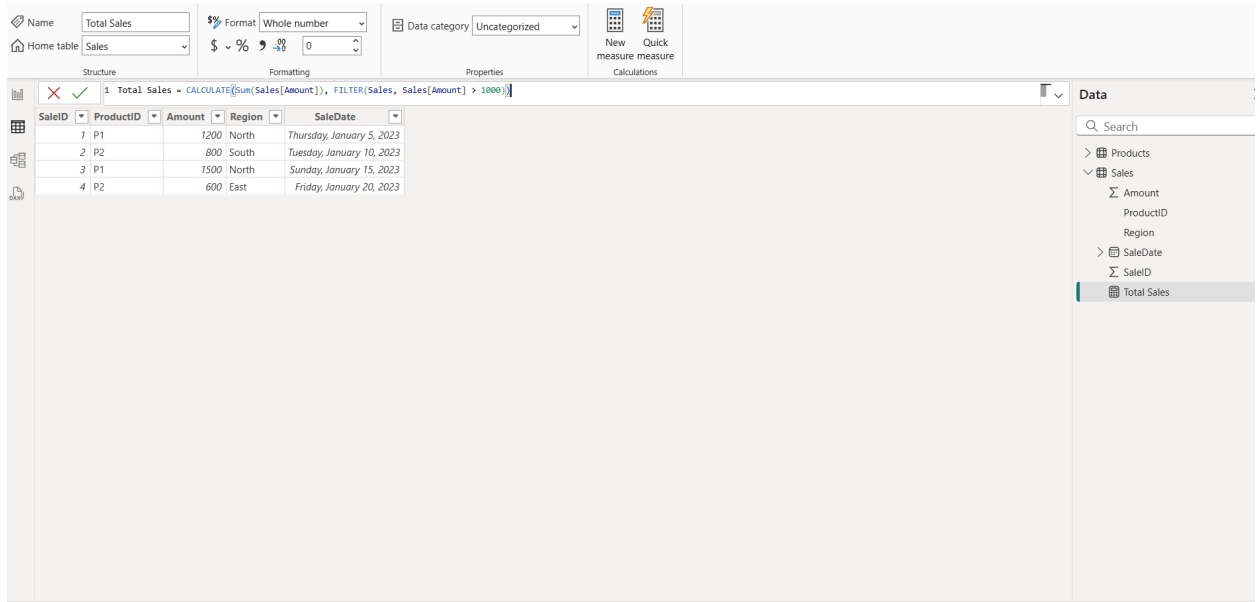
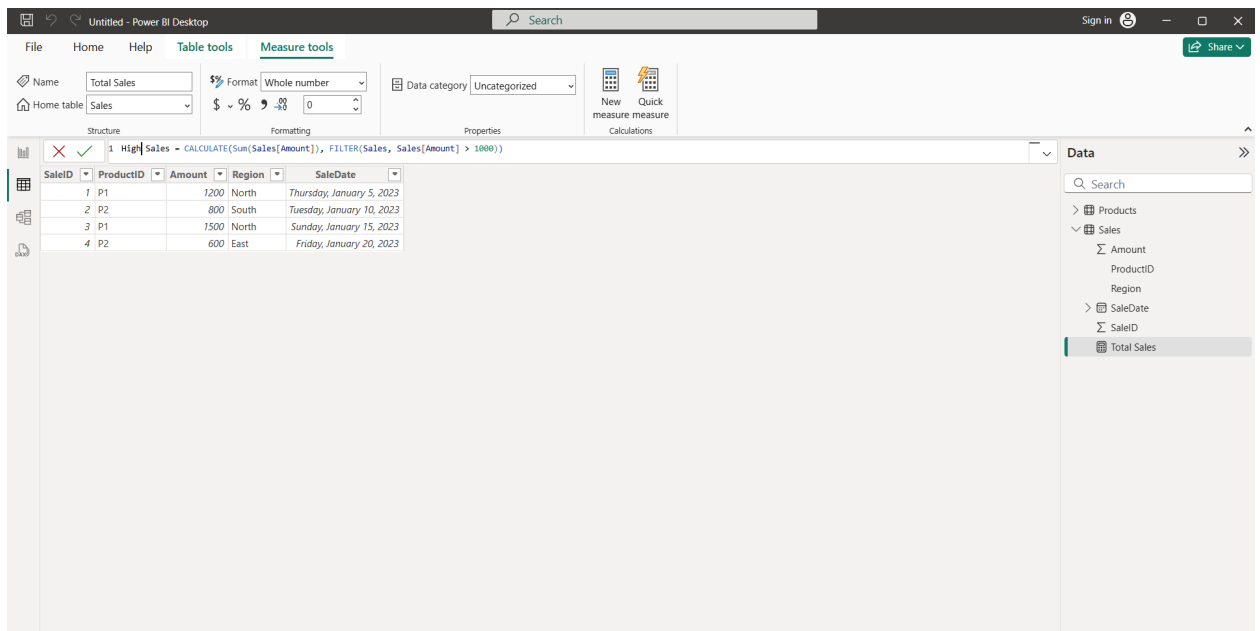


