DAX Questions and Answers

1. 1. What does DAX stand for?

DAX = Data Analysis Expressions → a formula language used in Power BI, Power Pivot, and SSAS Tabular.

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

Total Sales = SUM(Sales[Sales])

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

- Calculated Column → Computed row by row, stored in the table. Increases data model size.
- Measure → Calculated on the fly based on filter context. More efficient for aggregations.

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

Profit Margin = DIVIDE(SUM(Sales[Profit]), SUM(Sales[Sales]), 0)

5. 5. What does COUNTROWS() do in DAX?

It returns the number of rows in a table.
Row Count = COUNTROWS(Sales)

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

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

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

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

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

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

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

It happens when a column's formula refers directly or indirectly to itself, creating a loop.

10. 10. Explain row context vs. filter context.

- Row Context → Calculations done row by row (e.g., calculated columns).
- Filter Context → Filters applied by visuals, slicers, or CALCULATE().

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

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

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

Selected Measure = SWITCH(
   SELECTEDVALUE(Metric[Name]),
   "Sales", SUM(Sales[Sales]),
   "Profit", SUM(Sales[Profit]),
   "Margin", DIVIDE(SUM(Sales[Profit]), SUM(Sales[Sales]))
)

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

Profit Margin Optimized =
VAR TotalProfit = SUM(Sales[Profit])
VAR TotalSales = SUM(Sales[Sales])
RETURN DIVIDE(TotalProfit, TotalSales, 0)

14. 14. Use CALCULATE() to override a filter

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

15. 15. Write a measure that returns the highest sales amount

Max Sales = MAX(Sales[Sales])
OR
Max Sales Amount = MAXX(ALL(Sales[ProductID]), SUM(Sales[Sales]))