

# **DATA ANALYTICS**

## **Assignment 4**

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**Challenge:** Create calculations and LODs using Global Dataset in  
Tableau

# Calculations:

## 1. Model: Trend line and Reference line with the average

Trend Lines Options

Model Type

☐ Linear

☒ Logarithmic

☐ Exponential

☐ Power

☐ Polynomial

Degree: 

3

Factors

Build separate trend lines based on the following dimensions:

Options

☒ Show tooltips

☐ Show confidence bands

☒ Allow a trend line per color

☒ Show recalculated line for highlighted or selected data points

☐ Force y-intercept to zero

OK

Edit Reference Line, Band, or Box

Line

Band

Distribution

Box Plot

Scope

☒ Entire Table

☐ Per Pane

☐ Per Cell

Line

Value: 

SUM(Sales)

Average

Label: 

Computation

Tooltip: 

Automatic

Line only

95

Formatting

Line:

Fill Above:

Fill Below:

☒ Show recalculated line for highlighted or selected data points

OK

# Visualization:

Pages

Columns

Rows

Filters

MARKS

YEAR(Order Date)

MONTH(Order Date)

SUM(Sales)

Sheet 13

Order Date

Sales

1600K

1400K

1200K

1000K

800K

600K

400K

200K

0K

January

February

March

April

May

June

July

August

September

October

November

December

Average

**2. Model:** Used SUM(Quantity) Quick Table Calculation>Percentile Quantity>Filter>Range from 0.2 to 1

This implies we are selecting only from the range 20% to 100%

Filter [Percentile of Quantity]

Range of values

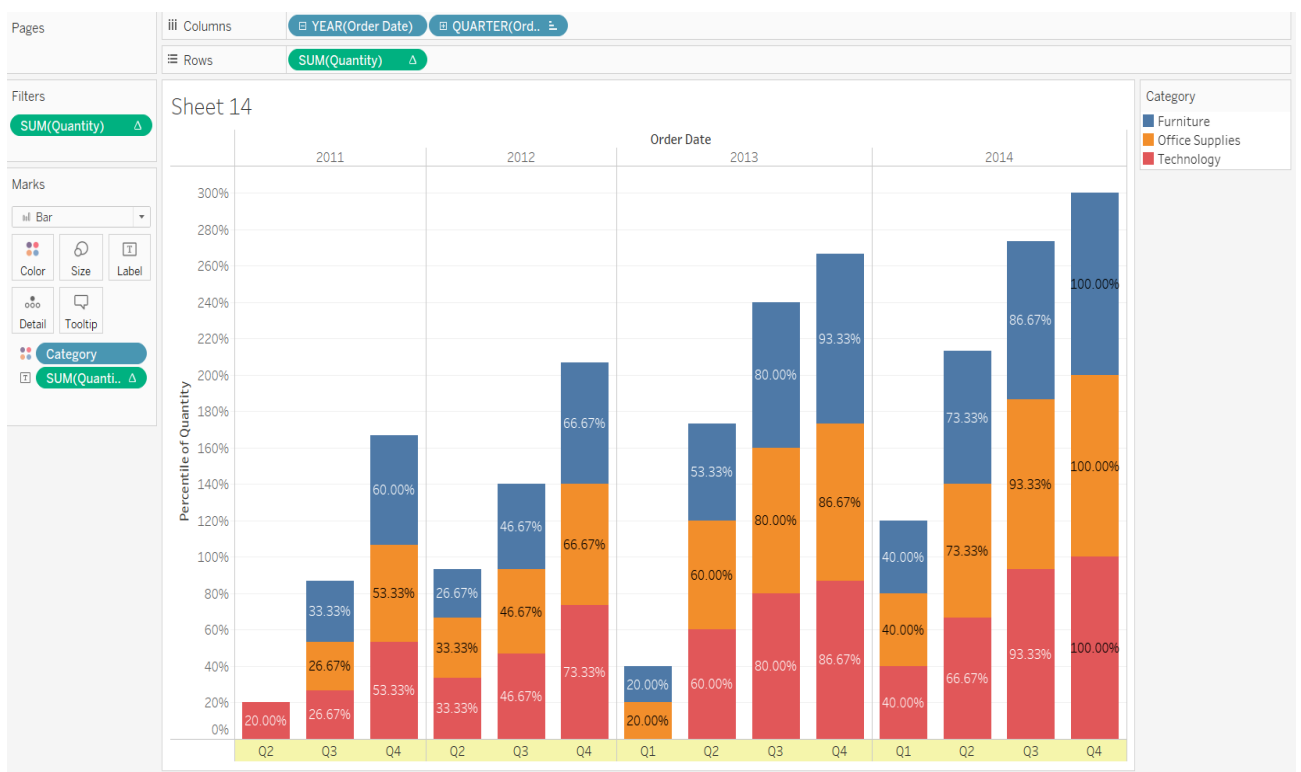
0.2 1

0% 100%

☐ Include Null Values

Reset OK Cancel Apply

## Visualization:



# Level of Detail (LOD):

## 1. Model:

### LOD Expression:

IF(AVG([Sales])>500 AND AVG([Profit])>50)  
THEN 'Accept'  
ELSE 'Not'  
END

acc or not

×

```
IF(AVG([Sales])>500 AND AVG([Profit])>50)
THEN 'Accept'
ELSE 'Not'
END
```

The calculation is valid.

