

# Excel formulas and shortcuts

Full alphabetical list of formulas

<https://support.microsoft.com/en-gb/office/excel-functions-alphabetical-b3944572-255d-4efb-bb96-c6d90033e188>

Shortcuts

[https://support.microsoft.com/en-gb/office/keyboard-shortcuts-in-excel-1798d9d5-842a-42b8-9c99-9b7213f0040f#bkmk\\_freqwin](https://support.microsoft.com/en-gb/office/keyboard-shortcuts-in-excel-1798d9d5-842a-42b8-9c99-9b7213f0040f#bkmk_freqwin)

Function	What it does	Example
+ - * / < >	Add, subtract, multiply, divide, less than greater than	=A1+B2 =C3*D4
()	Indicates what order to do things inner set first then work out	=((A1+B2) *C3)/D1 =((A1+B2) *C3)/D1 Red then blue then green
^	To the power of	=A2^5 ten to the power 5
e	Short of times 10 to the power of	=3E8 would be $3 \times 10^8$
=SUM()	Add all the cells together	=SUM(A2:A11) =SUM(A2:A11,C2:C11)
=AVERAGE()	Finds average (mean ) of data	=AVERAGE(A2:A11)
=MODE.MULT()	Finds all the modes – make sure you have space under for multiple ones	=MODE.MULT(A2:A11)
=STDEV.P()	Finds standard deviation of the whole set	=STDEV.P(A2:A11)
=MEDIAN()	Finds average median (middle value) of data	=MEDIAN(A2:A11)
=COUNT()	Counts the total number of cells with a value in them (also count blank count black cells, countif count if conditions met and countifs count if multiple conditions met)	=COUNT(A2:A11)
=MAX()	Finds maximum value	=MAX(A2:A11)
=MIN()	Finds minimum value	=MIN(A2:A11)
=TODAY()	Returns today's date	=TODAY()
=NOW()	Returns today's date and time	=NOW()
=IF()	Does a test and returns a value depending on outcome – tricky syntax	=IF(test, TRUE, FALSE) Eg to find in a number is bigger than 4 =IF(A2>4, "Yes", "No") Words need inverted commas numbers don't =IF(A2>4, 1, 2)
=OR()	If any of the statements is true it returns true if not false	=OR(A2>4, B3=2, D2>3) Would return true if anyone of those is correct if none of them then it would say false
=AND()	If any ALL if statements are true it returns true if not false	=AND(A2>4, B3=2, D2>3) Would return true only if all were true if not it would return false
=SQRT()	Finds square root	=SQRT(A2)
=SIN() =COS() =TAN()	Sin of angle in radians not degree (1 degree = $\pi/180$ radians)	=SIN(A2)
Ctrl	Hold and click allows section on non-adjacent cells	

Ctrl + shift+enter	Allows an array to be returned	
Right click to paste	Use paste special	Will copy selected parts eg formulas, <b>values</b> , formats
Ctrl+S	Save	
Ctrl+F	Search	
Ctrl+1	Text options	
Copy with change	Grab bottom right of box and pull down	
Copy without changes	Ctrl and grab bottom right of box and pull down	
\$	Keep cell constant (absolute rather than variable)	=A2*\$B\$2 As you copy A2 will change to A3, A4 etc but B2 will always be B2 You can use just one \$ to keep just the letter or number constant

## Editing graphs

- Highlight cells
- Insert / chart type / choose chart type
- To change which data is where click on data points then it will highlight cells and you can drag highlighted area over the ones you want.
- Hover or left click on element you want to change
- Then right click for options
- Top tab with chart clicked on **chart design** to add elements change chart style
- Top tab with element clicked on **format**
- Options from graphic on right  
+ chart elements paint brush style, funnel data options



- Short cut – if the graph isn't putting the data in the right format try making it a scatter then change chart type back to the one you want.
- To get a linear scale on a bar chart x axis go to format axis/axis options/ the pic of the bar chart / change the axis type to data axis (no idea why it works!)