# Connect With





## Math & statistical functions

- · SUM(<column>) Adds all the numbers in a column.
- SUMX(, <expression>) Returns the sum of an expression evaluated for each row in a table.
- · AVERAGE(<column>) Returns the average (arithmetic mean) of all the numbers in a column.
- AVERAGEX(, <expression>) Calculates the average (arithmetic mean) of a set of expressions evaluated over a table.
- · MEDIAN(<column>) Returns the median of a column.
- MEDIANX(, <expression>) Calculates the median of a set of expressions evaluated over a table.
- GEOMEAN(<column>) Calculates the geometric mean of a column.
- GEOMEANX(, <expression>) Calculates the geometric mean of a set of expressions evaluated over a table.
- · COUNT(<column>) Returns the number of cells in a column that contain non-blank values.
- COUNTX(, <expression>) Counts the number of rows from an expression that evaluates to a non-blank value.
- DIVIDE(<numerator>, <denominator> [,<alternateresult>]) Performs division and returns alternate result or BLANK() on division by  $\theta. \\$
- MIN(<column>) Returns a minimum value of a column
- · MAX(<column>) Returns a maximum value of a column.
- · COUNTROWS([]) Counts the number of rows in a table.
- · DISTINCTCOUNT(<column>) Counts the number of distinct values in a column.
- RANKX(, <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(, <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.
- ALLNOBLANKROW( | <column>[, <column>[, -: ]]]) Returns a table that is a subset of another table or expression.
- ALL([ | <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.
- ALLEXCEPT(, <column>[, <column>[, ...]]) Returns all the rows in a table except for those rows that are affected by the specified column filters.
- REMOVEFILTERS([ | <column>][, <column>[, ...]]]]) Clear all filters from designated tables or columns.

#### **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 possible results
- IFERROR(<value>, <value\_if\_error>) Returns value\_if\_error if the first expression is an error and the value of the expression itself otherwise.

## Information functions

- COLUMNSTATISTICS() Returns statistics regarding every column in every table. This function
- · NAMEOF(<value>) Returns the column or measure name of a value.
- ISBLANK(<value>) // ISERROR(<value>) Returns whether the value is blank // an error.
- ISLOGICAL(<value>) Checks whether a value is logical or not.
- ISNUMBER(<value>) Checks whether a value is a number or not.
- ISFILTERED( | <column>) Returns true when there are direct filters on a column.
- ISCROSSFILTERED( | <column>) Returns true when there are crossfilters on a column
- USERPRINCIPALNAME() Returns the user principal name or email address. This function has no acquients

#### **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.
- COLUMN([<column>] = <expression>) Stores the result of an expression as a column in a table.
- ORDER BY([<column>]) Defines the sort order of a column. Every column can be sorted in ascending (ASC) or descending (DESC) way.

## **Text functions**

- EXACT(<text\_1>, <text\_2>) Checks if two strings are identical (EXACT() is case sensitive).
- FIND(<text\_tofind>, <in\_text>) Returns the starting position a text within another text (FIND() is case sensitive).
- FORMAT(<value>, <format>) Converts a value to a text in the specified number format.
- LEFT(<text>, <num\_chars>) Returns the number of characters from the start of a string. • RIGHT(<text>, <num\_chars>) Returns the number of characters from the end of a string.
- · LEN(<text>) Returns the number of characters in a string of text.
- · LOWER(<text>) Converts all letters in a string to lowercase.
- UPPER(<text>) Converts all letters in a string to uppercase.
- TRIM(<text>) Remove all spaces from a text string.
- · CONCATENATE(<text\_1>, <text\_2>) Joins two strings together into one string.
- SUBSTITUTE(<text>, <old\_text>, <new\_text>, <instance\_num>) Replaces existing text with new text in a string.
- REPLACE(<old\_text>, <start\_posotion>, <num\_chars>, <new\_text>) Replaces part of a string with a new string.

## Date & time functions

- CALENDAR(<start\_date>, <end\_date>) Returns a table with a single column named "Date" that
  contains a contiguous set of dates.
- DATE(<year>, <month>, <day>) Returns the specified date in datetime format.
- DATEDIFF(<date\_1>, <date\_2>, <interval>) Returns the number of units between two dates as defined in <interval>.
- DATEVALUE(<date\_text>) Converts a date in text to a date in datetime format.
- DAY(<date>) Returns a number from 1 to 31 representing the day of the month.
- · WEEKNUM(<date>) Returns weeknumber in the year.
- · MONTH(<date>) Returns a number from 1 to 12 representing a month.
- QUARTER(<date>) Returns a number from 1 to 4 representing a quarter.

### Time intelligence functions

- DATEADD(<dates>, <number\_of\_intervals>, <interval>) Moves a date by a specific interval.
- $\hbox{\bf \cdot DATESBETWEEN(< dates>, < date\_1>, < date\_2>)} \ \hbox{Returns the dates between specified dates}.$
- 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.
- STARTOFMONTH(<dates>) // ENDOFMONTH(<dates>) Returns the start // end of the month.
- STARTOFQUARTER(<dates>) // ENDOFQUARTER(<dates>) Returns the start // end of the quarter.
- STARTOFYEAR(<dates>) // ENDOFYEAR(<dates>) Returns the start // end of the quarter.

# Relationship functions

- CROSSFILTER(<left\_column>, <right\_column>, <crossfiltertype>) Specifies the cross-filtering direction to be used in a calculation.
- RELATED(<column>) Returns a related value from another table.

## Table manipulation functions

- SUMMARIZE(, <groupBy\_columnName>[, <groupBy\_columnName>]...[, <name>, <expression>]...)
  Returns a summary table for the requested totals over a set of groups.
- DISTINCT() Returns a table by removing duplicate rows from another table or expression.
- ADDCOLUMNS(, <name>, <expression>[, <name>, <expression>]...) Adds calculated columns to the given table or table expression.
- SELECTCOLUMNS(, <name>, <expression>[, <name>, <expression>]..) Selects calculated columns from the given table or table expression.
- GROUPBY( [, <groupBy\_columnName>[, [<column\_name>] [<expression>]]...) Create a summary of the input table grouped by specific columns.
- INTERSECT(<left\_table>, <right\_table>) Returns the rows of the left-side table that appear in the right-side table.
- NATURALINNERJOIN(<left\_table>, <right\_table>) Joins two tables using an inner join.
- NATURALLEFTOUTERJOIN(<left\_table>, <right\_table>) Joins two tables using a left outer join.
- UNION(, [, [,...]]) Returns the union of tables with matching columns.

#### **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
8.8	AND condition	([City] = "Bru") && ([Return] = "Yes"))
П	OR condition	([City] = "Bru")    ([Return] = "Yes"))
IN {}	OR condition for each row	Product[Color] IN {"Red", "Blue", "Gold"}