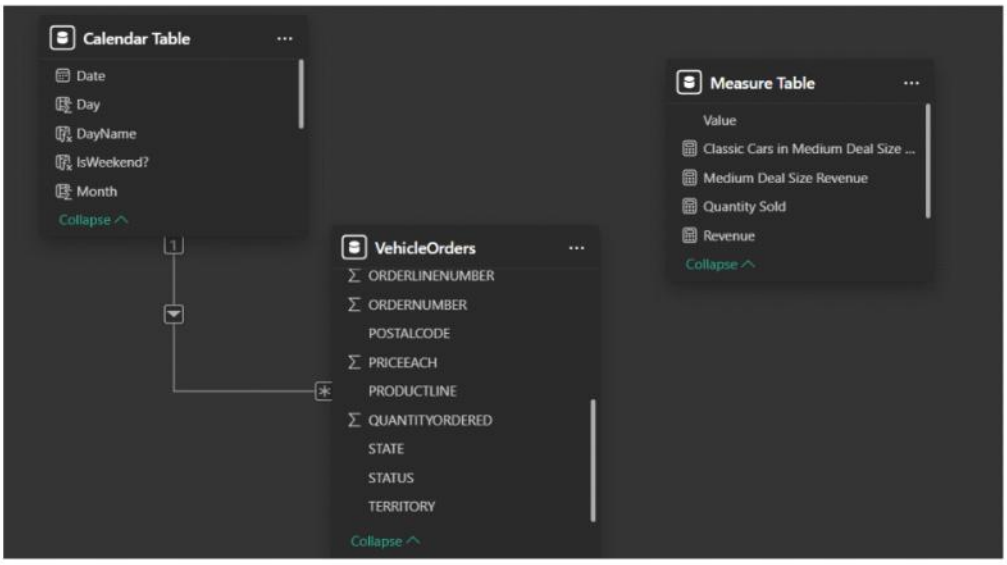
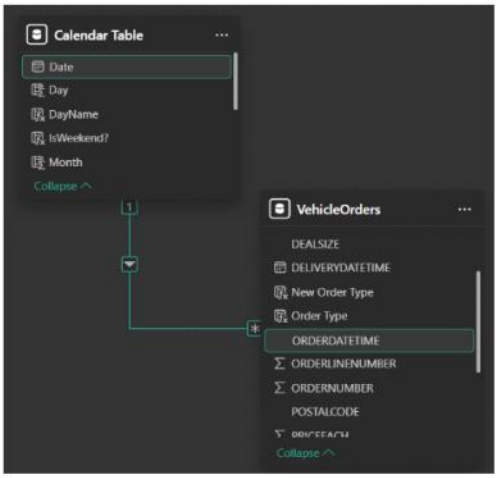
Advanced DAX Functions - P2

```
1 Calendar Table =
2 CALENDAR(
3     "01/01/2012",
4     TODAY())
```

Date	Year	Month	Day	MonthName	ShortMonthName	DayName	Weekday	ShortDayName	IsWeekend?
01-01-2012	2012	1	1	January	Jan	Sunday	7	Sun	Weekend
02-01-2012	2012	1	2	January	Jan	Monday	1	Mon	Weekday
03-01-2012	2012	1	3	January	Jan	Tuesday	2	Tue	Weekday
04-01-2012	2012	1	4	January	Jan	Wednesday	3	Wed	Weekday
05-01-2012	2012	1	5	January	Jan	Thursday	4	Thu	Weekday
06-01-2012	2012	1	6	January	Jan	Friday	5	Fri	Weekday
07-01-2012	2012	1	7	January	Jan	Saturday	6	Sat	Weekend
08-01-2012	2012	1	8	January	Jan	Sunday	7	Sun	Weekend
09-01-2012	2012	1	9	January	Jan	Monday	1	Mon	Weekday
10-01-2012	2012	1	10	January	Jan	Tuesday	2	Tue	Weekday
11-01-2012	2012	1	11	January	Jan	Wednesday	3	Wed	Weekday
12-01-2012	2012	1	12	January	Jan	Thursday	4	Thu	Weekday
13-01-2012	2012	1	13	January	Jan	Friday	5	Fri	Weekday
14-01-2012	2012	1	14	January	Jan	Saturday	6	Sat	Weekend
15-01-2012	2012	1	15	January	Jan	Sunday	7	Sun	Weekend
16-01-2012	2012	1	16	January	Jan	Monday	1	Mon	Weekday
17-01-2012	2012	1	17	January	Jan	Tuesday	2	Tue	Weekday
18-01-2012	2012	1	18	January	Jan	Wednesday	3	Wed	Weekday
19-01-2012	2012	1	19	January	Jan	Thursday	4	Thu	Weekday
20-01-2012	2012	1	20	January	Jan	Friday	5	Fri	Weekday
21-01-2012	2012	1	21	January	Jan	Saturday	6	Sat	Weekend
22-01-2012	2012	1	22	January	Jan	Sunday	7	Sun	Weekend





DateDiff(),
DateAdd()

We must deliver the products within 48 hours ~ 2 days of time.

