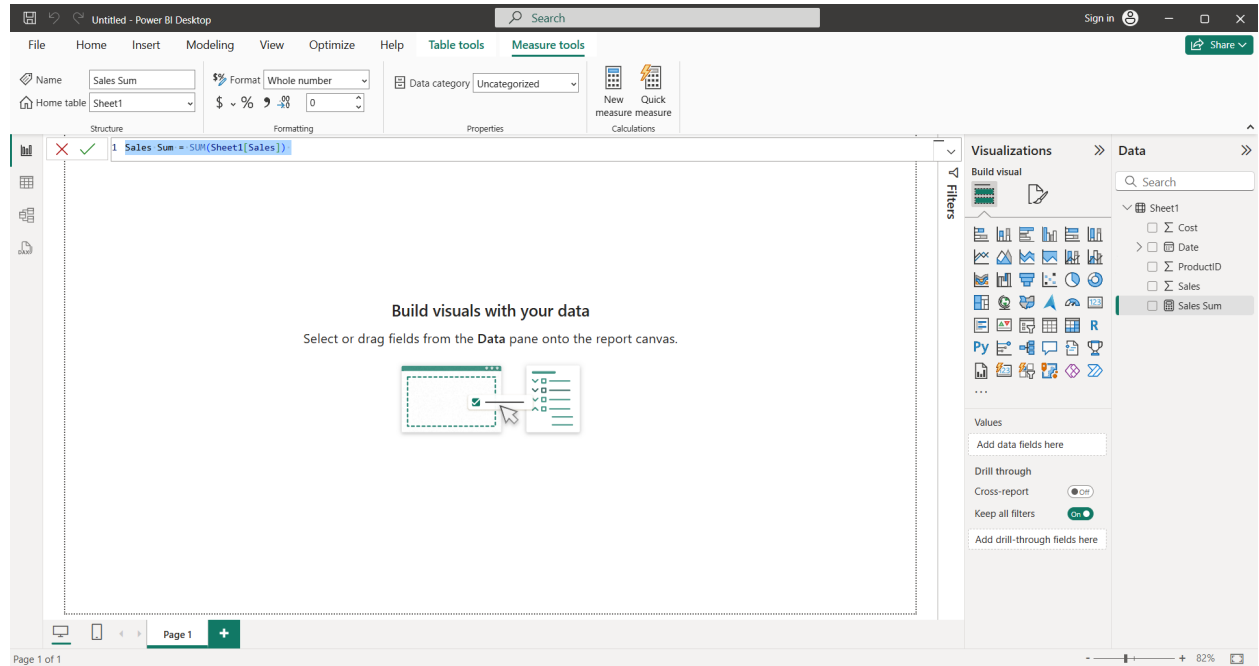


1. What does DAX stand for?

Data Analysis Expressions (DAX) is a formula expression language used in Analysis Services, Power BI, and Power Pivot in Excel.

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



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

A calculated column is evaluated for each row and stored in the table. A measure is calculated only when used in a visual and summarizes data based on filters. Columns are row-level; measures are summary-level.

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

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File Home Help Table tools Column tools

Name: Profit Margin Format: General Summarization: Sum Data type: Decimal number Data category: Uncategorized

Structure: Profit Margin = DIVIDE(Sheet1[Profit], Sheet1[Sales], 0)

ProductID	Sales	Cost	Date	Profit	Profit Margin
1	6000	4000	Sunday, January 1, 2023	2000	0.3333333333333333
2	3000	2000	Monday, January 2, 2023	1000	0.3333333333333333
3	2000	1500	Tuesday, January 3, 2023	500	0.25

Quick measure: Copilot can help. Get measure suggestions in DAX query view. Try it now.

Select a calculation to create a measure.

Select a calculation

Data: Sheet1, Cost, Date, ProductID, Profit, Profit Margin, Sales, Sales Sum

Table: Sheet1 (3 rows) Column: Profit Margin (2 distinct values)

5. What does COUNTROWS() do in DAX?

COUNTROWS in Power BI DAX returns the number of rows in a table.

