

## Functions covered

### Strings

LEFT	- takes a cell as a first argument and number of elements to output from the Left side as a second argument.
RIGHT	- takes a cell as a first argument and number of elements to output from the Right side as a second argument.
FIND	- takes a text to search as a first argument and text to search within as a second. Is case sensitive.
SEARCH	- takes a text to search as a first argument and text to search within as a second. Is not case sensitive.
CONCATENATE	- merges (concatenates) two or more strings together
&	- merges (concatenates) two strings together
AVERAGE	- calculates the simple arithmetic average of an input (e.g. a range of values)
MEDIAN	- calculates the median of an input (e.g. a range of values)
MODE	- calculates the mode of an input (e.g. a range of values)
MAX	- calculates the max of an input (e.g. a range of values)
MIN	- calculates the min of an input (e.g. a range of values)
STDEV	- calculates the standard deviation of an input (e.g. a range of values)
SUM	- calculates the sum of an input (e.g. a range of values)

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|--------|---|
| COUNT  | - calculates the number of cells of an input (e.g. a range of values) that are solely numeric (e.g. numbers)                |
| COUNTA | - calculates the number of cells of an input (e.g. a range of values) that are not empty (whether number or a text or else) |

## Conditionals

- |                  |  |
|------------------|--|
| IF               | - gets 3 arguments: condition to check, value to output if condition is satisfied, value to output otherwise   |
| AVERAGEIF        | - calculates the average of a range that satisfied a certain condition   |
| SUMIF            | - sums some values in some range only if a condition is satisfied  |
| COUNTIF          | - counts the number of cells that satisfy some given condition   |
| VLOOKUP          | - looks up a value in a column, finds it in another range (table) and returns corresponding value on the same row but another column from that table mentioned as a third argument (as done in the "Name" and "Margin" columns of "1) Register" sheet) |
| INDEX            | - provides the value from a table that is in the intersection of selected row or column  |
| MATCH            | - provides the index of an item (if exact) or a value close to item's content (if approximate) inside a range (row or column).   |
| Format type      | - dropdown menu, that changes the format of a cell data (e.g. text, number or general)   |
| Increase decimal | - Increase the number of presented decimal points (e.g. from 8.00 to 8.000)  |
| Sort & Filter    | - used only Filter, puts filters on column names to easily choose table rows based on their values (hides the rest)  |
| Format as        | - takes a range/selectino as an input  |

Table	and formats as a table
Pivot table	- takes a table as an argument and constructs a new sheet with a pivot table
Recommended charts	- takes data as an input and draws an appropriate graph on it
Line	- tiny Sparkline (Line graph inside one cell) to quickly visualize a trend

## 2 names in column: John Snow

1st: =LEFT(B3;FIND(" "; B3))

2nd: =RIGHT(B4;LEN(B4)-FIND(" ";B4))

## 3 names in column:

911 FORRESTAL DR, ARLINGTON, TX 76010

1st: =LEFT(A2;FIND(" ";A2)-1)

2nd: =MID(A2;FIND(" ";A2)+2;FIND(" ";A2;FIND(" ";A2)+1)-FIND(" ";A2)-2)

3rd: =MID(A2;FIND(" ";A2;FIND(" ";A2)+1)+2;FIND(" ";A2;FIND(" ";A2;FIND(" ";A2)+1)+1)-FIND(" ";A2;FIND(" ";A2)+1)+1)

4th: =TRIM(MID(A2;FIND(" ";A2;FIND(" ";A2)+1)+2)+1;LEN(A2)-SUM(LEN(B2)+LEN(C2)+LEN(D2))))

From MID

=MID(A2;FIND("[ ";A2)+1;FIND("[ ";A2)-FIND("[ ";A2)-1)

Mean: =AVERAGE(E3:E7)

Mode: =MODE(actors)

Average of Arm: =AVERAGEIF(C3:C7;"Armenia";D3:D7)

First we take were to find Armenia, than show criteria of Armenia, than show the range that we expect to average

Count: =COUNT(FALSE;K3:K7)

## Making exchange of rates with if

=IF([@Currency]="USD";[@Price];[@Price]/\$J\$1)

=IF([@[Price\_correct]]>Average;"Expensive";"Cheap")  
=IF((OR(MONTH(C6)=6;MONTH(C6)=7;MONTH(C6)=8));E6;"other")

### Merging two variables

=CONCATENATE([@Name];"-";[@Type])

### Put a filter first, will count if the condition is satisfied

=COUNTIF(Shopping[Type];Filter)

### VLookup

Look up value, the table in which we search, 2 from which to return. Should be attentive to have the searchable values in the first column.

=VLOOKUP(\$A4;info;2;FALSE)

### Index/Match

First we put the table we want to have the value from, than Match the lookable value, put the array of variables to search, tiche the FALSE, and then the column from which we want to have the value. Or we can choose the column in the array to have it.

=INDEX(info;MATCH(A2;array;0);6)  
=INDEX(Edu\_table;MATCH(C5;Edu\_table[Code];0);2)  
=INDEX(Edu\_table[Education];MATCH(C3;Edu\_table[Code];0))  
Gri indexum en inch petqa het beri, matchum code, code array

### ARRAY Formulas

MEDIANIF =MEDIAN(IF(sprice=50;margin))

We show the range criteria and then the column that we want to find median from

=AVERAGE(C2:C8-D2:D8)

Here we say if the word starts with P, find mode of the last range.

=MODE(IF(LEFT(Table2[Edu\_labels];1)="P";Table2[Age\_Groups]))

### Finding out mistakes

We take new column with price set to avoid manually written price mistakes

=COUNTIF(codes;\$A5)\*\$C5

Here we find code, calculate the count and then multiply with price

### THEN

=SUMIF(codes;\$A3;prices)

We take a the sum of specific code and its prices and find the difference.

Mistake should be in this one

### Vlookup and Index match with if

=IF(B5>apple\_median;"High";IF(B5=apple\_median;"Equal";"Low"))

**When we want to count the quantity of the variable till the row.**

(COUNTIF(A\$2:A2;A2)