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:

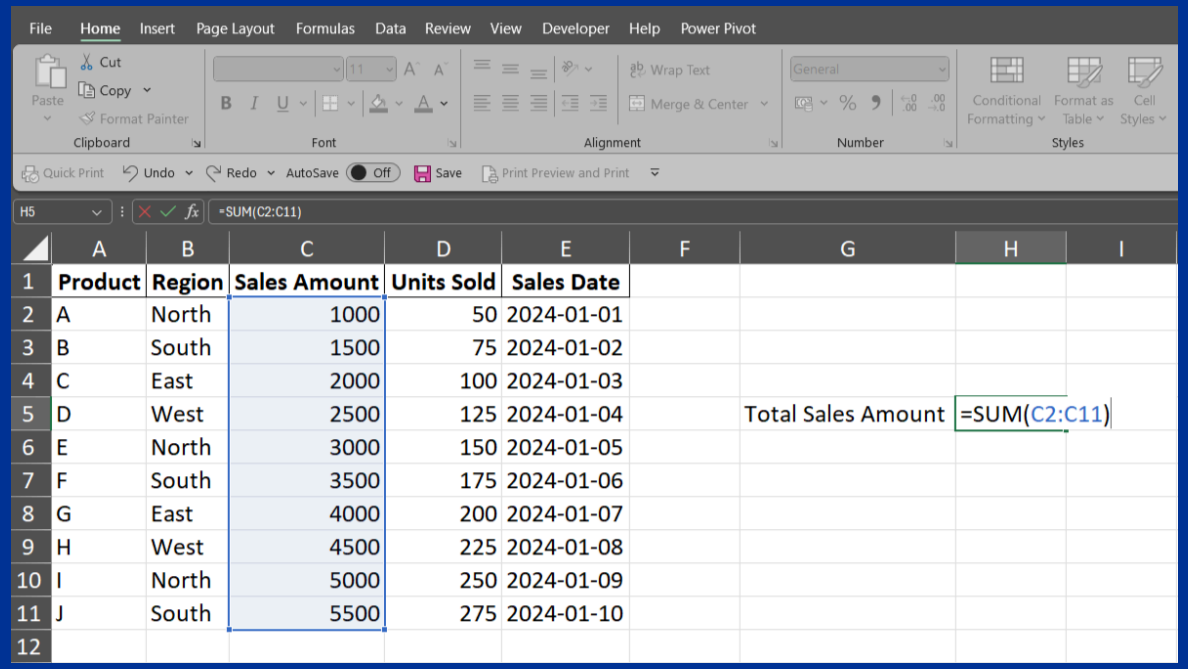
1. **Select the cell where you want the result to appear.**
2. **Type =SUM(and then select the range of cells you want to sum.)**
3. **Press Enter.**

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

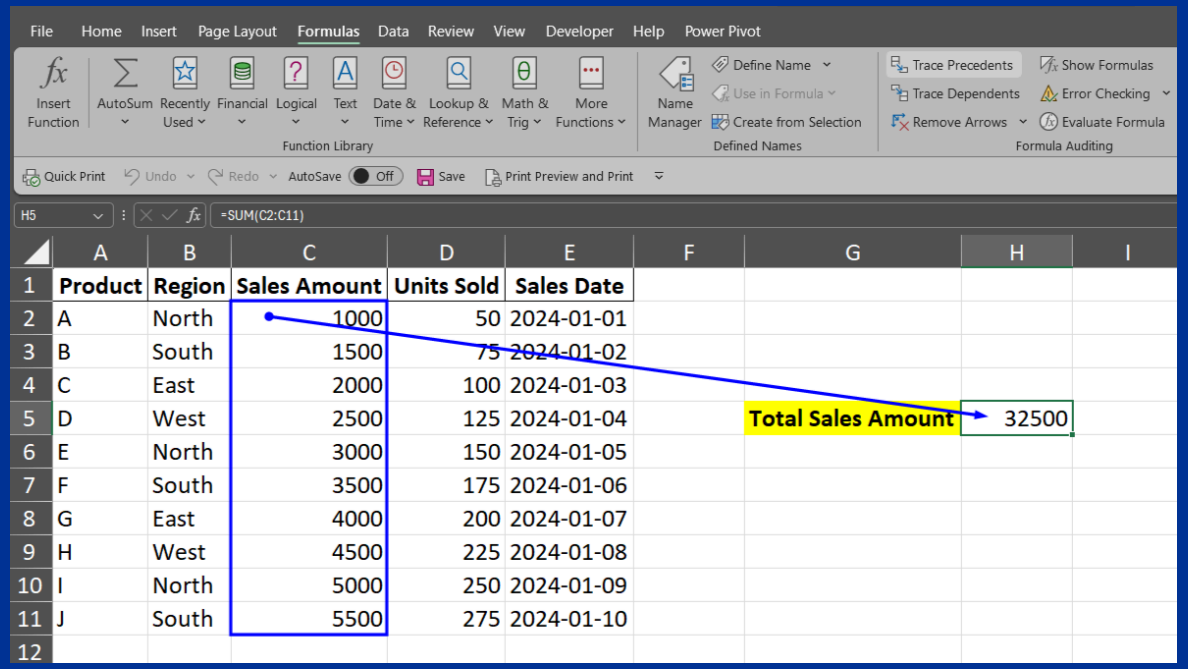
1. **In the Fields pane, right-click on the table where you want to create the measure and select New measure.**
2. **Enter the DAX formula: SUM(TableName[ColumnName]).**

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)

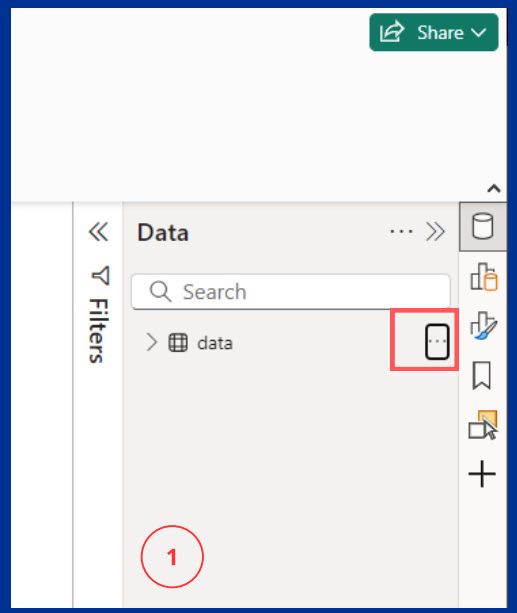


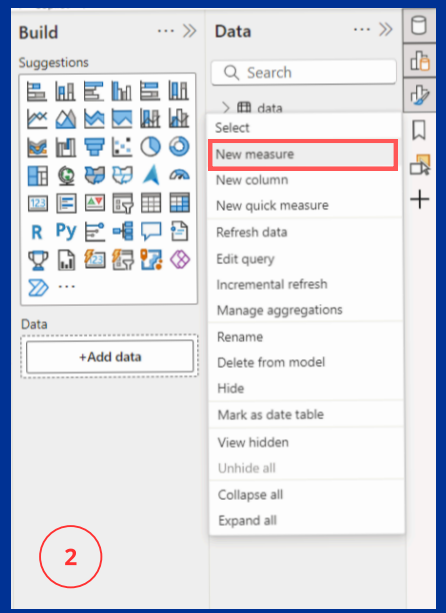
	A	B	C	D	E	F	G	H	I
1	Product	Region	Sales Amount	Units Sold	Sales Date				
2	A	North	1000	50	2024-01-01				
3	B	South	1500	75	2024-01-02				
4	C	East	2000	100	2024-01-03				
5	D	West	2500	125	2024-01-04		Total Sales Amount	=SUM(C2:C11)	
6	E	North	3000	150	2024-01-05				
7	F	South	3500	175	2024-01-06				
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									

