	Counts how many values (numeric and non-numeric) are in the list of arguments.	COUNTA(value1, [value2], ...)
COUNTBLANK	Count the number of empty cells in a range of cells.	COUNTBLANK(range)
COUNTIF	Counts the number of cells within a range that meet the given criteria.	COUNTIF(range, criteria)
COUNTIFS	Counts the number of cells within a range that meet multiple criteria.	COUNTIFS(criteria_range1, criteria1, [criteria_range2, criteria2]...)
MAX	Returns the maximum value in a list of arguments.	MAX(number1, [number2], ...)
MEDIAN	Returns the median of the given numbers.	MEDIAN(number1, [number2], ...)

Function	Description	Syntax
MIN	Returns the minimum value in a list of arguments.	MIN(number1, [number2], ...)
STDEV.P	Calculates standard deviation based on the entire population, given as arguments.	STDEV.P(number1,[number2],...)

Text Functions

Function	Description	Syntax
CONCATENATE	Joins two or more text strings into one string.	CONCATENATE(text1, [text2], ...)
FIND	Returns the starting position of one text string within another text string (case sensitive).	FIND(find_text, within_text, [start_num])
LEFT	Returns the first character or characters in a text string, based on the number of characters you specify.	LEFT(text, [num_chars])
LEN	Returns the number of characters in a text string.	LEN(text)
LOWER	Converts text to lowercase.	LOWER(text)
MID	Returns a specific number of characters from a text string, starting at the position you specify, based on the number of characters you specify.	MID(text, start_num, num_chars)
PROPER	Capitalizes the first letter in each word of a text string.	PROPER(text)
RIGHT	Returns the rightmost characters from a text string.	RIGHT(text)
SUBSTITUTE	Substitutes new text for old text in a text string.	SUBSTITUTE(text, old_text, new_text, [instance_num])
TEXT	Changes the way a number appears by applying formatting to it with format codes.	TEXT(value, text_format)
TRIM	Removes all spaces from text except for single spaces between words.	TRIM(text)
UPPER	Converts text to uppercase.	UPPER(text)

Handy Excel Formula & Function “Recipes”

Offset date values with the DATE function

Scenario	Syntax
Dynamically calculate a date 3 months from the current date.	<code>=DATE(YEAR(TODAY()),MONTH(TODAY())+3,DAY(TODAY()))</code>

Use EOMONTH to return the first day of the month

Scenario	Syntax
Dynamically return the first day of the current month.	<code>=EOMONTH(TODAY(),-1)+1</code>

Error-proof lookups with IFERROR and VLOOKUP

Scenario	Syntax
Return a customized error message if VLOOKUP can't find a value.	<code>=IFERROR(VLOOKUP(A2,Sheet2!A:B,2,FALSE),"Value not found.")</code>

Classify a lookup value as "found" or "not found" in a list with ISERROR and MATCH

Scenario	Syntax
Return "Found" if the keyword "Excel" is found in a list of names in column A, and "Not found" otherwise.	<code>=IF(ISERROR(MATCH("Excel",A:A,0)),"Not found","Found")</code>

Create a multi-level classification with nested IF functions

Scenario	Syntax
Classify a product price in cell A1 as "High" (> \$1,000), "Medium" (>= \$200), or "Low" (< \$200)	<code>=IF(A1>1000,"High",IF(A1>=200,"Medium","Low"))</code>

Apply complex logical conditions with IF + AND

Scenario	Syntax
Calculate whether a salesperson qualified for a bonus by testing whether they exceeded their sales goal of \$1,000,000 <i>and</i> their new accounts goal of 20. The value for sales is in cell A1, while the value for new accounts is in cell B1.	=IF(AND(A1>1000000,B1>20),"Yes","No")

Combine INDEX and MATCH for two-way lookups

Scenario	Syntax
Return a grade from a two-way matrix (column AND row headers) of student names and class names in cells A1:J10, at the intersection of "Excel" (rows) and "Travis" (columns).	=INDEX(A1:J10,MATCH("Excel",A1:A10,0),MATCH("Travis",A1:J1,0))

Randomly sample data with RANDBETWEEN and INDEX

Scenario	Syntax
Randomly select a name from a list of 10 names in cells A1:A10.	=INDEX(A1:A10,RANDBETWEEN(1,10))

Use TEXT to return the name of the current day of the week

Scenario	Syntax
Return the name of the current day of the week.	=TEXT(TODAY(),"dddd")

Dynamically extract a person's first name with FIND and LEFT

Scenario	Syntax
Return the first name from a person's name stored in cell A1, regardless of length.	=LEFT(A1,FIND("'",A1)-1)

Remove multiple characters from a text string with nested SUBSTITUTE functions

Scenario	Syntax
Remove all periods and commas from a text string in cell A1.	=SUBSTITUTE(SUBSTITUTE(A1,".", ""),",", "")

Common Formula Errors

Common Formula Errors

Error	Description
#DIV/0	The formula attempts to divide a number by zero.
#NAME?	Some part of the formula references a name (for example, a function name) that Excel doesn't recognize.
#VALUE!	One or more function arguments have been supplied with data that is incompatible with the argument.
#REF!	The formula references a cell that no longer exists.
#####	The value is too wide to fit within its column.

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