ORDERDATETIME	DELIVERYDATETIME
19-05-2014 23:07:00	21-05-2014 11:19:59
25-11-2014 01:04:00	25-11-2014 07:56:06
13-10-2014 00:33:00	14-10-2014 15:46:41
14-08-2016 23:02:00	16-08-2016 17:27:35
28-08-2014 00:16:00	29-08-2014 15:53:17
17-06-2012 23:51:00	20-06-2012 23:46:07
15-05-2014 23:47:00	16-05-2014 09:08:01
26-09-2013 23:42:00	27-09-2013 02:26:05
12-03-2014 00:54:00	13-03-2014 17:57:38
07-05-2014 01:19:00	09-05-2014 18:31:03
09-05-2016 00:47:00	09-05-2016 02:47:22
02-06-2012 23:47:00	05-06-2012 04:30:35
13-09-2013 23:41:00	15-09-2013 22:52:02
24-05-2013 00:33:00	26-05-2013 02:35:03
28-03-2013 01:26:00	28-03-2013 14:00:36
12-09-2012 01:12:00	15-09-2012 00:02:15
04-11-2013 00:58:00	04-11-2013 17:34:58
13-09-2013 00:39:00	14-09-2013 10:38:05
21-10-2013 00:56:00	23-10-2013 16:51:09
12-09-2016 22:55:00	15-09-2016 06:48:36
02-11-2013 01:26:00	03-11-2013 08:46:12
04-04-2015 01:09:00	07-04-2015 00:55:32
25-07-2016 23:27:00	27-07-2016 07:12:44
06-10-2012 00:36:00	06-10-2012 19:04:53
17-03-2012 00:42:00	19-03-2012 08:16:40
14-08-2015 23:10:00	17-08-2015 17:15:38

+2 - DateMath

Target Delivery Date

Calculated Columns

```
1 Target Delivery Date = VehicleOrders[ORDERDATETIME] + 2
```

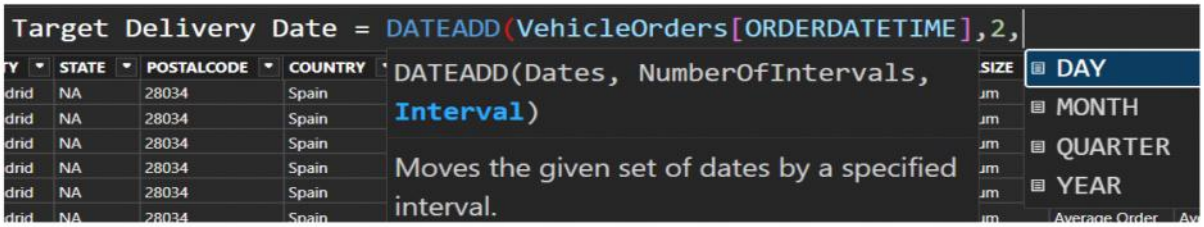
CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	Order Type	New Order Type	Target Delivery Date
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Regular Order	Regular Order	21-05-2014 23:07:00
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Regular Order	Regular Order	27-11-2014 01:04:00
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	15-10-2014 00:33:00
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	16-08-2016 23:02:00

```
Target Delivery Date = DATEADD(VehicleOrders[ORDERDATETIME],
```

Y	STATE	POSTALCODE	COUNTRY
drid	NA	28034	Spain
drid	NA	28034	Spain
drid	NA	28034	Spain
drid	NA	28034	Spain
drid	NA	28034	Spain
drid	NA	28034	Spain

DATEADD(Dates, NumberOfIntervals, Interval)

Moves the given set of dates by a specified interval.



