

Microsoft Power BI:DAX functions

- **Aggregation functions**

Function	Description	Syntax Example
APPROXIMATEDISTINCTCOUNT	Estimated count of unique values	APPROXIMATEDISTINCTCOUNT(Sales[CustomerID])
AVERAGE	Average of numbers in a column	AVERAGE(Sales[SalesAmount])
AVERAGEA	Average including text/logical	AVERAGEA(Sales[Quantity])
AVERAGEX	Avg of expression over table	AVERAGEX(Sales, Sales[SalesAmount]*Sales[Quantity])
COUNT	Count numeric non-blanks	COUNT(Sales[Quantity])
COUNTA	Count all non-blanks (incl. text, Boolean)	COUNTA(Sales[CustomerName])
COUNTAX	Count non-blank results of expression	COUNTAX(Sales, Sales[Quantity]*2)
COUNTBLANK	Count blank values	COUNTBLANK(Sales[Remarks])
COUNTROWS	Count rows in table	COUNTROWS(Sales)
COUNTX	Count numeric expression results	COUNTX(Sales, Sales[Quantity]*Sales[UnitPrice])
DISTINCTCOUNT	Count unique values	DISTINCTCOUNT(Sales[CustomerID])
DISTINCTCOUNTNOBLANK	Count unique values excluding blanks	DISTINCTCOUNTNOBLANK(Sales[CustomerID])
MAX	Largest numeric value	MAX(Sales[SalesAmount])
MAXA	Largest including logical/text	MAXA(Sales[Score])
MAXX	Max of expression per row	MAXX(Sales, Sales[Quantity]*Sales[UnitPrice])
MIN	Smallest numeric value	MIN(Sales[SalesAmount])
MINA	Smallest incl. logical/text	MINA(Sales[Score])
MINX	Min of expression per row	MINX(Sales, Sales[Quantity]*Sales[UnitPrice])
PRODUCT	Product of all values	PRODUCT(Sales[Quantity])
PRODUCTX	Product of expression per row	PRODUCTX(Sales, Sales[Quantity]*Sales[UnitPrice])
SUM	Sum of numbers in column	SUM(Sales[SalesAmount])
SUMX	Sum of expression per row	SUMX(Sales, Sales[Quantity]*Sales[UnitPrice])

Microsoft Power BI:DAX functions

- **Date and time functions**

Function	Description	Syntax Example
CALENDAR	Returns a contiguous set of dates in a table	CALENDAR(DATE(2024,1,1), DATE(2024,12,31))
CALENDARAUTO	Creates a contiguous date table based on data model	CALENDARAUTO()
DATE	Creates a date in datetime format	DATE(2025,8,17)
DATEDIFF	Difference between two dates (unit: DAY, MONTH, YEAR, etc.)	DATEDIFF(DATE(2024,1,1), DATE(2024,12,31), DAY)
DATEVALUE	Converts text to date	DATEVALUE("2025-08-17")
DAY	Extracts day from date	DAY(DATE(2025,8,17))
EDATE	Date shifted by given months	EDATE(DATE(2025,8,17), 2)
EOMONTH	Last day of month, shifted by N months	EOMONTH(DATE(2025,8,17), 1)
HOURL	Extracts hour from datetime	HOURL(NOW())
MINUTE	Extracts minute from datetime	MINUTE(NOW())
MONTH	Extracts month number	MONTH(DATE(2025,8,17))
NETWORKDAYS	Number of working days between two dates (excludes weekends/holidays)	NETWORKDAYS(DATE(2025,8,1), DATE(2025,8,31))
NOW	Current date & time	NOW()
QUARTER	Extracts quarter number (1–4)	QUARTER(DATE(2025,8,17))
SECOND	Extracts seconds from datetime	SECOND(NOW())
TIME	Creates time from hours, minutes, seconds	TIME(14, 30, 0)
TIMEVALUE	Converts text time to datetime	TIMEVALUE("2:45 PM")
TODAY	Current date	TODAY()
UTCNOW	Current UTC date & time	UTCNOW()
UTCTODAY	Current UTC date	UTCTODAY()
WEEKDAY	Returns day of week (1=Sunday, 7=Saturday by default)	WEEKDAY(DATE(2025,8,17))
WEEKNUM	Week number of a date	WEEKNUM(DATE(2025,8,17), 2)
YEAR	Extracts year	YEAR(DATE(2025,8,17))
YEARFRAC	Fraction of year between two dates	YEARFRAC(DATE(2025,1,1), DATE(2025,8,17))

Microsoft Power BI:DAX functions

- Filter functions

Function	Description	Syntax Example
ALL	Returns all rows in a table/column, ignoring filters	CALCULATE(SUM(Sales[Amount]), ALL(Sales))
ALLCROSSFILTERED	Clears filters from related tables	CALCULATE(SUM(Sales[Amount]), ALLCROSSFILTERED(Product))
ALLEXCEPT	Clears all filters except specified	CALCULATE(SUM(Sales[Amount]), ALLEXCEPT(Sales, Sales[Region]))
ALLNOBLANKROW	Returns all rows except blank row	CALCULATE(COUNTROWS(Customer), ALLNOBLANKROW(Customer))
ALLSELECTED	Clears filters only from current selection (visual)	CALCULATE(SUM(Sales[Amount]), ALLSELECTED(Sales))
CALCULATE	Evaluates expression with modified filter context	CALCULATE(SUM(Sales[Amount]), Sales[Region]="West")
CALCULATETABLE	Returns a table with modified filter context	CALCULATETABLE(FILTER(Sales, Sales[Amount]>1000), Sales[Region]="West")
EARLIER	Gets column value from earlier row context	FILTER(Sales, Sales[Amount] > EARLIER(Sales[Amount]))
EARLIEST	Similar to EARLIER, earliest outer evaluation	Used inside nested row contexts
FILTER	Returns a filtered table	FILTER(Sales, Sales[Amount]>1000)
FIRST	Visual calc: first row value on axis	In matrix: FIRST(SUM(Sales[Amount]))
INDEX	Returns row at absolute position	INDEX(3, Sales, ORDERBY(Sales[Amount], ASC))
KEEPFILTERS	Keeps filters instead of overriding	CALCULATE(SUM(Sales[Amount]), KEEPFILTERS(Sales[Amount]>1000))
LAST	Visual calc: last row value on axis	LAST(SUM(Sales[Amount]))
LOOKUP	Visual calc: lookup value with filters	Works in matrix context
LOOKUPWITHTOTALS	Visual calc: lookup with explicit filters only	Similar to LOOKUP
LOOKUPVALUE	Returns value matching condition(s)	LOOKUPVALUE(Product[Price], Product[ProductID], 101)
MATCHBY	Defines match columns in window functions	MATCHBY(Sales[Region])
MOVINGAVERAGE	Returns moving average over axis	MOVINGAVERAGE(SUM(Sales[Amount]), -3, 0)
NEXT	Visual calc: value from next row	NEXT(SUM(Sales[Amount]))

