

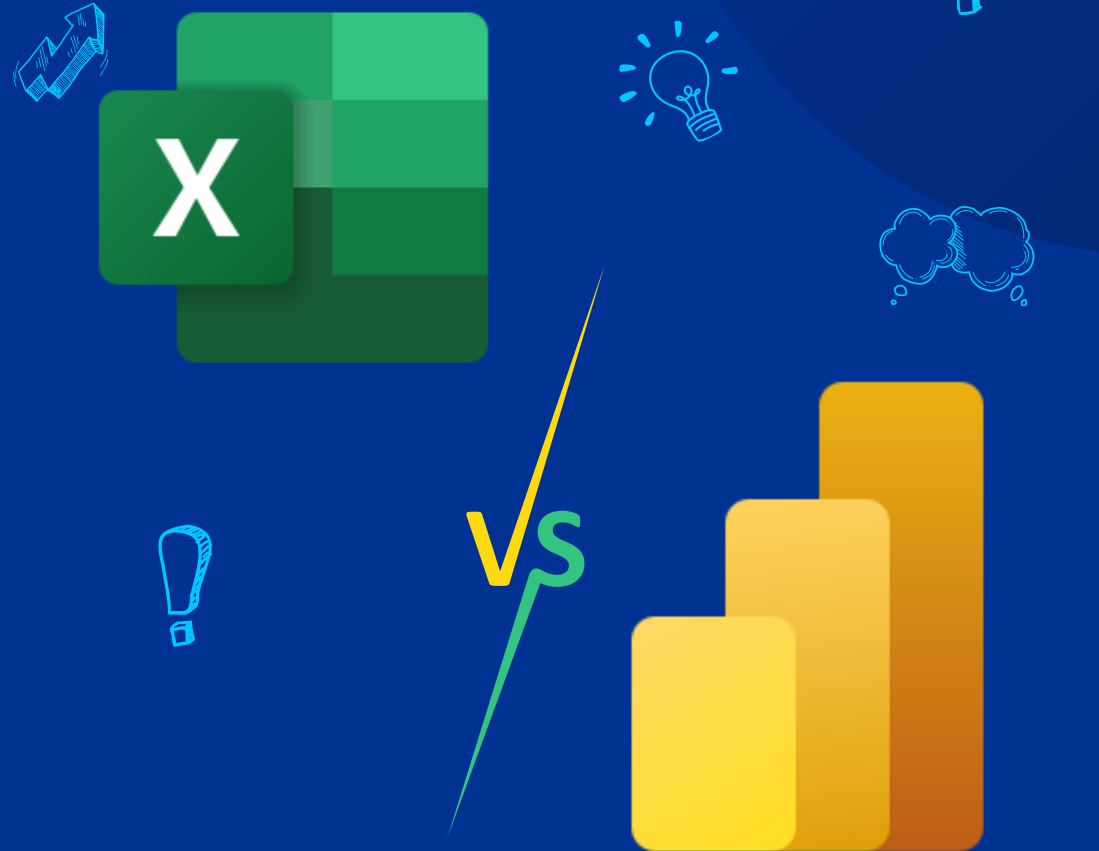
DAY 1

TOPIC: 5 POPULAR FUNCTIONS IN EXCEL AND POWER BI

DAILY DATA JOURNEY



ANIRUDDHA
BISWAS



FUNCTION 1: WE'LL LOOK AT HOW TO USE THE **SUM** FUNCTION IN BOTH EXCEL AND POWER BI.

In Excel To calculate the total of a range of numbers, we can use the SUM function. Here's how:

1. Select the cell where you want the result to appear.
2. Type =SUM(and then select the range of cells you want to sum.)
3. Press Enter.

In Power BI, To sum a column of data, we can create a measure using the SUM function.

1. In the Fields pane, right-click on the table where you want to create the measure and select New measure.
2. Enter the DAX formula: SUM(TableName[ColumnName]).