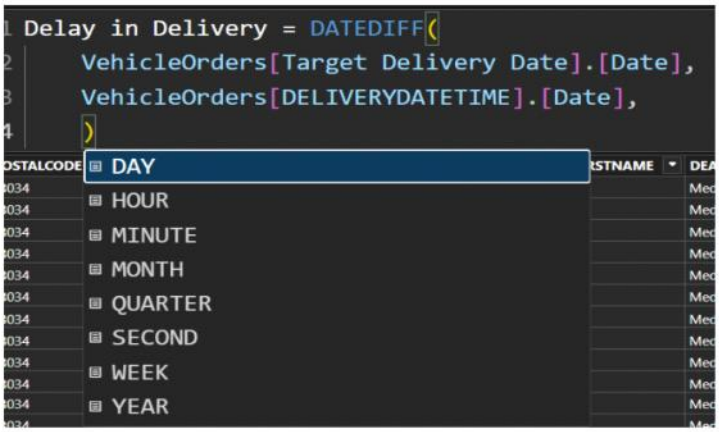
CITY	STATE	POSTALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	Order Type	New Order Type	Target Delivery Date
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Regular Order	Regular Order	21-05-2014
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Regular Order	Regular Order	27-11-2014
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	15-10-2014
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	16-08-2016
Madrid	NA	28034	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	30-08-2014

Target Delivery Date
21-05-2014
27-11-2014
15-10-2014
16-08-2016
30-08-2014
19-06-2012
17-05-2014
28-09-2013
14-03-2014
09-05-2014
11-05-2016
04-06-2012
15-09-2013
26-05-2013
30-03-2013

ORDERDATETIME	DELIVERYDATETIME
19-05-2014 23:07:00	21-05-2014 11:19:59
25-11-2014 01:04:00	25-11-2014 07:56:06
13-10-2014 00:33:00	14-10-2014 15:46:41
14-08-2016 23:02:00	16-08-2016 17:27:35
28-08-2014 00:16:00	29-08-2014 15:53:17
17-06-2012 23:51:00	20-06-2012 23:46:07
15-05-2014 23:47:00	16-05-2014 09:08:01
26-09-2013 23:42:00	27-09-2013 02:26:05
12-03-2014 00:54:00	13-03-2014 17:57:38
07-05-2014 01:19:00	09-05-2014 18:31:03
09-05-2016 00:47:00	09-05-2016 02:47:22
02-06-2012 23:47:00	05-06-2012 04:30:35
13-09-2013 23:41:00	15-09-2013 22:52:02
24-05-2013 00:33:00	26-05-2013 02:35:03
28-03-2013 01:26:00	28-03-2013 14:00:36
12-09-2012 01:12:00	15-09-2012 00:02:15

Delay in Delivery

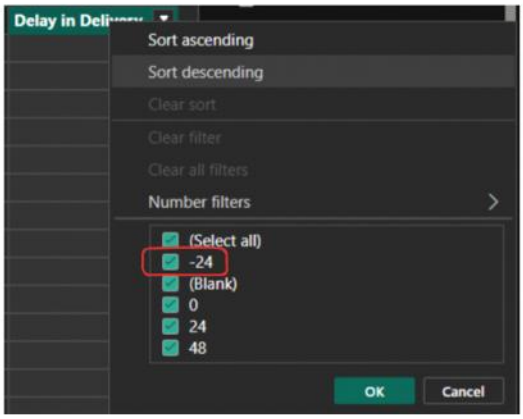
Date2 - Date1 => Delivery Date Time - Target Delivery Date



0 - 2 days
24 - 1 day
48 - same day delivery
-24 - 1 day delay
-48 - 2 days delay

```
Delay in Delivery = DATEDIFF(
    VehicleOrders[DELIVERYDATETIME].[Date],
    VehicleOrders[Target Delivery Date].[Date],
    HOUR)
```

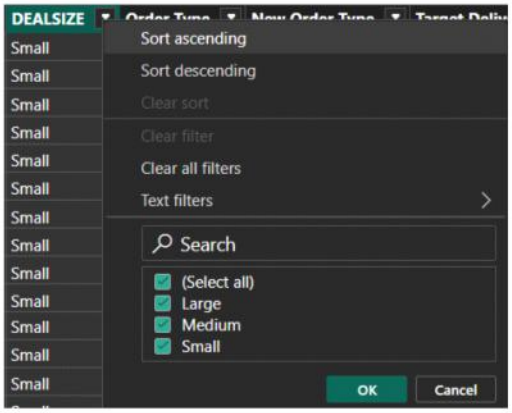
TALCODE	COUNTRY	TERRITORY	CONTACTLASTNAME	CONTACTFIRSTNAME	DEALSIZE	Order Type	New Order Type	Target Delivery Date	Delay in Delivery
4	Spain	EMEA	Freyre	Diego	Medium	Regular Order	Regular Order	21-05-2014	0
4	Spain	EMEA	Freyre	Diego	Medium	Regular Order	Regular Order	27-11-2014	48
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	15-10-2014	24
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	16-08-2016	0
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	30-08-2014	24
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	19-06-2012	-24
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	17-05-2014	24
4	Spain	EMEA	Freyre	Diego	Medium	Bulk Order	Bulk Order	28-09-2013	24
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	14-03-2014	24
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	09-05-2014	0
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	11-05-2016	48
4	Spain	EMEA	Freyre	Diego	Medium	Average Order	Average Order	04-06-2012	-24

