ALPHAMART'S SALES

PERFORMANCE ANALYSIS

ALPHAMART'S SALES PERFORMANCE ANALYSIS

Project Description:

In the competitive world of retail, understanding sales performance is essential for growth and sustainability. AlphaMart recognizes the importance of data-driven decision-making in navigating this landscape.

Aim:

to uncover valuable insights from AlphaMart's sales data.

Objectives:

Analyzing
1. Revenue Trends
2. Geographical Sales Distribution
3. Customer Demographics
4. Top Product Performance
5. Key Performance Indicators

ALPHAMART'S SALES PERFORMANCE ANALYSIS

Learning outcomes:

1. Understanding chart types for univariate, bivariate, and multivariate analysis

2. Utilizing filters

3. Creating calculated fields to analyze data and derive insights.

4. Building and customizing geographical visualizations

5. Designing key performance indicators (KPIs)

TASK 1

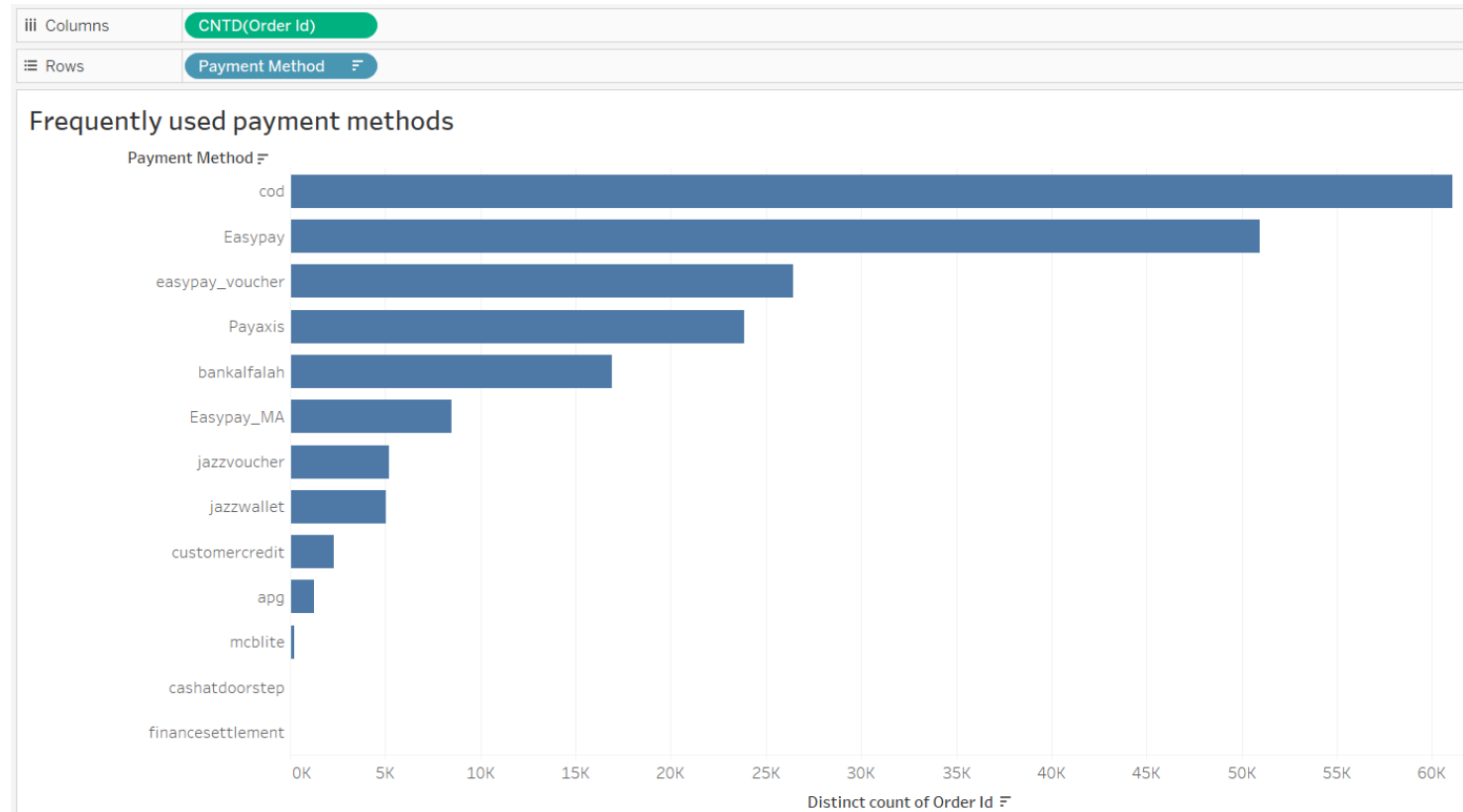Import the data from the file **'AlphaMart Sales Dataset'**.

Link

TASK 2

Find out the most frequently used payment methods for placing the orders.

