

1. What does DAX stand for?

DAX stands for **Data Analysis Expressions**.

It's a formula language used in Power BI, Excel Power Pivot, and Analysis Services for creating **measures**, **calculated columns**, and **custom calculations**.

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

Feature	Calculated Column	Measure
Evaluated for	Each row in a table	Entire table (aggregated context)
Stored in model	Yes (increases model size)	No (calculated on-the-fly)
Used in	Rows, slicers, and grouping	Cards, charts, KPIs, etc.

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

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

`DIVIDE()` is safer than `/` — it handles divide-by-zero errors automatically.

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

It returns the **number of rows** in a table.

```
Order Count = COUNTROWS(Sales)
```

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

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

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

It occurs when a column refers **indirectly or directly to itself** during calculation, causing an **infinite loop**.

Example:

```
ColumnA = Sales[ColumnA] + 10 // ✗ circular reference
```

10. Explain row context vs. filter context

Context Type	Description
Row Context	Calculations made row by row , as in calculated columns
Filter Context	Filters applied by slicers, visuals, or <code>CALCULATE()</code> in measures

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

Instead of repeating calculations:

```
Optimized Measure =  
VAR TotalSales = SUM(Sales[Sales])  
VAR TotalCost = SUM(Sales[Cost])  
RETURN TotalSales - TotalCost
```

Improves readability and performance by avoiding repeated calculations.

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

```
Sales Without Region =  
CALCULATE (  
    SUM(Sales[Sales]),  
    REMOVEFILTERS(Sales[Region])  
)
```

`CALCULATE ()` modifies the **filter context** of a calculation.