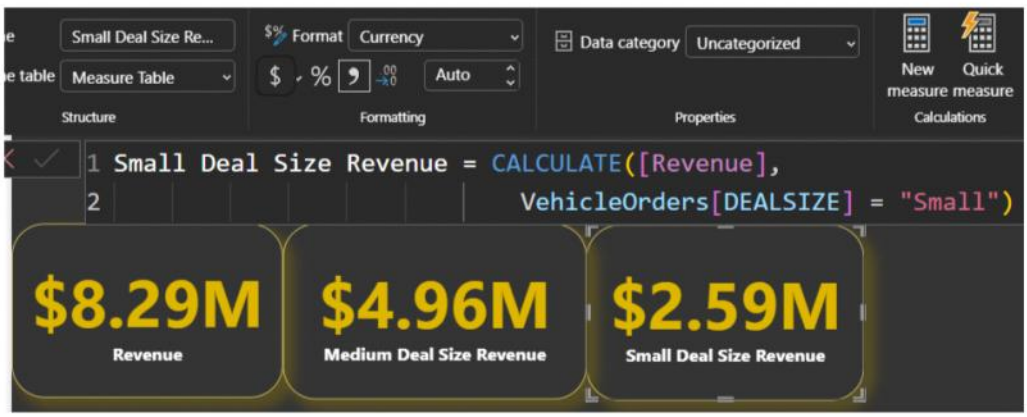


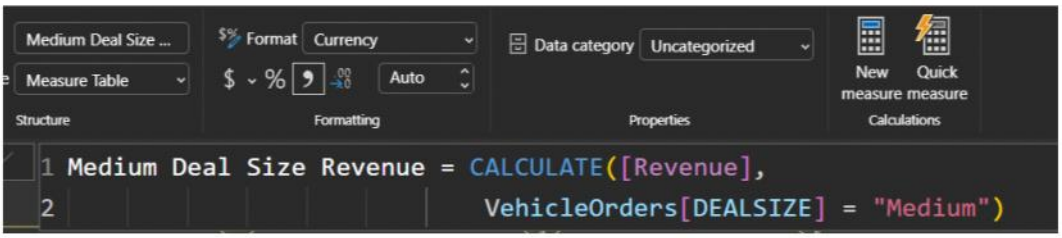
10-15% is delay in delivery.
We have to reduce this percentage.

Calculate → Explicit Measure

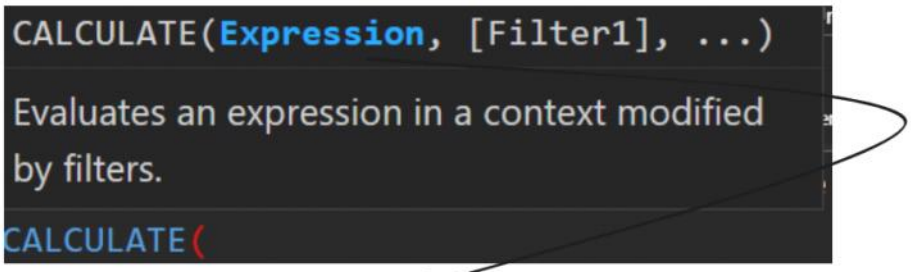
Helps to write complex calculation easily.