COLUMN CHART

Purpose:

To compare numerical values across categories.

TASK 3

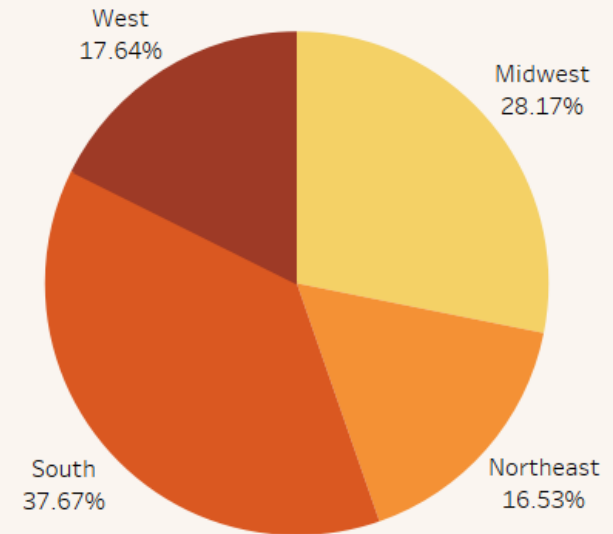Visualize the percentage distribution of sales across different regions.

PIE CHART

Purpose:

Display proportions of a whole to highlight category contributions

Regionwise revenue distribution

TASK 4

Visualize the frequency distribution of customer ages.

HISTOGRAM CHART

Purpose:

visualize the frequency distribution of customer ages

Rows: COUNTD(orderID)

Columns: Bins of Age with size 10
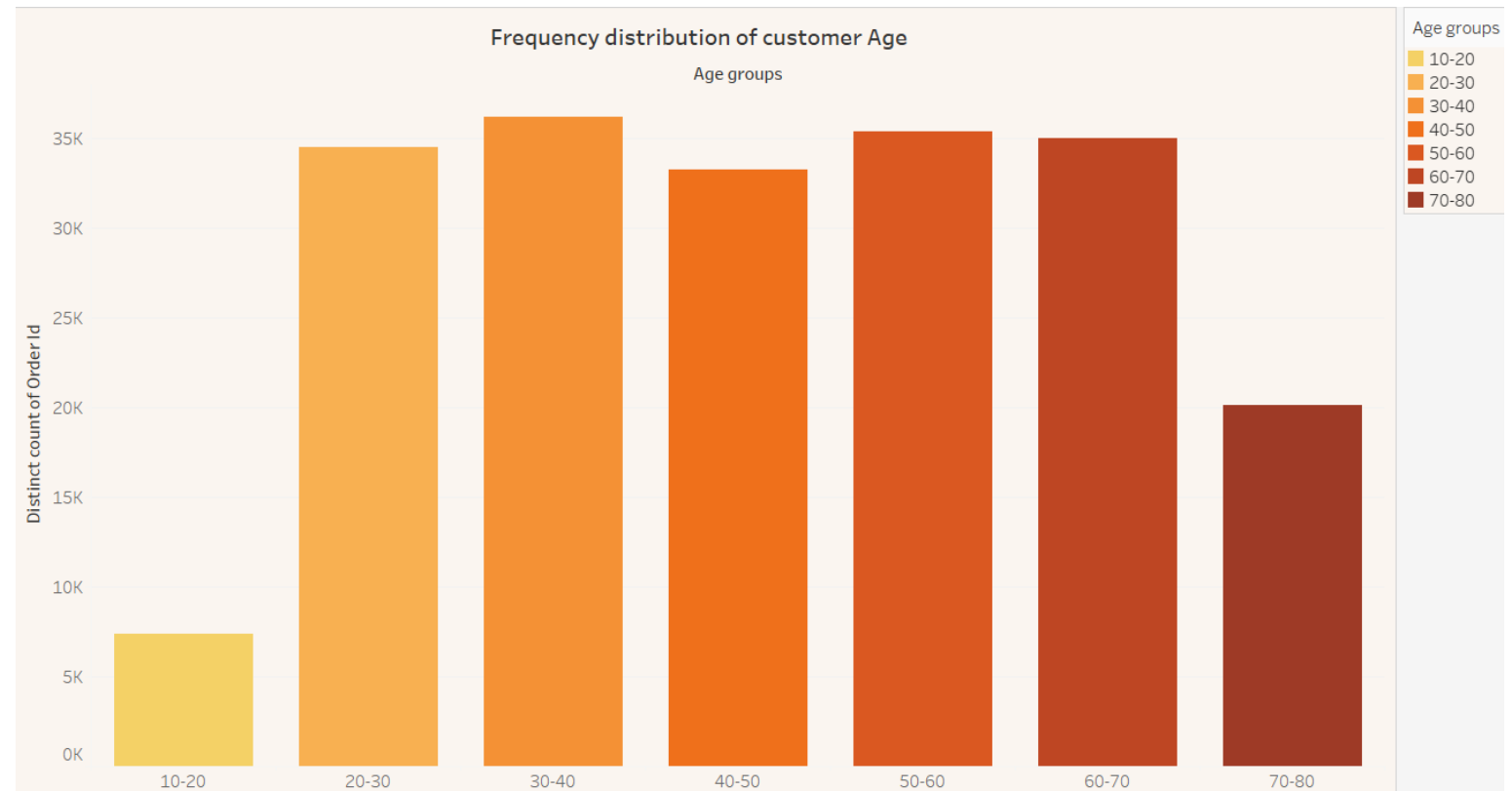
Task 5