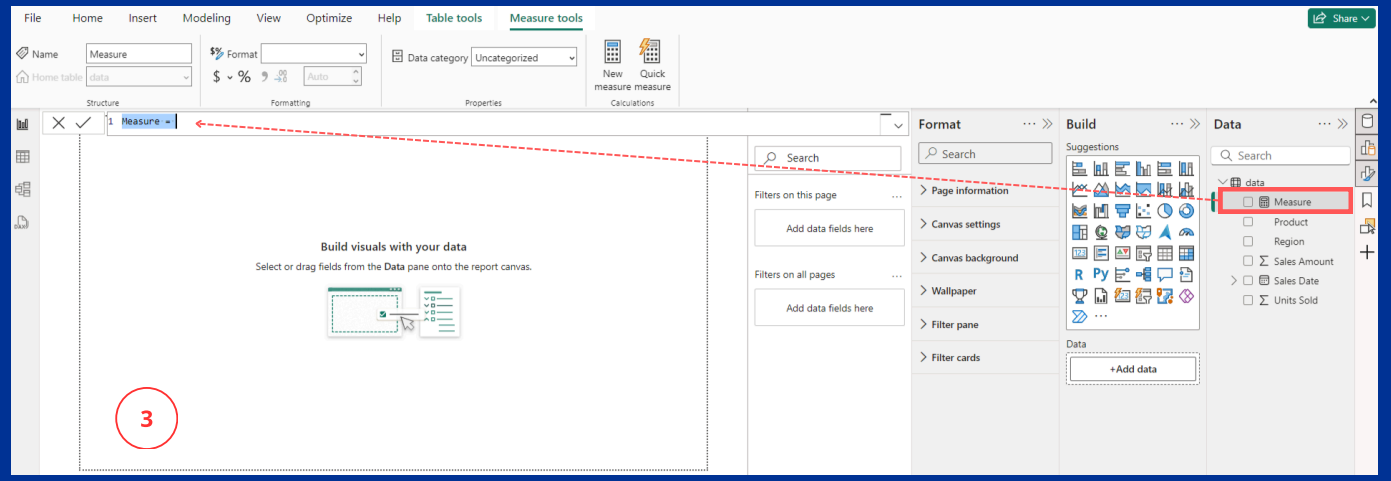


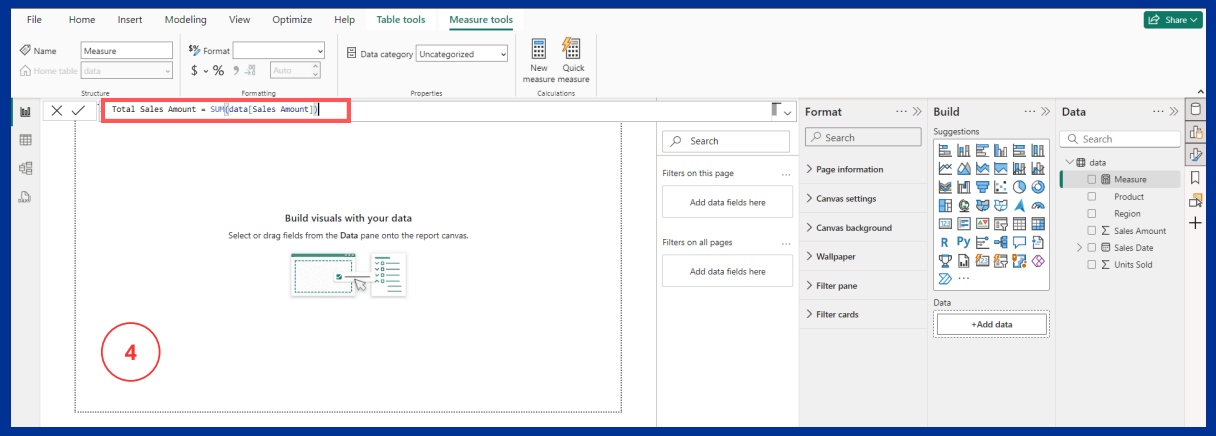
	A	B	C	D	E	F	G	H	I
1	Product	Region	Sales Amount	Units Sold	Sales Date				
2	A	North	1000	50	2024-01-01				
3	B	South	1500	75	2024-01-02				
4	C	East	2000	100	2024-01-03				
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500	
6	E	North	3000	150	2024-01-05				
7	F	South	3500	175	2024-01-06				
8	G	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									

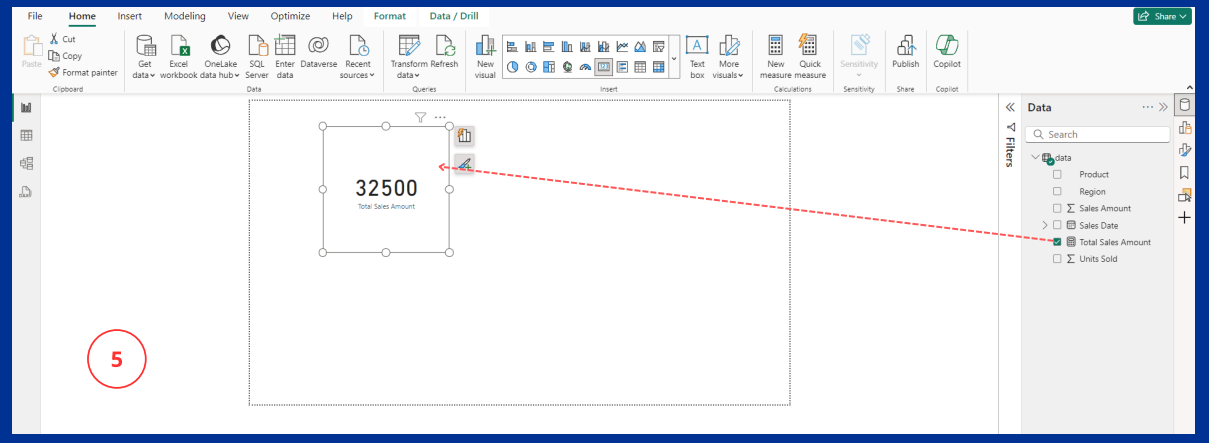
CASE 1: SUM OF SALES AMOUNT (POWER BI)











