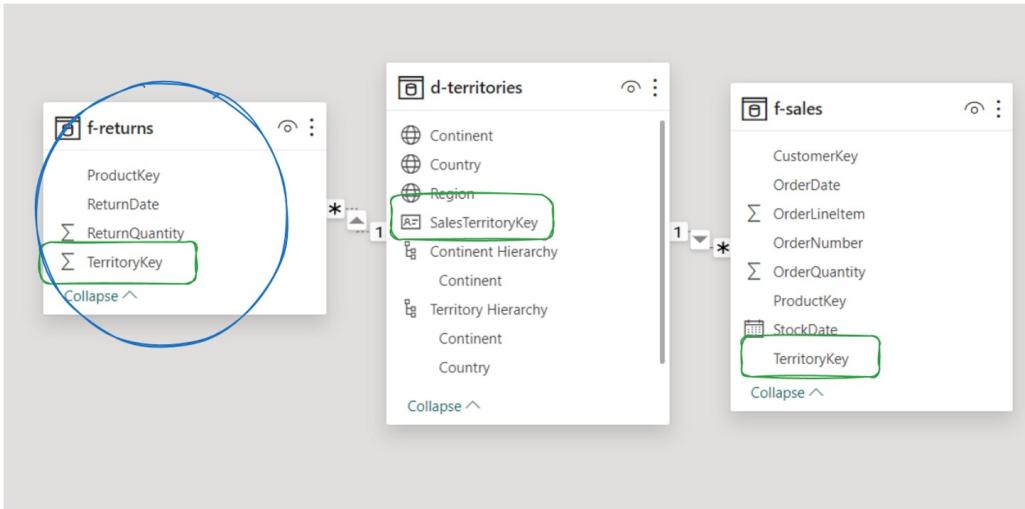


DAX [DATA ANALYSIS EXPRESSION]



1. Example 1 : What if I'll choose territory Key From Return Table [Fact]

Sales Table - No Direct Relation

TerritoryKey	Sum of OrderQuantity	Sum of ReturnQuantity
1	84174	270
4	84174	362
5	84174	1
6	84174	238
7	84174	186
8	84174	163
9	84174	404
10	84174	204
Total	84174	1828

2. Example 2 : What if I'll take the territory Key From D-territory Table [Dimension Table]

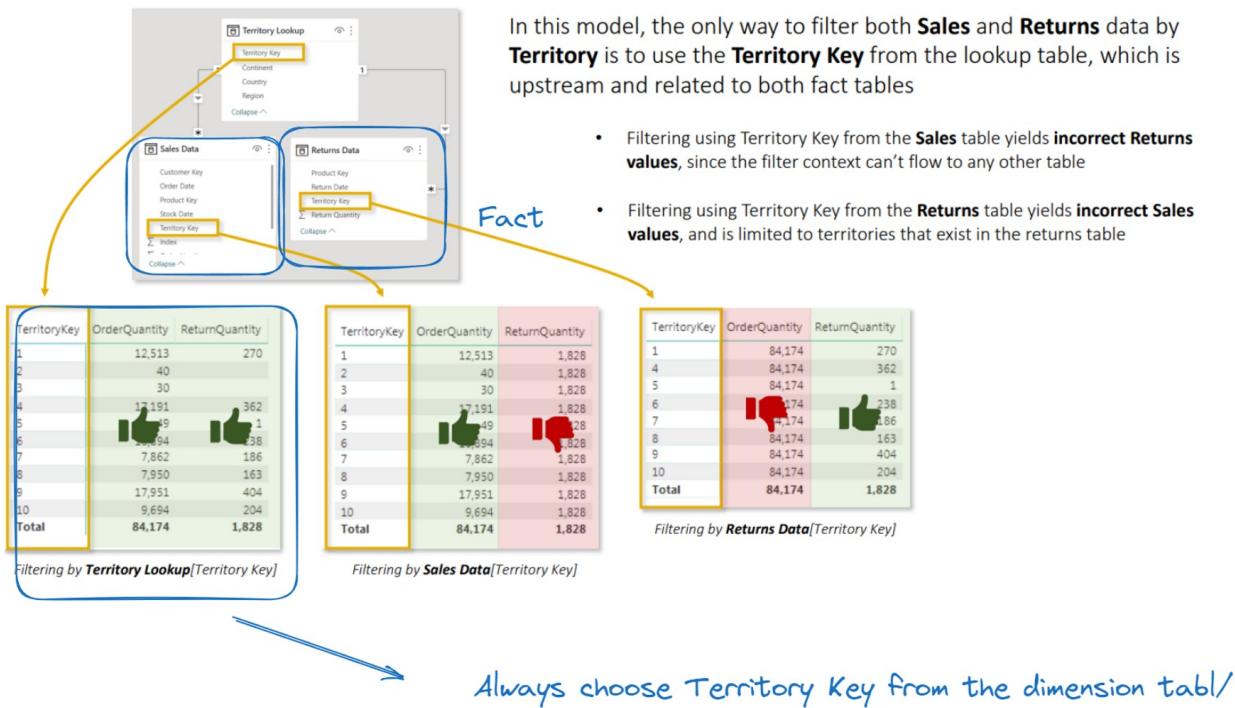
SalesTerritoryKey	Sum of OrderQuantity	Sum of ReturnQuantity
1	12513	270
2	40	
3	30	
4	17191	362
5	49	1
6	10894	238
7	7862	186
8	7950	163
9	17951	404
10	9694	204
Total	84174	1828

