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DA Assignment 4

Creating a Data Module called Global Superstore dataset

Basic Calculations: Using pre built functions provided by Tableau we try to create new 'Calculated fields'

1) **Average Profit per Sale:** Calculate the average profit per sale.
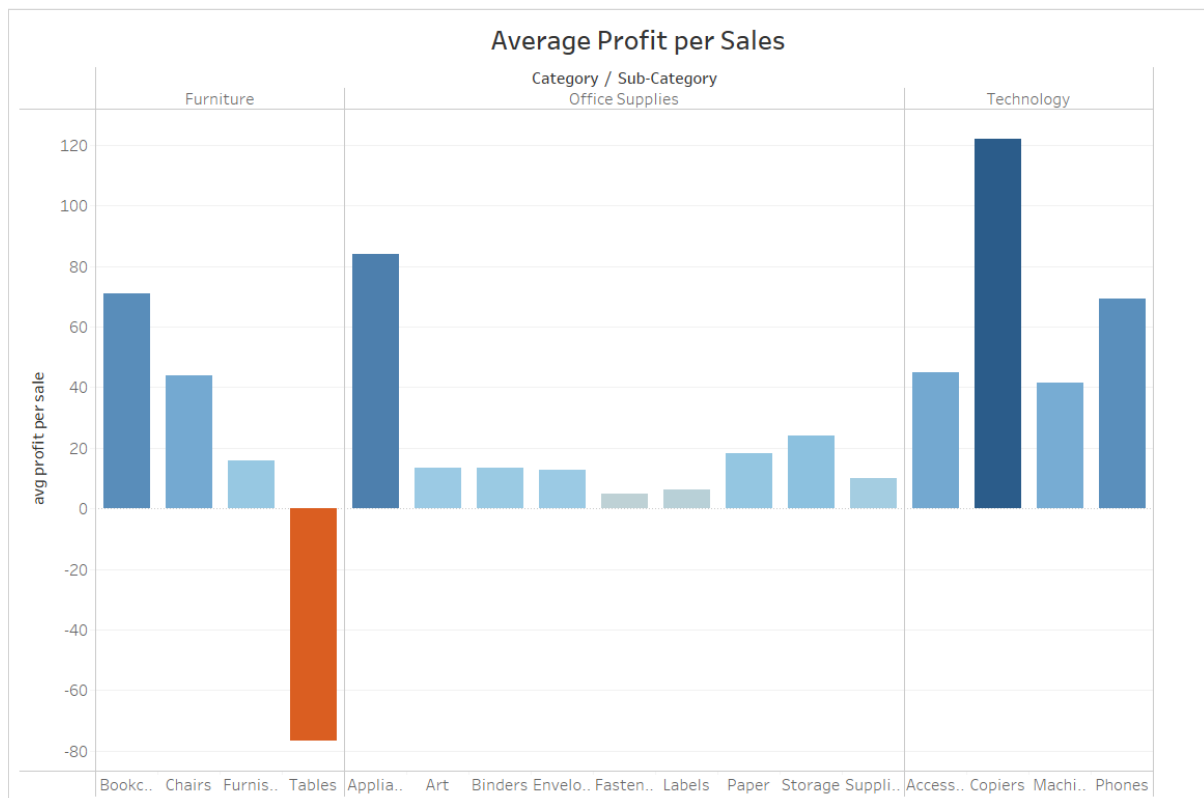
Calculation Formula: SUM([Profit]) / COUNTD([Order ID])

2) **Yearly Sales:** Group sales by year.

Calculation Formula: SUM(IF YEAR([Order Date]) = YEAR(TODAY()) THEN [Sales] END)