Analyze the revenue trend over the year.
(October 2020 to November 2021)

LINE CHART

Purpose:

Show the revenue trend over the year.
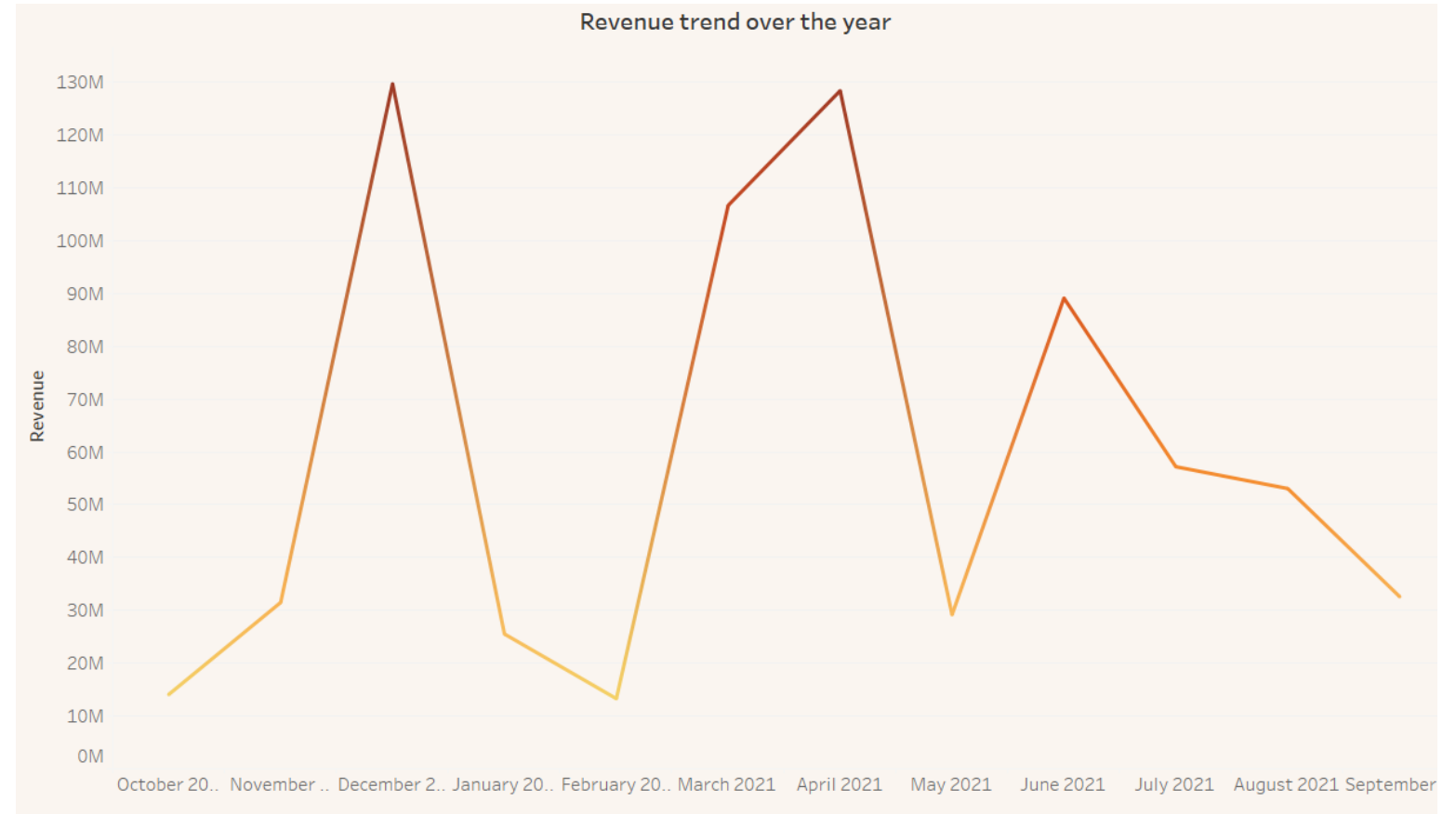
Task 6

Visualize revenue per state using geographical map.

Geographical Map

Purpose:
Compare Visualize data distribution across geographic locations to identify patterns and trends.

Task 7

Create a KPI for a revenue in a month.

KPI

Revenue in March 2021

Month

March 2021 ▾

106,687,613

Task 8

Visualize the revenue generated from product categories from all 12 months.

