**📊 Aggregation Functions**

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| --- | --- |
| **Function** | **Purpose** |
| **SUM()** | Adds all values in a column. |
| **SUMX()** | Adds up a custom expression row by row. Used for calculated totals like revenue. |
| **AVERAGE()** | Returns the average of a column. |
| **AVERAGEX()** | Returns the average of a row-level expression. |
| **MAX() / MIN()** | Returns the highest/lowest value in a column. |
| **DISTINCTCOUNT()** | Counts unique values in a column. |

**🧮 Calculation Functions**

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| --- | --- |
| **Function** | **Purpose** |
| **CALCULATE()** | Changes the filter context to compute a new value. Used heavily in DAX for dynamic calculations. |
| **DIVIDE(numerator, denominator, alternateResult)** | Safe division that avoids divide-by-zero errors. |

**🔁 Iterator Functions**

|  |  |
| --- | --- |
| **Function** | **Purpose** |
| **SUMX(table, expression)** | Iterates through each row and calculates a value, then sums the results. |
| **AVERAGEX(table, expression)** | Same as SUMX but returns average instead of total. |
| **FILTER(table, condition)** | Returns only rows that match a condition; commonly used inside CALCULATE. |
| **TOPN(n, table, orderBy\_expression, [order])** | Returns top n rows based on a measure or expression. |

**🗂️ Filter Context Functions**

|  |  |
| --- | --- |
| **Function** | **Purpose** |
| **ALLEXCEPT(table, column)** | Removes all filters **except** the one(s) specified. Useful in visual-level calculations. |
| **ALL(column/table)** | Removes all filters to calculate over the entire dataset. Common for percentage calculations. |

**📅 Time Intelligence Functions *(if you have a Date table)***

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| --- | --- |
| **Function** | **Purpose** |
| **DATESMTD()** | Returns the dates from the current month-to-date period. |
| **MAX(column)** | When used in a date filter, it helps calculate running totals by comparing dates. |

**📆 Date & Time Functions**

|  |  |
| --- | --- |
| **Function** | **Purpose** |
| **YEAR(), MONTH(), WEEKDAY()** | Extract parts of a date (e.g., year, month number, weekday). |
| **WEEKDAY(date, 2)** | Returns day of the week (Mon=1, Sun=7); useful for checking if it’s a weekend. |

**📏 Row Context & Calculated Columns**

|  |  |
| --- | --- |
| **Function** | **Purpose** |
| **(Column1 \* Column2)** | Used in calculated columns to create row-level results like Revenue or Profit. |