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OFFSET	Returns row offset by N	OFFSET(-1, Sales, ORDERBY(Sales[Date], ASC))
ORDERBY	Defines order in window functions	ORDERBY(Sales[Date], ASC)
PARTITIONBY	Defines partition columns in window functions	PARTITIONBY(Sales[Region])
PREVIOUS	Visual calc: value from previous row	PREVIOUS(SUM(Sales[Amount]))
RANGE	Returns interval of rows (like WINDOW)	RANGE(-2, 0, ORDERBY(Sales[Date], ASC))
RANK	Ranking within partition	RANK(SUM(Sales[Amount]), ORDERBY(Sales[Amount], DESC))
REMOVEFILTERS	Clears filters from table/column	CALCULATE(SUM(Sales[Amount]), REMOVEFILTERS(Sales))
ROWNUMBER	Unique row number within partition	ROWNUMBER(ORDERBY(Sales[Amount], DESC))
RUNNINGSUM	Running total along axis	RUNNINGSUM(SUM(Sales[Amount]))
SELECTEDVALUE	Returns value if one value is selected	SELECTEDVALUE(Sales[Region], "Multiple")
WINDOW	Returns multiple rows in interval	WINDOW(-2, 0, ORDERBY(Sales[Date], ASC))

Microsoft Power BI:DAX functions

- Financial functions

Function	Description	Syntax Example
ACCRINT	Accrued interest for periodic-paying security	ACCRINT(issue, first_int, settlement, rate, par, freq)
ACCRINTM	Accrued interest for maturity-paying security	ACCRINTM(issue, settlement, rate, par)
AMORDEGRC	Depreciation with coefficient	AMORDEGRC(cost, date_purch, first_per, salvage, period, rate)
AMORLINC	Linear depreciation	AMORLINC(cost, date_purch, first_per, salvage, period, rate)
COUPDAYBS	Days from coupon start → settlement	COUPDAYBS(settlement, maturity, freq)
COUPDAYS	Total days in coupon period	COUPDAYS(settlement, maturity, freq)
COUPDAYSNC	Days from settlement → next coupon	COUPDAYSNC(settlement, maturity, freq)
COUPNCD	Next coupon date after settlement	COUPNCD(settlement, maturity, freq)
COUPNUM	No. of coupons until maturity	COUPNUM(settlement, maturity, freq)
COUPPCD	Previous coupon date before settlement	COUPPCD(settlement, maturity, freq)
CUMIPMT	Cumulative interest in period	CUMIPMT(rate, nper, pv, start, end, type)
CUMPRINC	Cumulative principal in period	CUMPRINC(rate, nper, pv, start, end, type)
DB	Declining balance depreciation	DB(cost, salvage, life, period)
DDB	Double-declining depreciation	DDB(cost, salvage, life, period, factor)
DISC	Discount rate for security	DISC(settlement, maturity, pr, redemption, basis)
DOLLARDE	Convert fractional price → decimal	DOLLARDE(1.02, 16)
DOLLARFR	Convert decimal → fractional price	DOLLARFR(1.125, 16)
DURATION	Macauley duration	DURATION(settlement, maturity, coupon, yld, freq, basis)
EFFECT	Effective annual interest rate	EFFECT(nominal_rate, npery)
FV	Future value of investment	FV(rate, nper, pmt, [pv], [type])
INTRATE	Interest rate for fully invested	INTRATE(settlement, maturity, investment, redemption,

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	security	basis)
IPMT	Interest payment for a period	IPMT(rate, per, nper, pv)
ISPMT	Interest in specific period	ISPMT(rate, per, nper, pv)
MDURATION	Modified Macauley duration	MDURATION(settlement, maturity, coupon, yld, freq, basis)
NOMINAL	Nominal rate given effective	NOMINAL(effect_rate, npery)
NPER	Number of periods for investment	NPER(rate, pmt, pv, [fv], [type])
ODDFPRICE	Price of bond w/ odd first period	ODDFPRICE(settlement, maturity, issue, first_coupon, rate, yld, redemption, freq, basis)
ODDFYIELD	Yield of bond w/ odd first period	ODDFYIELD(settlement, maturity, issue, first_coupon, rate, pr, redemption, freq, basis)
ODDLPRICE	Price of bond w/ odd last period	ODDLPRICE(settlement, maturity, last_interest, rate, yld, redemption, freq, basis)
ODDLYIELD	Yield of bond w/ odd last period	ODDLYIELD(settlement, maturity, last_interest, rate, pr, redemption, freq, basis)
PDURATION	Periods to reach target FV	PDURATION(rate, pv, fv)
PMT	Loan payment (constant payments)	PMT(rate, nper, pv)
PPMT	Principal part of payment	PPMT(rate, per, nper, pv)
PRICE	Price of bond (periodic interest)	PRICE(settlement, maturity, rate, yld, redemption, freq, basis)
PRICEDISC	Price of discount security	PRICEDISC(settlement, maturity, discount, redemption, basis)
PRICEMAT	Price of bond paying at maturity	PRICEMAT(settlement, maturity, issue, rate, yld, basis)
PV	Present value of investment	PV(rate, nper, pmt, [fv], [type])
RATE	Interest rate per period	RATE(nper, pmt, pv, [fv], [type])
RECEIVED	Amount received at maturity	RECEIVED(settlement, maturity, investment, discount, basis)
RRI	Equivalent growth rate	RRI(nper, pv, fv)
SLN	Straight-line depreciation	SLN(cost, salvage, life)
SYD	Sum-of-years digits depreciation	SYD(cost, salvage, life, per)
TBILLEQ	Bond-equivalent yield for T-Bill	TBILLEQ(settlement, maturity, discount)
TBILLPRICE	Price per \$100 T-Bill	TBILLPRICE(settlement, maturity, discount)
TBILLYIELD	Yield for T-Bill	TBILLYIELD(settlement, maturity, pr)

