Power BI - DAX Date Functions

DAX date functions are built-in functions that help you work with date and time values. These functions allow you to create new columns, calculate differences between dates, extract parts of a date like day, month or year and handle time-based calculations in your reports.

To understand these functions, we'll use a sample dataset containing 50 products sold by a library supply company. The dataset includes a Date column that we'll use to demonstrate each function.

To download click: Sheet1

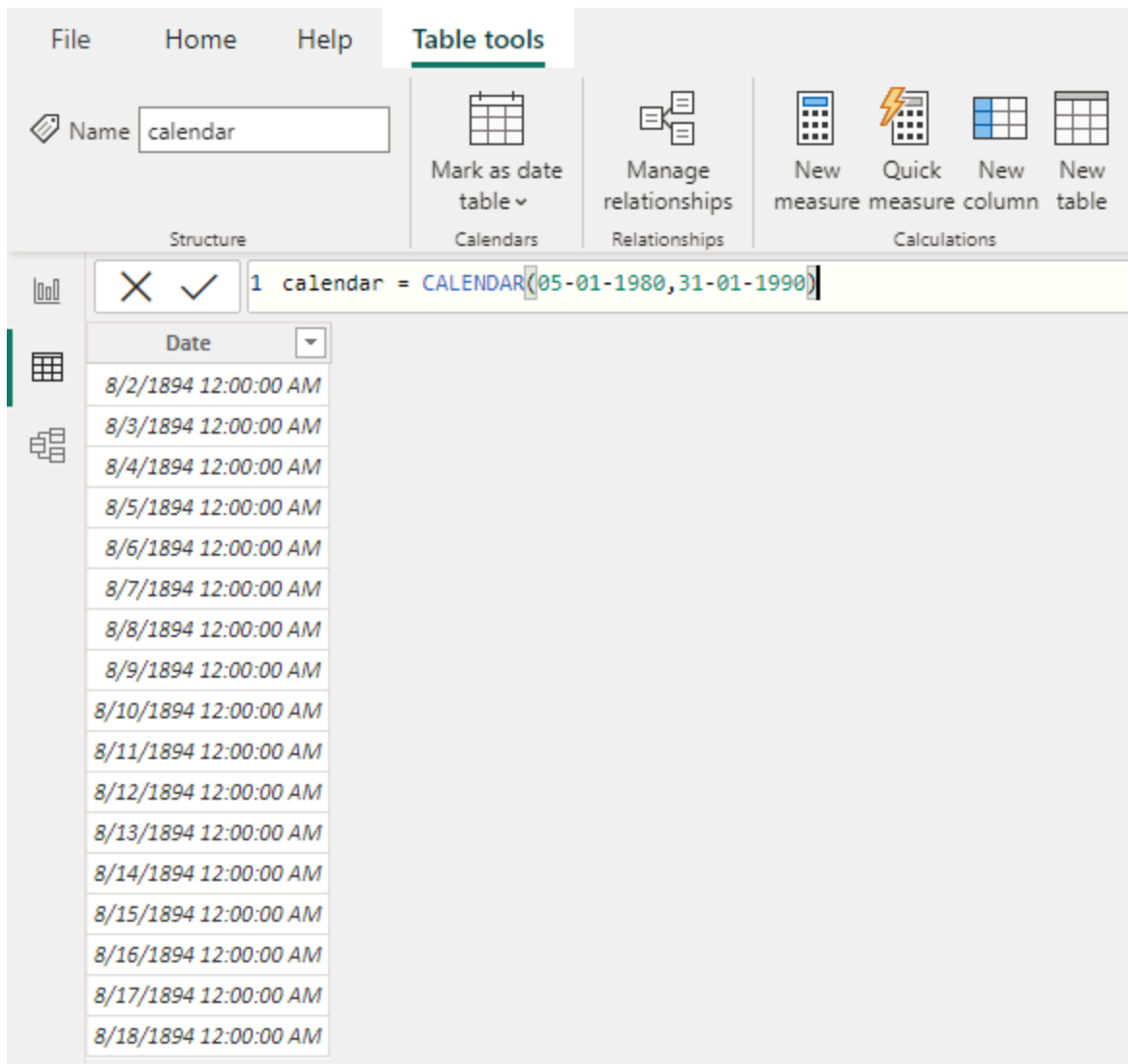| Image		Order No.		Order Date (dd-mm-yyyy)	
1		521		19-01-1997	
2		521		19-01-1997	
3		521		19-01-1997	
4		521		19-01-1997	
5		-		19-01-1992	
6		-		19-01-1999	
7		-		19-01-1997	
8		RDG/Fur/057		19-01-1999	
9		-		16-10-2007	
10		-		19-01-1992	
11		-		19-01-1991	
12		-		18-11-2013	
13		-		18-11-2013	
14		-		18-11-2013	
15		4301/HC-Store-Lab		25-02-1989	
16		4301/HC-Store-Lab		25-02-1989	
17		4301/HC-Store-Lab		25-02-1989	
18		H.C/Pur./Order/417010		11/1/1989	
19		H.C/Pur./Order/417010		11.01.1989	
20		H.C/Pur./Order/417010		11.01.1989	
21		H.C/Pur./Order/417010		11.01.1989	
22		H.C/Pur./Order/417010		11.01.1989	
23		H.C/Pur./Order/417010		11.01.1989	