FOR THE PURPOSE OF THIS DEMONSTRATION, I AM USING A SAMPLE DATASET THAT INCLUDES SALES DATA FOR VARIOUS PRODUCTS. (Demo_Sales_Data.xlsx)

CASE 1: SUM OF SALES AMOUNT (EXCEL)

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Conditional Formatting

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H5

=SUM(C2:C11)

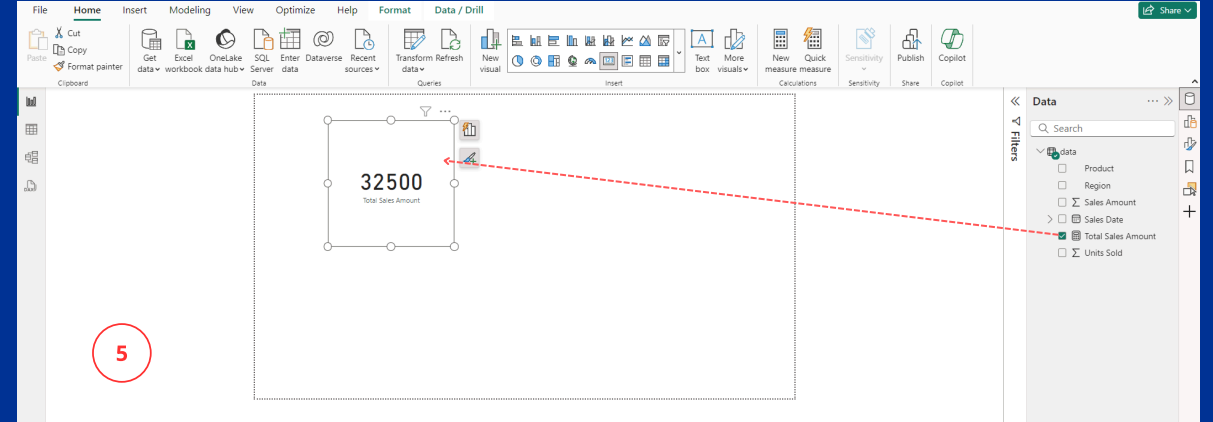
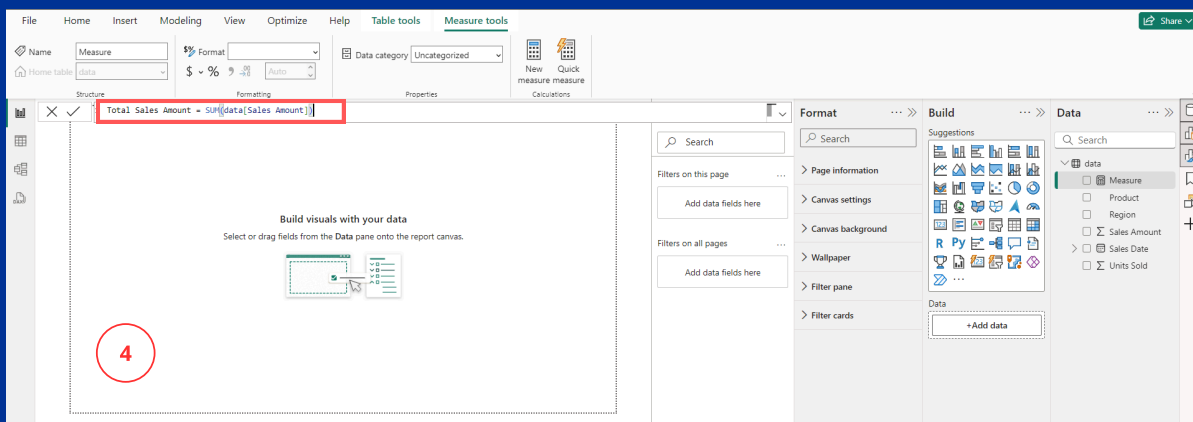
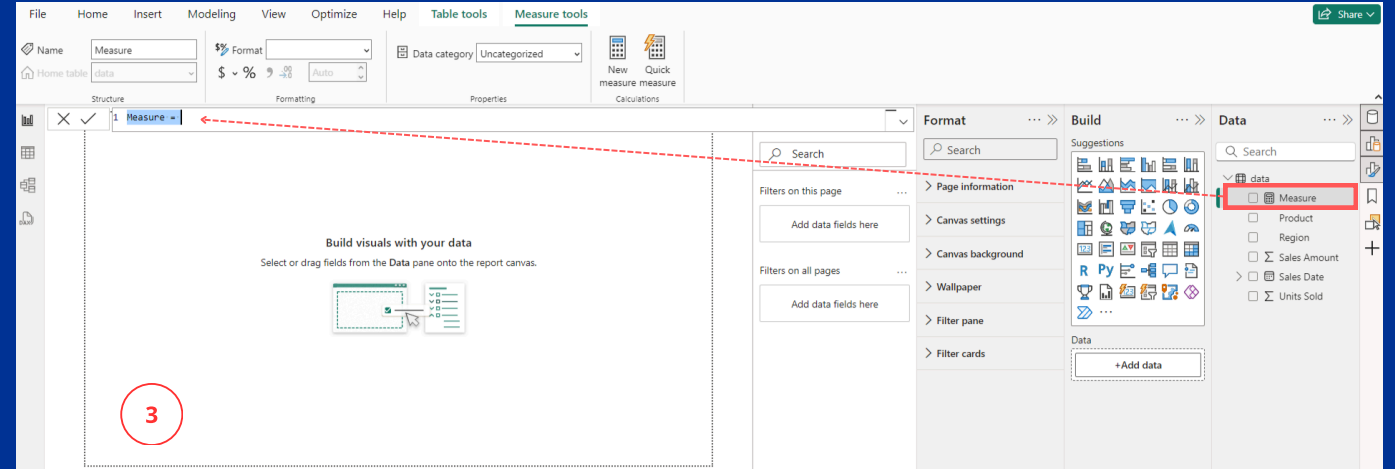
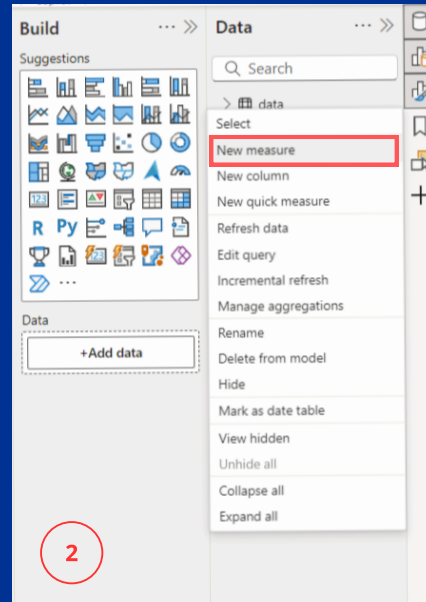