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VDB	Variable declining balance depreciation	VDB(cost, salvage, life, start, end, [factor], [no_switch])
XIRR	IRR for irregular cashflows	XIRR(values, dates, [guess])
XNPV	NPV for irregular cashflows	XNPV(rate, values, dates)
YIELD	Yield of periodic-paying bond	YIELD(settlement, maturity, rate, pr, redemption, freq, basis)
YIELDDISC	Yield of discount security	YIELDDISC(settlement, maturity, pr, redemption, basis)
YIELDMAT	Yield of bond paying at maturity	YIELDMAT(settlement, maturity, issue, rate, pr, redemption, basis)

Microsoft Power BI:DAX functions

- INFO functions**

Function	Description	Syntax Example
INFO.VIEW.COLUMNS	Returns a list of all columns in the current model.	EVALUATE INFO.VIEW.COLUMNS()
INFO.VIEW.MEASURES	Returns a list of all measures in the current model.	EVALUATE INFO.VIEW.MEASURES()
INFO.VIEW.RELATIONSHIPS	Returns a list of all relationships in the current model.	EVALUATE INFO.VIEW.RELATIONSHIPS()
INFO.VIEW.TABLES	Returns a list of all tables in the current model.	EVALUATE INFO.VIEW.TABLES()
INFO.ALTERNATEOFDEFINITIONS	(No description provided – alternate object definitions).	EVALUATE INFO.ALTERNATEOFDEFINITIONS()
INFO.ANNOTATIONS	Returns list of all annotations in the model.	EVALUATE INFO.ANNOTATIONS()
INFO.ATTRIBUTEHIERARCHIES	DMV query for attribute hierarchies.	EVALUATE INFO.ATTRIBUTEHIERARCHIES()
INFO.ATTRIBUTEHIERARCHYSTORAGES	Returns attribute hierarchy storages.	EVALUATE INFO.ATTRIBUTEHIERARCHYSTORAGES()
INFO.CALCDEPENDENCY	Shows calculation dependency information for a DAX query.	EVALUATE INFO.CALCDEPENDENCY()
INFO.CALCULATIONGROUPS	Returns all calculation groups in the model.	EVALUATE INFO.CALCULATIONGROUPS()
INFO.CALCULATIONITEMS	Returns all calculation items in the model.	EVALUATE INFO.CALCULATIONITEMS()
INFO.CATALOGS	DMV query for catalogs.	EVALUATE INFO.CATALOGS()
INFO.CHANGEDPROPERTIES	DMV query for changed properties.	EVALUATE INFO.CHANGEDPROPERTIES()
INFO.COLUMNPARTITIONSTORAGES	Returns column partition storages.	EVALUATE INFO.COLUMNPARTITIONSTORAGES()
INFO.COLUMNPERMISSIONS	Returns all column permissions in the model.	EVALUATE INFO.COLUMNPERMISSIONS()
INFO.COLUMNS	Returns all columns with schema rowset.	EVALUATE INFO.COLUMNS()

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INFO.COLUMNSTORAGES	Returns all column storages in the model.	EVALUATE INFO.COLUMNSTORAGES()
INFO.CSDLMETADATA	Returns metadata in XML format.	EVALUATE INFO.CSDLMETADATA()
INFO.CULTURES	Returns a list of all cultures in the model.	EVALUATE INFO.CULTURES()
INFO.DATACOVERAGEDEFINITIONS	Returns data coverage definitions.	EVALUATE INFO.DATACOVERAGEDEFINITIONS()
INFO.DATASOURCES	DMV query for data sources.	EVALUATE INFO.DATASOURCES()
INFO.DELTATABLEMETADASTORAGES	Returns delta table metadata storages.	EVALUATE INFO.DELTATABLEMETADASTORAGES()
INFO.DEPENDENCIES	Shows dependencies between calculations.	EVALUATE INFO.DEPENDENCIES()
INFO.DETAILROWSDEFINITIONS	Returns all detail rows definitions.	EVALUATE INFO.DETAILROWSDEFINITIONS()
INFO.DICTIONARYSTORAGES	Returns dictionary storages.	EVALUATE INFO.DICTIONARYSTORAGES()
INFO.EXCLUDEDARTIFACTS	DMV query for excluded artifacts.	EVALUATE INFO.EXCLUDEDARTIFACTS()
INFO.EXPRESSIONS	Returns all expressions in the model.	EVALUATE INFO.EXPRESSIONS()
INFO.EXTENDEDPROPERTIES	Returns extended properties.	EVALUATE INFO.EXTENDEDPROPERTIES()
INFO.FORMATSTRINGDEFINITIONS	Returns format string definitions.	EVALUATE INFO.FORMATSTRINGDEFINITIONS()
INFO.FUNCTIONS	Returns list of DAX functions.	EVALUATE INFO.FUNCTIONS()
INFO.GENERALSEGMENTMAPSEGMENTMETADASTORAGES	Returns general segment metadata.	EVALUATE INFO.GENERALSEGMENTMAPSEGMENTMETADASTORAGES()
INFO.GROUPBYCOLUMNS	Returns group-by columns.	EVALUATE INFO.GROUPBYCOLUMNS()
INFO.HIERARCHIES	DMV query for hierarchies.	EVALUATE INFO.HIERARCHIES()

