Lesson 9 - Context in DAX & CALCULATE

1. What is row context? Give an example in a calculated column.

Row context means evaluating expressions for each row. Example: Sales[TotalPrice] = Sales[Quantity] * Sales[UnitPrice].

2. Write a measure that finds total sales

Total Sales = SUMX(Sales, Sales[Quantity] * Sales[UnitPrice])

3. Use RELATED to fetch the Name from the Customers table into the Sales table.

Add a column: Name = RELATED(Customers[Name])

4. What does CALCULATE(SUM(Sales[Quantity]), Sales[Category] = "Electronics") return?

It returns the total quantity where Category = "Electronics".

5. Explain the difference between VAR and RETURN in DAX.

VAR defines a variable; RETURN outputs its result. Useful for readability and performance.

6. Create a calculated column in Sales called TotalPrice using row context (Quantity * UnitPrice).

TotalPrice = Sales[Quantity] * Sales[UnitPrice]

7. Write a measure Electronics Sales using CALCULATE to sum sales only for the "Electronics" category.

Electronics Sales = CALCULATE(SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]), Sales[Category] = "Electronics")

8. Use ALL(Sales[Category]) in a measure to show total sales ignoring category filters.

Total Sales (All) = CALCULATE(SUMX(Sales, Sales[Quantity] * Sales[UnitPrice]), ALL(Sales[Category]))

9. Fix this error: A calculated column in Sales uses RELATED(Customers[Region]) but returns blanks.

Check if Customers table is related to Sales table. Missing relationship causes blanks.

10. Why does CALCULATE override existing filters?

CALCULATE modifies the filter context by applying new filters or overriding existing ones.

11. Write a measure that returns average unitprice of products

Average UnitPrice = AVERAGE(Sales[UnitPrice])

12. Use VAR to store a temporary table of high-quantity sales (Quantity > 2), then count rows.

HighQty = VAR t = FILTER(Sales, Sales[Quantity] > 2) RETURN COUNTROWS(t)

13. Write a measure `% of Category Sales` that shows each sale's contribution to its category total.

% of Category Sales = DIVIDE(SUM(Sales[Quantity]), CALCULATE(SUM(Sales[Quantity]), ALLEXCEPT(Sales, Sales[Category])))

14. Simulate a "remove filters" button using ALL in a measure.

Remove Filters = CALCULATE(SUM(Sales[Quantity]), ALL(Sales))

15. Troubleshoot: A CALCULATE measure ignores a slicer. What’s the likely cause?

The slicer is on an unrelated table or incorrect relationship direction.