1 Dependency ▾

Apply

OK

## Visualization:

Pages

Filters

Marks

Columns

Rows

Market

Sub-Category

Sheet 10

Sub-Catego..	Africa	APAC	Canada	Market	EMEA	EU	LATAM	US
Accessories	182	266	235	184	361	215	216	216
	28	23	68	15	74	41	54	54
Appliances	426	910	496	443	883	564	231	231
	25	125	140	20	149	81	39	39
Art	62	94	66	55	112	68	34	34
	6	11	15	2	21	11	8	8
Binders	36	66	50	38	76	44	134	134
	4	11	13	4	15	5	20	20
Bookcases	426	809	441	413	751	470	504	504
	37	108	103	36	117	39	-15	-15
Chairs	306	528	267	279	492	323	532	532
	15	64	71	-2	43	31	43	43
Copiers	467	759	574	422	785	503	2,199	2,199
	68	124	205	43	121	65	818	818
Envelopes	47	84	57	46	91	62	65	65
	7	8	17	4	20	9	27	27
Fasteners	26	42	27	27	47	30	14	14
	4	3	8	4	10	4	4	4
Furnishings	96	157	54	110	176	100	96	96
	11	25	8	6	30	0	14	14
Labels	22	31	17	19	34	22	34	34
	4	3	5	2	7	4	15	15
Machines	334	535	329	262	528	303	1,646	1,646
	29	75	47	12	41	17	29	29
Paper	66	88	89	50	96	61	57	57
	10	10	22	4	20	10	25	25
Phones	432	706	504	388	634	461	371	371
	67	118	134	10	66	48	50	50
Storage	164	264	212	153	259	177	265	265
	20	30	58	5	21	20	25	25
Supplies	59	101	77	63	119	71	246	246
	5	6	17	4	22	12	-6	-6

AGG(acc or not)

Accept

Not

## 2. Model:

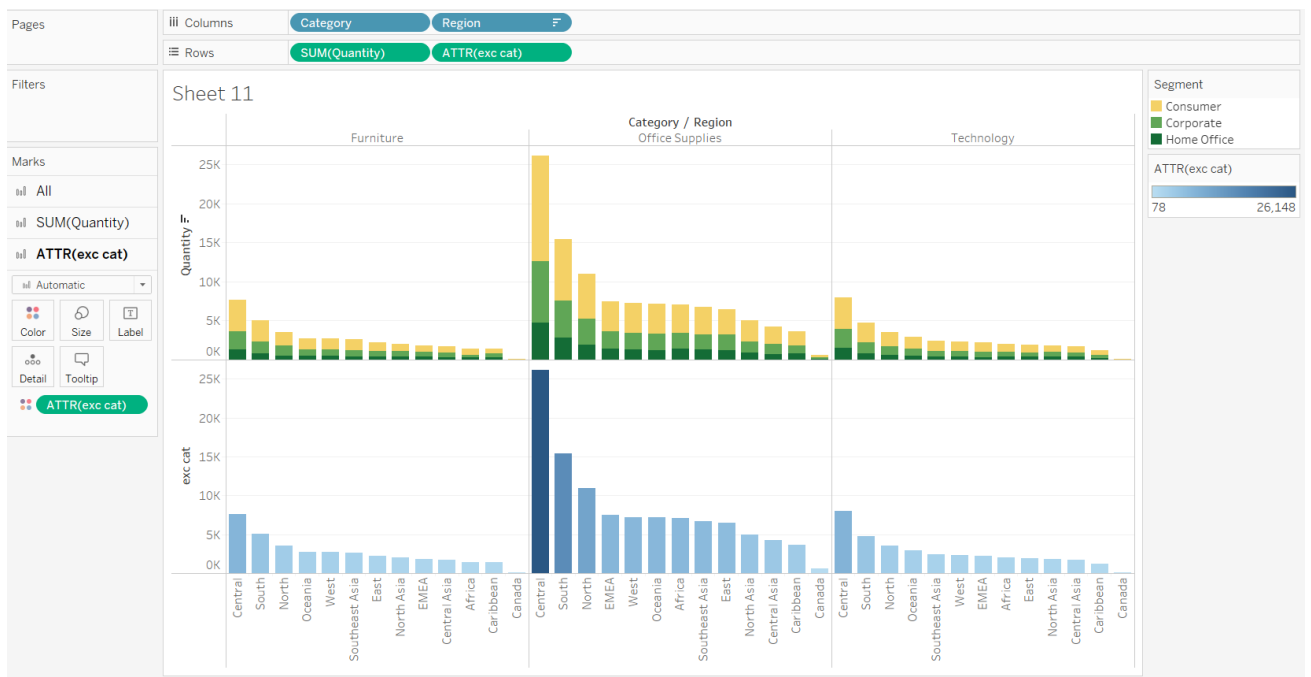
### LOD Expression:

{ EXCLUDE [Segment]: SUM([Quantity]) }

```
{ EXCLUDE [Segment]: SUM([Quantity]) }
```

The calculation is valid. 1 Dependency ▾ Apply OK

### Visualization:



As we can observe here in the first row we passed the segment in colour and in the second row we passed our new calculated field “exc cat”. That is the reason we are not having a specific segment in the second visualization because we have excluded it in the LOD expression.

### 3. Model:

#### LOD Expression:

```
{ INCLUDE [Region]:AVG([Profit]) }
```

avg profit in region

×

```
{ INCLUDE [Region]:AVG([Profit]) }
```

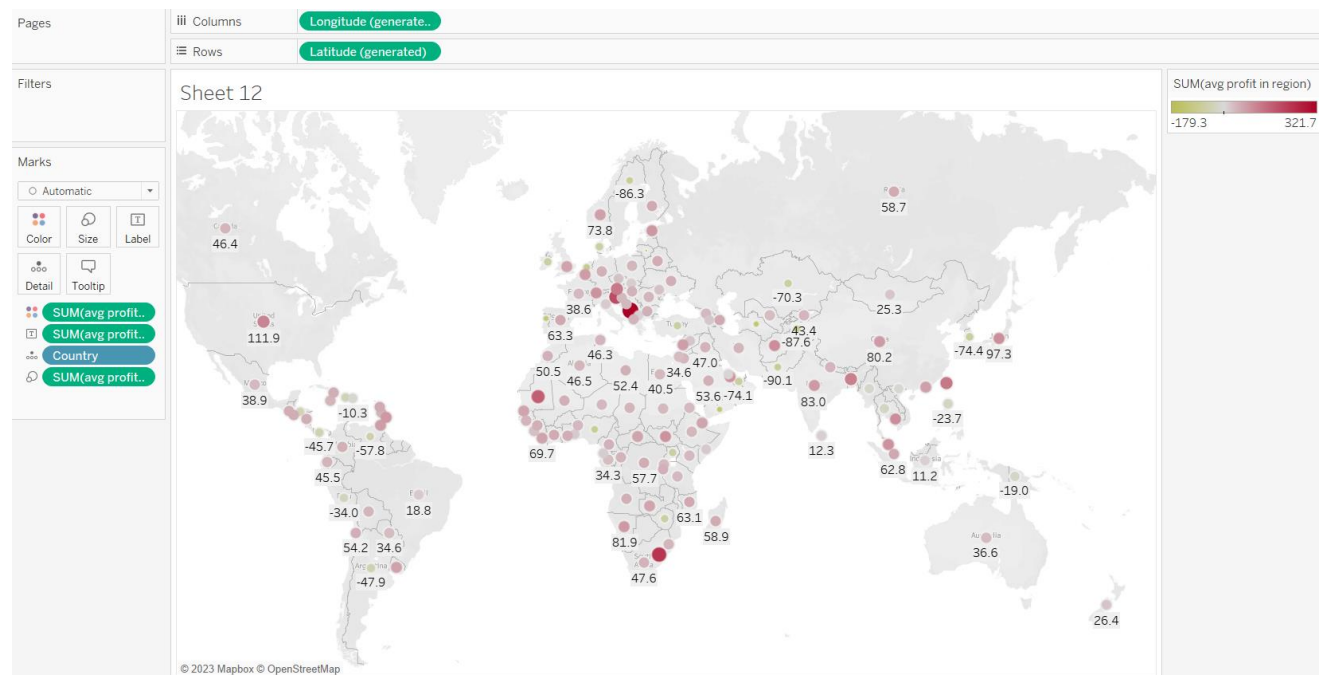
The calculation is valid.

1 Dependency ▾

Apply

OK

#### Visualization:



We are including the region in average profit where the default minimum value is -179.3 and the maximum value is 321.7.