Table: Sheet1 (50 rows)

1. Functions for Generating Dates

DAX Calendar

The CALENDAR Function generates a continuous range of dates between a specified start date and end date. This is helpful when you want to create a date table for time-based analysis.

Syntax:
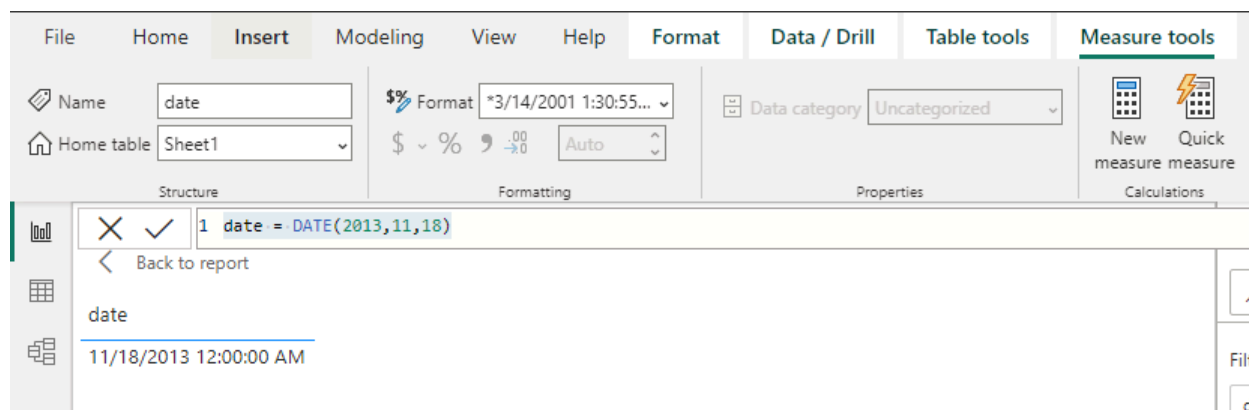
CALENDAR(<start_date>, <end_date>)

calender Function

DAX Date

The DATE Function returns a date based on the year, month and day you specify. It's useful for creating a date from individual year, month and day values.

