Lesson 8 - Introduction to DAX Basics

1. What does DAX stand for?

DAX stands for Data Analysis Expressions.

2. Write a DAX formula to sum the Sales column.

SUM(Sales)

3. What is the difference between a calculated column and a measure?

Calculated columns are row-by-row and stored in the table; Measures are calculated on the fly and are not stored.

4. Use the DIVIDE function to calculate Profit Margin (Profit/Sales).

DIVIDE([Profit], [Sales])

5. What does COUNTROWS() do in DAX?

COUNTROWS() counts the number of rows in a table.

6. Create a measure: Total Profit that subtracts total cost from total sales

Total Profit = SUMX(Sheet1, Sheet1[Sales] - Sheet1[Cost])

7. Write a measure to calculate Average Sales per Product.

Average Sales per Product = DIVIDE(SUM(Sheet1[Sales]), DISTINCTCOUNT(Sheet1[ProductID]))

8. Use IF() to tag products as "High Profit" if Profit > 1000.

High Profit Tag = IF([Profit] > 1000, "High Profit", "Low Profit")

9. What is a circular dependency error in a calculated column?

A circular dependency error occurs when a calculated column depends on itself, directly or indirectly.

10. Explain row context vs. filter context.

Row context refers to the current row in calculations; Filter context refers to filters applied to visuals/measures.

11. Write a measure to calculate YTD Sales using TOTALYTD().

YTD Sales = TOTALYTD(SUM(Sheet1[Sales]), Sheet1[Date])

12. Create a dynamic measure that switches between Sales, Profit, and Margin.

Dynamic Measure = SWITCH(TRUE(), [Selection]="Sales", [Sales], [Selection]="Profit", [Profit], [Margin])

13. Optimize a slow DAX measure using variables (VAR).

Use VAR to store intermediate results to avoid recomputation and improve readability and speed.

14. Use CALCULATE() to override a filter

CALCULATE(SUM(Sales), Region="East")

15. Write a measure that returns the highest sales amount

MAX(Sales)