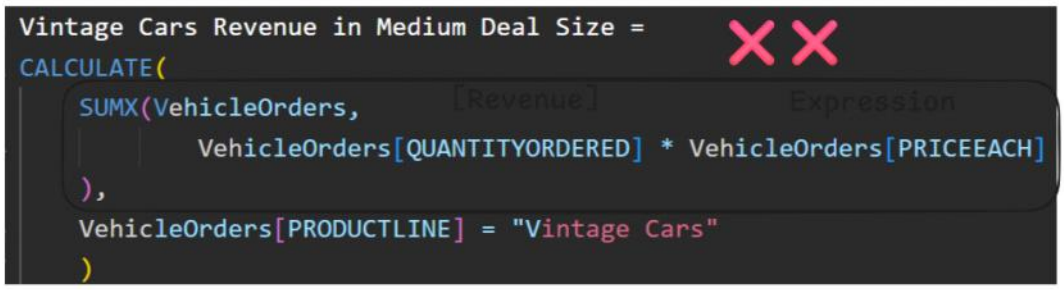


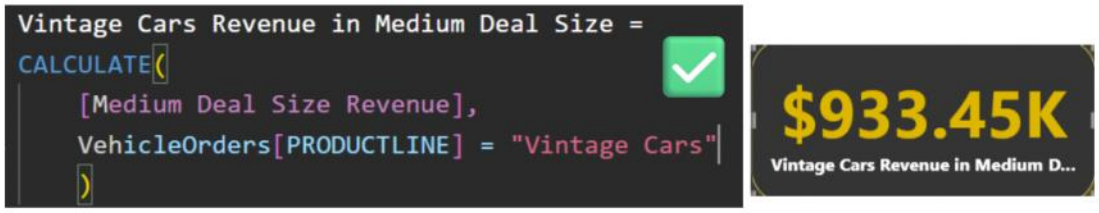

Medium Deal Size ...
Format
Currency
Data category
Uncategorized
Measure Table
Auto
New measure
Quick measure
Structure
Formatting
Properties
Calculations
1 Medium Deal Size Revenue = CALCULATE([Revenue],
2 VehicleOrders[DEALSIZE] = "Medium")

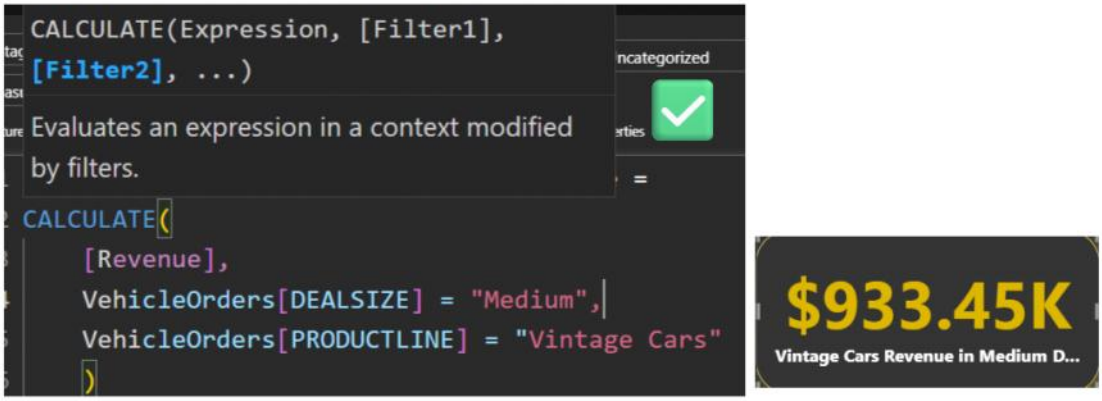

1 Large Deal Size Revenue = CALCULATE(
2 [Revenue],
3 VehicleOrders[DEALSIZE] = "Large")
$8.29M
Revenue
$4.96M
Medium Deal Size Revenue
$2.59M
Small Deal Size Revenue
$738.76K
Large Deal Size Revenue


CALCULATE(Expression, [Filter1], ...)
Evaluates an expression in a context modified by filters.
CALCULATE(


Revenue = SUMX(VehicleOrders,
VehicleOrders[QUANTITYORDERED] * VehicleOrders[PRICEEACH]
)

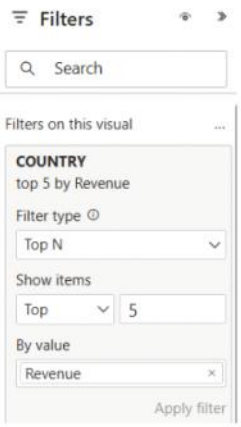

Vintage Cars Revenue in Medium Deal Size =
CALCULATE(
SUMX(VehicleOrders,
VehicleOrders[QUANTITYORDERED] * VehicleOrders[PRICEEACH]
),
VehicleOrders[PRODUCTLINE] = "Vintage Cars"
)


Vintage Cars Revenue in Medium Deal Size =
CALCULATE(
[Medium Deal Size Revenue],
VehicleOrders[PRODUCTLINE] = "Vintage Cars"
)
$933.45K
Vintage Cars Revenue in Medium D...

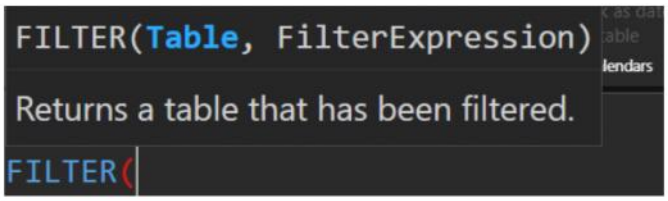

CALCULATE(Expression, [Filter1], [Filter2], ...)
Evaluates an expression in a context modified by filters.
CALCULATE(
[Revenue],
VehicleOrders[DEALSIZE] = "Medium",
VehicleOrders[PRODUCTLINE] = "Vintage Cars"
)
$933.45K
Vintage Cars Revenue in Medium D...