Syntax:
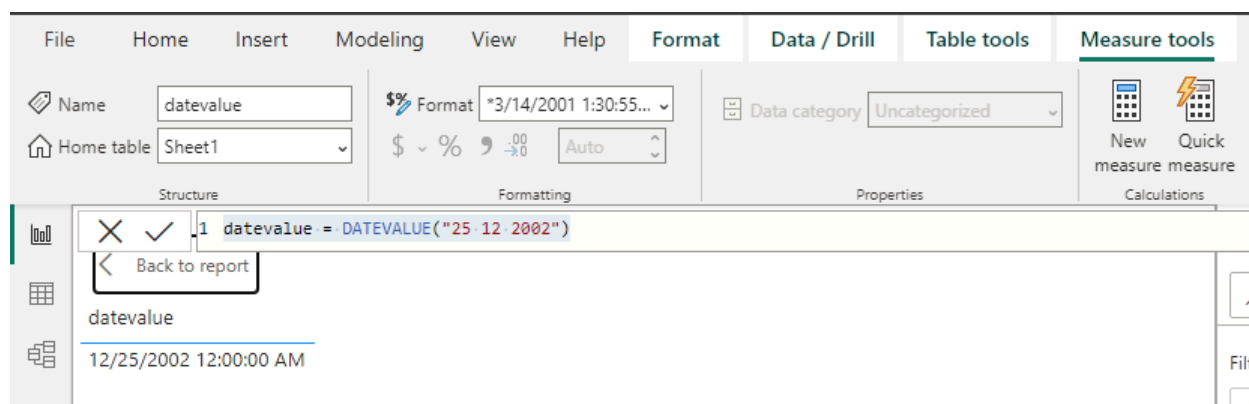
DATE(<year>, <month>, <day>)

Date function

2. Functions for Date Manipulation

DAX Datevalue Function

The DATEVALUE Function converts a date in text format into a date value and allow Power BI to work with dates in text form.
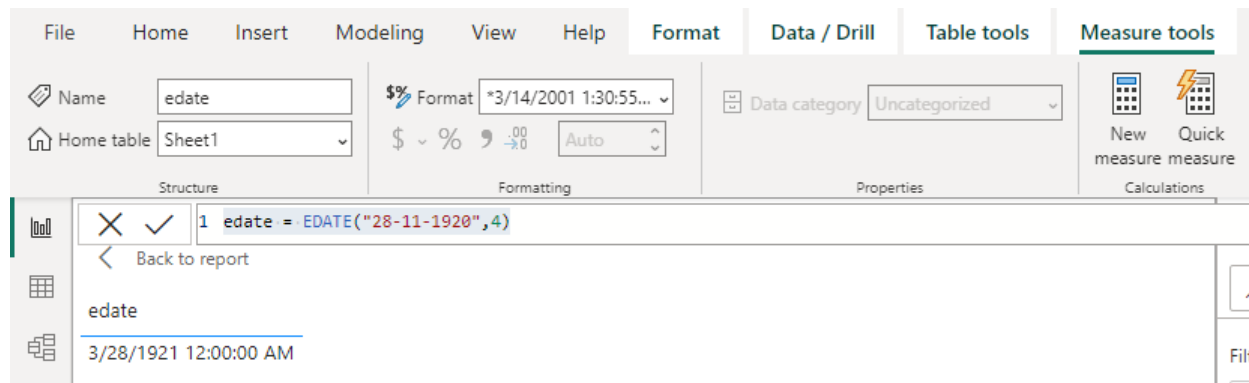
Syntax:

DATEVALUE(date_text)

Datevalue Function

DAX Edate

The EDATE Function returns a date that is a specific number of months before or after a given start date. It's useful for calculating future or past dates such as due dates.