Find out the product category which is generating highest revenue in a month.

Heatmap

Pages

Columns ⊞ MONTH(Order Dat..

Rows Category

Filters

Marks

☐ Square ▾

Color | Size | Label

Detail | Tooltip

▦ SUM(Revenue)
T SUM(Revenue)

Sheet 10

SUM(Revenue)

981 ▬▬▬ 70,934,799

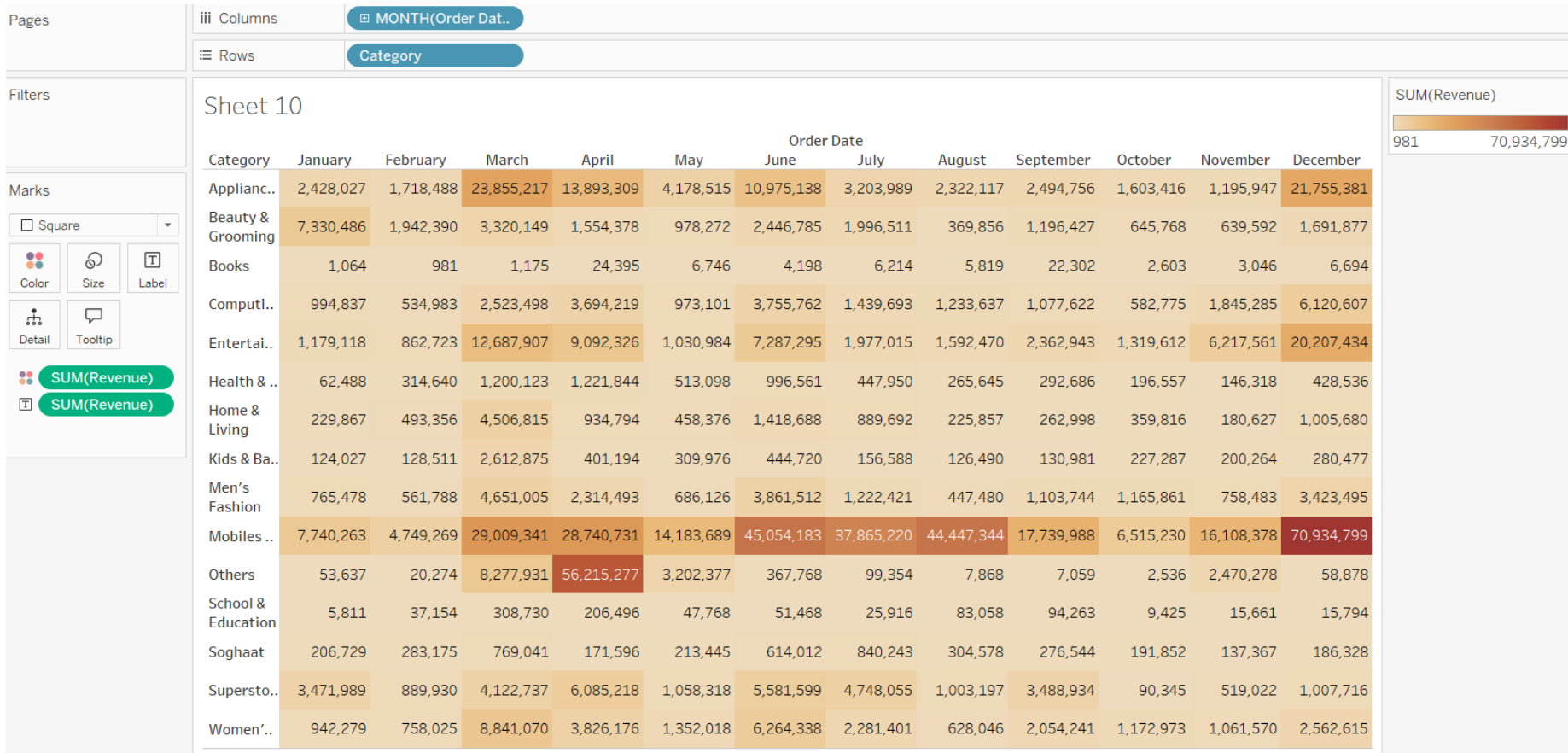| | | | | | | | Order Date | | | | | |
Category	January	February	March	April	May	June	July	August	September	October	November	December
Applianc..	2,428,027	1,718,488	23,855,217	13,893,309	4,178,515	10,975,138	3,203,989	2,322,117	2,494,756	1,603,416	1,195,947	21,755,381
Beauty & Grooming	7,330,486	1,942,390	3,320,149	1,554,378	978,272	2,446,785	1,996,511	369,856	1,196,427	645,768	639,592	1,691,877
Books	1,064	981	1,175	24,395	6,746	4,198	6,214	5,819	22,302	2,603	3,046	6,694
Computi..	994,837	534,983	2,523,498	3,694,219	973,101	3,755,762	1,439,693	1,233,637	1,077,622	582,775	1,845,285	6,120,607
Entertai..	1,179,118	862,723	12,687,907	9,092,326	1,030,984	7,287,295	1,977,015	1,592,470	2,362,943	1,319,612	6,217,561	20,207,434
Health & ..	62,488	314,640	1,200,123	1,221,844	513,098	996,561	447,950	265,645	292,686	196,557	146,318	428,536
Home & Living	229,867	493,356	4,506,815	934,794	458,376	1,418,688	889,692	225,857	262,998	359,816	180,627	1,005,680
Kids & Ba..	124,027	128,511	2,612,875	401,194	309,976	444,720	156,588	126,490	130,981	227,287	200,264	280,477
Men's Fashion	765,478	561,788	4,651,005	2,314,493	686,126	3,861,512	1,222,421	447,480	1,103,744	1,165,861	758,483	3,423,495
Mobiles ..	7,740,263	4,749,269	29,009,341	28,740,731	14,183,689	45,054,183	37,865,220	44,447,344	17,739,988	6,515,230	16,108,378	70,934,799
Others	53,637	20,274	8,277,931	56,215,277	3,202,377	367,768	99,354	7,868	7,059	2,536	2,470,278	58,878
School & Education	5,811	37,154	308,730	206,496	47,768	51,468	25,916	83,058	94,263	9,425	15,661	15,794
Soghaat	206,729	283,175	769,041	171,596	213,445	614,012	840,243	304,578	276,544	191,852	137,367	186,328
Supersto..	3,471,989	889,930	4,122,737	6,085,218	1,058,318	5,581,599	4,748,055	1,003,197	3,488,934	90,345	519,022	1,007,716
Women'..	942,279	758,025	8,841,070	3,826,176	1,352,018	6,264,338	2,281,401	628,046	2,054,241	1,172,973	1,061,570	2,562,615