## 1. What does **FILTER(Sales, Sales[Amount] > 1000)** return?

**FILTER** is used inside of functions: **SUMX()**, **CALCULATE()**, **AVERAGEX()** to filter the table in order to get the data we want with a specific condition



## 2. Write a measure **High Sales** that sums **Amount** where **Amount > 1000** using **FILTER**.



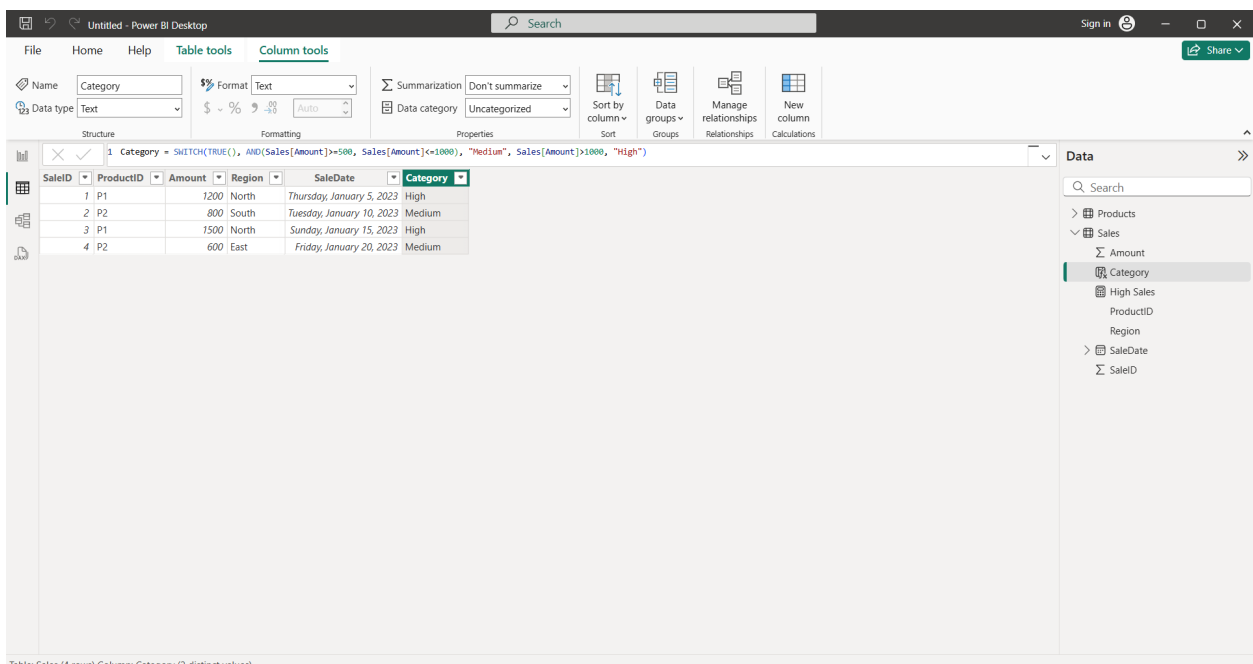
## 3. How does **ALLEXCEPT(Sales, Sales[Region])** differ from **ALL(Sales)**?