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INFO.HIERARCHYSTORAGES	Returns hierarchy storages.	EVALUATE INFO.HIERARCHYSTORAGES() ()
INFO.KPIS	Returns all KPIs in the model.	EVALUATE INFO.KPIS()
INFO.LEVELS	Returns all levels in the model.	EVALUATE INFO.LEVELS()
INFO.LINGUISTICMETADATA	DMV query for linguistic metadata.	EVALUATE INFO.LINGUISTICMETADATA() ()
INFO.MEASURES	Returns all measures in the model.	EVALUATE INFO.MEASURES()
INFO.MODEL	DMV query for the model itself.	EVALUATE INFO.MODEL()
INFO.OBJECTTRANSLATIONS	Returns object translations.	EVALUATE INFO.OBJECTTRANSLATIONS() ()
INFO.PARQUETFILESTORAGES	Returns parquet file storages.	EVALUATE INFO.PARQUETFILESTORAGES() ()
INFO.PARTITIONS	DMV query for partitions.	EVALUATE INFO.PARTITIONS() ()
INFO.PARTITIONSTORAGE	Returns partition storages.	EVALUATE INFO.PARTITIONSTORAGE() ()
INFO.PERSPECTIVECOLUMNS	Returns perspective columns.	EVALUATE INFO.PERSPECTIVECOLUMNS() ()
INFO.PERSPECTIVEHIERARCHIES	Returns perspective hierarchies.	EVALUATE INFO.PERSPECTIVEHIERARCHIES() ()
INFO.PERSPECTIVEMEASURES	Returns perspective measures.	EVALUATE INFO.PERSPECTIVEMEASURES() ()
INFO.PERSPECTIVES	Returns perspectives.	EVALUATE INFO.PERSPECTIVES() ()
INFO.PERSPECTIVETABLES	Returns perspective tables.	EVALUATE INFO.PERSPECTIVETABLES() ()
INFO.PROPERTIES	DMV query for properties.	EVALUATE INFO.PROPERTIES() ()
INFO.QUERYGROUPS	Returns query groups.	EVALUATE INFO.QUERYGROUPS() ()
INFO.REFRESHPOLICIES	Returns refresh policies.	EVALUATE INFO.REFRESHPOLICIES() ()
INFO.RELATEDCOLUMNDETAILS	Returns related column details.	EVALUATE INFO.RELATEDCOLUMNDETAILS() ()

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INFO.RELATIONSHIPINDEXSTORAGES	Returns relationship index storages.	EVALUATE INFO.RELATIONSHIPINDEXSTORAGES()
INFO.RELATIONSHIPS	DMV query for relationships.	EVALUATE INFO.RELATIONSHIPS()
INFO.RELATIONSHIPSTORAGES	Returns relationship storages.	EVALUATE INFO.RELATIONSHIPSTORAGES()
INFO.ROLEMEMBERSHIPS	Returns role memberships.	EVALUATE INFO.ROLEMEMBERSHIPS()
INFO.ROLES	Returns roles in the model.	EVALUATE INFO.ROLES()
INFO.SEGMENTMAPSTORAGES	Returns segment map storages.	EVALUATE INFO.SEGMENTMAPSTORAGES()
INFO.SEGMENTSTORAGE S	Returns segment storages.	EVALUATE INFO.SEGMENTSTORAGES()
INFO.STORAGEFILES	Returns storage files.	EVALUATE INFO.STORAGEFILES()
INFO.STORAGEFOLDERS	Returns storage folders.	EVALUATE INFO.STORAGEFOLDERS()
INFO.STORAGETABLECOLUMNS	Returns column statistics of in-memory tables.	EVALUATE INFO.STORAGETABLECOLUMNS()
INFO.STORAGETABLECOLUMNSEGMENTS	Returns column segment storage info.	EVALUATE INFO.STORAGETABLECOLUMNSEGMENTS()
INFO.STORAGETABLES	Returns in-memory table statistics.	EVALUATE INFO.STORAGETABLES()
INFO.TABLEPERMISSIONS	Returns table permissions.	EVALUATE INFO.TABLEPERMISSIONS()
INFO.TABLES	Returns list of all tables in the model.	EVALUATE INFO.TABLES()
INFO.TABLESTORAGES	Returns table storages.	EVALUATE INFO.TABLESTORAGES()
INFO.VARIATIONS	Returns variations in the model.	EVALUATE INFO.VARIATIONS()

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- Information functions

Function	Description	Syntax Example
COLUMNSTATISTICS	Returns a table of statistics regarding every column in every table in the model.	COLUMNSTATISTICS()
CONTAINS	Returns TRUE if values for all referred columns exist in those columns.	CONTAINS(Product, Product[ProductID], 1)
CONTAINSROW	Returns TRUE if a row of values exists in a table.	CONTAINSROW({1,2,3}, 2)
CONTAINSSTRING	Returns TRUE if one string contains another string.	CONTAINSSTRING("Power BI", "BI")
CONTAINSSTRINGEXACT	Returns TRUE if one string contains another (case-sensitive).	CONTAINSSTRINGEXACT("Power BI", "bi")
CUSTOMDATA	Returns the CustomData property in the connection string.	CUSTOMDATA()
HASONEFILTER	Returns TRUE if only one value is directly filtered.	HASONEFILTER(Sales[Region])
HASONEVALUE	Returns TRUE if only one distinct value exists in context.	HASONEVALUE(Sales[CustomerID])
ISAFTER	Boolean function to check if row comes after a certain value.	ISAFTER(Date[Date], DATE(2024,1,1))
ISBLANK	Checks whether a value is blank.	ISBLANK(SUM(Sales[Amount]))
ISCROSSFILTERED	Returns TRUE if a column is being filtered due to cross-filter.	ISCROSSFILTERED(Product[Category])
ISEMPTY	Returns TRUE if a table is empty.	ISEMPTY(FILTER(Sales, Sales[Amount] > 10000))
ISERROR	Check if the value is an error.	ISERROR(DIVIDE(1,0))
ISEVEN	Returns TRUE if the number is even.	ISEVEN(10)
ISFILTERED	Returns TRUE if the column is being filtered directly.	ISFILTERED(Sales[ProductID])
ISINSCOPE	Returns TRUE if the column is currently in scope in the hierarchy.	ISINSCOPE(Product[Category])
ISLOGICAL	Returns TRUE if value is logical (TRUE/FALSE).	ISLOGICAL(TRUE())
ISNONTEXT	Returns TRUE if the value is not text.	ISNONTEXT(123)
ISNUMBER	Returns TRUE if the value is a number.	ISNUMBER(25)
ISODD	Returns TRUE if the number is odd.	ISODD(5)
ISONORAFTER	Boolean function like "Start At" clause.	ISONORAFTER(Date[Date], DATE(2023,12,31))
ISSELECTEDMEASURE	Checks if the current measure in context is one	ISSELECTEDMEASURE([Sales