Task 9

Find the top 5 product categories generating highest sales. Also, visualize the gender wise contribution to the sales.
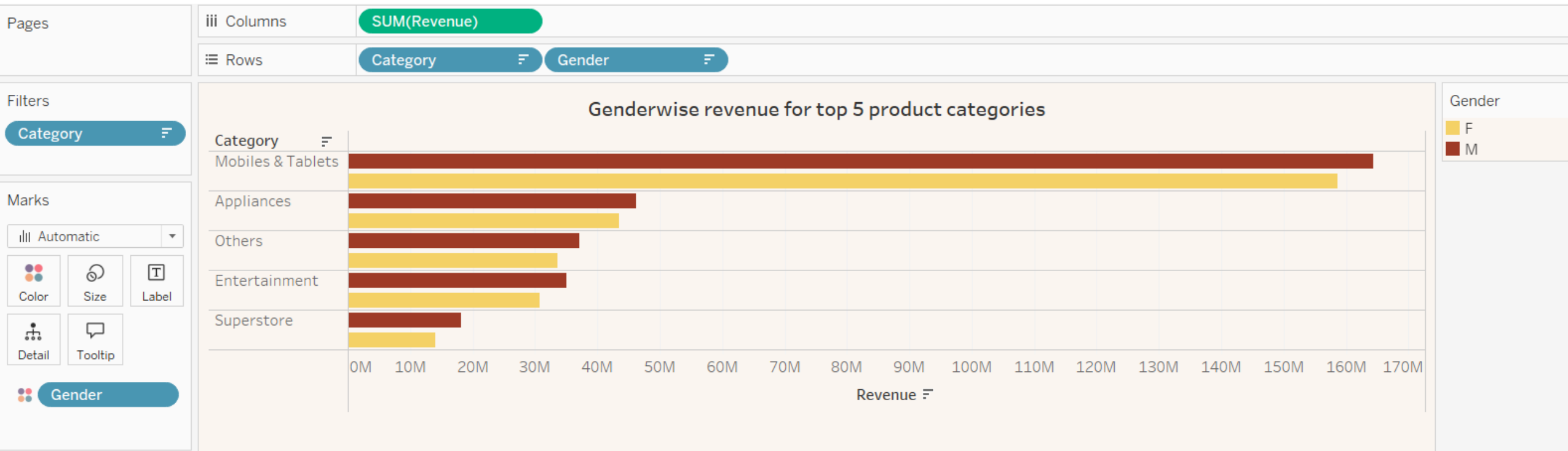
FILTERS

Filters:
Filters in Tableau are used to refine and control the data displayed in visualizations, allowing for focused analysis and better insights.

