POWER BI TOP 10 FORMULAS

Top 10 Formulas Every **Data Analyst** Should Know

@PREMMANDAL

BUSINESS & DATA ANALYST

CLEAN AND SHORT PDF FOR YOU
EASY TO LEARN

CALCULATE

CALCULATE allows you to modify the filter context within which a calculation is evaluated.

Formula: CALCULATE(<expression>, <filter1>, <filter2>, ...)

Example: If you want to calculate total sales based on our net sales data, we can use the CALCULATE function.

= CALCULATE(SUM('Sales'[NetSales]), 'Sales'[Year] = 2023)

SUM

SUM adds up all the values in a specified column. It's a basic aggregate function used to get the total of numeric data.

Formula:

=SUM(<column>)

Example:

This calculates the total net sales by summing all values in the Sales[Net Sales] column.

= SUM(Sales[Net Sales])

SUMX

SUMX returns the sum of an expression evaluated for each row in a table.

Unlike SUM, which operates on a single column, SUMX allows for row-by-row calculations.

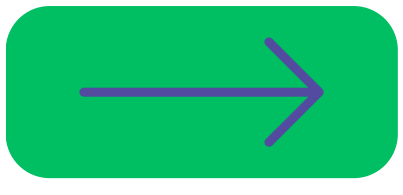
Formula:

=SUMX(<table>, <expression>)

Example:

Here, for each row in the Sales table, it multiplies Sales[Quantity] by Sales[Profit per Unit] and then sums up those results.

= SUMX(Sales, Sales[Quantity] * Sales[Profit per Unit])



AVERAGE

AVERAGE calculates the arithmetic mean of all the numbers in a specified column. It's useful for determining the central value of a set of numbers.

Formula:

=AVERAGE(<column>)

=AVERAGE(Sales[Net Sales])

Example: Here, This calculates the average of all values in the Sales[Net Sales] column..

IF

IF checks a condition and returns one value if the condition is TRUE and another value if the condition is FALSE.
It's used for conditional logic.
Formula:
=IF(<logical_test>, <value_if_true>, <value_if_false>)
Example:
This checks if Sales[Net Sales] is greater than 10,000. If true, it returns "Yes"; otherwise, it returns "No".
= IF(Sales[Net Sales] > 10000, "Yes", "No")

FILTER

FILTER returns a table that represents a subset of another table or expression, based on a specified condition. It’s used to create more specific views of data.
Formula: =FILTER(<table>, <filter>)
Example: It returns a table of sales data where the Region column equals "North".
= FILTER(Sales, Sales[Region] = "North")

ALL

ALL removes all filters from a specified table or column. It’s often used in combination with other functions to provide a baseline or total value that isn’t affected by the current filters.

Formula:

=ALL(<table_or_column>))

Example:

This calculates the total net sales without considering any existing filters on the Sales table.

= CALCULATE(SUM(Sales[Net Sales]), ALL(Sales))

ALLEXCEPT

ALLEXCEPT removes all context filters in a table except filters that have been applied to specified columns. This allows for selective removal of filters.

Formula: =ALLEXCEPT(<table>, <column1>, <column2>, ...)

Example: This keeps all filters on the Sales[Product Category] column but removes other filters, and then calculates the total net sales.

= CALCULATE(SUM(Sales[Net Sales]), ALLEXCEPT(Sales, Sales[Product Category]))

RELATED

RELATED returns a related value from another table. It’s used to bring in data from a related table in a data model.

Formula:

=RELATED(<column>)

Example:

Assuming there is a relationship between the Sales and Product tables, this returns the product name for each sale.

= RELATED(Product[Product Name])

DISTINCT

DISTINCT returns a one-column table that contains the unique values from the specified column. It’s useful for identifying or counting distinct items in a column.

Formula: =DISTINCT(<column>)

Example: This returns a table of unique values from the Sales[Product Category] column.

= DISTINCT(Sales[Product Category])

@PREMMANDAL

BUSINESS & DATA ANALYST

Was this helpful

WOULD YOU MIND SHOWING YOUR SUPPORT
BY GIVING IT A LIKE?
INSPIRE ME TO CREATE MORE!