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ASURE	of the specified.	Amount], [Profit])
ISSUBTOTAL	Returns TRUE if row is a subtotal in SUMMARIZE.	ISSUBTOTAL(Sales[Region])
ISTEXT	Returns TRUE if the value is text.	ISTEXT("Hello")
NONVISUAL	Marks a value filter in SUMMARIZECOLUMNS as non-visual.	SUMMARIZECOLUMNS(Product[Category], NONVISUAL(Sales[Region]))
SELECTEDMEASURE	Returns the measure that is currently in context.	SELECTEDMEASURE()
SELECTEDMEASUREFORMATSTRING	Returns the format string of the measure in context.	SELECTEDMEASUREFORMATSTRING()
SELECTEDMEASURENAME	Returns the name of the measure in context.	SELECTEDMEASURENAME()
USERCULTURE	Returns the locale for the current user.	USERCULTURE()
USERNAME	Returns domain and username.	USERNAME()
USEROBJECTID	Returns the user's Object ID or SID.	USEROBJECTID()
USERPRINCIPALNAME	Returns the user principal name.	USERPRINCIPALNAME()

Microsoft Power BI:DAX functions

- Logical functions

Function	Description	Syntax Example
AND	Checks whether both arguments are TRUE, and returns TRUE if both are TRUE.	AND(Sales[Amount] > 1000, Sales[Quantity] > 10)
BITAND	Returns a bitwise 'AND' of two numbers.	BITAND(6, 3) - 2
BITLSHIFT	Returns a number shifted left by the specified number of bits.	BITLSHIFT(5, 2) - 20
BITOR	Returns a bitwise 'OR' of two numbers.	BITOR(6, 3) - 7
BITRSHIFT	Returns a number shifted right by the specified number of bits.	BITRSHIFT(20, 2) - 5
BITXOR	Returns a bitwise 'XOR' of two numbers.	BITXOR(6, 3) - 5
COALESCE	Returns the first expression that is not BLANK.	COALESCE(Sales[Discount], 0)
FALSE	Returns the logical value FALSE.	FALSE
IF	Checks a condition, and returns one value when TRUE, otherwise another.	IF(Sales[Amount] > 1000, "High", "Low")
IF.EAGER	Same as IF but evaluates both TRUE & FALSE expressions (eager execution).	IF.EAGER(Sales[Amount] > 1000, "High", "Low")
IFERROR	Evaluates an expression and returns a specified value if error occurs.	IFERROR(DIVIDE(Sales[Amount], Sales[Quantity]), 0)
NOT	Changes FALSE to TRUE, or TRUE to FALSE.	NOT(Sales[Amount] > 1000)
OR	Returns TRUE if one of the arguments is TRUE.	OR(Sales[Amount] > 1000, Sales[Quantity] > 10)
SWITCH	Evaluates an expression against a list of values and returns a matching result.	#ERROR!
TRUE	Returns the logical value TRUE.	TRUE

Microsoft Power BI:DAX functions

- Math and trig functions

Function	Description	Syntax Example
ABS	Returns the absolute value of a number.	ABS(<number>)
ACOS	Returns the arccosine of a number.	ACOS(<number>)
ACOSH	Returns the inverse hyperbolic cosine of a number.	ACOSH(<number>)
ACOT	Returns the arccotangent of a number.	ACOT(<number>)
ACOTH	Returns the inverse hyperbolic cotangent of a number.	ACOTH(<number>)
ASIN	Returns the arcsine of a number.	ASIN(<number>)
ASINH	Returns the inverse hyperbolic sine of a number.	ASINH(<number>)
ATAN	Returns the arctangent of a number.	ATAN(<number>)
ATANH	Returns the inverse hyperbolic tangent of a number.	ATANH(<number>)
CEILING	Rounds a number up, to the nearest integer or significance.	CEILING(<number>, <significance>)
CONVERT	Converts an expression from one data type to another.	CONVERT(<number>, <from_unit>, <to_unit>)
COS	Returns the cosine of an angle.	COS(<number>)
COSH	Returns the hyperbolic cosine of a number.	COSH(<number>)
COT	Returns the cotangent of an angle in radians.	COT(<number>)
COTH	Returns the hyperbolic cotangent of a number.	COTH(<number>)
CURRENCY	Returns value as currency data type.	CURRENCY(<number>)
DEGREES	Converts radians into degrees.	DEGREES(<radians>)
DIVIDE	Division with alternate result if divisor = 0.	DIVIDE(<numerator>, <denominator>[, <alternateResult>])
EVEN	Rounds a number up to nearest even integer.	EVEN(<number>)
EXP	Returns e^n.	EXP(<number>)
FACT	Returns factorial.	FACT(<number>)
FLOOR	Rounds down to nearest multiple.	FLOOR(<number>, <significance>)
GCD	Greatest common divisor of integers.	GCD(<number1>, <number2>, ...)

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INT	Rounds down to nearest integer.	INT(<number>)
ISO.CEILING	Rounds up to nearest integer/multiple.	ISO.CEILING(<number>[, <significance>])
LCM	Least common multiple.	LCM(<number1>, <number2>, ...)
LN	Natural logarithm.	LN(<number>)
LOG	Logarithm with base.	LOG(<number>[, <base>])
LOG10	Base-10 logarithm.	LOG10(<number>)
MOD	Returns remainder.	MOD(<number>, <divisor>)
MROUND	Rounds to given multiple.	MROUND(<number>, <multiple>)
ODD	Rounds up to nearest odd integer.	ODD(<number>)
PI	Returns value of π .	PI()
POWER	Number raised to a power.	POWER(<number>, <power>)
QUOTIENT	Returns integer division result.	QUOTIENT(<numerator>, <denominator>)
RADIANS	Converts degrees to radians.	RADIANS(<degrees>)
RAND	Random number between 0–1.	RAND()
RANDBETWEEN	Random number in range.	RANDBETWEEN(<bottom>, <top>)
ROUND	Rounds to digits.	ROUND(<number>, <num_digits>)
ROUNDDOWN	Rounds down toward zero.	ROUNDDOWN(<number>, <num_digits>)
ROUNDUP	Rounds up away from zero.	ROUNDUP(<number>, <num_digits>)
SIGN	Returns -1, 0, or 1 depending on sign.	SIGN(<number>)
SIN	Returns sine of an angle.	SIN(<number>)
SINH	Hyperbolic sine.	SINH(<number>)
SQRT	Square root.	SQRT(<number>)
SQRTPI	$\sqrt{n\pi}$.	SQRTPI(<number>)
TAN	Tangent of an angle.	TAN(<number>)
TANH	Hyperbolic tangent.	TANH(<number>)
TRUNC	Truncates decimal part.	TRUNC(<number>[, <num_digits>])