Syntax:
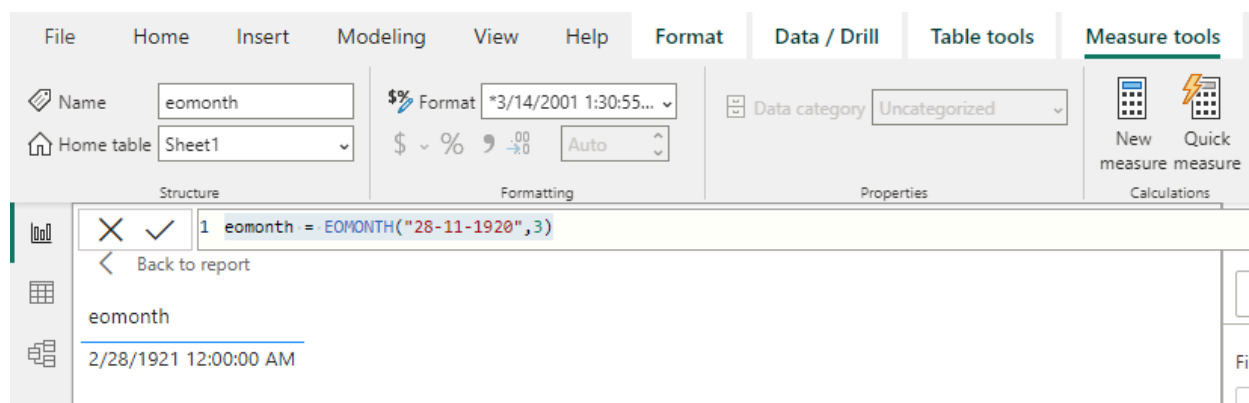
EDATE(<start_date>, <months>)

edate function

DAX Eomonth

The EOMONTH Function returns the last day of the month before or after a specified number of months. It's useful for calculating end-of-month dates.

Syntax:

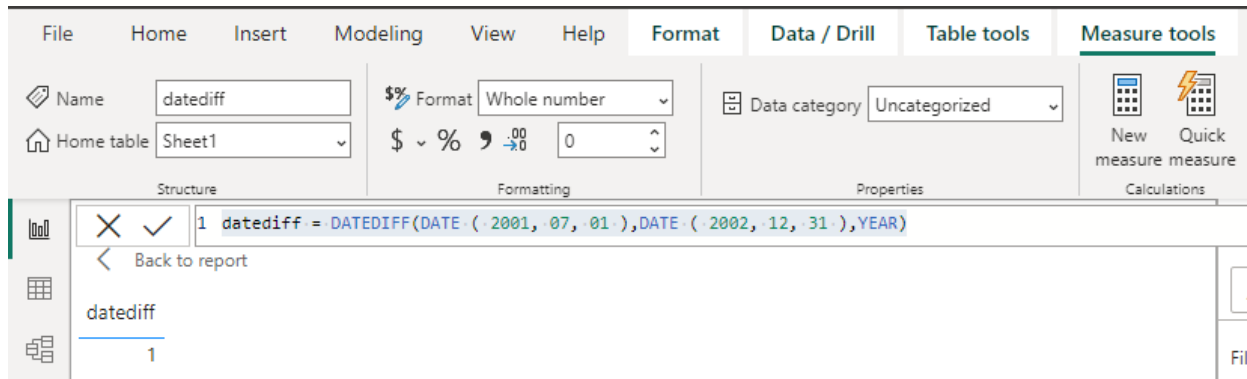*EOMONTH(<start_date>, <months>)*

eomonth function

3. Functions for Date Calculations

DAX Datediff Function

The DATEDIFF Function calculates the difference between two dates in a specified time unit like days, months, years.