PRODUCTLINE	Large	Medium	Small	Total
Classic Cars	$4,49,530.16	$18,45,151.86	$6,73,864.38	**$29,68,546.40**
Vintage Cars	$1,11,200.00	$9,33,451.81	$5,99,560.24	**$16,44,212.05**
Motorcycles	$91,600.00	$5,58,912.72	$3,20,573.57	**$9,71,086.29**
Trucks and Buses	$35,800.00	$6,65,276.49	$2,46,278.69	**$9,47,355.18**
Planes	$46,127.75	$4,72,345.20	$3,59,469.26	**$8,77,942.21**
Ships		$3,90,938.24	$2,87,002.16	**$6,77,940.40**
Trains	$4,500.00	$95,660.36	$1,03,643.90	**$2,03,804.26**
Total	**$7,38,757.91**	**$49,61,736.68**	**$25,90,392.20**	**$82,90,886.79**

COUNTRY	Classic Cars	Motorcycles	Planes	Ships	Trains	Trucks and Buses	Vintage Cars
USA	$10,15,261.93	$4,27,488.21	$2,89,594.72	$2,01,835.45	$66,526.22	$3,40,668.64	$6,45,050.04
Spain	$3,69,361.76	$63,854.10	$86,968.96	$1,17,377.08	$37,924.72	$1,49,413.65	$1,96,805.70
France	$3,02,423.44	$1,92,884.31	$93,930.48	$63,330.39	$19,817.56	$97,510.64	$1,49,361.03
Australia	$1,53,580.51	$73,725.57	$69,687.19	$4,159.76	$1,681.35	$60,827.02	$1,57,937.06
UK	$1,27,062.04	$32,055.91	$36,575.92	$69,555.38	$12,635.54	$25,280.40	$1,10,038.15
Total	**$19,67,689.68**	**$7,90,008.10**	**$5,76,757.27**	**$4,56,258.06**	**$1,38,585.39**	**$6,73,700.35**	**$12,59,191.98**

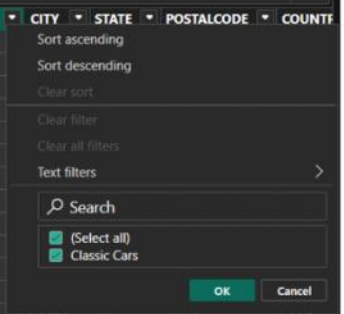


Filter




```
Classic Car Dataset =
FILTER(
    VehicleOrders,
    VehicleOrders[PRODUCTLINE] = "Classic Cars")
```

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	ORDERDATETIME	DELIVERYDATETIME	STATUS	PRODUCTLINE	CITY	STATE	POSTALCODE	COUNTR
10104	34	₹ 100	1	13-10-2014 00:33:00	14-10-2014 15:46:41	Shipped	Classic Cars				
10153	42	₹ 100	12	14-08-2016 23:02:00	16-08-2016 17:27:35	Shipped	Classic Cars				
10212	39	₹ 100	16	28-08-2014 00:16:00	29-08-2014 15:53:17	Shipped	Classic Cars				
10203	47	₹ 100	5	12-03-2014 00:54:00	13-03-2014 17:57:38	Shipped	Classic Cars				
10212	33	₹ 100	15	07-05-2014 01:19:00	09-05-2014 18:31:03	Shipped	Classic Cars				
10212	29	₹ 100	10	09-05-2016 00:47:00	09-05-2016 02:47:22	Shipped	Classic Cars				
10212	38	₹ 100	6	24-05-2013 00:33:00	26-05-2013 02:35:03	Shipped	Classic Cars				
10212	41	₹ 100	9	12-09-2012 01:12:00	15-09-2012 00:02:15	Shipped	Classic Cars				
10246	40	₹ 100	4	13-09-2013 00:39:00	14-09-2013 10:38:05	Shipped	Classic Cars				
10412	41	₹ 100	4	21-10-2013 00:56:00	23-10-2013 16:51:09	Shipped	Classic Cars				
10212	40	₹ 100	7	06-10-2012 00:36:00	06-10-2012 19:04:53	Shipped	Classic Cars				
10311	43	₹ 100	10	17-03-2012 00:42:00	19-03-2012 08:16:40	Shipped	Classic Cars				
10379	29	₹ 100	5	14-08-2015 23:10:00	17-08-2015 17:15:38	Shipped	Classic Cars	Madrid	NA	28034	Spain
10212	40	₹ 100	11	15-08-2012 23:40:00	16-08-2012 13:55:01	Shipped	Classic Cars	Madrid	NA	28034	Spain
10383	47	₹ 100	6	07-04-2015 00:29:00	09-04-2015 05:43:57	Shipped	Classic Cars	Madrid	NA	28034	Spain
10203	32	₹ 100	10	03-04-2015 00:10:00	04-04-2015 12:16:26	Shipped	Classic Cars	Madrid	NA	28034	Spain
10212	45	₹ 100	8	23-07-2014 01:42:00	25-07-2014 04:39:30	Shipped	Classic Cars	Madrid	NA	28034	Spain
10311	32	₹ 100	11	23-11-2014 23:33:00	25-11-2014 03:08:55	Shipped	Classic Cars	Madrid	NA	28034	Spain
10104	38	₹ 100	3	14-09-2015 00:16:00	14-09-2015 19:45:10	Shipped	Classic Cars	Madrid	NA	28034	Spain
10383	38	₹ 100	1	03-10-2013 00:05:00	04-10-2013 11:32:58	Shipped	Classic Cars	Madrid	NA	28034	Spain
10394	37	₹ 100	1	01-11-2013 01:54:00	01-11-2013 23:33:09	Shipped	Classic Cars	Madrid	NA	28034	Spain