yearly sales ✕
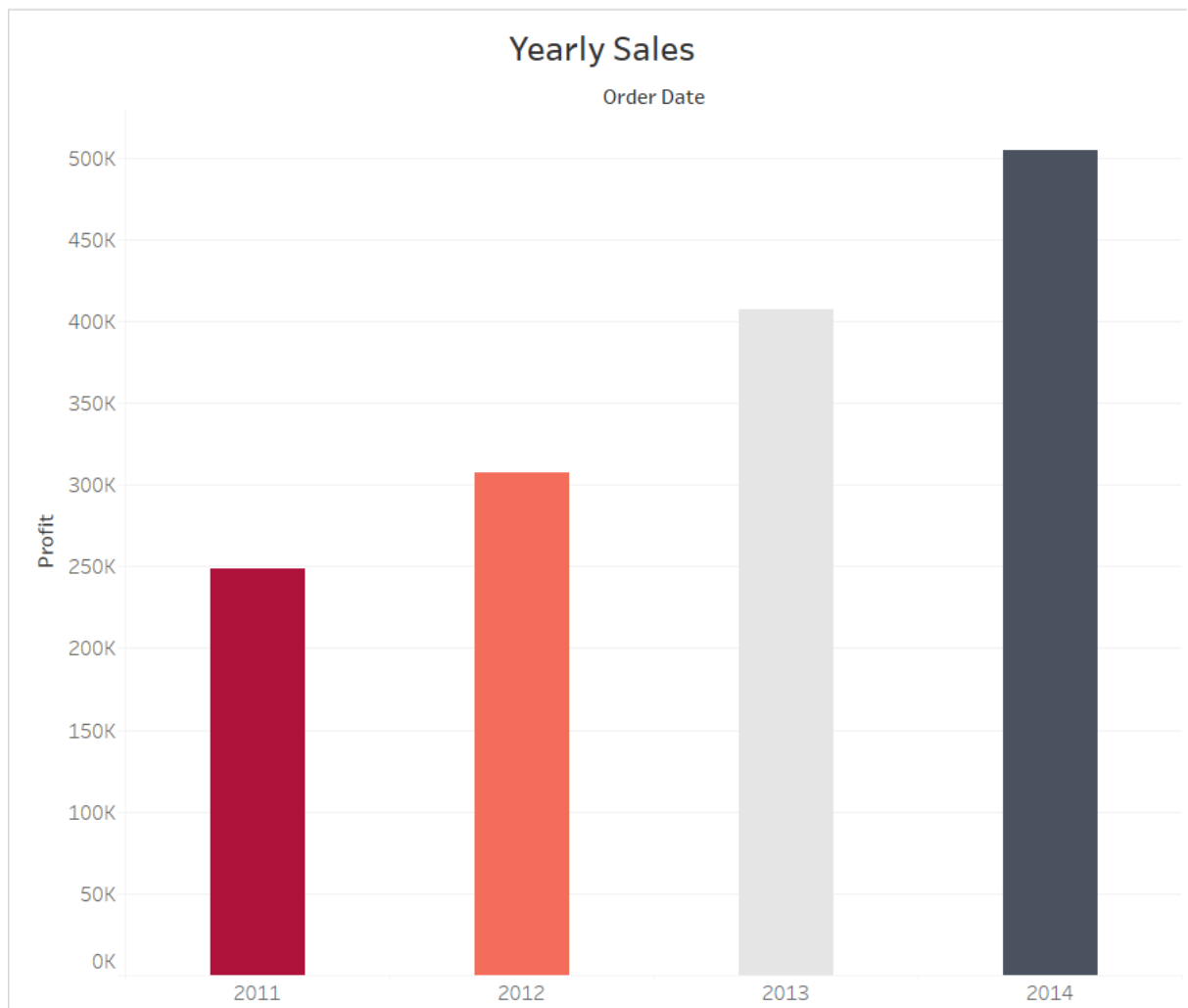
```
SUM(IF YEAR([Order Date]) = YEAR([Order Date])
  THEN [Sales] END)
```

▶

AGG(yearly sales)
2,259,451   4,299,866

The calculation is valid.   1 Dependency ▾   Apply   OK

Yearly Sales

Order Date

3) **Top N Products by Sales:** Find the top N products by sales.