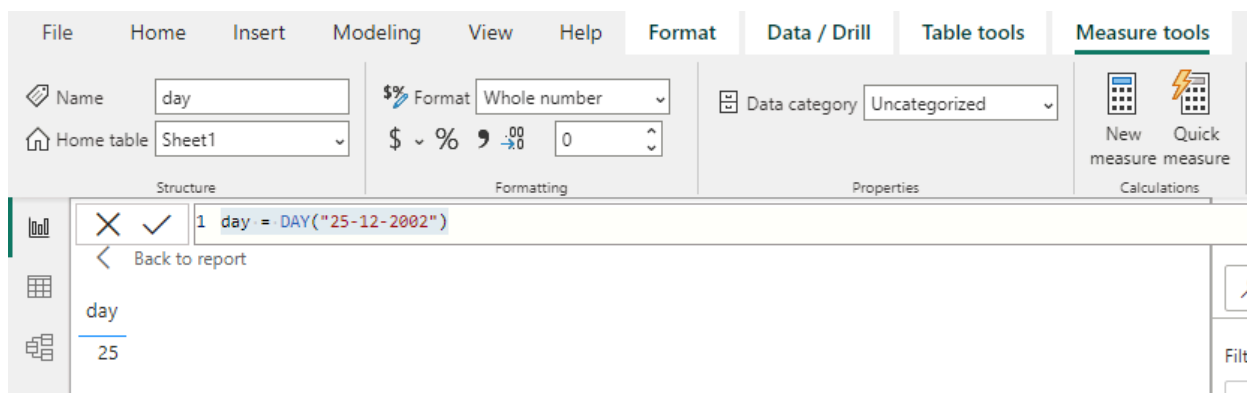**Syntax:**

DATEDIFF(<Date1>, <Date2>, <Interval>)

Datediff Function

DAX Day Function

The DAY function extracts the day of the month from a given date. It returns a number between 1 and 31.
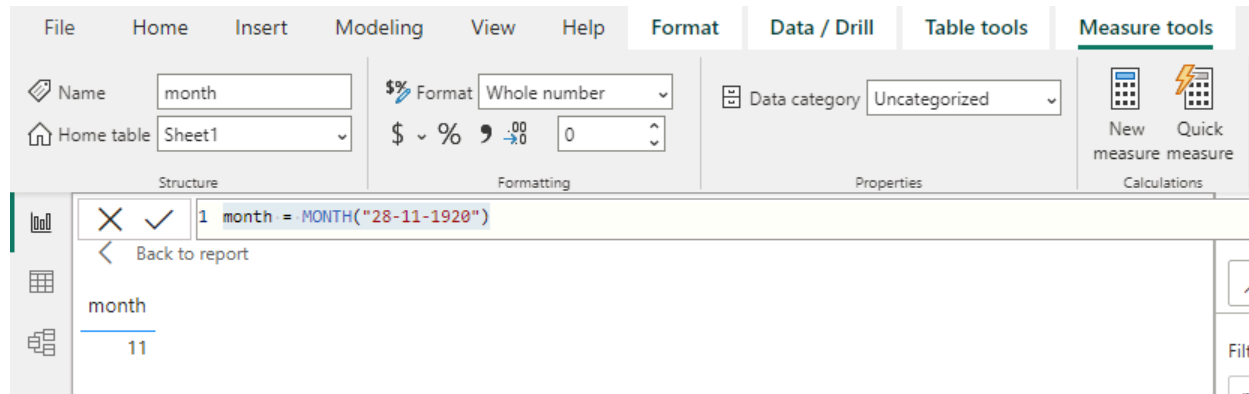
Syntax:

DAY(<date>)

Day Function

DAX Month Function

The MONTH Function extracts the month from a given date and return a number between 1 (January) and 12 (December).
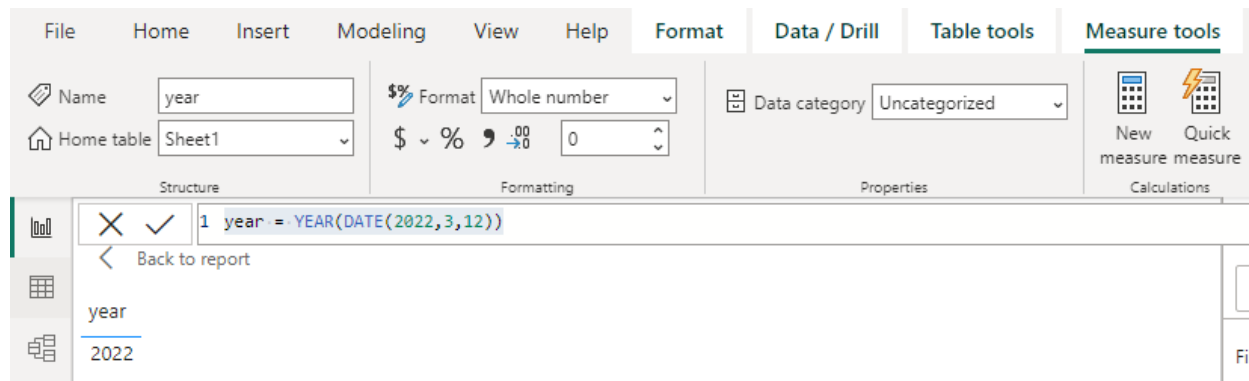
Syntax:

MONTH(<datetime>)

Month Function

DAX Year Function

The YEAR Function extracts the year from a given date and return a 4-digit integer between 1900 and 9999.

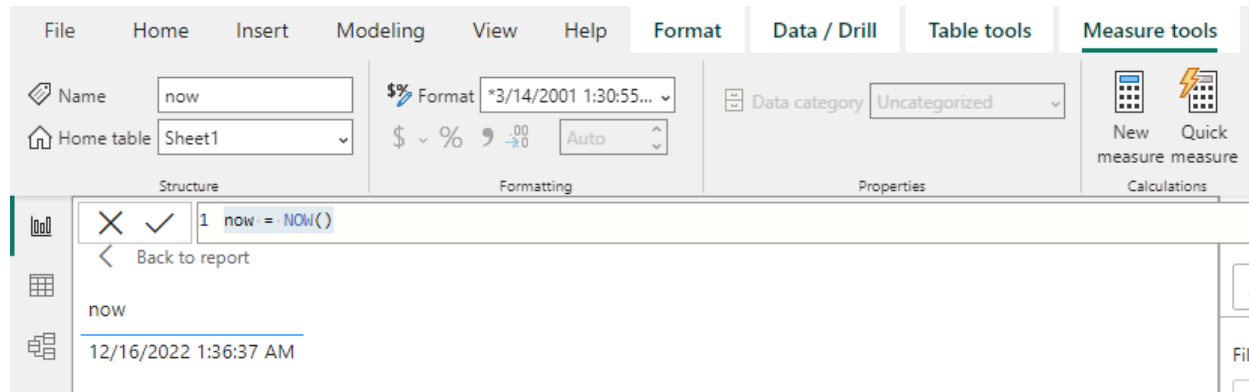**Syntax:**

YEAR(<date>)

Year Function

4. Functions for Working with Time

DAX Now Function

Returns the current date and time. It's used for calculating real-time information or dynamically update time-sensitive reports.
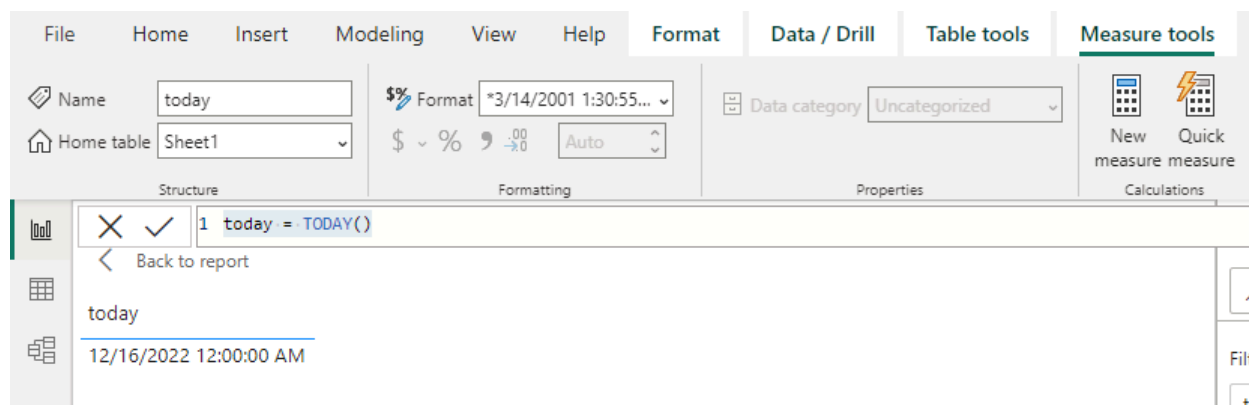
Syntax:

NOW()

Now Function

DAX Today Function

The TODAY Function gives the current date and updates automatically every time the workbook is opened. It can also be used to calculate intervals by subtracting dates.