Microsoft Power BI:DAX functions

- Other functions

Function	Description	Syntax Example
BLANK	Returns a blank.	BLANK()
ERROR	Raises an error with an error message.	ERROR("This is a custom error message")
EVALUATEANDLOG	Returns the value of the first argument and logs it in a DAX Evaluation Log.	EVALUATEANDLOG(SUM(Sales[Amount]))
TOCSV	Returns a table as a string in CSV format.	TOCSV(SUMMARIZE(Sales, Sales[Product], "Total Sales", SUM(Sales[Amount])))
TOJSON	Returns a table as a string in JSON format.	TOJSON(SUMMARIZE(Sales, Sales[Product], "Total Sales", SUM(Sales[Amount])))

Microsoft Power BI:DAX functions

- **Parent and child functions**

Function	Description	Syntax Example
PATH	Returns a delimited text string with the identifiers of all parents of a node, starting with the top-level parent and ending with the current row.	PATH(<id_column>, <parent_id_column>)
PATHCONTAINS	Returns TRUE/FALSE if the specified item exists in the given path. Useful for checking if a node belongs to a particular branch.	PATHCONTAINS(<path>, <item>)
PATHITEM	Returns the item at the specified position in a path (1 = top parent, n = bottom child). type (optional): TEXT (default) or INTEGER.	PATHITEM(<path>, <position>[, <type>])
PATHITEMREVERSE	Returns the item at the specified position counting from the end of the path. (1 = current node, 2 = parent, etc.)	PATHITEMREVERSE(<path>, <position>[, <type>])
PATHLENGTH	Returns the number of items in a path (i.e., hierarchy depth).	PATHLENGTH(<path>)

Microsoft Power BI:DAX functions

- Relationship functions

Function	Description	Syntax Example
CROSSFILTER	Changes the filter direction between two columns in a relationship for a specific calculation. direction can be None, OneWay, or Both.	CROSSFILTER(<columnName1>, <columnName2>, <direction>)
RELATED	Returns a value from a related table by following an existing many-to-one relationship. Works like a lookup.	RELATED(<columnName>)
RELATEDTABLE	Returns a table of related rows from another table, based on the current row context.	RELATEDTABLE(<tableName>)
USERELATIONSHIP	Activates an inactive relationship between two tables for the duration of a calculation.	CALCULATE(<expression>, USERELATIONSHIP(<columnName1>, <columnName2>))

Microsoft Power BI:DAX functions

- Statistical functions

Function	Description	Syntax
BETA.DIST	Returns the Beta distribution. If cumulative=TRUE → CDF, else PDF.	BETA.DIST(x, alpha, beta, cumulative [, A], [B])
BETA.INV	Returns the inverse of Beta CDF.	BETA.INV(probability, alpha, beta [, A], [B])
CHISQ.DIST	Returns the Chi-squared distribution (CDF or PDF).	CHISQ.DIST(x, deg_freedom, cumulative)
CHISQ.DIST.RT	Returns the right-tailed probability of the Chi-squared distribution.	CHISQ.DIST.RT(x, deg_freedom)
CHISQ.INV	Returns the inverse left-tailed Chi-squared distribution.	CHISQ.INV(probability, deg_freedom)
CHISQ.INV.RT	Returns the inverse right-tailed Chi-squared distribution.	CHISQ.INV.RT(probability, deg_freedom)
COMBIN	Returns number of combinations without repetition.	COMBIN(number, number_chosen)
COMBINA	Returns number of combinations with repetition.	COMBINA(number, number_chosen)
CONFIDENCE.NORM	Returns the confidence interval using normal distribution.	CONFIDENCE.NORM(alpha, standard_dev, size)
CONFIDENCE.T	Returns the confidence interval using Student's t-distribution.	CONFIDENCE.T(alpha, standard_dev, size)
EXPON.DIST	Returns the exponential distribution.	EXPON.DIST(x, lambda, cumulative)
GEOMEAN	Returns the geometric mean of a column.	GEOMEAN(<column>)
GEOMEANX	Evaluates expression for each row in table → returns geometric mean.	GEOMEANX(<table>, <expression>)
LINEST	Returns parameters (slope, intercept) of linear regression.	LINEST(y-values, x-values [, const])
LINESTX	Regression across rows of a table.	LINESTX(table, y-expression, x-expression [, const])
MEDIAN	Returns median of values in column.	MEDIAN(<column>)
MEDIANX	Returns median of expression evaluated over a table.	MEDIANX(<table>, <expression>)

Microsoft Power BI:DAX functions

NORM.DIST	Returns normal distribution (CDF or PDF).	NORM.DIST(x, mean, standard_dev, cumulative)
NORM.INV	Returns the inverse normal distribution.	NORM.INV(probability, mean, standard_dev)
NORM.S.DIST	Returns standard normal distribution (mean=0, std=1).	NORM.S.DIST(z, cumulative)
NORM.S.INV	Returns the inverse of standard normal distribution.	NORM.S.INV(probability)
PERCENTILE.EXC	Returns k-th percentile (exclusive method).	PERCENTILE.EXC(<column>, k)
PERCENTILE.INC	Returns k-th percentile (inclusive method).	PERCENTILE.INC(<column>, k)
PERCENTILEX.EXC	Evaluates expression for each row, then percentile (exclusive).	PERCENTILEX.EXC(<table>, <expression>, k)
PERCENTILEX.INC	Same as above but inclusive.	PERCENTILEX.INC(<table>, <expression>, k)
PERMUT	Returns number of permutations without repetition.	PERMUT(number, number_chosen)
POISSON.DIST	Returns Poisson distribution probability.	POISSON.DIST(x, mean, cumulative)
RANK.EQ	Returns the rank of a number in a list.	RANK.EQ(<number>, <column>[, <order>])
RANKX	Returns the rank of a calculated expression within a table.	RANKX(<table>, <expression>[, <value>[, <order>[, <ties>]]])
SAMPLE	Returns n random rows from a table.	SAMPLE(n, table [, orderBy_expression])
STDEV.P	Population standard deviation.	STDEV.P(<column>)
STDEV.S	Sample standard deviation.	STDEV.S(<column>)
STDEVX.P	Population standard deviation over evaluated expression.	STDEVX.P(<table>, <expression>)
STDEVX.S	Sample standard deviation over evaluated expression.	STDEVX.S(<table>, <expression>)
T.DIST	Returns Student's t-distribution (CDF or PDF).	T.DIST(x, deg_freedom, cumulative)
T.DIST.2T	Returns two-tailed Student's t-distribution.	T.DIST.2T(x, deg_freedom)
T.DIST.RT	Returns right-tailed Student's t-distribution.	T.DIST.RT(x, deg_freedom)
T.INV	Returns inverse left-tailed Student's t-distribution.	T.INV(probability, deg_freedom)