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File Home Help Table tools Column tools

Name: Profit Margin Format: General Summarization: Sum Data type: Decimal number Data category: Uncategorized

Structure: 1 Count Rows = COUNTROWS(Sheet1)

ProductID	Sales	Cost	Date	Profit	Profit Margin
1	6000	4000	Sunday, January 1, 2023	2000	0.3333333333333333
2	3000	2000	Monday, January 2, 2023	1000	0.3333333333333333
3	2000	1500	Tuesday, January 3, 2023	500	0.25

Quick measure: Copilot can help. Get measure suggestions in DAX query view. Try it now.

Select a calculation to create a measure.

Select a calculation

Data: Sheet1, Cost, Date, ProductID, Profit, Profit Margin, Sales, Sales Sum

Table: Sheet1 (3 rows) Column: Profit Margin (2 distinct values)

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

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File Home Help Table tools Measure tools

Name: Total Profit Format: Whole number Data category: Uncategorized

Home table: Sheet1 \$ % 0

Structure: 1 Total Profit = [Total Sales] - [Total Cost]

ProductID	Sales	Cost	Date	Profit	Count Rows	Profit Margin
1	6000	4000	Sunday, January 1, 2023	2000	3	0.333333333333333
2	3000	2000	Monday, January 2, 2023	1000	3	0.333333333333333
3	2000	1500	Tuesday, January 3, 2023	500	3	0.25

Quick measure: Select a calculation to create a measure.

Data: Sheet1, Cost, Count Rows, Date, ProductID, Profit, Profit Margin, Sales, Sales Sum, Total Cost, Total Profit, Total Sales

Table: Sheet1 (3 rows) Column: Total Profit (0 distinct values)

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

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File Home Help Table tools Measure tools

Name: Average Sales Format: General Data category: Uncategorized

Home table: Sheet1 \$ % Auto

Structure: 1 Average Sales = AVERAGE(sheet1[Sales])

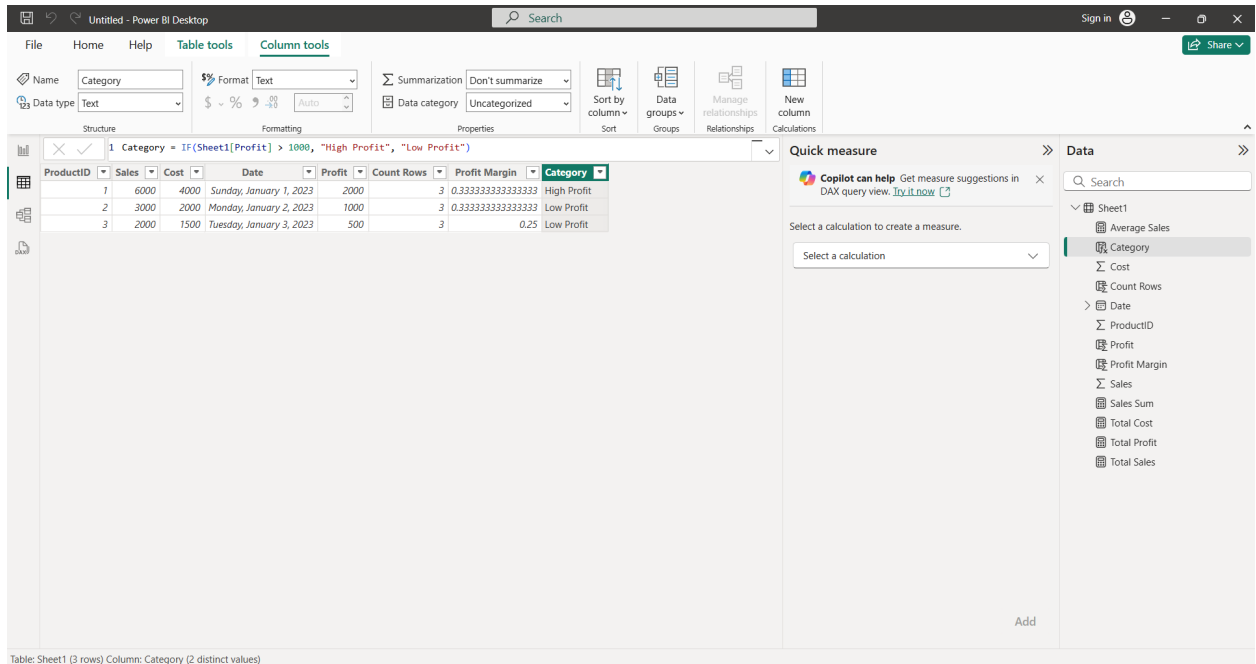
ProductID	Sales	Cost	Date	Profit	Count Rows	Profit Margin
1	6000	4000	Sunday, January 1, 2023	2000	3	0.333333333333333
2	3000	2000	Monday, January 2, 2023	1000	3	0.333333333333333
3	2000	1500	Tuesday, January 3, 2023	500	3	0.25

