

1. What does DAX stand for?

DAX stands for Data Analysis Expression. DAX is a functional language. Every expression is a function call, and function parameters can also be function calls.

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

Sum of Sales = SUM(Retail\_Sales\_Data[Sales])

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

Calculated column stores a value per row in a table, while a measure calculates the result based on the current filtering context. This context might be slicers or column/row selections in a pivot table.

Calculated columns:

- Each row in the table gets its own calculated value.
- They are stored in the data model and consume memory.
- The value remains constant regardless of the user filters.
- Mainly used for adding new attributes and categories based on the row, categorize data, place calculated results in pivot tables, using the result as a filter condition.

Measures:

- Calculates values based on the aggregation of rows within the current filter context.
- Only the DAX formula is stored in the memory, not the calculated result.
- Filters affect the result
- Mainly used to calculate aggregates like sum, average, max, min, etc., dynamic calculations that change based on filters, calculate year-over-year variances.

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

Profit Margin = DIVIDE(Sheet1[Profit], Sheet1[Sales])

5. What does COUNTROWS() do in DAX?

COUNTROWS() function is used to count the number of rows within the specified table or a table defined by an expression. It is more preferable than

COUNT() function when calculating the total number of rows in the table since it's more efficient and avoids counting blank values.

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

Total Profit = SUM(Sheet1[Cost]) - SUM(Sheet1[Sales])

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

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

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



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

When 2 or more calculated columns, measures or tables references each other directly or indirectly. This creates a loop which Power BI cannot process.

10. Explain row context vs. filter context.

Row context defines the current row being evaluated in a calculation, while filter context specifies the rows that are visible or considered in a calculation based on filters applied.

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

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

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



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



14. Use CALCULATE() to override a filter

```
Total Sales All Regions =  
CALCULATE(  
    SUM(Sheet1[Sales]),  
    ALL(Sheet1[Region])  
)
```

15. Write a measure that returns the highest sales amount

```
Highest Sales Amount = MAXX(Sheet1, Sheet1[Sales])
```