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

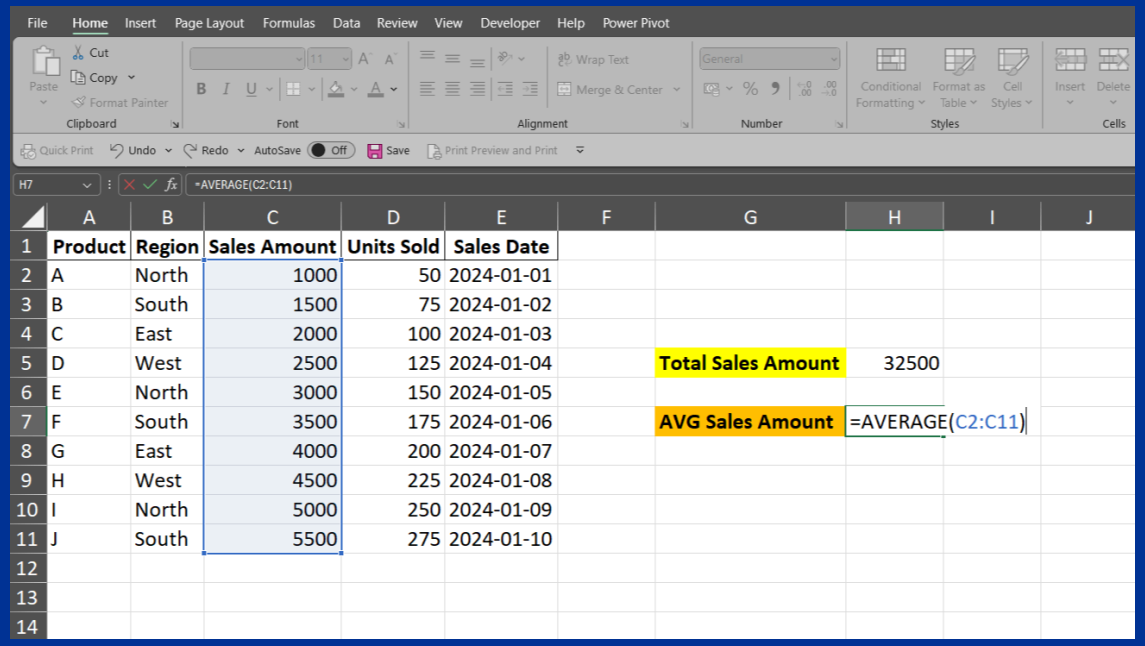
In Excel: To calculate the average of a range of numbers:

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

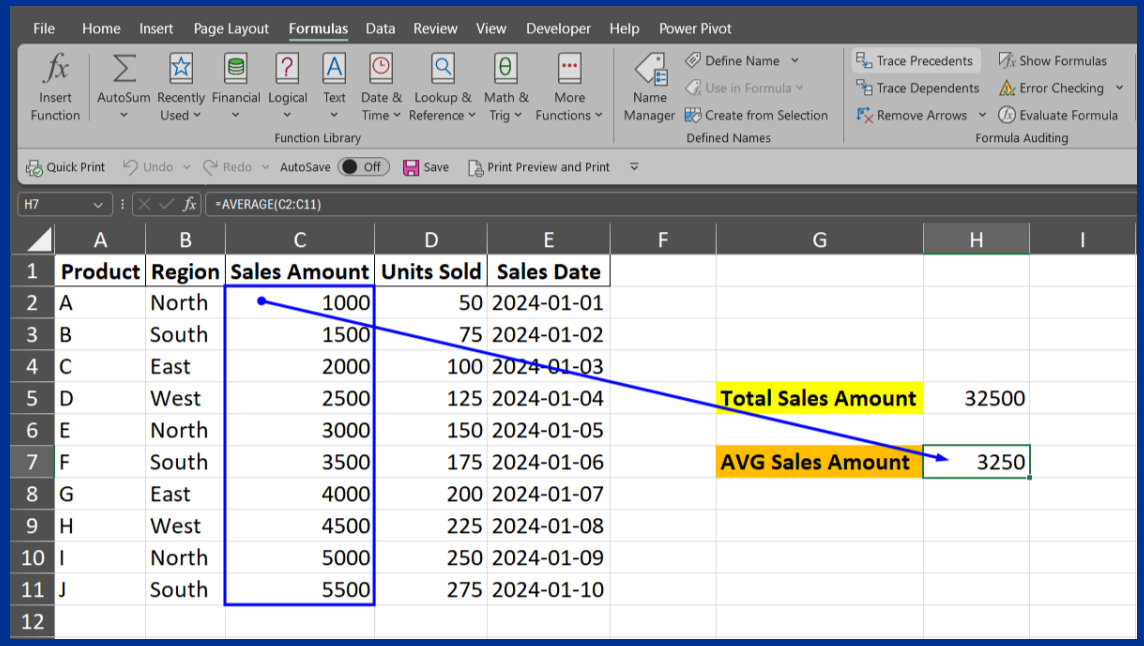
In Power BI: Create a measure using the AVERAGE function in DAX:

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)