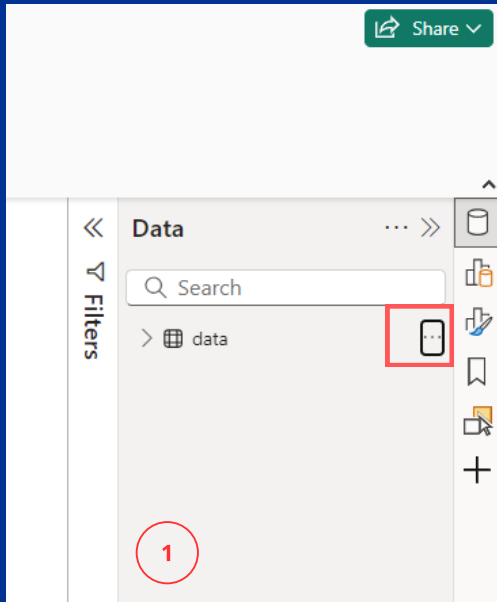
	A	B	C	D	E	F	G	H	I
1	Product	Region	Sales Amount	Units Sold	Sales Date				
2	A	North	1000	50	2024-01-01				
3	B	South	1500	75	2024-01-02				
4	C	East	2000	100	2024-01-03				
5	D	West	2500	125	2024-01-04				
6	E	North	3000	150	2024-01-05				
7	F	South	3500	175	2024-01-06				
8	G	East	4000	200	2024-01-07				
9	H	West	4500	225	2024-01-08				
10	I	North	5000	250	2024-01-09				
11	J	South	5500	275	2024-01-10				
12									

