

# Glossary of DAX functions and operators

## > Math & statistical functions

- **SUM(<column>)**  
Adds all the numbers in a column.
- **AVERAGE(<column>)**  
Returns the average (arithmetic mean) of all the numbers in a column.
- **SUMX(<table>, <expression>)**  
Returns the sum of an expression evaluated for each row in a table.
- **COUNTX(<table>, <expression>)**  
Counts the number of rows from an expression that evaluates to a non-blank value.
- **AVERAGEX(<table>, <expression>)**  
Calculates the average (arithmetic mean) of a set of expressions evaluated over a table.
- **DIVIDE(<numerator>, <denominator> [, <alternateresult>])**  
Performs division and returns alternate result or BLANK() on division by 0.
- **MIN(<column>)**  
Returns a minimum value of a column.
- **MAX(<column>)**  
Returns a maximum value of a column.
- **COUNTROWS(<table>)**  
Counts the number of rows in a table.
- **DISTINCTCOUNT(<column>)**  
Counts the number of distinct values in a column.
- **RANKX(<table>, <expression>[, <value>[, <order>[, <ties>]])**  
Returns the ranking of a number in a list of numbers for each row in the table argument.

## > Filter functions

- **FILTER(<table>, <filter>)**  
Returns a table that is a subset of another table or expression.
- **CALCULATE(<expression>[, <filter1> [, <filter2> [, ...]])**  
Evaluates an expression in a filter context.
- **HASONEVALUE(<columnName>)**  
Returns TRUE when the context for columnName has been filtered down to one distinct value only. Otherwise it is FALSE.
- **ALL(<table> | <column>[, <column>[, <column>[, ...]])**  
Returns all the rows in a table, or all the values in a column, ignoring any filters that might have been applied.

## > Logical functions

- **IF(<logical\_test>, <value\_if\_true>[, <value\_if\_false>])**  
Checks a condition, and returns a certain value depending on whether it is true or false.
- **AND(<logical 1>, <logical 2>)**  
Checks whether both arguments are TRUE, and returns TRUE if both arguments are TRUE. Otherwise, it returns FALSE.
- **OR(<logical 1>, <logical 2>)**  
Checks whether one of the arguments is TRUE to return TRUE. The function returns FALSE if both arguments are FALSE.
- **NOT(<logical>)**  
Changes TRUE to FALSE and vice versa.
- **SWITCH(<expression>, <value>, <result>[, <value>, <result>]...[, <else>])**  
Evaluates an expression against a list of values and returns one of multiple possible result

## > Date & time functions

- **CALENDAR(<start\_date>, <end\_date>)**  
Returns a table with a single column named "Date" that contains a contiguous set of dates.

## > Time intelligence functions

- **TOTALYTD(<expression>, <dates>[, <filter>][, <year\_end\_date>])**  
Evaluates the year-to-date value of the expression in the current context.
- **SAMEPERIODLASTYEAR(<dates>)**  
Returns a table that contains a column of dates shifted one year back in time.

## > Relationship functions

- **CROSSFILTER()**  
Specifies the cross-filtering direction to be used in a calculation.
- **RELATED()**  
Returns a related value from another table.

## > Table manipulation functions

- **SUMMARIZE(<table>, <groupBy\_columnName>[, <groupBy\_columnName>]...[, <name>, <expression>]...)**  
Returns a summary table for the requested totals over a set of groups.
- **DISTINCT(<table>)**  
Returns a table by removing duplicate rows from another table or expression.
- **ADDCOLUMNS(<table>, <name>, <expression>[, <name>, <expression>]...)**  
Adds calculated columns to the given table or table expression.
- **SELECTCOLUMNS(<table>, <name>, <expression>[, <name>, <expression>]...)**  
Selects calculated columns from the given table or table expression.

## > Text functions

- **SUBSTITUTE(<text>, <old\_text>, <new\_text>, <instance\_num>)**  
Replaces existing text with new text in a string.

## > Information functions

- **USERPRINCIPALNAME()**  
Returns the user principal name or email address. This function has no arguments.

## > DAX statements

- **VAR(<name> = <expression>)**  
Stores the result of an expression as a named variable. To return the variable, use RETURN after the variable is defined.

## > Other functions

- **BLANK()**  
Returns a blank.

## > DAX Operators

Comparison operators	Meaning
=	Equal to
= =	Strict equal to
>	Greater than
<	Smaller than
> =	Greater than or equal to
= <	Smaller than or equal to
< >	Not equal to

Text operator	Meaning	Example
&	Concatenates text values	Concatenates text values   [City]&","&[State]

Logical operator	Meaning	Example
&&	AND condition	(([City] = "Bru") && ([Return] = "Yes"))
	OR condition	(([City] = "Bru")    ([Return] = "Yes"))
IN {}	OR condition for each row	Product[Color] IN {"Red", "Blue", "Gold"}

Can't find the function you're looking for?  
Take a look at the Microsoft [documentation](#)