3. Example 3 : What if I'll choose Territory Key From the Sales [Fact Table].

TerritoryKey	Sum of OrderQuantity	Sum of ReturnQuantity
1	12513	1828
2	40	1828
3	30	1828

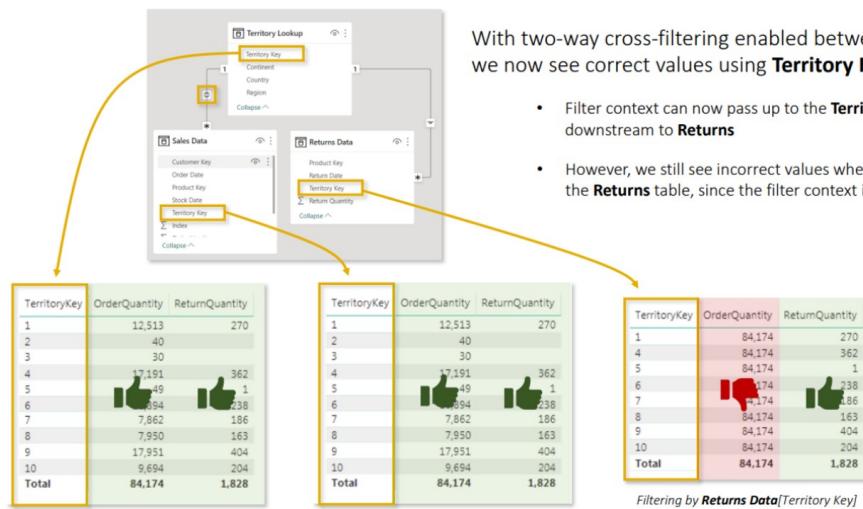
TerritoryKey	Sum of OrderQuantity	Sum of ReturnQuantity
1	12513	1828
2	40	1828
3	30	1828
4	17191	1828
5	49	1828
6	10894	1828
7	7862	1828
8	7950	1828
9	17951	1828
10	9694	1828
Total	84174	1828

EXAMPLE: FILTER FLOW



Always choose Territory Key from the dimension table!

EXAMPLE: BI-DIRECTIONAL FILTERS



7	7,862	186
8	7,950	163
9	17,951	404
10	9,694	204
Total	84,174	1,828

Filtering by Territory Lookup[Territory Key]

7	7,862	186
8	7,950	163
9	17,951	404
10	9,694	204
Total	84,174	1,828

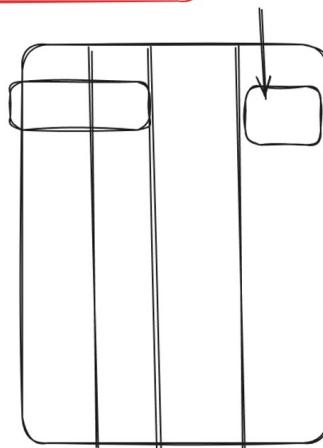
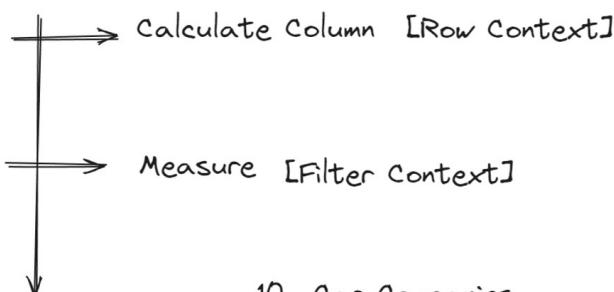
Filtering by Sales Data[Territory Key]

7	84,174	404
9	84,174	204
10	84,174	1,828
Total	84,174	1,828

Filtering by Returns Data[Territory Key]

→ Note : We can not apply both Cross Filter on 2 different Fact Table :
Just because it create ambiguity.