Total Sales Amount

=SUM(C2:C11)

[illegible]

CASE 1: SUM OF SALES AMOUNT (POWER BI)



FUNCTION 2: WE'LL LOOK AT HOW TO USE THE **AVERAGE FUNCTION IN BOTH EXCEL AND POWER BI.**

In Excel: To calculate the average of a range of numbers:

- 1. Select the cell where you want the result.**
- 2. Type =AVERAGE(and select the range).**
- 3. Press Enter.**

In Power BI: Create a measure using the AVERAGE function in DAX:

- 1. Right-click on the table and select New measure.**
- 2. Enter the DAX formula: AVERAGE(TableName[ColumnName]).**

CASE 2: AVERAGE OF SALES AMOUNT (EXCEL)

	A	B	C	D	E	F	G	H	I	J
1	Product	Region	Sales Amount	Units Sold	Sales Date					
2	A	North	1000	50	2024-01-01					
3	B	South	1500	75	2024-01-02					
4	C	East	2000	100	2024-01-03					
5	D	West	2500	125	2024-01-04					
6	E	North	3000	150	2024-01-05					
7	F	South	3500	175	2024-01-06					
8	G	East	4000	200	2024-01-07					
9	H	West	4500	225	2024-01-08					
10	I	North	5000	250	2024-01-09					
11	J	South	5500	275	2024-01-10					
12										
13										
14										

