📘 DAX Functions Cheat Sheet – Thorough Version

---

1. Filter DAX Functions

Function	Description	Example
CALCULATE	Evaluates an expression in a modified filter context. Core for dynamic calculations.	CALCULATE(SUM(Sales[Amount]), Sales[Region]="East")
FILTER	Returns a table of rows that meet a condition. Often used inside CALCULATE.	FILTER(Sales, Sales[Amount]>1000)
ALL / ALLEXCEPT / ALLSELECTED	Removes filters from columns or tables. ALL removes all filters, ALLEXCEPT preserves some columns, ALLSELECTED respects slicers.	CALCULATE(SUM(Sales[Amount]), ALL(Sales[Region]))
REMOVEFILTERS	Removes filters from a table or column. Alternative to ALL.	CALCULATE(SUM(Sales[Amount]), REMOVEFILTERS(Sales[Region]))
RELATED / RELATEDTABLE / LOOKUPVALUE	Retrieve related values from another table using relationships or explicit lookup.	RELATED(Customer[Name])
DISTINCT / VALUES	Returns a table of unique values from a column.	DISTINCT(Sales[Product])
EARLIER / EARLIEST	Accesses an earlier row context within a nested row calculation.	CALCULATE(MAX(Sales[Amount]), Sales[Product]=EARLIER(Sales[Product]))
HASONEVALUE / HASONEFILTER / ISFILTERED	Checks filter conditions: whether a column has one value, is filtered, etc.	IF(HASONEVALUE(Product[Category]), VALUES(Product[Category]), "All")
SELECTEDVALUE	Returns selected value in a column or a default if multiple.	SELECTEDVALUE(Product[Category], "Multiple")
USERELATIONSHIP	Activates an inactive relationship temporarily inside a calculation.	CALCULATE(SUM(Sales[Amount]), USERELATIONSHIP(Sales[OrderDate], Calendar[Date]))

Function	Description	Example
SUMMARIZE	Creates a summary table with grouping and aggregation.	SUMMARIZE(Sales, Sales[Region], "TotalSales", SUM(Sales[Amount]))

---

2. Maths & Statistics DAX Functions

Function	Description	Example
SUM / SUMX	SUM sums a column; SUMX iterates over a table to sum an expression.	SUM(Sales[Amount]), SUMX(FILTER(Sales, Sales[Qty]>5), Sales[Amount])
AVERAGE / AVERAGEX	Average of a column or calculated over a table.	AVERAGE(Sales[Amount]), AVERAGEX(Sales, Sales[Amount]*1.1)
MAX / MAXX	Returns maximum value; MAXX iterates over a table/expression.	MAX(Sales[Amount]), MAXX(Sales, Sales[Qty]*2)
MIN / MINX	Returns minimum value; MINX iterates over a table/expression.	MIN(Sales[Amount])
DIVIDE	Safely performs division with optional alternate result for divide-by-zero.	DIVIDE(Sales[Amount], Sales[Qty], 0)
COUNT / COUNTA	COUNT counts numeric values; COUNTA counts all non-blank values.	COUNT(Sales[Qty]), COUNTA(Customer[Name])
COUNTROWS / DISTINCTCOUNT	COUNTROWS counts rows in a table; DISTINCTCOUNT counts unique values in a column.	COUNTROWS(Sales), DISTINCTCOUNT(Customer[ID])
COUNTX	Iterates over a table and counts non-blank results of expression.	COUNTX(Sales, Sales[Qty]*2)
RANKX	Returns ranking of a value over a table, can handle ties.	RANKX(ALL(Sales), Sales[Amount], , DESC)

---

3. Date & Time DAX Functions

Function	Description	Example
DATEDIFF	Returns difference between two dates in a specified unit.	DATEDIFF(Sales[StartDate], Sales[EndDate], DAY)

Function	Description	Example
DATEADD / SAMEPERIODLASTYEAR	Shifts dates by a specified interval; SAMEPERIODLASTYEAR for YoY analysis.	DATEADD(Calendar[Date], -1, YEAR)
TODAY / NOW	Returns current date / date and time.	TODAY()
TOTALYTD / TOTALQTD / TOTALMTD	Calculates Year-To-Date / Quarter-To-Date / Month-To-Date totals.	TOTALYTD(SUM(Sales[Amount]), Calendar[Date])
DATESYTD / DATESQTD / DATESMTD	Returns date table for YTD, QTD, MTD.	DATESYTD(Calendar[Date])
DATESINPERIOD	Returns a set of dates within a specified period.	DATESINPERIOD(Calendar[Date], TODAY(), -30, DAY)
DATESBETWEEN	Returns dates between two specific dates.	DATESBETWEEN(Calendar[Date], DATE(2025,1,1), DATE(2025,12,31))
YEAR / MONTH / DAY	Extracts year, month, or day from a date.	YEAR(Sales[OrderDate])
PARALLELPERIOD	Returns a parallel period (previous month, quarter, or year) for time comparison.	PARALLELPERIOD(Calendar[Date], -1, MONTH)

---

4. Text DAX Functions

Function	Description	Example
CONCATENATE	Combines two text strings.	CONCATENATE(Customer[FirstName], Customer[LastName])
SEARCH / FIND	Returns position of a substring in a string; SEARCH is case-insensitive.	SEARCH("John", Customer[Name])
FORMAT	Converts value to text in specified format.	FORMAT(Sales[Amount], "Currency")
UNICHAR	Returns the Unicode character for a number.	UNICHAR(9733) → ★
LEFT / MID / RIGHT	Extract characters from start/middle/end of string.	LEFT(Customer[Name],3)

Function	Description	Example
REPLACE / SUBSTITUTE	Replace characters or substrings.	REPLACE(Customer[Name],1,3,"Mr.")
UPPER / LOWER / PROPER	Changes case of text.	UPPER(Customer[Name])
LEN	Returns length of string.	LEN(Customer[Name])
TRIM	Removes extra spaces.	TRIM(Customer[Name])
REPT	Repeats a string N times.	REPT("*",5) → *****

---

5. Logical DAX Functions

Function	Description	Example
IF	Conditional logic; returns value based on TRUE/FALSE.	IF(Sales[Amount]>1000,"High","Low")
IFERROR	Returns alternate value if expression errors.	IFERROR(DIVIDE(Sales[Amount],Sales[Qty]),0)
COALESCE	Returns first non-blank value.	COALESCE(Customer[Phone], Customer[Email], "N/A")
OR / AND / NOT	Logical operations.	IF(AND(Sales[Qty]>5, Sales[Amount]>1000),"Yes","No")
SWITCH	Multiple condition checks.	SWITCH(Product[Category], "A","Group1","B","Group2","Other")
TRUE / FALSE	Boolean constants.	IF(TRUE(), "Yes", "No")

---

6. Window DAX Functions

Function	Description	Example
WINDOW	Returns a windowed result over a range (used in Power BI visuals)	N/A (visual-specific)
INDEX	Returns value at a specific position in a column/table	N/A
OFFSET	Returns a value offset from current row in a window	OFFSET(Sales[Amount], -1) → previous row's amount

---