Quick measure: Select a calculation to create a measure.

Data: Sheet1, Average Sales, Cost, Count Rows, Date, ProductID, Profit, Profit Margin, Sales, Sales Sum, Total Cost, Total Profit, Total Sales

Table: Sheet1 (3 rows) Column: Average Sales (0 distinct values)

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



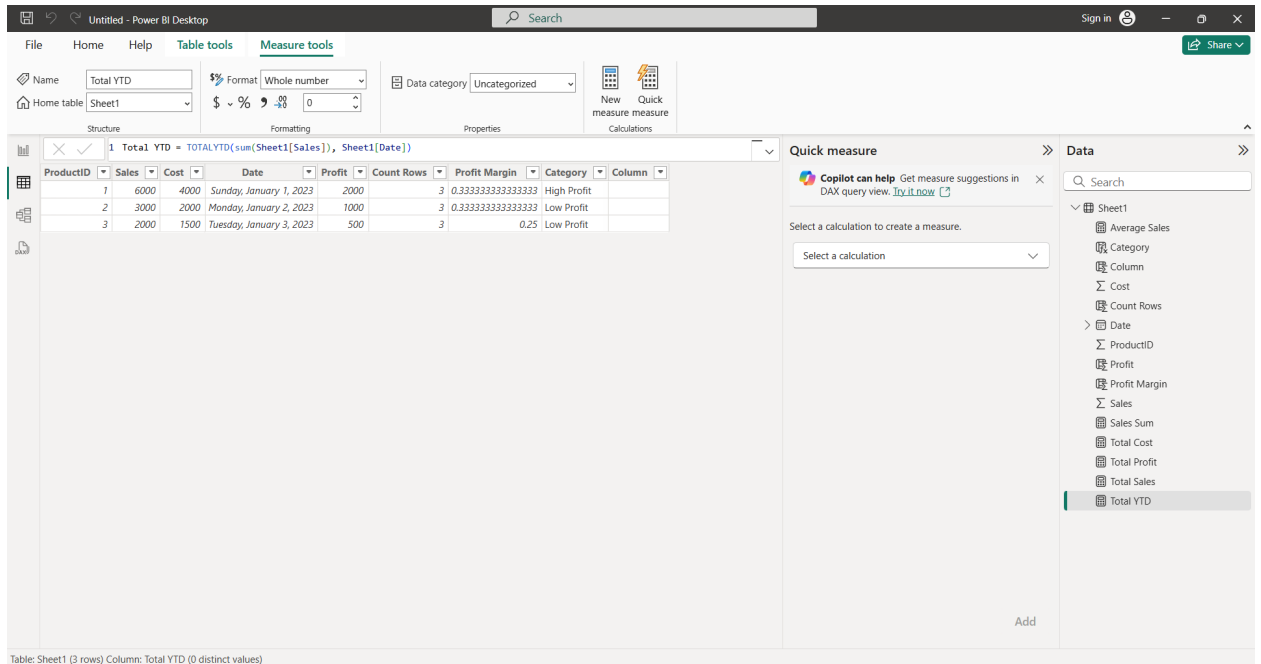
9. What is a circular dependency error in a calculated column?

In Power BI, a circular dependency error occurs when two or more calculated columns or measures in a table indirectly rely on each other, creating a loop that prevents Power BI from resolving the calculation order.

10. Explain row context vs. filter context.

Row context refers to the current row being processed in a calculation, while filter context refers to the set of filters applied to the data before calculations occur.

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



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
15. Write a measure that returns the highest sales amount