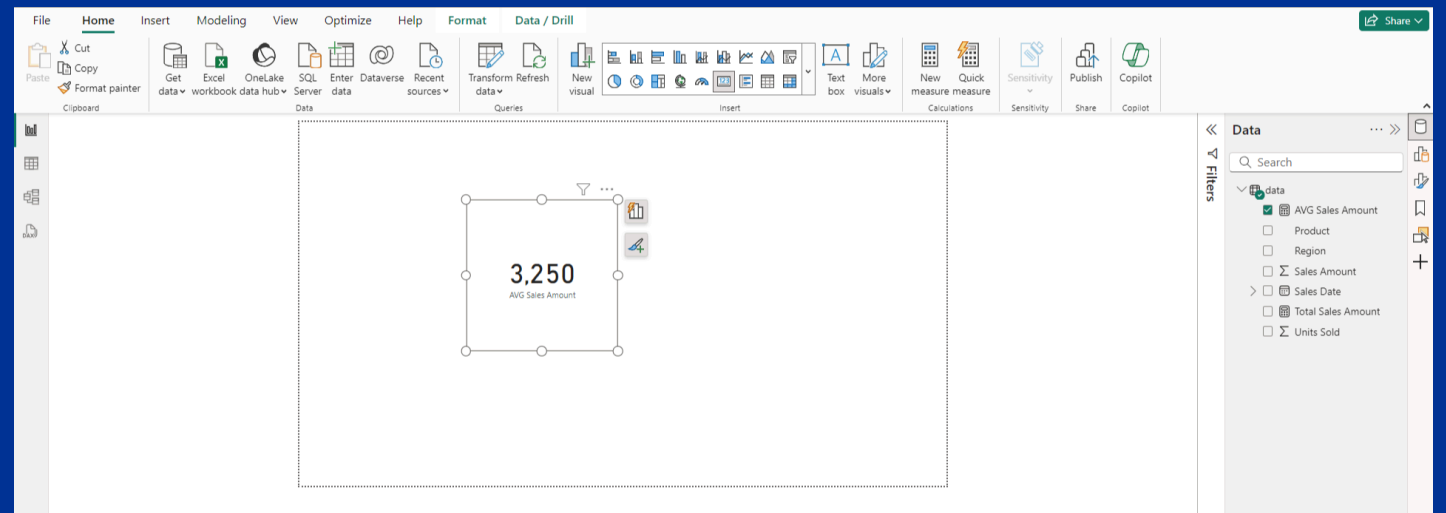
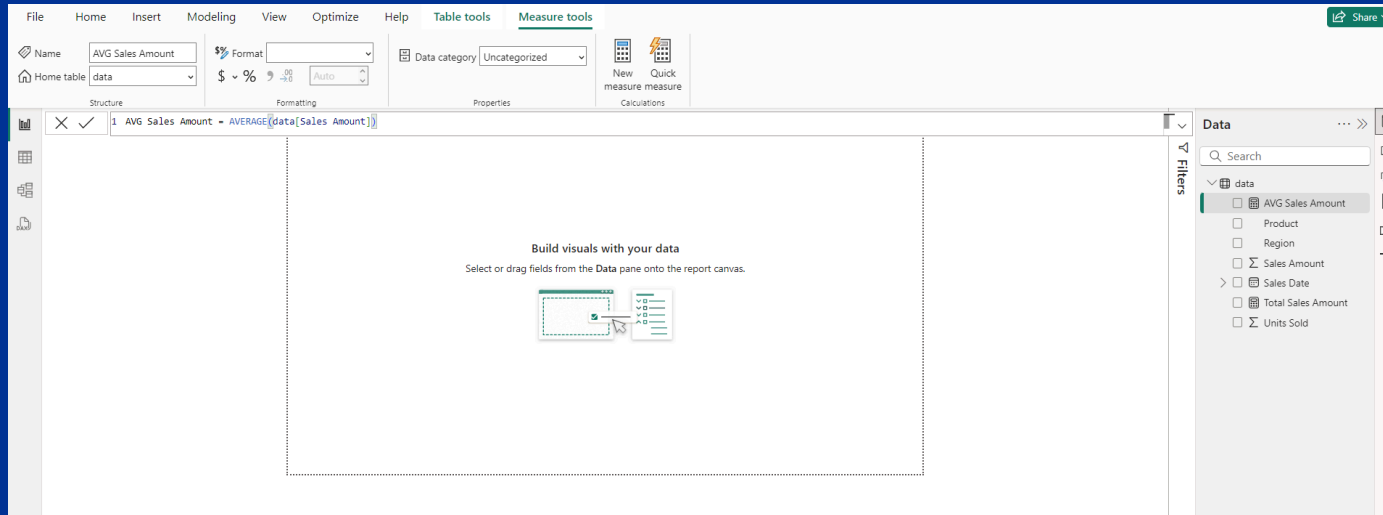
	A	B	C	D	E	F	G	H	I
1	Product	Region	Sales Amount	Units Sold	Sales Date				
2	A	North	1000	50	2024-01-01				
3	B	South	1500	75	2024-01-02				
4	C	East	2000	100	2024-01-03				
5	D	West	2500	125	2024-01-04				
6	E	North	3000	150	2024-01-05				
7	F	South	3500	175	2024-01-06				
8	G	East	4000	200	2024-01-07				
9	H	West	4500	225	2024-01-08				
10	I	North	5000	250	2024-01-09				
11	J	South	5500	275	2024-01-10				
12									

Formula Bar: `=AVERAGE(C2:C11)`

Summary Table:

Total Sales Amount	32500
AVG Sales Amount	3250

CASE 2: AVERAGE OF SALES AMOUNT (POWER BI)



FUNCTION 3: WE'LL LOOK AT HOW TO USE THE **COUNT** FUNCTION IN BOTH EXCEL AND POWER BI.

