

DATA ANALYTICS WITH IBM COGNOS

ASSIGNMENT – 4

NAME : CHARAN TEJA

REG NO : 21BCE8778

CAMPUS : VIT-AP

Challenge: Create calculations and LODs using Global Dataset in Tableau

Calculations:

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

The image shows two side-by-side configuration windows from Tableau. The left window is titled 'Trend Lines Options' and the right window is titled 'Edit Reference Line, Band, or Box'.

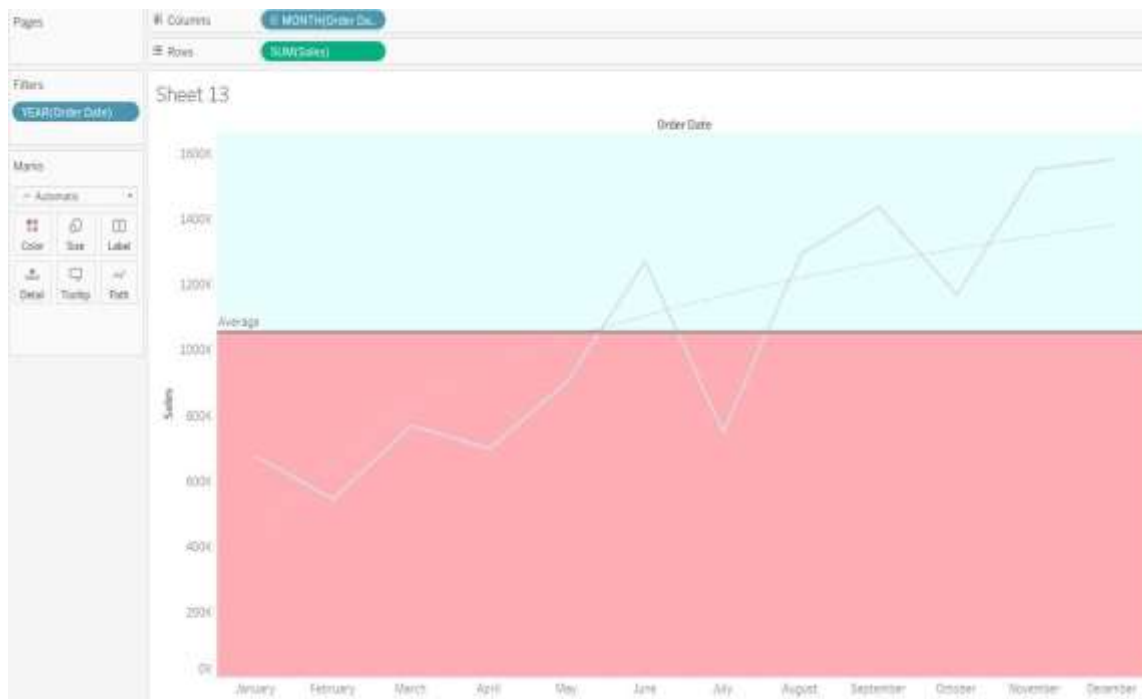
Trend Lines Options:

- Model Type:** Radio buttons for Linear, Logarithmic (selected), Exponential, Power, and Polynomial. A 'Degree' field is set to 3.
- Factors:** A text box with the instruction 'Build separate trend lines based on the following dimensions:' and an empty list box below it.
- Options:** Checkboxes for 'Show tooltips' (checked), 'Show confidence bands' (unchecked), 'Allow a trend line per color' (checked), 'Show recalculated line for highlighted or selected data points' (checked), and 'Force y-intercept to zero' (unchecked).
- An 'OK' button is at the bottom right.

Edit Reference Line, Band, or Box:

- Four tabs are at the top: 'Line' (selected), 'Band', 'Distribution', and 'Box Plot'.
- Scope:** Radio buttons for 'Entire Table' (selected), 'Per Pane', and 'Per Cell'.
- Line:** Fields for 'Value' (SUM(Sales)), 'Average' (selected), 'Label' (Computation), and 'Tooltip' (Automatic).
- Fields for 'Line only' and '95'.
- Formatting:** Fields for 'Line' (color), 'Fill Above' (light blue), and 'Fill Below' (light red).
- A checkbox 'Show recalculated line for highlighted or selected data points' is checked.
- 'OK' buttons are at the bottom right of each window.

