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

It returns a table containing only rows from Sales where Amount > 1000.

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

High Sales = CALCULATE(SUM(Sales[Amount]), FILTER(Sales, Sales[Amount] > 1000))

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

ALL(Sales) removes all filters on the Sales table. ALLEXCEPT(Sales, Sales[Region]) removes all filters except Region, keeping region-level grouping intact.

## Use SWITCH to categorize Amount: Medium if 500–1000, High if > 1000

Amount Category = SWITCH(TRUE(), Sales[Amount] > 1000, "High", Sales[Amount] >= 500 && Sales[Amount] <= 1000, "Medium", "Low")

## What is the purpose of ALLSELECTED?

ALLSELECTED returns all values in a column/table considering slicer selections but ignoring visual-level filters. Useful for % of total calculations within user-selected ranges.

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

Regional Sales % = DIVIDE(SUM(Sales[Amount]), CALCULATE(SUM(Sales[Amount]), ALLEXCEPT(Sales, Sales[Region])))

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

Dynamic Measure = SWITCH(SELECTEDVALUE(MeasureChoice[Measure]), "Sum", SUM(Sales[Amount]), "Average", AVERAGE(Sales[Amount]), "Count", COUNT(Sales[Amount]) )

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

No Furniture Sales = CALCULATE(SUM(Sales[Amount]), FILTER(Products, Products[Category] <> "Furniture"))

## Why might ALLSELECTED behave unexpectedly in a pivot table?

Because ALLSELECTED depends on user-selected filters. If visuals or slicers interact in unexpected ways, results may differ from ALL or ALLEXCEPT.

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

Total Sales Ignore Region = CALCULATE(SUM(Sales[Amount]), ALL(Sales[Region]))

## Optimize this measure: High Sales = CALCULATE(SUM(Sales[Amount]), FILTER(Sales, Sales[Amount] > 1000))

Optimized High Sales = CALCULATE(SUM(Sales[Amount]), Sales[Amount] > 1000) (Boolean filter is faster than FILTER).

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

Top 2 Products = CALCULATETABLE( TOPN(2, SUMMARIZE(Sales, Sales[ProductID], "TotalSales", SUM(Sales[Amount])), [TotalSales], DESC), ALL(Sales) )

## Use ALLSELECTED with no parameters to respect slicers but ignore visual-level filters.

Example: Total Sales (Selected) = CALCULATE(SUM(Sales[Amount]), ALLSELECTED())

## Debug: A SWITCH measure returns incorrect values when fields are added to a matrix visual.

Likely cause: SWITCH is based on SELECTEDVALUE which returns BLANK when multiple values exist. Fix: use HASONEVALUE() to ensure context or use MAX() instead of SELECTEDVALUE.

## Simulate a "reset filters" button using ALL in a measure.

Reset Total Sales = CALCULATE(SUM(Sales[Amount]), ALL(Sales))

## Sample Lesson 10 Sales Data:

| SaleID | ProductID | Amount | Region | SaleDate |
|---|---|---|---|---|
| 1 | P1 | 1200 | North | 1/5/2023 |
| 2 | P2 | 800 | South | 1/10/2023 |
| 3 | P1 | 1500 | North | 1/15/2023 |

| | | | | |
|---|---|---|---|---|
| 4 | P2 | 600 | East | 1/20/2023 |