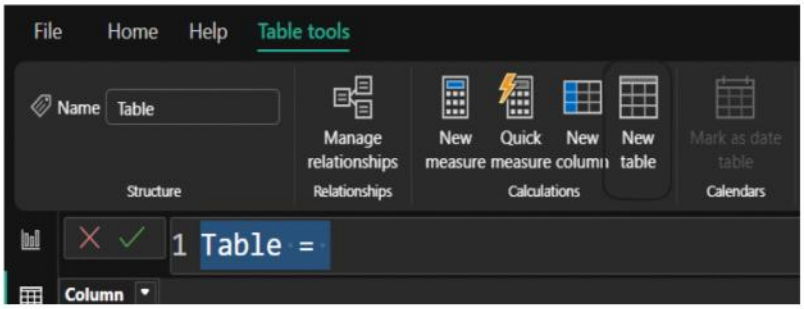
```
Classic/Vintage Cars Dataset =
FILTER(
    VehicleOrders,
    OR(VehicleOrders[PRODUCTLINE] = "Classic Cars",
    VehicleOrders[PRODUCTLINE] = "Vintage Cars"))
```

ORDERNUMBER	QUANTITYORDERED	PRICEEACH	ORDERLINENUMBER	ORDERDATETIME	DELIVERYDATETIME	STATUS	PRODUCTLINE	CITY	STATE	POSTALCODE	COUNTR
10104	34	₹ 100	1	13-10-2014 00:33:00	14-10-2014 15:46:41	Shipped	Classic Cars				
10153	42	₹ 100	12	14-08-2016 23:02:00	16-08-2016 17:27:35	Shipped	Classic Cars				
10212	39	₹ 100	16	28-08-2014 00:16:00	29-08-2014 15:53:17	Shipped	Classic Cars				
10203	47	₹ 100	5	12-03-2014 00:54:00	13-03-2014 17:57:38	Shipped	Classic Cars				
10212	33	₹ 100	15	07-05-2014 01:19:00	09-05-2014 18:31:03	Shipped	Classic Cars				
10212	29	₹ 100	10	09-05-2016 00:47:00	09-05-2016 02:47:22	Shipped	Classic Cars				
10205	36	₹ 100	2	02-06-2012 23:47:00	05-06-2012 04:30:35	Shipped	Vintage Cars				
10244	40	₹ 100	7	13-09-2013 23:41:00	15-09-2013 22:52:02	Shipped	Vintage Cars				
10212	38	₹ 100	6	24-05-2013 00:33:00	26-05-2013 02:35:03	Shipped	Classic Cars				
10379	39	₹ 100	2	28-03-2013 01:26:00	28-03-2013 14:00:36	Shipped	Vintage Cars				
10212	41	₹ 100	9	12-09-2012 01:12:00	15-09-2012 00:02:15	Shipped	Classic Cars				
10246	40	₹ 100	4	13-09-2013 00:39:00	14-09-2013 10:38:05	Shipped	Classic Cars				
10412	41	₹ 100	4	21-10-2013 00:56:00	23-10-2013 16:51:09	Shipped	Classic Cars				
10380	40	₹ 100	10	04-04-2015 01:09:00	07-04-2015 00:55:32	Shipped	Vintage Cars	Madrid	NA	28034	Spain
10244	43	₹ 100	8	25-07-2016 23:27:00	27-07-2016 07:12:44	Shipped	Vintage Cars	Madrid	NA	28034	Spain
10212	40	₹ 100	7	06-10-2012 00:36:00	06-10-2012 19:04:53	Shipped	Classic Cars	Madrid	NA	28034	Spain
10311	43	₹ 100	10	17-03-2012 00:42:00	19-03-2012 08:16:40	Shipped	Classic Cars	Madrid	NA	28034	Spain
10379	29	₹ 100	5	14-08-2015 23:10:00	17-08-2015 17:15:38	Shipped	Classic Cars	Madrid	NA	28034	Spain
10244	30	₹ 100	1	30-06-2013 01:50:00	02-07-2013 05:26:48	Shipped	Vintage Cars	Madrid	NA	28034	Spain