Calculation Formula: { FIXED [Product Name] : SUM([Sales]) }

```
products by sales                                    ✕

{ FIXED [Product Name] : SUM([Sales]) }
```
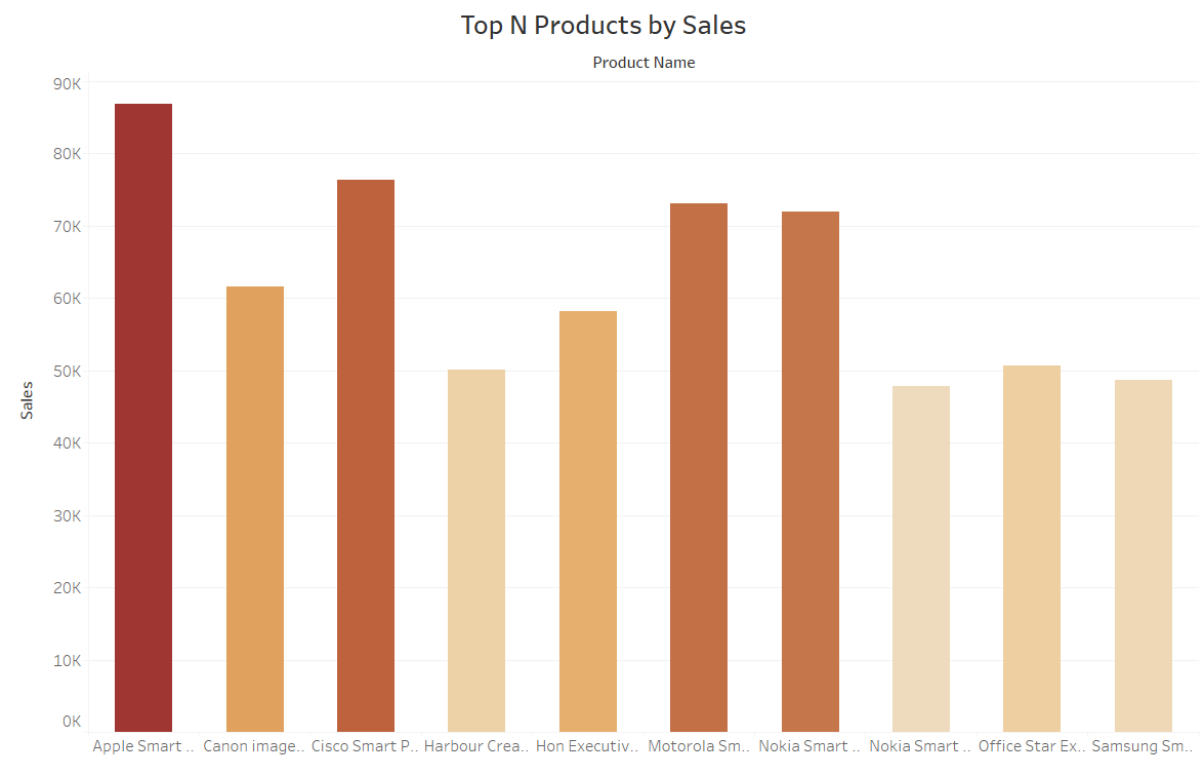
SUM(products by sales)

47,878   86,936

The calculation is valid.   1 Dependency ▾   Apply   OK

Top N Products by Sales

Product Name

LOD Expressions: also called as Level of Detail. These Expressions contain three main functions

- FIXED
- INCLUDE
- EXCLUDE

1) **Category-Level Average Profit:** Calculate the average profit for each category, regardless of the dimension of your view.

LOD Expression: { FIXED [Category] : AVG([Profit]) }

cat avg profit   ×
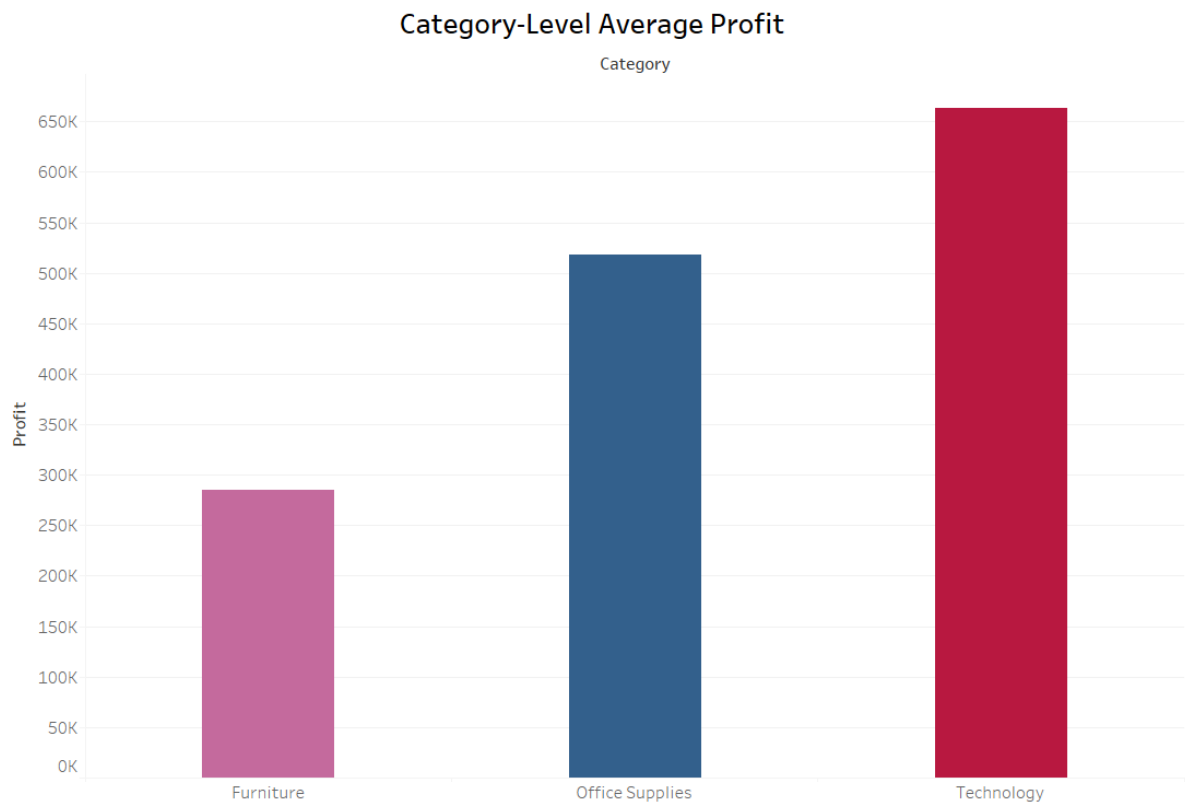
{ FIXED [Category] : AVG([Profit]) }