Microsoft Power BI:DAX functions

T.INV.2T	Returns inverse two-tailed Student's t-distribution.	T.INV.2T(probability, deg_freedom)
VAR.P	Returns population variance.	VAR.P(<column>)
VAR.S	Returns sample variance.	VAR.S(<column>)
VARX.P	Returns population variance over evaluated expression.	VARX.P(<table>, <expression>)
VARX.S	Returns sample variance over evaluated expression.	VARX.S(<table>, <expression>)

Microsoft Power BI:DAX functions

- Table manipulation functions

Function	Description	Syntax
ADDCOLUMNS	Adds calculated columns to the given table.	ADDCOLUMNS(Table, ColumnName, Expression, ...)
ADDMISSINGITEMS	Adds combinations of items from multiple columns if they don't already exist.	ADDMISSINGITEMS(Table, ColumnName, ...)
CROSSJOIN	Returns the Cartesian product of all rows from all tables.	CROSSJOIN(Table1, Table2, ...)
CURRENTGROUP	Returns the set of rows in the current group when used inside GROUPBY.	Used inside GROUPBY → GROUPBY(Table, GroupBy_Column, "Column", Expression, ...) with CURRENTGROUP()
DATATABLE	Creates an inline static table with given values.	DATATABLE(ColumnName, DataType, { {Row1}, {Row2}, ... })
DETAILROWS	Returns the data defined in the Detail Rows Expression for a measure.	DETAILROWS([Measure])
DISTINCT (column)	Returns a one-column table of distinct values from a column.	DISTINCT(ColumnName)
DISTINCT (table)	Removes duplicate rows from a table.	DISTINCT(Table)
EXCEPT	Returns rows from Table1 that do not appear in Table2.	EXCEPT(Table1, Table2)
FILTERS	Returns the filters applied directly on a column.	FILTERS(ColumnName)
GENERATE	Cartesian product of Table1 and evaluated Table2 in current row context.	GENERATE(Table1, Table2)
GENERATEALL	Similar to GENERATE, but keeps unmatching rows as well.	GENERATEALL(Table1, Table2)
GENERATESERIES	Returns a single column table containing values of an arithmetic series.	GENERATESERIES(Start, End, Increment)
GROUPBY	Groups data without implicit CALCULATE (lighter than SUMMARIZE).	GROUPBY(Table, GroupBy_Column, "Column", Expression, ...)
IGNORE	Omits specific expressions from blank/null evaluation.	IGNORE(Expression) (used inside SUMMARIZECOLUMNS)
INTERSECT	Returns intersection rows of two	INTERSECT(Table1, Table2)

Microsoft Power BI:DAX functions

	tables.	
NATURALINNERJOIN	Performs an inner join between two tables.	NATURALINNERJOIN(Table1, Table2)
NATURALLEFTOUTERJOIN	Performs a left outer join between two tables.	NATURALLEFTOUTERJOIN(Table1, Table2)
ROLLUP	Adds subtotal/rollup rows to a grouped result.	ROLLUP(Column1, Column2, ...) (inside SUMMARIZE)
ROLLUPADDISSUBTOTAL	Adds rollup/subtotal rows in SUMMARIZECOLUMNS.	ROLLUPADDISSUBTOTAL(Table, Column)
ROLLUPISSUBTOTAL	Flags subtotal rows created by ROLLUPADDISSUBTOTAL.	ROLLUPISSUBTOTAL(Column)
ROLLUPGROUP	Adds rollup groups inside SUMMARIZE / SUMMARIZECOLUMNS.	ROLLUPGROUP(Column1, Column2, ...)
ROW	Returns a single row table.	ROW("Column1", Expression1, "Column2", Expression2, ...)
SELECTCOLUMNS	Creates a table with new calculated columns.	SELECTCOLUMNS(Table, "NewColumnName", Expression, ...)
SUBSTITUTEWITHINDEX	Returns a table with a left semi join + adds index.	SUBSTITUTEWITHINDEX(Table1, Table2, OrderBy_Column)
SUMMARIZE	Creates a summary table over groups.	SUMMARIZE(Table, GroupBy_Column, "Column", Expression, ...)
SUMMARIZECOLUMNS	Creates a summary table with filters applied.	SUMMARIZECOLUMNS(GroupBy_Column, ..., [Measure])
Table Constructor	Creates an inline table with one or more columns.	{ (Value1), (Value2), ... } or { (1,"A"), (2,"B") }
TOPN	Returns top N rows of a table.	TOPN(N, Table, OrderBy_Expression, Order)
TREATAS	Applies a table as filters to unrelated columns.	TREATAS(Table, Column1, Column2, ...)
UNION	Returns combined rows from tables.	UNION(Table1, Table2, ...)
VALUES	Returns distinct values of a column or one-column version of a table.	VALUES(ColumnName) OR VALUES(Table)