1. Selection filter
2. Wildcard filter
3. Condition filter
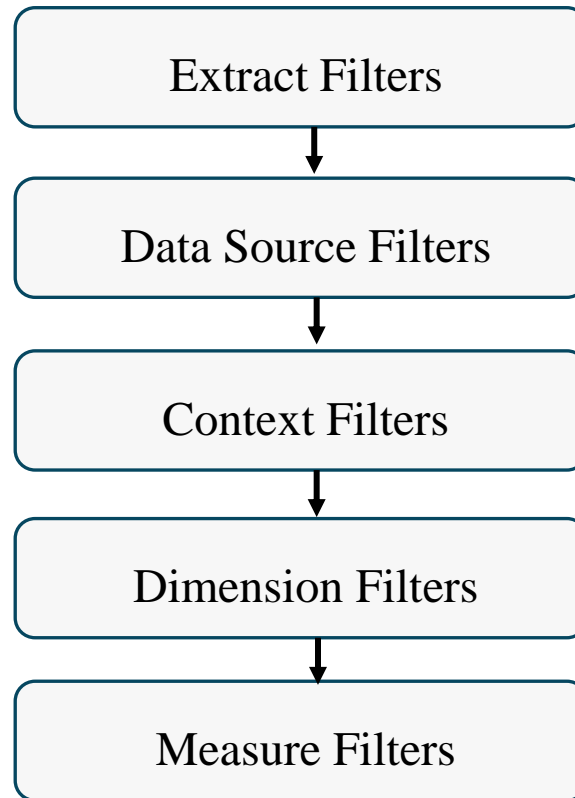4. Top 'N' filter

Dimension Filter

Task 10

Find top 3 product categories which are generating highest revenue from southern region.

Order of Filter Execution

```
┌─────────────────────────┐
│     Extract Filters      │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│   Data Source Filters    │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Context Filters      │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│    Dimension Filters     │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Measure Filters      │
└─────────────────────────┘
```

Filters

Context Filter:
Creates a **context** or **subset of data** that other filters will be applied to. It essentially sets a "context" for the remaining filters, ensuring that subsequent filters only affect the data within this subset.

Regular Filter:
Applies directly to the data, without setting a context for other filters. It works independently of other filters.

Context Filter

Find top 3 product categories which are generating highest revenue from southern region.
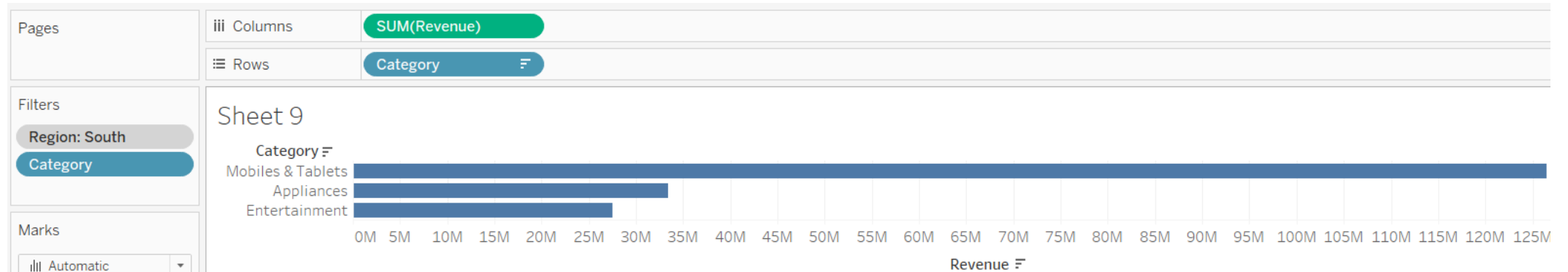
Task 11

Using geographical map, visualize the sales generated from states.

Include the revenue generated per region in tooltip.

Level of Details
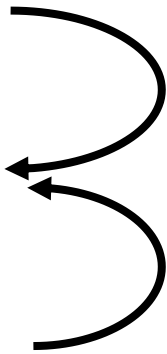
Refers to the granularity at which data is analyzed or aggregated in a visualization.

Changing the Level of Details

TYPES OF LOD

Fixed

- Calculates values at a fixed level of detail
- **Independent** of the dimensions in the view
- Not affected by dimension filter

{FIXED <list of dimensions> : Aggregations}

```
{ FIXED [Customer ID] : COUNTD([Order ID])}
```

TYPES OF LOD

Exclude

- Removes a dimension from the level of detail in the view, calculating more aggregated values.
- Affected by dimension filter