In Excel: To count the number of cells with numerical data:

1. **Select the cell for the result.**
2. **Type =COUNT(and select the range)**
3. **Press Enter.**

In Power BI: Create a measure using the COUNT function in DAX:

1. **Right-click on the table and select New measure.**
2. **Enter the DAX formula: COUNT(TableName[ColumnName]).**

CASE 3: COUNT OF SALES AMOUNT (EXCEL)

[illegible]

File Home Insert Page Layout Formulas Data Review View Developer Help Power Pivot

fx Insert Function ∑ AutoSum Recently Used Financial Logical Text Date & Time Lookup & Reference Math & Trig More Functions Name Manager Define Name Use in Formula Create from Selection Defined Names Trace Precedents Trace Dependents Show Formulas Error Checking Remove Arrows Evaluate Formula Formula Auditing

Quick Print Undo Redo AutoSave Off Save Print Preview and Print

H9 X ✓ fx =COUNT(C2:C11)

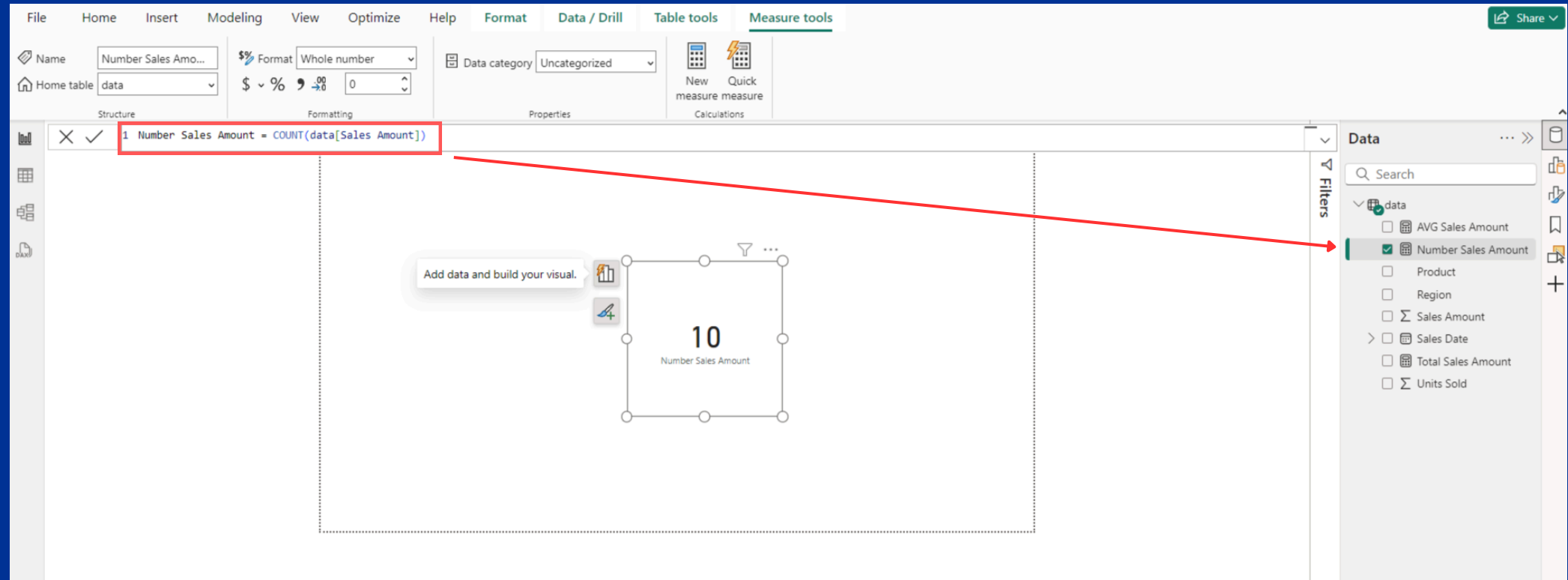
	A	B	C	D	E	F	G	H	I
1	Product	Region	Sales Amount	Units Sold	Sales Date				
2	A	North	1000	50	2024-01-01				
3	B	South	1500	75	2024-01-02				
4	C	East	2000	100	2024-01-03				
5	D	West	2500	125	2024-01-04				
6	E	North	3000	150	2024-01-05				
7	F	South	3500	175	2024-01-06				
8	G	East	4000	200	2024-01-07				
9	H	West	4500	225	2024-01-08				
10	I	North	5000	250	2024-01-09				
11	J	South	5500	275	2024-01-10				
12									