Visualization:



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

At least

At most

Special

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	Columns	Market
Filters	Rows	Sub-Category
Sheet 10		
	Sub-Category	Africa APAC Canada EMEA EU LATAM US
	Accessories	180 288 180 184 961 215 218
		20 23 66 33 34 41 54
	Appliances	426 910 490 443 883 564 231
		25 125 140 20 149 81 39
	Art	62 94 86 55 131 66 94
		5 11 15 0 21 11 8
	Binders	86 98 90 38 79 44 134
		4 11 18 4 35 5 20
	Bookcases	426 809 441 413 751 470 594
		57 108 103 36 117 38 15
	Chairs	906 528 260 279 480 323 500
		15 84 71 12 43 31 43
	Copiers	467 259 574 402 785 503 2,199
		48 124 205 43 121 48 818
	Envelopes	47 84 57 46 81 62 55
		7 8 17 4 28 6 27
	Fasteners	26 47 27 27 47 40 14
		4 3 6 4 10 4 4
	Furnishings	96 117 94 110 176 106 96
		11 23 6 8 38 8 14
	Labels	23 11 17 18 34 22 34
		8 8 5 2 7 6 15
	Machines	884 535 886 262 626 303 1,646
		19 76 40 12 41 17 20
	Paper	66 88 89 50 96 61 57
		10 10 20 4 20 10 25
	Phones	462 708 504 388 634 460 371
		47 118 134 10 66 48 50
	Storage	264 264 112 152 258 177 265
		10 30 38 5 21 20 25
	Supplies	88 201 79 65 138 71 246
		4 6 11 4 19 14 4

2. Model:

LOD Expression:

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

exc cat

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

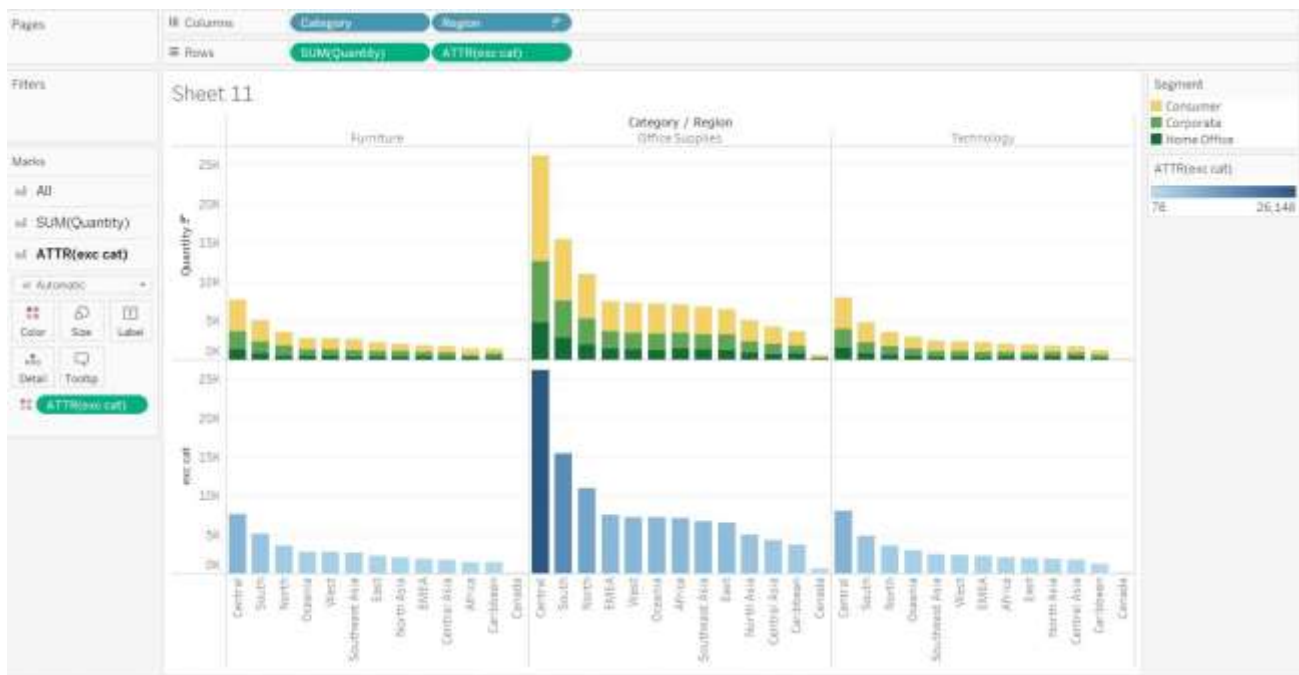
The calculation is valid.

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]) }

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

The calculation is valid. 1 Dependency

Visualization:

Columns: Longitude (generated)

Rows: Latitude (generated)

Sheet 12

Legend: SUM(avg profit in region)

Color scale: -179.3 to 321.7

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