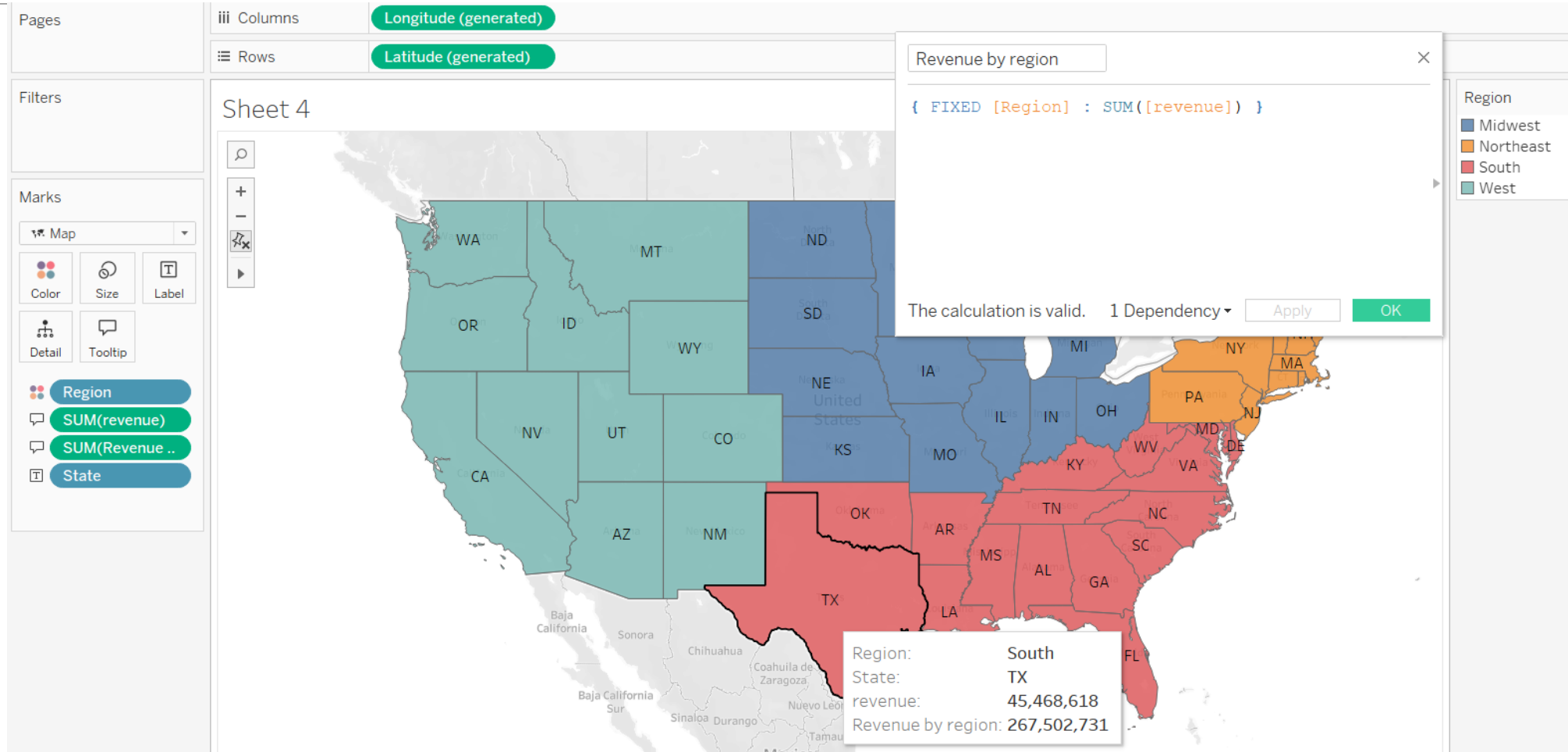{EXCLUDE <list of dimensions> : Aggregations}