Sort ascending
Sort descending
Clear sort
Clear filter
Clear all filters
Text filters
Search
(Select all)
Classic Cars
Vintage Cars
OK
Cancel

SUMMARIZE()

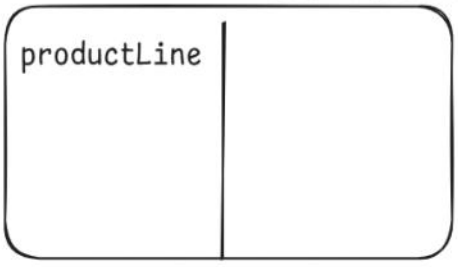
- Pivot Table
- Group BY
- Aggregations




```
Summary Table =
SUMMARIZE(VehicleOrders
SUMMARIZE(Table,
[GroupBy_ColumnName1], ...,
[Name1], [Expression1], ...)
```

Creates a summary the input table grouped by the specified columns.

"Total Revenue"



price * quantity [Revenue]

```
Summary Table =
SUMMARIZE(
    VehicleOrders,
    VehicleOrders[PRODUCTLINE],
    "Total Sales",
    [Revenue]
)
```

Aggregated Column Name

PRODUCTLINE	Total Sales
Trains	₹ 2,03,804.26
Ships	₹ 6,77,940.4
Planes	₹ 8,77,942.21
Vintage Cars	₹ 16,44,212.05
Trucks and Buses	₹ 9,47,355.18
Classic Cars	₹ 29,68,546.4
Motorcycles	₹ 9,71,086.29

Categorical [Rows]

PRODUCTLINE	Total Sales
Classic Cars	$29,68,546.4
Vintage Cars	$16,44,212.05
Motorcycles	$9,71,086.29
Trucks and Buses	$9,47,355.18
Planes	$8,77,942.21
Ships	$6,77,940.4
Trains	$2,03,804.26

PRODUCTLINE	Revenue
Classic Cars	$29,68,546.40
Motorcycles	$9,71,086.29
Planes	$8,77,942.21
Ships	$6,77,940.40
Trains	$2,03,804.26
Trucks and Buses	$9,47,355.18
Vintage Cars	$16,44,212.05
Total	**$82,90,886.79**

```
Summary Table =
SUMMARIZE(
    VehicleOrders,
    VehicleOrders[DEALSIZE],
    VehicleOrders[PRODUCTLINE],
    "Total Sales",
    [Revenue]
)
```

PRODUCTLINE	Total Sales	DEALSIZE
Trains	$4,500	Large
Planes	$46,127.75	Large
Vintage Cars	$1,11,200	Large
Trucks and Buses	$35,800	Large
Classic Cars	$4,49,530.16	Large
Motorcycles	$91,600	Large
Trains	$95,660.36	Medium
Ships	$3,90,938.24	Medium
Planes	$4,72,345.2	Medium
Vintage Cars	$9,33,451.81	Medium
Trucks and Buses	$6,65,276.49	Medium
Classic Cars	$18,45,151.86	Medium
Motorcycles	$5,58,912.72	Medium
Trains	$1,03,643.9	Small
Ships	$2,87,002.16	Small
Planes	$3,59,469.26	Small

```
Summary Table =
SUMMARIZE(
    VehicleOrders,
    VehicleOrders[DEALSIZE],
    VehicleOrders[PRODUCTLINE],
    "Total Sales",
    [Revenue],
    "Total Qty Sold",
    [Quantity Sold]
)
```

PRODUCTLINE	Total Sales	DEALSIZE	Total Qty Sold
Trains	$4,500	Large	45
Planes	$46,127.75	Large	477
Vintage Cars	$1,11,200	Large	1112
Trucks and Buses	$35,800	Large	358
Classic Cars	$4,49,530.16	Large	4506
Motorcycles	$91,600	Large	916
Trains	$95,660.36	Medium	1052
Ships	$3,90,938.24	Medium	4311
Planes	$4,72,345.2	Medium	5250
Vintage Cars	$9,33,451.81	Medium	10022
Trucks and Buses	$6,65,276.49	Medium	6777
Classic Cars	$18,45,151.86	Medium	19178