Total Sales Amount 32500

AVG Sales Amount 3250

Number Sales Amount 10

CASE 3: COUNT OF SALES AMOUNT (POWER BI)



FUNCTION 4: WE'LL LOOK AT HOW TO USE THE **CONCATENATE** FUNCTION IN BOTH EXCEL AND POWER BI.

In Excel: To combine text from multiple cells:

1. **Select the cell for the result.**
2. **Type =CONCATENATE(and select the cells.)**
3. **Press Enter.**

In Power BI: Use the CONCATENATE function in DAX:

1. **Right-click on the table and select New column.**
2. **Enter the DAX formula: CONCATENATE(text1, text2)**

CASE 4: CONCATENATE FUNCTION FOR PRODUCT AND REGION (EXCEL)

	A	B	C	D	E	F	G	H	I	J	K
1	Product	Region	Sales Amount	Units Sold	Sales Date					Product with Region	
2	A	North	1000	50	2024-01-01					=CONCAT(A2,"-",B2)	
3	B	South	1500	75	2024-01-02						
4	C	East	2000	100	2024-01-03						
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500			
6	E	North	3000	150	2024-01-05						
7	F	South	3500	175	2024-01-06		AVG Sales Amount	3250			
8	G	East	4000	200	2024-01-07						
9	H	West	4500	225	2024-01-08		Number Sales Amount	10			
10	I	North	5000	250	2024-01-09						
11	J	South	5500	275	2024-01-10						
12											
13											
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15											
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17											
18											

	A	B	C	D	E	F	G	H	I	J	K
1	Product	Region	Sales Amount	Units Sold	Sales Date					Product with Region	
2	A	North	1000	50	2024-01-01					A - North	
3	B	South	1500	75	2024-01-02					B - South	
4	C	East	2000	100	2024-01-03					C - East	
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500		D - West	
6	E	North	3000	150	2024-01-05					E - North	
7	F	South	3500	175	2024-01-06		AVG Sales Amount	3250		F - South	
8	G	East	4000	200	2024-01-07					G - East	
9	H	West	4500	225	2024-01-08		Number Sales Amount	10		H - West	
10	I	North	5000	250	2024-01-09					I - North	
11	J	South	5500	275	2024-01-10						
12											
13											
14											
15											
16											
17											
18											

WHY USE " - ":
THE STRING " - " IS USED TO SEPARATE THE PRODUCT NAME AND REGION FOR BETTER READABILITY.

CASE 4: CONCATENATE FUNCTION FOR PRODUCT AND REGION (POWER BI)

Write a DAX expression that creates a new column in the selected table and calculates values for each row.

Product	Region	Sales Amount	Units Sold	Sales Date
A	North	1000	50	01 January 2024
B	South	1500	75	02 January 2024
C	East	2000	100	03 January 2024
D	West	2500	125	04 January 2024
E	North	3000	150	05 January 2024
F	South	3500	175	06 January 2024
G	East	4000	200	07 January 2024
H	West	4500	225	08 January 2024
I	North	5000	250	09 January 2024
J	South	5500	275	10 January 2024