**ALL(Sales)** ignores all filter of the original sales table and calculate the value accordingly. **ALLEXCEPT(Sales, Sales[Region])** calculates with all filters except from **Sales[Region]** column, it mean that all filters can't affect the value in a visualization part except from Region column, and only slicer with **Sales[Region]** can give the value with filtering

#### 4. Use SWITCH to categorize Amount:

"Medium" if 500-1000

"High" if > 1000 ``



#### 5. What is the purpose of ALLSELECTED?

The purpose of **ALLSELECTED** is to keep the values the user selected using slicers or visuals, even from outside the current visual.

#### 6. Write a measure Regional Sales % showing each sale's contribution to its region's total (use ALLEXCEPT).

1 Regional Sales % =

2 DIVIDE(

3 SUM(Sales[Amount]),

4 CALCULATE(SUM(Sales[Amount]), ALLEXCEPT(Sales, Sales[Region])), 0

5 )

SaleID	ProductID	Amount	Region	SaleDate	Category	Product Category
1	P1	1200	North	Thursday, January 5, 2023	High	Electronics
2	P2	800	South	Tuesday, January 10, 2023	Medium	Furniture
3	P1	1500	North	Sunday, January 15, 2023	High	Electronics
4	P2	600	East	Friday, January 20, 2023	Medium	Furniture

Quick measure

Search

- Products
- Sales
  - Amount
  - Category
  - Electronics Sales
  - High Sales
  - High\_Sales
  - Measure
  - Product Category
  - ProductID
  - Region
  - Regional Sales %
  - SaleDate
  - SaleID
  - Top2Products
  - Total Sales

7. Create a dynamic measure using SWITCH to toggle between SUM, AVERAGE, and COUNT of Amount.

-

8. Use FILTER inside CALCULATE to exclude "Furniture" sales (Products[Category] = "Furniture").

File Home Help Table tools Measure tools

Name Electronics Sales

Format Whole number

Data category Uncategorized

Home table Sales

Format

Properties

Calculations

1 Electronics Sales = CALCULATE(SUM(Sales[Amount]), FILTER(Sales, Sales[Product Category] < "Furniture"))

SaleID	ProductID	Amount	Region	SaleDate	Category	Product Category
1	P1	1200	North	Thursday, January 5, 2023	High	Electronics
2	P2	800	South	Tuesday, January 10, 2023	Medium	Furniture
3	P1	1500	North	Sunday, January 15, 2023	High	Electronics
4	P2	600	East	Friday, January 20, 2023	Medium	Furniture

Quick measure

Search

- Products
- Sales
  - Amount
  - Category
  - Electronics Sales
  - High Sales
  - High\_Sales
  - Measure
  - Product Category
  - ProductID
  - Region
  - Regional Sales %
  - SaleDate
  - SaleID
  - Top2Products
  - Total Sales

9. Why might ALLSELECTED behave unexpectedly in a pivot table?

## 10. Write a measure that calculates total sales and ignores filters from region

The screenshot shows the Power BI Desktop interface. The 'Measure tools' ribbon is active, and the formula bar contains the measure: `1 Total Sales = CALCULATE(SUM(Sales[Amount]), ALL(Sales[Region]))`. The 'Sales' table is displayed in the data pane, showing columns: SaleID, ProductID, Amount, Region, SaleDate, Category, and Product Category. The data is as follows:

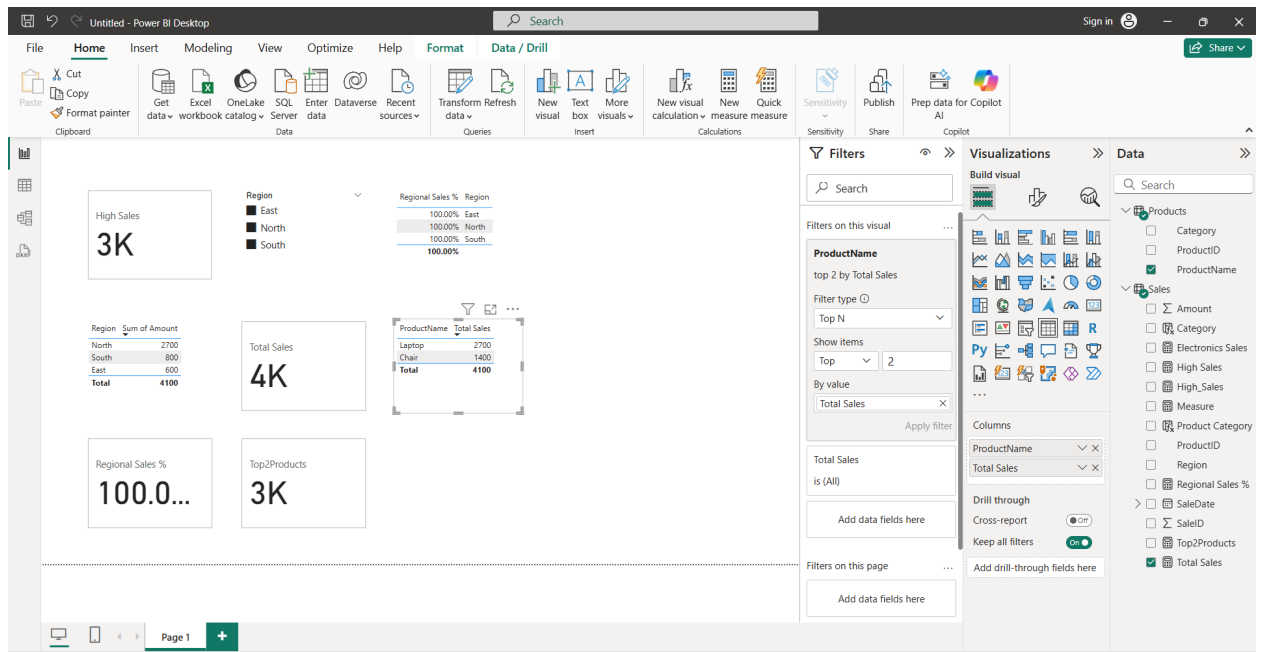
SaleID	ProductID	Amount	Region	SaleDate	Category	Product Category
1	P1	1200	North	Thursday, January 5, 2023	High	Electronics
2	P2	800	South	Tuesday, January 10, 2023	Medium	Furniture
3	P1	1500	North	Sunday, January 15, 2023	High	Electronics
4	P2	600	East	Friday, January 20, 2023	Medium	Furniture

## 11. Optimize this measure: High Sales = CALCULATE(SUM(Sales[Amount]), FILTER(Sales, Sales[Amount] > 1000)) (Hint: Replace FILTER with a Boolean filter inside CALCULATE.)

The screenshot shows the Power BI Desktop interface. The 'Measure tools' ribbon is active, and the formula bar contains the measure: `1 High Sales = CALCULATE(SUM(Sales[Amount]), Sales[Amount] > 1000)`. The 'Sales' table is displayed in the data pane, showing columns: SaleID, ProductID, Amount, Region, SaleDate, Category, and Product Category. The data is as follows:

SaleID	ProductID	Amount	Region	SaleDate	Category	Product Category
1	P1	1200	North	Thursday, January 5, 2023	High	Electronics
2	P2	800	South	Tuesday, January 10, 2023	Medium	Furniture
3	P1	1500	North	Sunday, January 15, 2023	High	Electronics
4	P2	600	East	Friday, January 20, 2023	Medium	Furniture

12. Write a measure **Top 2 Products** using **TOPN** and **FILTER** to show the highest-grossing products.



13. Use **ALLSELECTED** with no parameters to respect slicers but ignore visual-level filters.
14. Debug: A **SWITCH** measure returns incorrect values when fields are added to a matrix visual.
15. Simulate a "reset filters" button using **ALL** in a measure.