DAX [DATA ANALYSIS EXPRESSION]



10 Car Companies

Tata

\$1.92 Million

Two ways to use DAX

Calculated Columns

Customer Lookup		Total Children	Parent
M	emma32@adventure-works.com	70000	5 Bachelor
M	barry20@adventure-works.com	40000	5 High School
M	martha13@adventure-works.com	70000	5 High School
S	tamara16@adventure-works.com	40000	5 High School
S	gerald21@adventure-works.com	130000	5 Bachelor
M	alexa1@adventure-works.com	40000	5 High School
M	jack53@adventure-works.com	70000	5 Graduate Degree
S	ricky1@adventure-works.com	100000	5 Bachelor
M	keith4@adventure-works.com	70000	5 Partial College
M	latoya19@adventure-works.com	70000	5 Bachelor

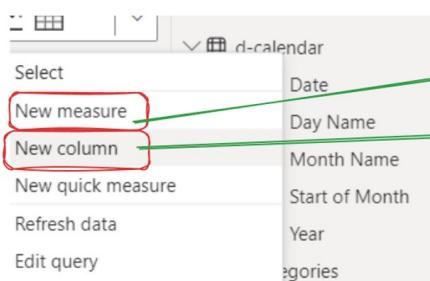
Measures

```

> Returns Data
> # Rollin Calendar
> New measure
> New column
New quick me Total Orders = DISTINCTCOUNT(Sales_Data[OrderNumber])
Refresh data
Edit query Total Revenue = SUMX(Sales_Data, Sales_Data[OrderQuantity] * RELATED(Product_Lookup[ProductPrice]))
Quantity Ordered = SUM(Sales_Data[OrderQuantity])

```

Distinct Count [Fx]
Sales_Data [Table]
OrderNumber [Column]