Syntax:

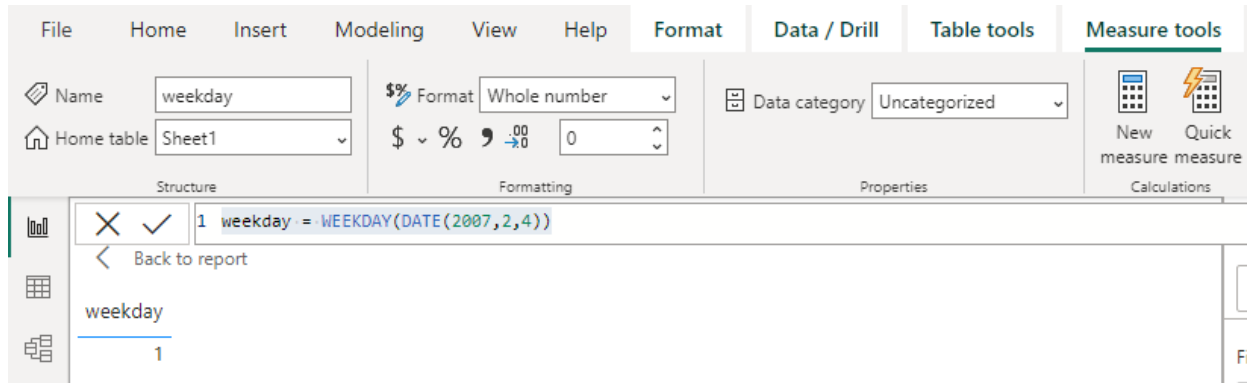*TODAY()*

Today function

5. Functions for Working with Weeks

DAX Weekday Function

The WEEKDAY Function returns a number between 1 and 7 that represents the day of the week. By default 1 is Sunday and 7 is Saturday.

Syntax:

WEEKDAY(<date>, <return_type>)
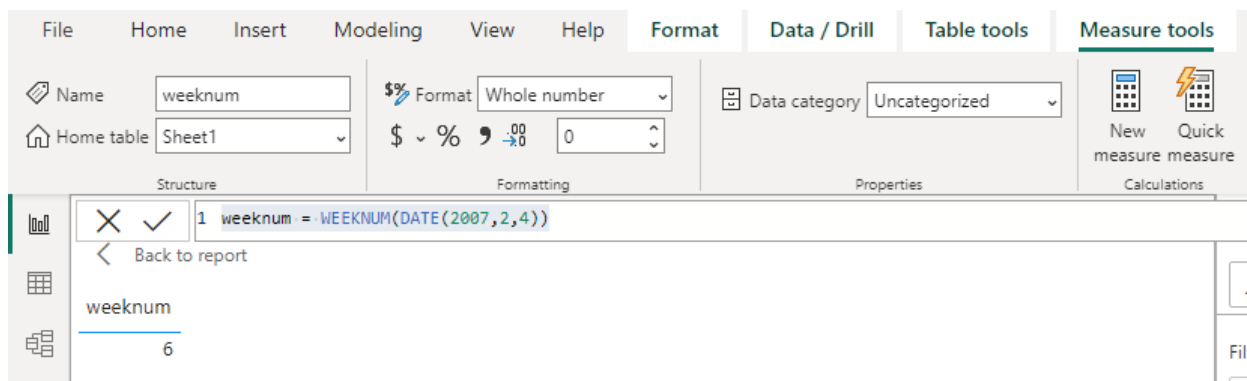

Weekday Function

DAX Weeknum Function

DAX WEEKNUM returns the week number for a given date based on two systems:

1. **System 1**: Week 1 is the first week of the year starting on January 1.
2. **System 2**: Week 1 is the week containing the first Thursday of the year based on the ISO 8601 standard (European week numbering).