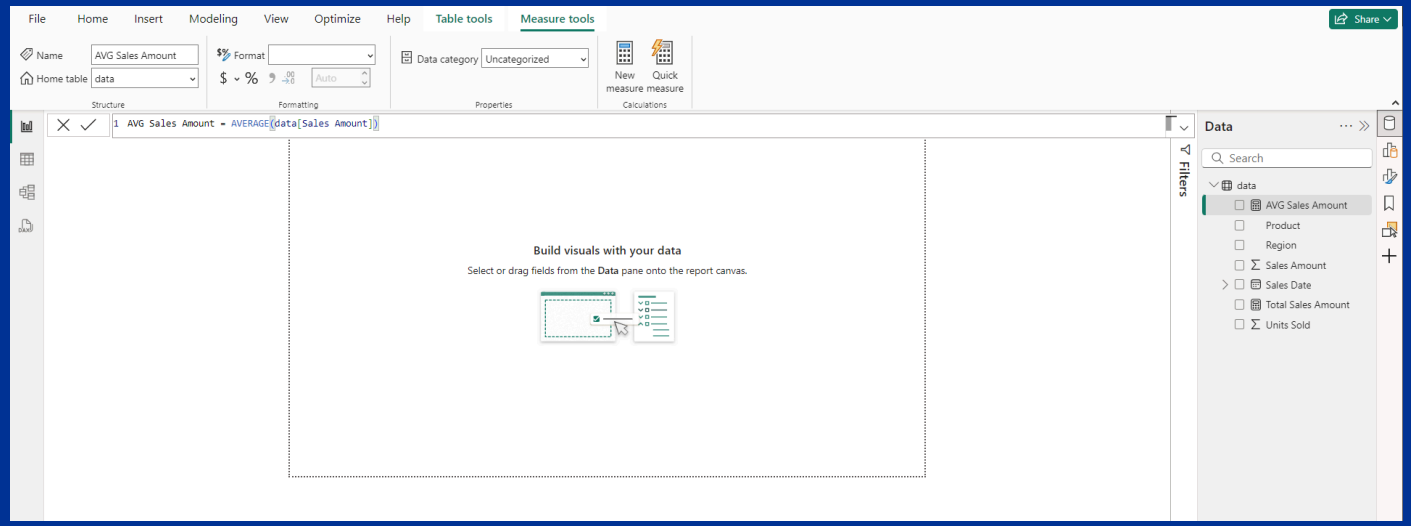


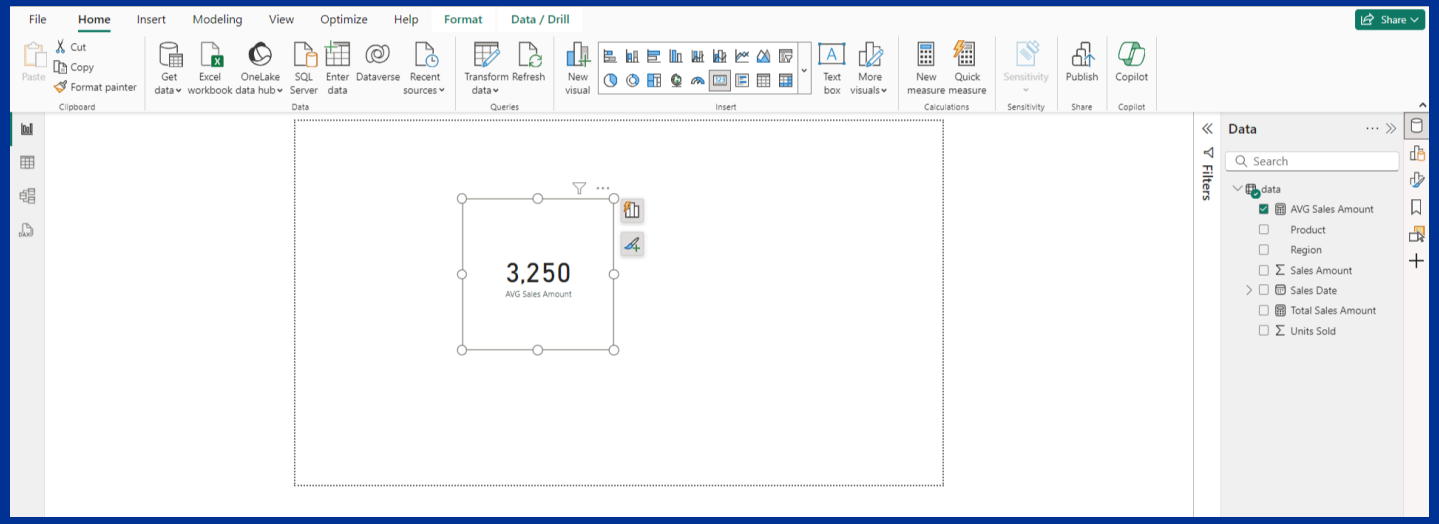
	A	B	C	D	E	F	G	H	I	J
1	Product	Region	Sales Amount	Units Sold	Sales Date					
2	A	North	1000	50	2024-01-01					
3	B	South	1500	75	2024-01-02					
4	C	East	2000	100	2024-01-03					
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500		
6	E	North	3000	150	2024-01-05					
7	F	South	3500	175	2024-01-06		AVG Sales Amount	=AVERAGE(C2:C11)		
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		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				
10	I	North	5000	250	2024-01-09				
11	J	South	5500	275	2024-01-10				
12									

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.

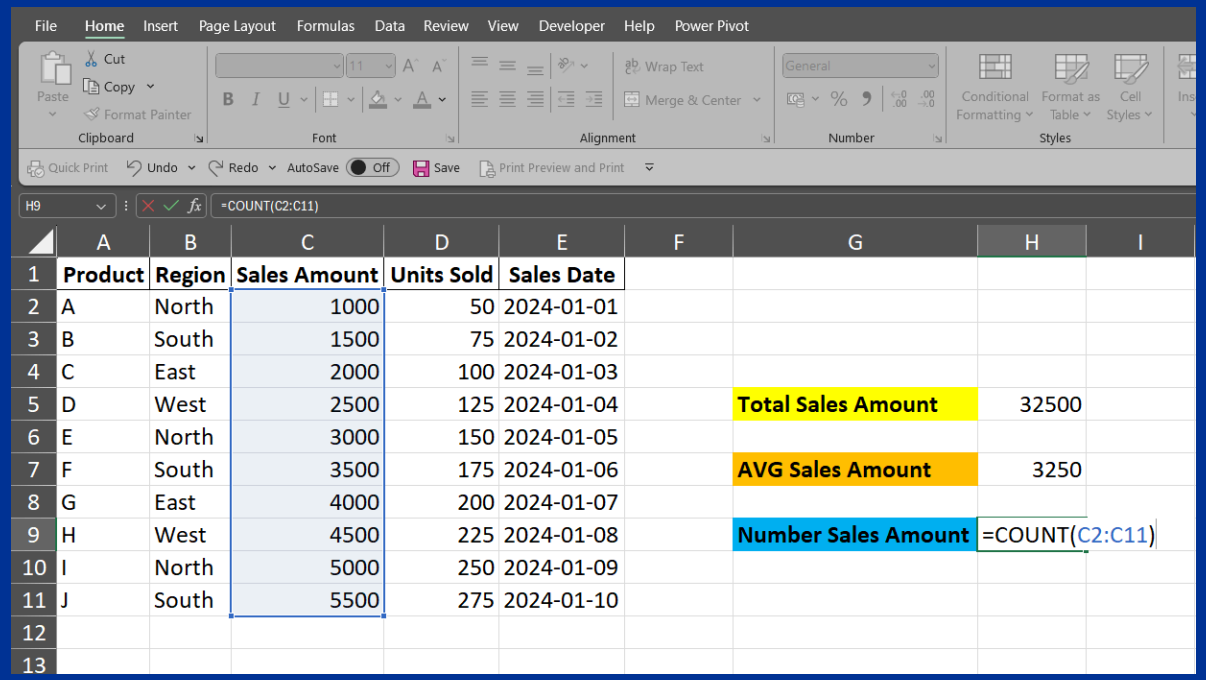
In Excel: To count the number of cells with numerical data:

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

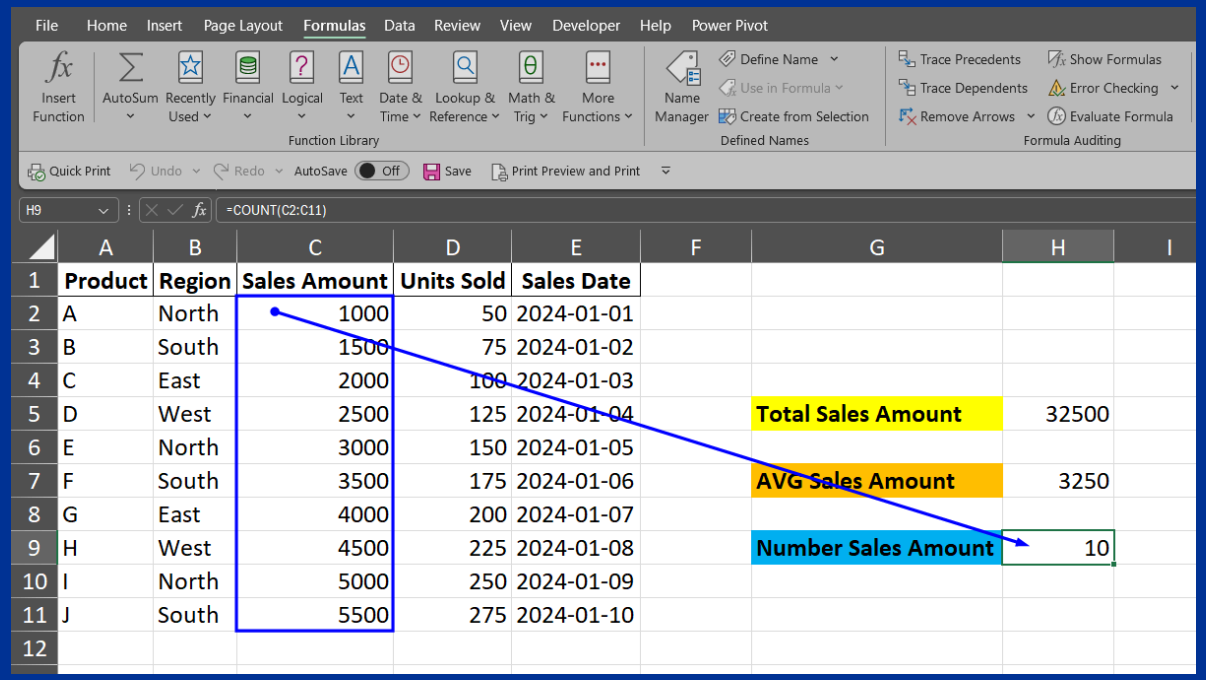
In Power BI: Create a measure using the COUNT function in DAX:

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)

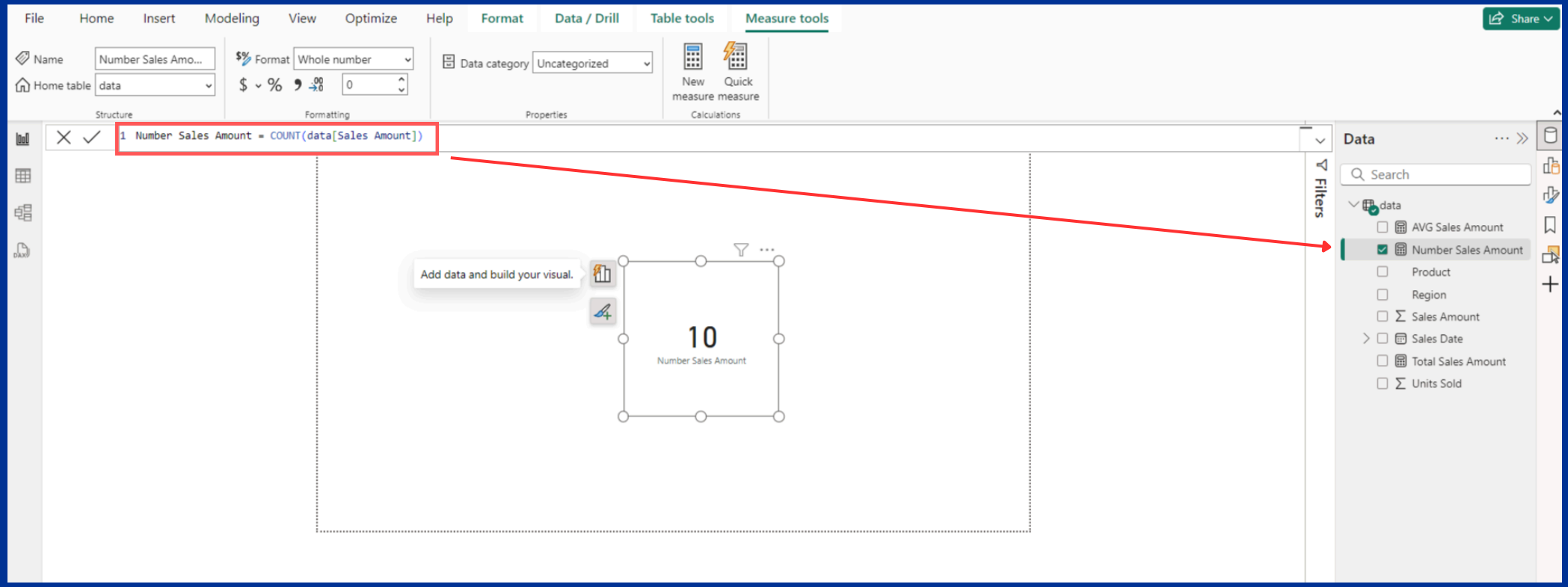


	A	B	C	D	E	F	G	H	I
1	Product	Region	Sales Amount	Units Sold	Sales Date				
2	A	North	1000	50	2024-01-01				
3	B	South	1500	75	2024-01-02				
4	C	East	2000	100	2024-01-03				
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500	
6	E	North	3000	150	2024-01-05				
7	F	South	3500	175	2024-01-06		AVG Sales Amount	3250	
8	G	East	4000	200	2024-01-07				
9	H	West	4500	225	2024-01-08		Number Sales Amount	=COUNT(C2:C11)	
10	I	North	5000	250	2024-01-09				
11	J	South	5500	275	2024-01-10				
12									
13									



	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		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									

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.