DAX Measure

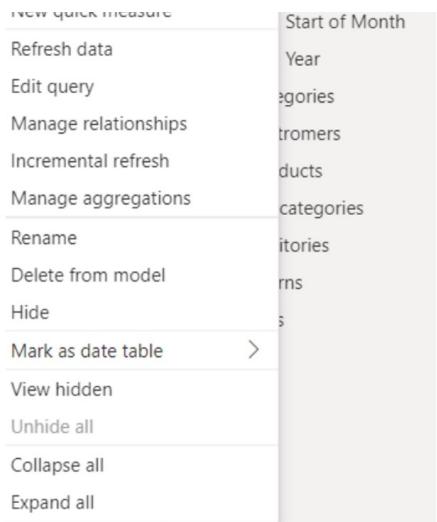
Calculated Column

Total Order

11.95K

Total Revenue

\$2.25M

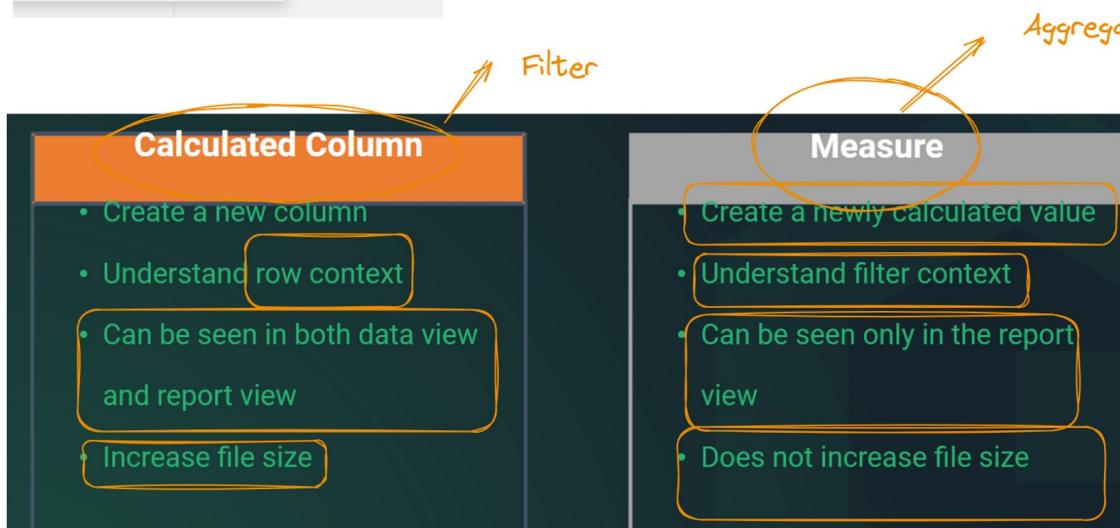


Calculated Column

\$2.25M

Qty ordered

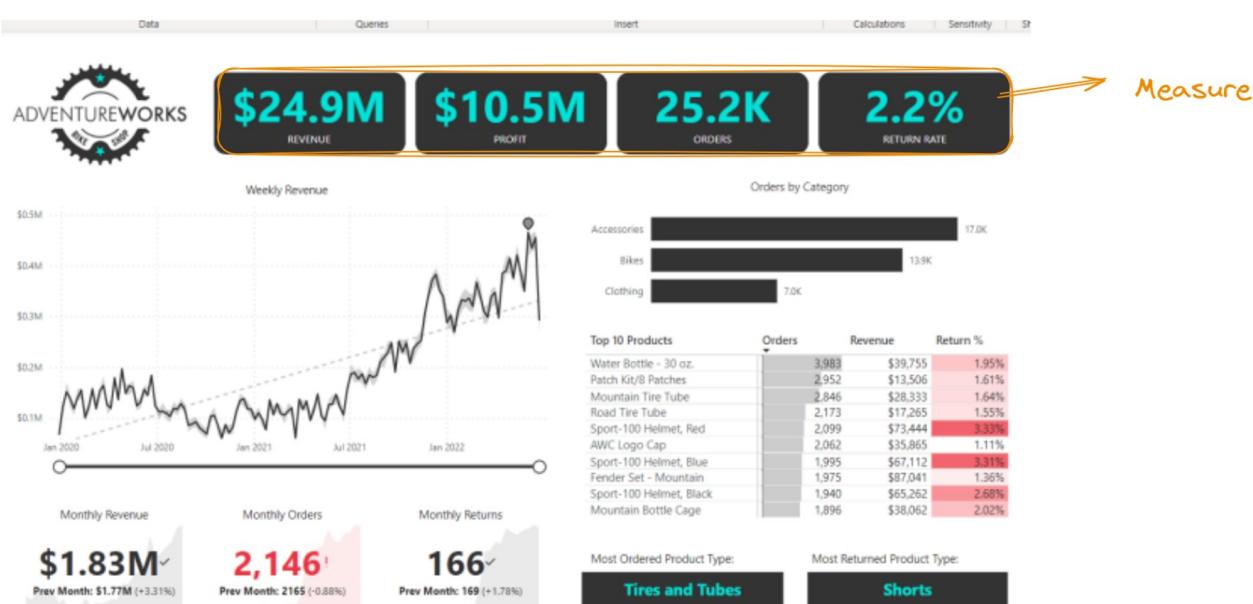
18K



Filter

Aggregate [Summarized by]

Row Context





Search

- > Measure Table → **Measure**
- > Calendar Lookup
- ✓ Customer Lookup ...
 - AnnualIncome
 - Birth Year
 - BirthDate
 - Customer Full ... → **calculated column**
 - Customer Prior...
 - CustomerKey
 - Domain Name
 - Education Cate...
 - EducationLevel
 - EmailAddress
 - FirstName

Dax - Q1 :

Name: Column
Data type: Whole number

Structure:

X	✓	1 Target Customer	= IF('d-customers'[AnnualIncome] > 50000 , "Yes" , "No")			
BirthDate	MaritalStatus	Gender	EmailAddress	AnnualIncome	TotalChildren	E

IF(LogicalTest, ResultIfTrue, [ResultIfFalse])
Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE.

Table
Column Name

New Column Name

Condition being applied based on Annual Income

Target Customer

Yes

Note:

Remember to Choose Column to Create a Calculated Column.

Contextual menu options shown: New measure, New column, New quick measure, Refresh data, Edit query, Manage relationships, Incremental refresh.

Yes
Yes
Yes
...

Q2

Properties | Sort | Groups | Relationships | Calculations

```
1 Target Customer-2 = IF('d-customers'[AnnualIncome]>50000 && 'd-customers'[Gender] = "M" , "Yes" , "No")
```

Address | AnnualIncome | TotalChildren | EducationLevel | Occupation | HomeOwner | Full Name

Q3

Properties | Sort | Groups | Relationships | Calculations

```
1 Target Customer-3 = IF('d-customers'[AnnualIncome]>50000 && 'd-customers'[Gender] = "M" && 'd-customers'[MaritalStatus] = "M" , "Yes" , "No")
```

AnnualIncome | TotalChildren | EducationLevel | Occupation | HomeOwner | Full Name | Target Customer-1 | Target Customer-2

Properties | Sort | Groups | Relationships | Calculations

```
1 Target Customer-3 = IF(AND(AND('d-customers'[AnnualIncome]> 50000 , 'd-customers'[Gender] = "M"), 'd-customers'[MaritalStatus] = "M"), "Yes" , "No")
```

Properties | Sort | Groups | Relationships | Calculations

```
1 Target Customer-3 = IF(AND('d-customers'[AnnualIncome]> 50000 , 'd-customers'[Gender] = "M") && 'd-customers'[MaritalStatus] = "M", "Yes" , "No")
```