You can choose which system to use by specifying a return type value.

Syntax:

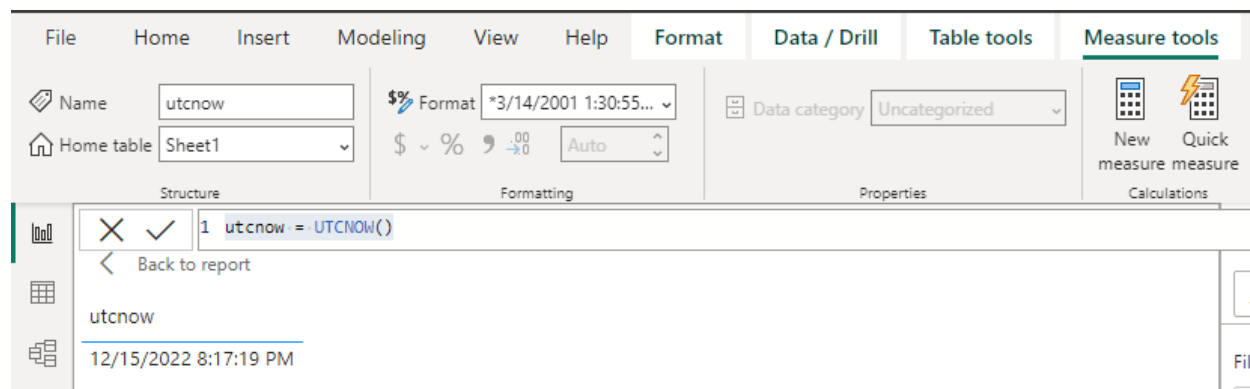*WEEKNUM(<date>[, <return_type>])*

Weeknum Function

6. Functions for Handling Time Zones

DAX Utcnow Function

Gives the current date and time in UTC. The Utcnow Function output only varies when the formula is updated. It isn't always being updated.
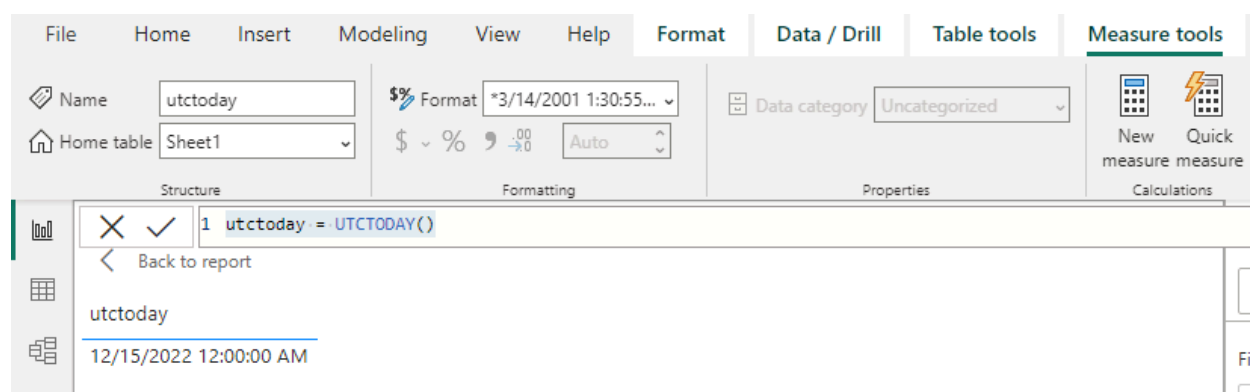
Syntax:

UTCNOW()

Utcnow Function

DAX UtcToday Function

Gives the current date in UTC.

Syntax:

UTCTODAY()

utc Today Function