SUM(cat avg profit)

The calculation is valid.   1 Dependency ▾   Apply   OK   16.58   65.45

Category-Level Average Profit

Category

2) **Region-Level Profit Margin:** Calculate the profit margin for each region, considering the overall profit and sales.

LOD Expression: { FIXED [Region] : SUM([Profit]) / SUM([Sales]) }

reg profit margin   ✕

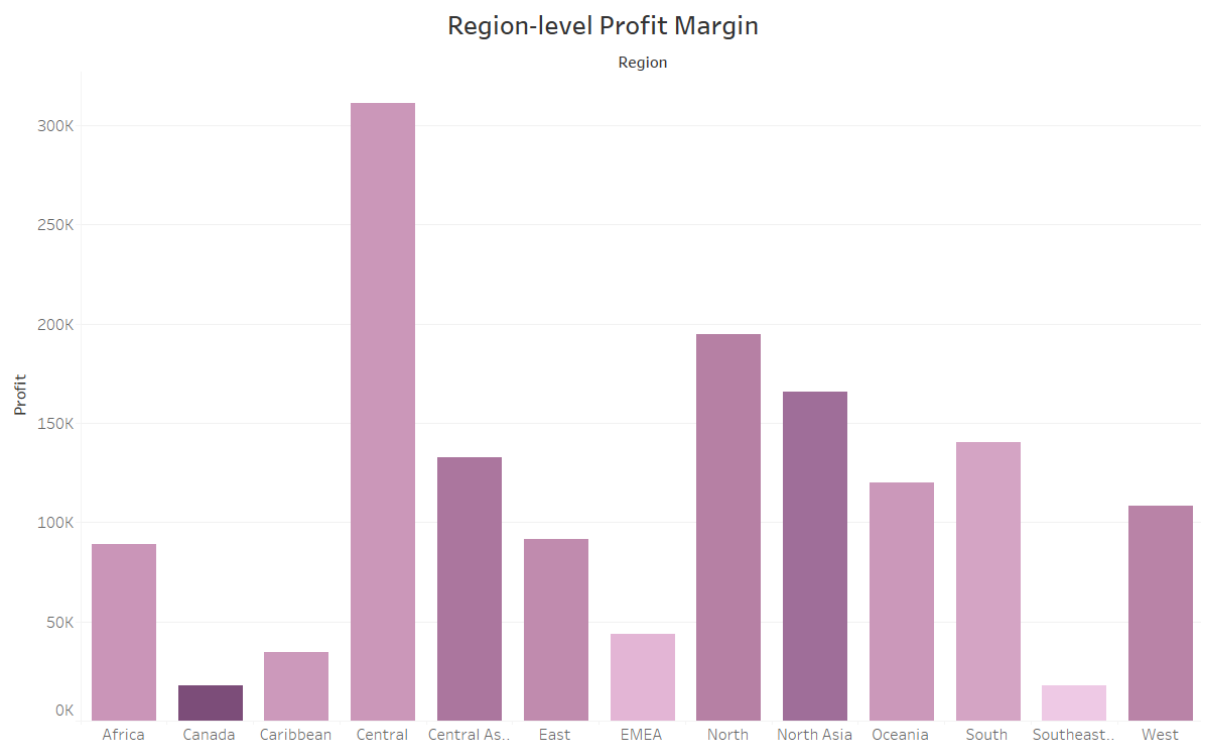{ FIXED [Region] : SUM([Profit]) / SUM([Sales]) }

▶

SUM(reg profit margin)

The calculation is valid.   1 Dependency ▾   Apply   OK   0.0202   0.2662

Region-level Profit Margin

Region

3) **Product Sub-Category-Level Max Sales, Including Region:** This finds the maximum sales value for each product sub-category while including the region dimension.