1

1 Column =

Product	Region	Sales Amount	Units Sold	Sales Date	Column
A	North	1000	50	01 January 2024	
B	South	1500	75	02 January 2024	
C	East	2000	100	03 January 2024	
D	West	2500	125	04 January 2024	
E	North	3000	150	05 January 2024	
F	South	3500	175	06 January 2024	
G	East	4000	200	07 January 2024	
H	West	4500	225	08 January 2024	
I	North	5000	250	09 January 2024	
J	South	5500	275	10 January 2024	

2

1 Product with Region = CONCATENATE([data[Product]], " - " & data[Region])

Product	Region	Sales Amount	Units Sold	Sales Date	Product with Region
A	North	1000	50	01 January 2024	A - North
B	South	1500	75	02 January 2024	B - South
C	East	2000	100	03 January 2024	C - East
D	West	2500	125	04 January 2024	D - West
E	North	3000	150	05 January 2024	E - North
F	South	3500	175	06 January 2024	F - South
G	East	4000	200	07 January 2024	G - East
H	West	4500	225	08 January 2024	H - West
I	North	5000	250	09 January 2024	I - North
J	South	5500	275	10 January 2024	J - South

3

Why Use " - " &:

- **Delimiter for Readability:** The string " - " is used as a delimiter to separate the product name and the region. This creates a clear distinction between the two pieces of information, making the combined text easier to read and understand.
- **Combining Text:** The & operator in DAX is used to concatenate (combine) text strings. By including " - " within the concatenation, we ensure that there is a visible separator between the product name and the region, preventing them from blending together into a single, unreadable string.

FUNCTION 5: WE'LL LOOK AT HOW TO USE THE **IF** FUNCTION IN BOTH EXCEL AND POWER BI.

In Excel: To create conditional logic:

1. **Select the cell for the result.**
2. **Type =IF(and enter the condition, value if true, and value if false.)**
3. **Press Enter.**

In Power BI: Create a measure or calculated column using the IF function in DAX:

1. **Right-click on the table and select New measure or New column.**
2. **Enter the DAX formula: IF(condition, true_value, false_value).**

CASE 5: IF FUNCTION FOR SALES CATEGORY
CONDITION: CATEGORIZE SALES AMOUNTS AS "HIGH" OR
"LOW" BASED ON A THRESHOLD OF 3000 (EXCEL)

[illegible][illegible]

CASE 5: IF FUNCTION FOR SALES CATEGORY

CONDITION: CATEGORIZE SALES AMOUNTS AS "HIGH" OR "LOW" BASED ON A THRESHOLD OF 3000 (POWER BI)

The screenshot shows the Power BI Desktop interface with the 'Column tools' ribbon selected. The 'Name' field is set to 'Sales Category', the 'Format' is 'Text', and the 'Data type' is 'Text'. The 'Summarization' is set to 'Don't summarize' and the 'Data category' is 'Uncategorized'. The 'New column' icon in the ribbon is highlighted with a red dotted arrow pointing to the formula bar.

The DAX formula bar contains the following formula:

```
1 Sales Category = IF(data[Sales Amount] > 3000, "High", "Low")
```

The data table below shows the results of the formula:

Product	Region	Sales Amount	Units Sold	Sales Date	Product with Region	Sales Category
A	North	1000	50	01 January 2024	A - North	Low
B	South	1500	75	02 January 2024	B - South	Low
C	East	2000	100	03 January 2024	C - East	Low
D	West	2500	125	04 January 2024	D - West	Low
E	North	3000	150	05 January 2024	E - North	Low
F	South	3500	175	06 January 2024	F - South	High
G	East	4000	200	07 January 2024	G - East	High
H	West	4500	225	08 January 2024	H - West	High
I	North	5000	250	09 January 2024	I - North	High
J	South	5500	275	10 January 2024	J - South	High



**I AM GRATEFUL FOR YOUR PATIENCE.
SHARE YOUR THOUGHTS IN THE COMMENTS
AND DO LIKE MY POST IF YOU FIND IT HELPFUL
AND INFORMATIVE!**



**ANIRUDDHA
BISWAS**