Microsoft Power BI:DAX functions

- Text functions

Function	Description	Example DAX Formula
COMBINEVALUES	Joins two or more text strings into one text string.	COMBINEVALUES("-", Sales[Region], Sales[Product]) → "East-TV"
CONCATENATE	Joins two text strings into one text string.	CONCATENATE("Hello ", "World") → "Hello World"
CONCATENATEX	Concatenates the result of an expression evaluated for each row in a table.	CONCATENATEX(VALUES(Sales[Product]), Sales[Product], ", ") → "TV, Laptop, Mobile"
EXACT	Compares two text strings and returns TRUE if they are exactly the same.	EXACT("PowerBI", "powerbi") → FALSE
FIND	Returns the starting position of one text string within another.	FIND("BI", "PowerBI", 1, -1) → 6
FIXED	Rounds a number to the specified decimals and returns text.	FIXED(1234.567, 2) → "1,234.57"
FORMAT	Converts a value to text in the specified format.	FORMAT(TODAY(), "DD-MMM-YYYY") → "17-Aug-2025"
LEFT	Returns characters from the start of a string.	LEFT("PowerBI", 5) → "Power"
LEN	Returns the number of characters in a text string.	LEN("Power BI") → 8
LOWER	Converts text to lowercase.	LOWER("POWER BI") → "power bi"
MID	Returns characters from the middle of a string.	MID("PowerBI", 2, 3) → "owe"
REPLACE	Replaces part of a string with another string.	REPLACE("PowerBI", 1, 5, "Excel") → "ExcelBI"
REPT	Repeats text a given number of times.	REPT("BI ", 3) → "BI BI BI "
RIGHT	Returns characters from the end of a string.	RIGHT("PowerBI", 2) → "BI"
SEARCH	Returns the position of a substring, case-insensitive.	SEARCH("bi", "PowerBI", 1, -1) → 6
SUBSTITUTE	Replaces existing text with new text.	SUBSTITUTE("Power-BI", "-", " ") → "Power BI"
TRIM	Removes all extra spaces from text.	TRIM(" Power BI ") → "Power BI"
UNICHAR	Returns a Unicode character from its numeric value.	UNICHAR(9733) → "★"
UNICODE	Returns the numeric Unicode of the first character.	UNICODE("★") → 9733

Microsoft Power BI:DAX functions

UPPER	Converts text to uppercase.	UPPER("power bi") → "POWER BI"
VALUE	Converts a text string to a number.	VALUE("123.45") → 123.45

Microsoft Power BI:DAX functions

- Time intelligence functions

Function	Description	Example DAX Formula
CLOSINGBALANCEMONTH	Evaluates expression at the last date of the month.	CLOSINGBALANCEMONTH(SUM(Sales[Amount]), 'Date'[Date])
CLOSINGBALANCEQUARTER	Evaluates expression at the last date of the quarter.	CLOSINGBALANCEQUARTER(SUM(Sales[Amount]), 'Date'[Date])
CLOSINGBALANCEYEAR	Evaluates expression at the last date of the year.	CLOSINGBALANCEYEAR(SUM(Sales[Amount]), 'Date'[Date])
DATEADD	Shifts dates forward/backward by specified intervals.	CALCULATE(SUM(Sales[Amount]), DATEADD('Date'[Date], -1, MONTH))
DATESBETWEEN	Returns dates between a start and end date.	CALCULATE(SUM(Sales[Amount]), DATESBETWEEN('Date'[Date], DATE(2024,1,1), DATE(2024,12,31)))
DATESINPERIOD	Returns dates starting at a date for a given interval.	CALCULATE(SUM(Sales[Amount]), DATESINPERIOD('Date'[Date], MAX('Date'[Date]), -3, MONTH))
DATESMTD	Returns month-to-date dates.	CALCULATE(SUM(Sales[Amount]), DATESMTD('Date'[Date]))
DATESQTD	Returns quarter-to-date dates.	CALCULATE(SUM(Sales[Amount]), DATESQTD('Date'[Date]))
DATESYTD	Returns year-to-date dates.	CALCULATE(SUM(Sales[Amount]), DATESYTD('Date'[Date]))
ENDOFMONTH	Returns last date of month in context.	ENDOFMONTH('Date'[Date])
ENDOFQUARTER	Returns last date of quarter in context.	ENDOFQUARTER('Date'[Date])
ENDOFYEAR	Returns last date of year in context.	ENDOFYEAR('Date'[Date])
FIRSTDATE	Returns first date in context.	FIRSTDATE('Date'[Date])
LASTDATE	Returns last date in context.	LASTDATE('Date'[Date])
NEXTDAY	Returns next day from current context.	CALCULATE(SUM(Sales[Amount]), NEXTDAY('Date'[Date]))
NEXTMONTH	Returns all dates in next month.	CALCULATE(SUM(Sales[Amount]), NEXTMONTH('Date'[Date]))
NEXTQUARTER	Returns all dates in next quarter.	CALCULATE(SUM(Sales[Amount]), NEXTQUARTER('Date'[Date]))
NEXTYEAR	Returns all dates in next year.	CALCULATE(SUM(Sales[Amount]), NEXTYEAR('Date'[Date]))
OPENINGBALANCEMONTH	Evaluates expression at first date of month.	OPENINGBALANCEMONTH(SUM(Sales[Amount]), 'Date'[Date])

Microsoft Power BI:DAX functions

OPENINGBALANCEQUARTER	Evaluates expression at first date of quarter.	OPENINGBALANCEQUARTER(SUM(Sales[Amount]), 'Date'[Date])
OPENINGBALANCEYEAR	Evaluates expression at first date of year.	OPENINGBALANCEYEAR(SUM(Sales[Amount]), 'Date'[Date])
PARALLELPERIOD	Returns parallel period shifted by intervals.	CALCULATE(SUM(Sales[Amount]), PARALLELPERIOD('Date'[Date], -1, YEAR))
PREVIOUSDAY	Returns previous day.	CALCULATE(SUM(Sales[Amount]), PREVIOUSDAY('Date'[Date]))
PREVIOUSMONTH	Returns all dates in previous month.	CALCULATE(SUM(Sales[Amount]), PREVIOUSMONTH('Date'[Date]))
PREVIOUSQUARTER	Returns all dates in previous quarter.	CALCULATE(SUM(Sales[Amount]), PREVIOUSQUARTER('Date'[Date]))
PREVIOUSYEAR	Returns all dates in previous year.	CALCULATE(SUM(Sales[Amount]), PREVIOUSYEAR('Date'[Date]))
SAMEPERIODLASTYEAR	Returns same period one year back.	CALCULATE(SUM(Sales[Amount]), SAMEPERIODLASTYEAR('Date'[Date]))
STARTOFMONTH	Returns first date of month.	STARTOFMONTH('Date'[Date])
STARTOFQUARTER	Returns first date of quarter.	STARTOFQUARTER('Date'[Date])
STARTOFYEAR	Returns first date of year.	STARTOFYEAR('Date'[Date])
TOTALMTD	Returns month-to-date calculation.	TOTALMTD(SUM(Sales[Amount]), 'Date'[Date])
TOTALQTD	Returns quarter-to-date calculation.	TOTALQTD(SUM(Sales[Amount]), 'Date'[Date])
TOTALYTD	Returns year-to-date calculation.	TOTALYTD(SUM(Sales[Amount]), 'Date'[Date])