LOD Expression: { INCLUDE [Region], [Sub-Category] : MAX([Sales]) }


```
prod max sales                                                    ✕

{ INCLUDE [Region], [Sub-Category] : MAX([Sales]) }
```
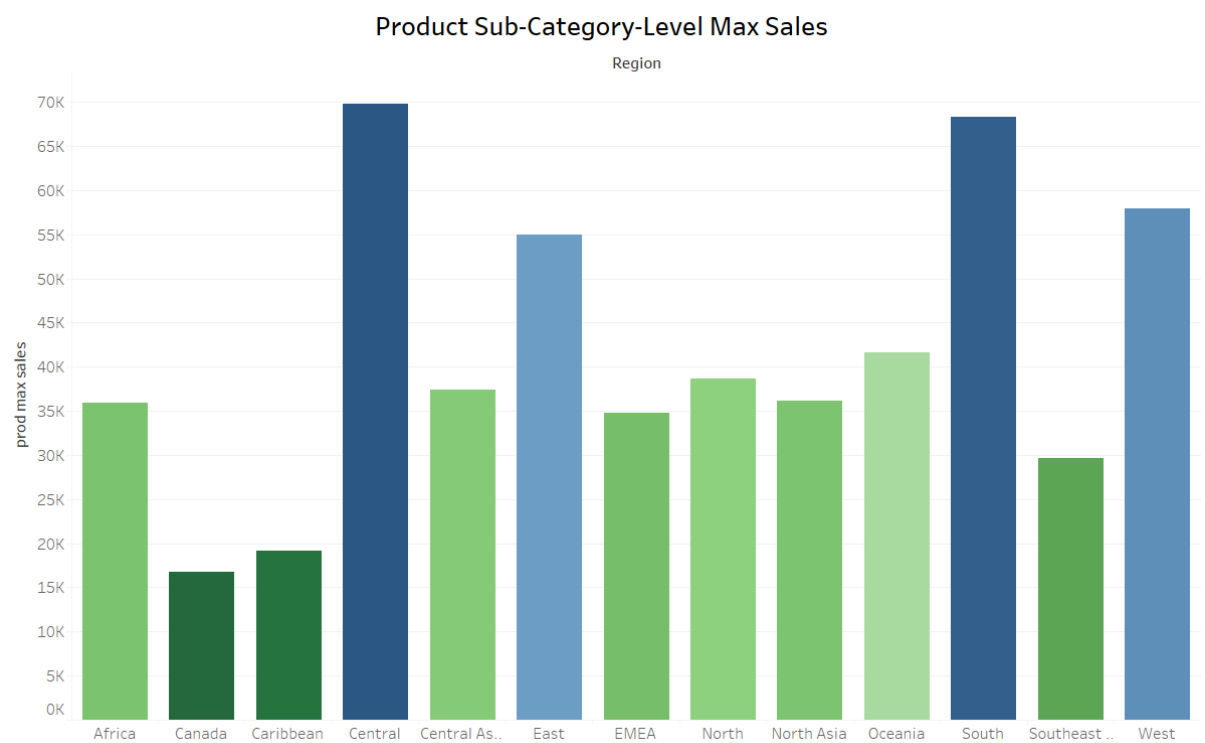
SUM(prod max sales)

The calculation is valid.   1 Dependency ▾   Apply   OK   16,787   69,844

Product Sub-Category-Level Max Sales

Region

4) **Region-Level Sales Rank, Excluding Category:** This ranks regions by sales while excluding the category dimension.

LOD Expression: { EXCLUDE [Category] : RANK(SUM([Sales])) }

```
region exclude category                                    ✕

{ EXCLUDE [Category] : AVG([Sales]) }



                                              ▶


                                                    ATTR(region exclude category)

The calculation is valid.    1 Dependency ▾   Apply    OK    28.2                    879.3
```

Region-Level Sales Rank, Excluding Category

Sub-Category