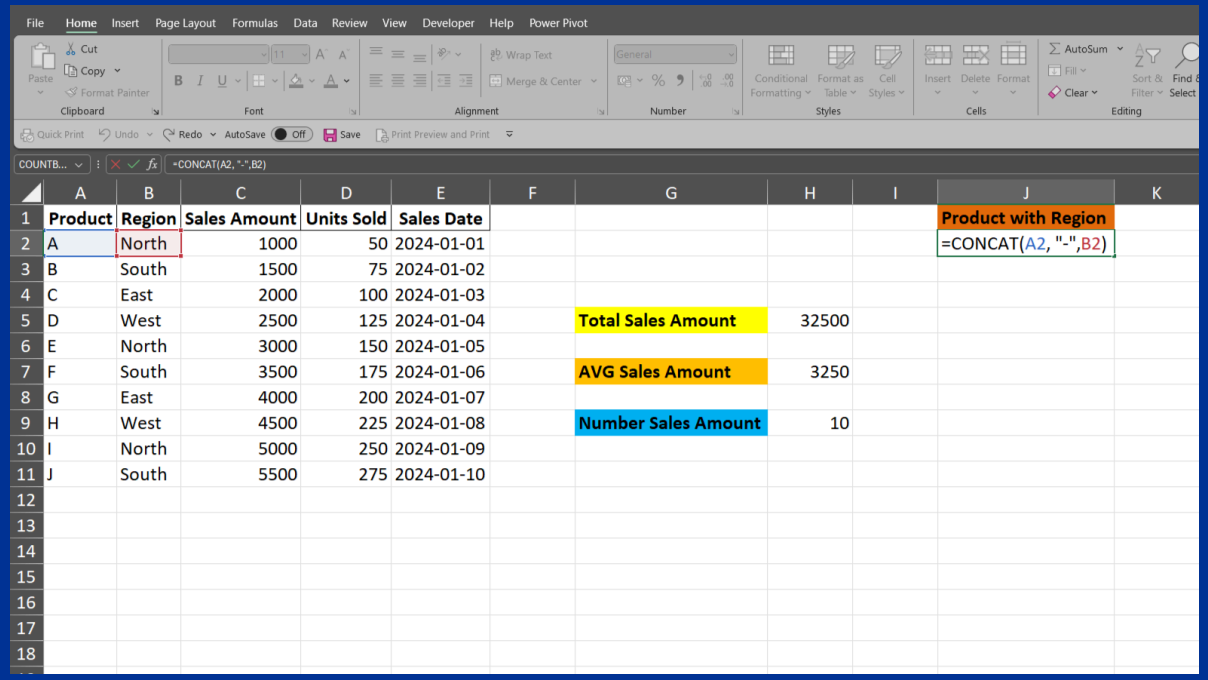
In Excel: To combine text from multiple cells:

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						
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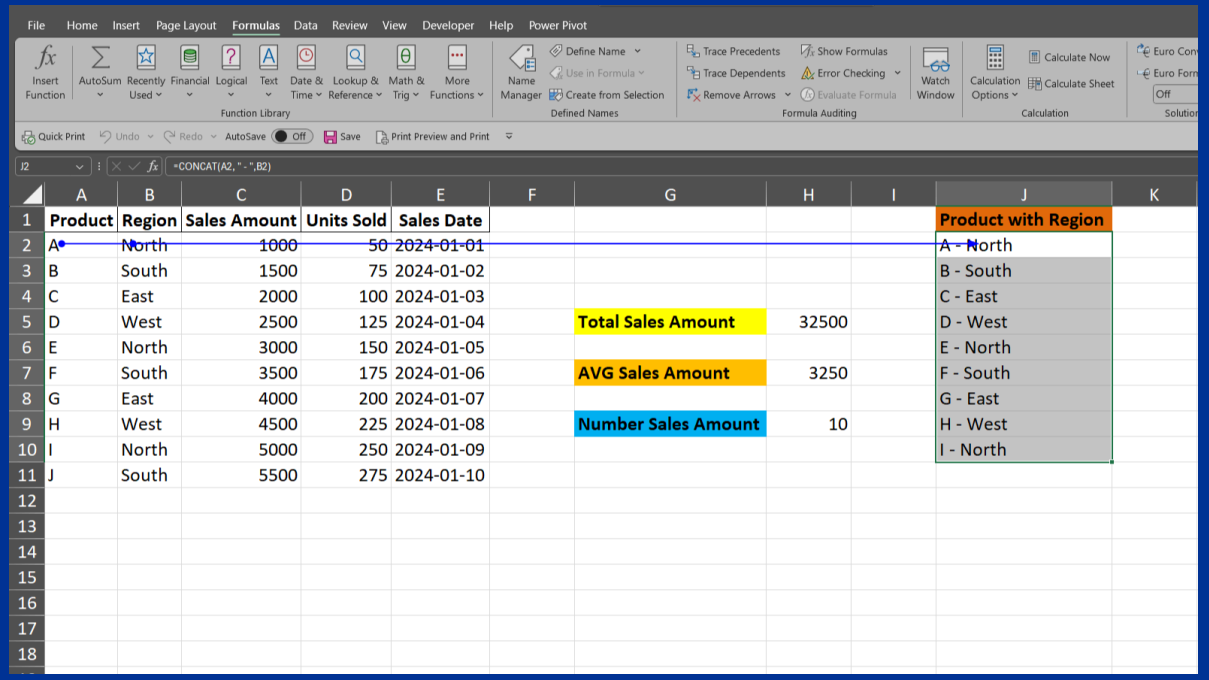
15											
16											
17											
18											

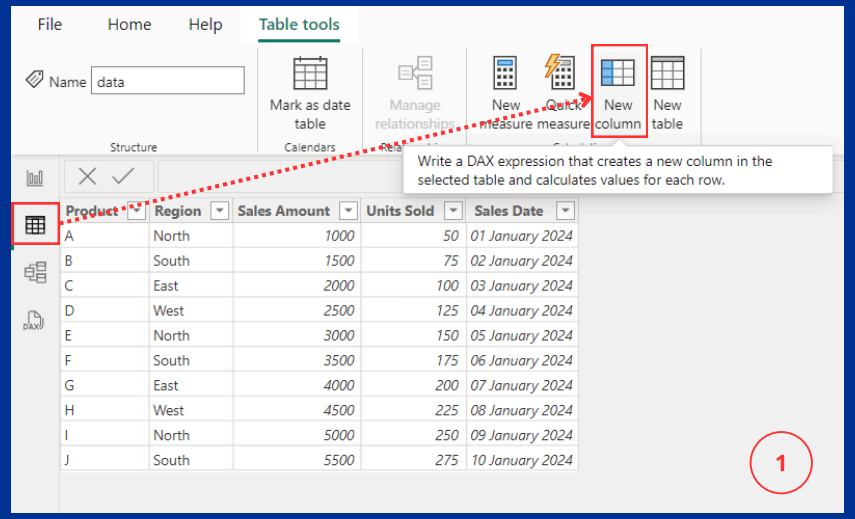


	A	B	C	D	E	F	G	H	I	J	K
1	Product	Region	Sales Amount	Units Sold	Sales Date					Product with Region	
2	A	North	1000	50	2024-01-01					A - North	
3	B	South	1500	75	2024-01-02					B - South	
4	C	East	2000	100	2024-01-03					C - East	
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500		D - West	
6	E	North	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											

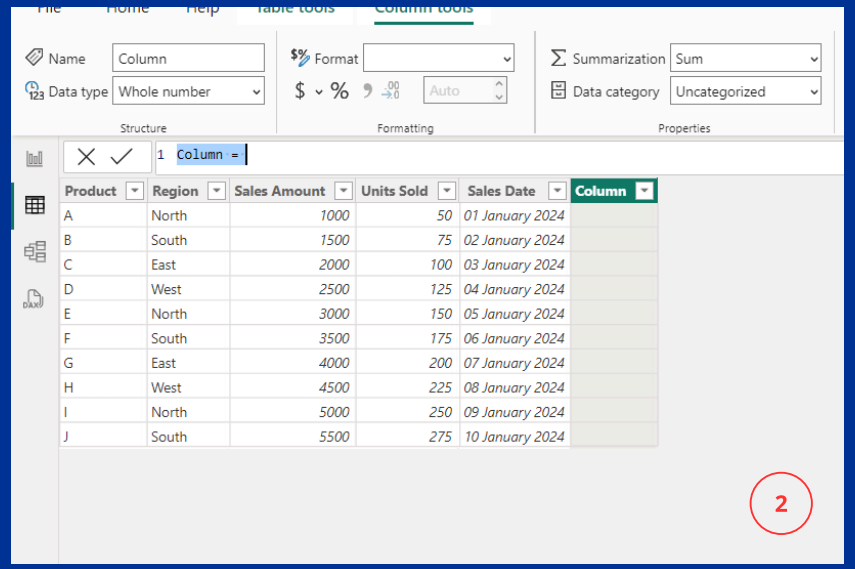
 # WHY USE " - ":