Include

- Adds a calculated expression to the existing level of detail in the view
- Affected by dimension filter
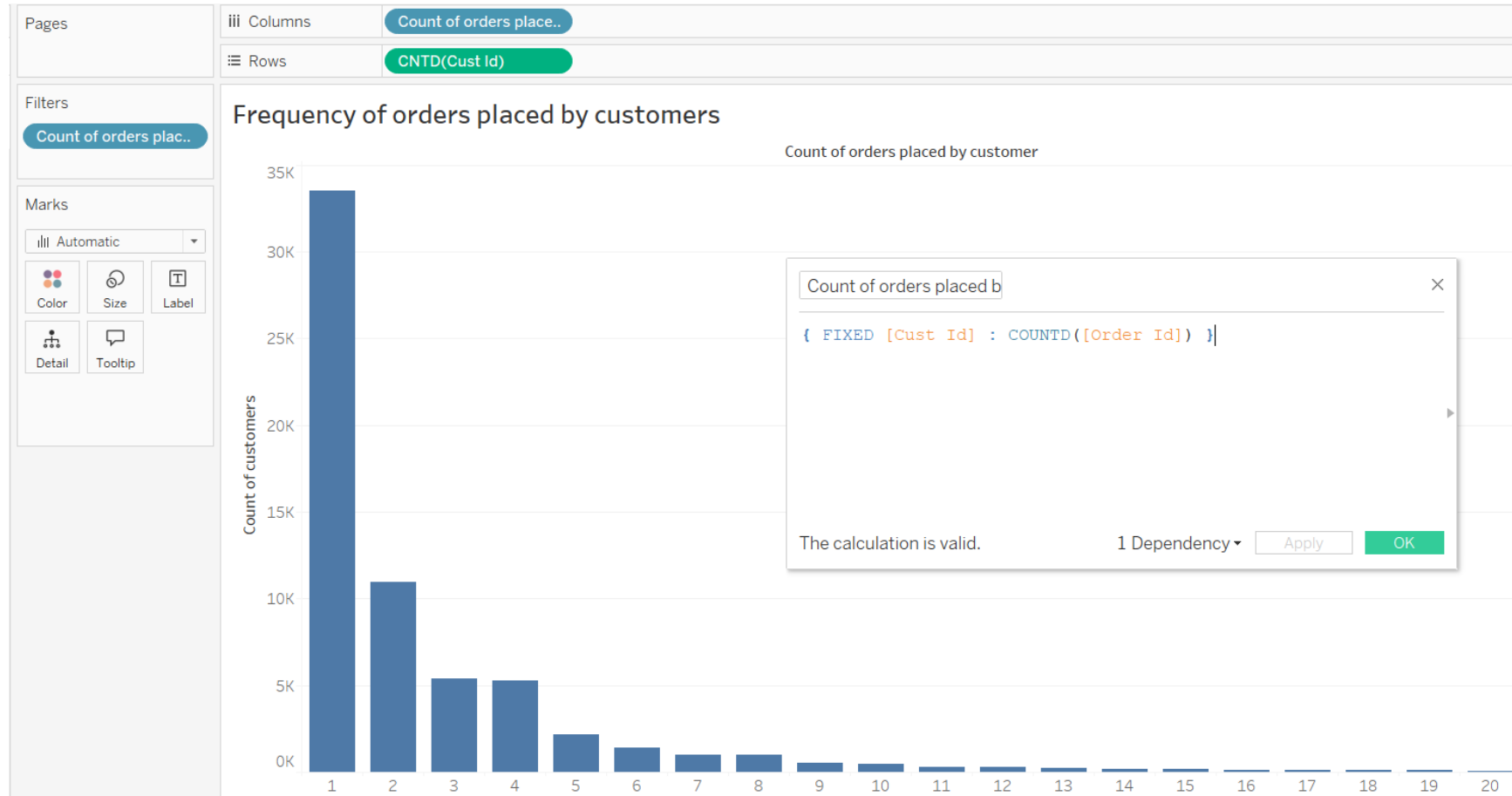
{INCLUDE <list of dimensions> : Aggregations}

Task 12

Find the frequency of orders placed by customers.

Find the frequency of orders placed by customers.

Task 13

Visualize revenue contribution (in percentage) by region, categorized by gender.

Visualize revenue contribution (in percentage) by region, categorized by gender.

Pages

Columns — Measure Names

Rows — Gender | Region

Filters

Measure Names

Marks

T Automatic ▾

Color | Size | Text

Detail | Tooltip

T Measure Values

Measure Values

SUM(revenue)

ATTR(Sales by gend..

AGG(percentage)

Revenue contribution by region, categorized by gender

Gender	Region	revenue	Sales by gender	percentage
F	Midwest	89,452,362	340,978,783	26.23%
	Northeast	57,721,436	340,978,783	16.93%
	South	127,425,146	340,978,783	37.37%
	West	66,379,839	340,978,783	19.47%
	Total	340,978,783	340,978,783	100.00%
M	Midwest	110,647,126	369,296,851	29.96%
	Northeast	59,672,985	369,296,851	16.16%
	South	140,077,585	369,296,851	37.93%
	West	58,899,155	369,296,851	15.95%
	Total	369,296,851	369,296,851	100.00%
Grand Total		710,275,634	*	

Task 14

Compute average revenue from states from each region.

(Note: Compute the average by considering revenue from cities in the respective states.)

Pages

≡ Rows | Region | State

Filters

Measure Names ≡

Marks

T Automatic ▾

Color	Size	Text

Detail	Tooltip

T Measure Values

Measure Values

SUM(revenue)

AGG(Average revenu..

Average revenue from states from each region

Region	State	revenue	Average revenue from states from each region
Midwest	IA	17,290,472	22,632
	IL	36,340,461	36,268
	IN	17,101,005	28,454
	KS	9,831,997	19,431
	MI	18,694,205	26,293
	MN	17,107,671	25,803
	MO	23,751,164	30,568
	ND	6,996,176	22,789
	NE	9,233,737	22,090
	OH	26,618,282	32,422
	SD	5,669,607	17,662
	WI	11,464,709	18,432
Northeast	CT	5,767,429	27,077
	MA	12,359,713	30,711
	ME	7,764,976	
	NH	3,966,230	
	NJ	13,949,926	
	NY	35,020,453	
	PA	30,051,234	
	RI	952,115	
	VT	7,562,345	
South	AL	11,538,740	
	AR	10,251,907	
	DC	3,743,253	
	DE	1,402,086	
	FL	26,325,586	
	GA	15,776,768	
	KY	21,008,992	
	LA	10,445,827	26,580

Average revenue from st ✕

```
AVG({ INCLUDE [City]: SUM([revenue])})
```

The calculation is valid.   1 Dependency ▾   Apply   OK

QnA