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

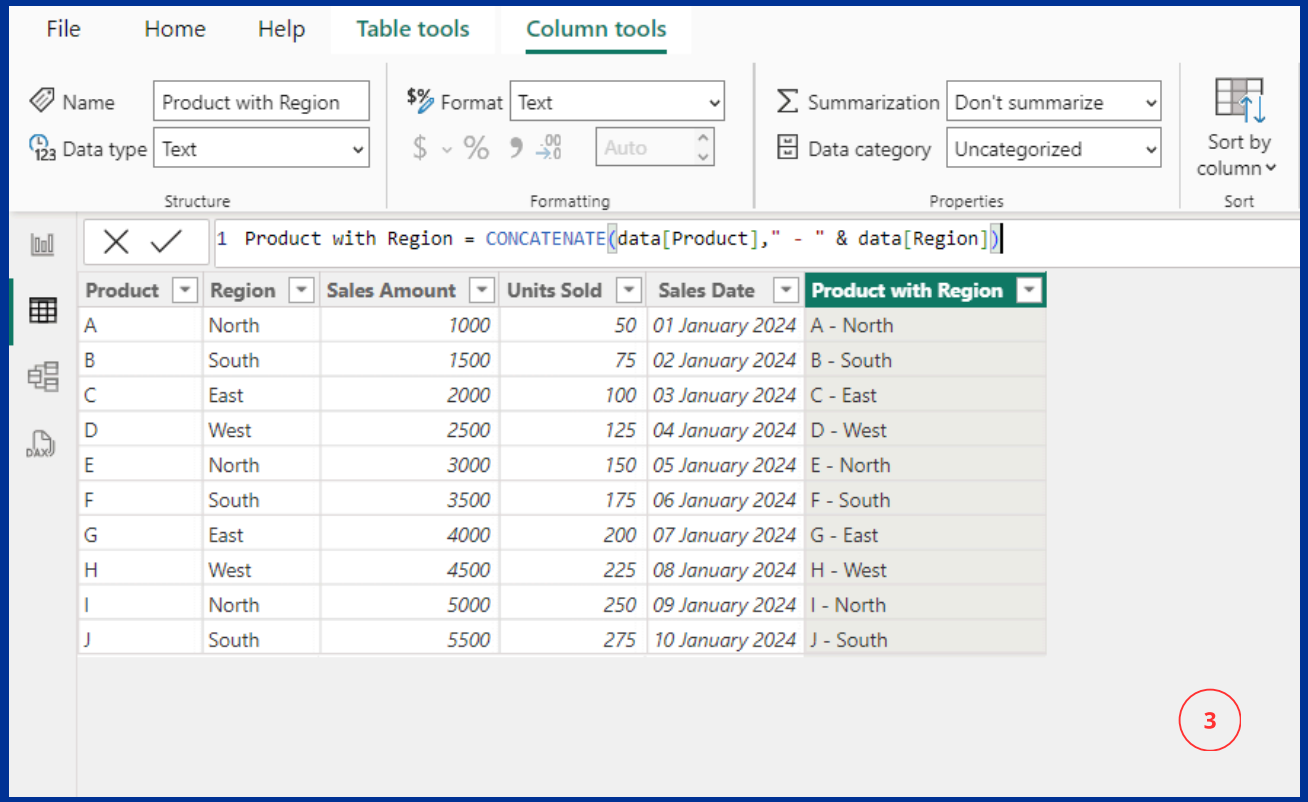
CASE 4: CONCATENATE FUNCTION FOR PRODUCT AND REGION (POWER BI)



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



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	



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

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.

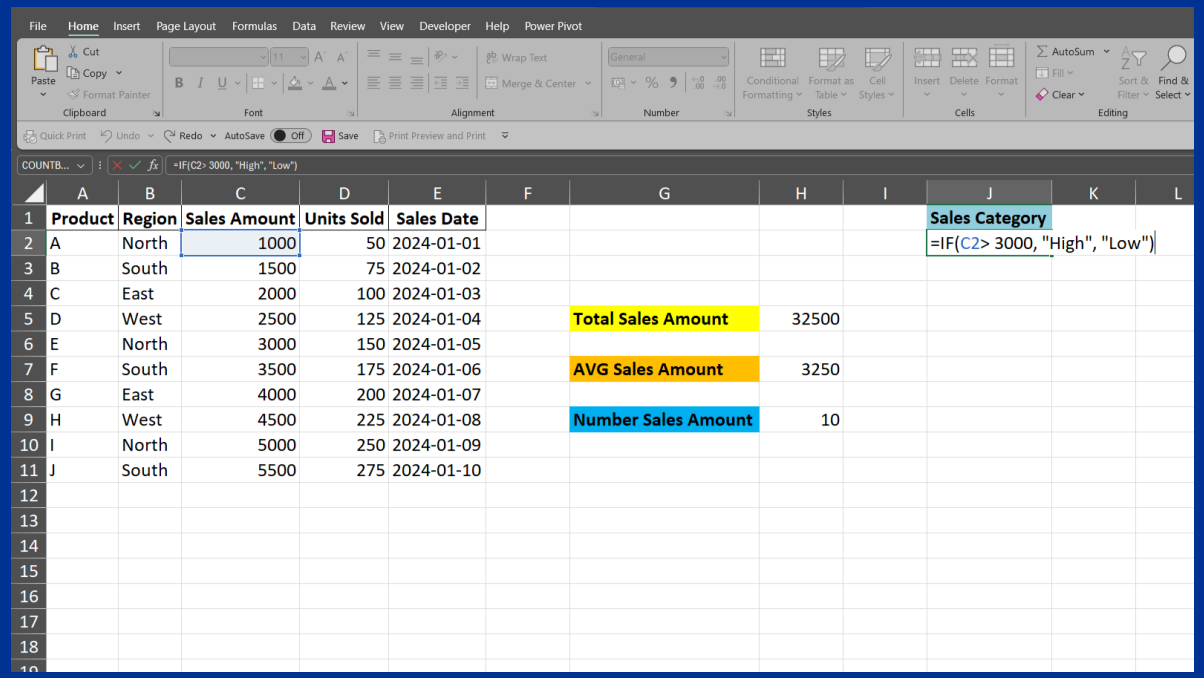
In Excel: To create conditional logic:

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

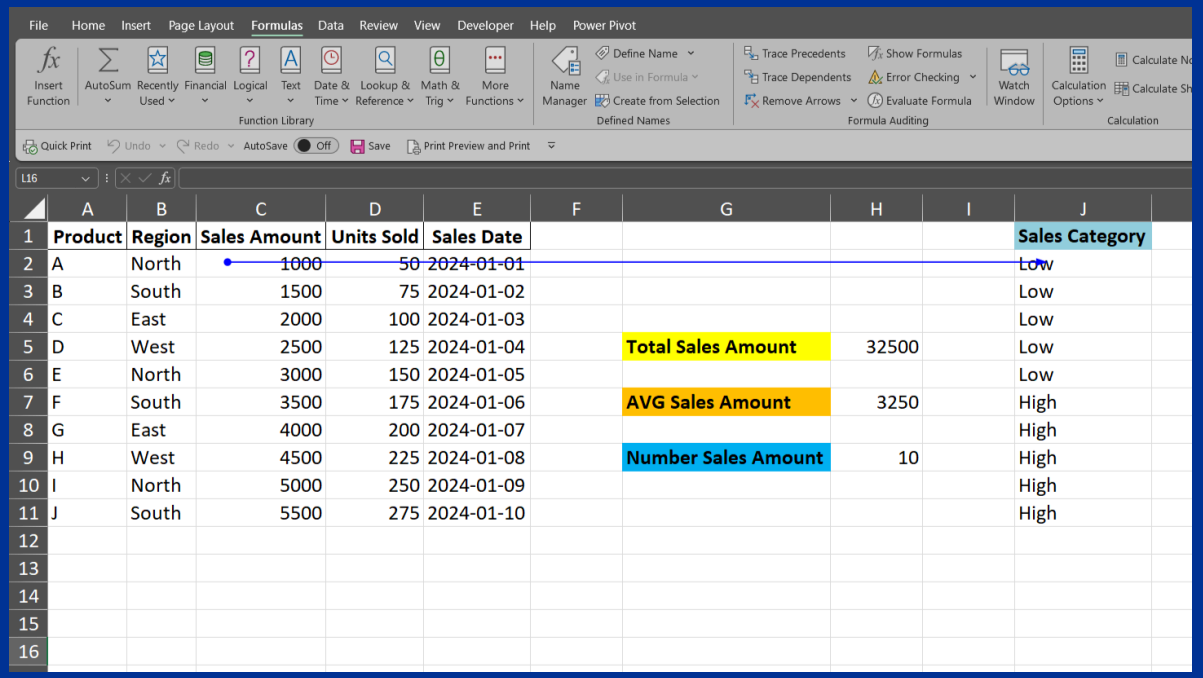
In Power BI: Create a measure or calculated column using the IF function in DAX:

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)

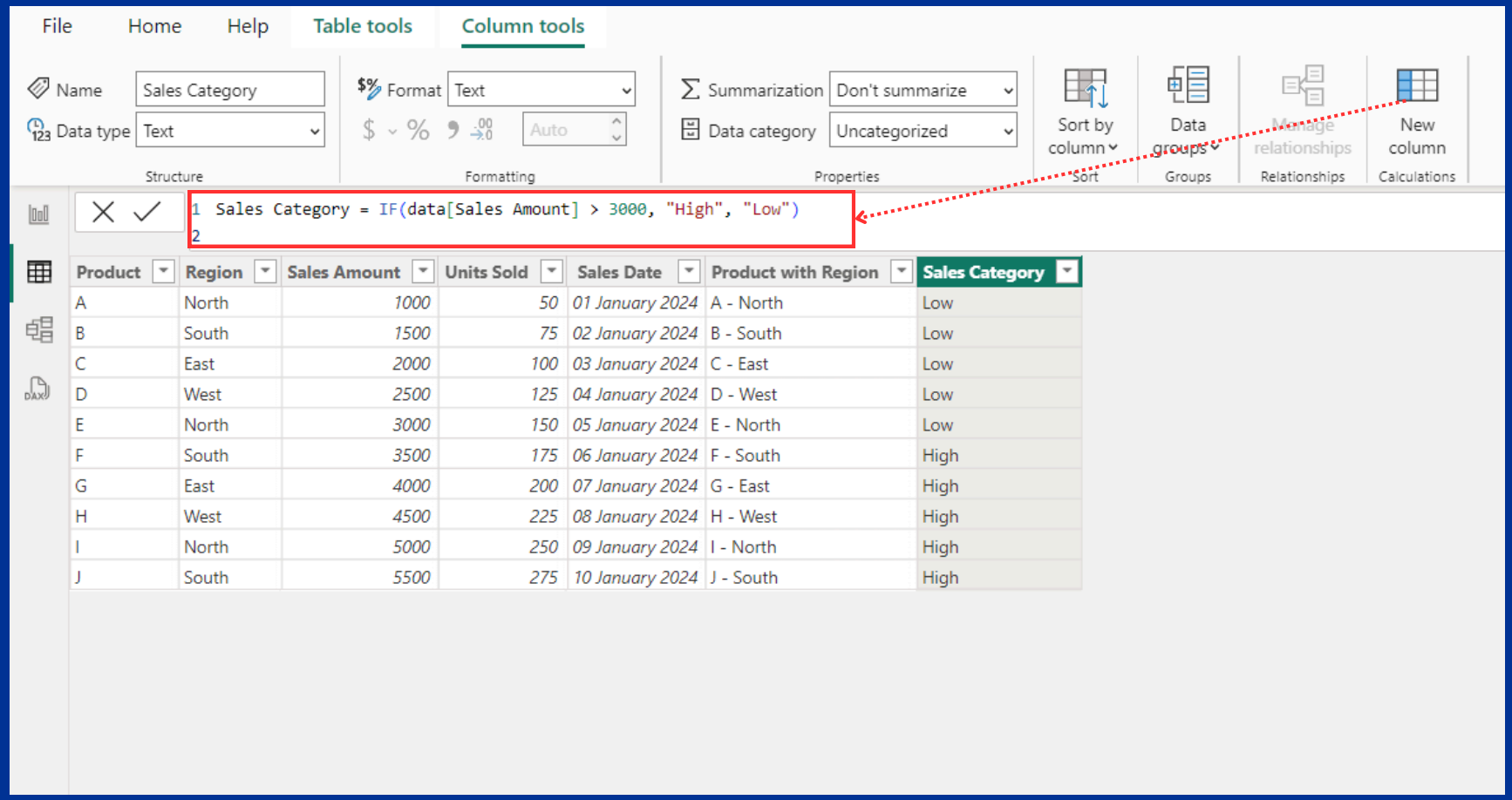


	A	B	C	D	E	F	G	H	I	J	K	L
1	Product	Region	Sales Amount	Units Sold	Sales Date					Sales Category		
2	A	North	1000	50	2024-01-01					=IF(C2> 3000, "High", "Low")		
3	B	South	1500	75	2024-01-02							
4	C	East	2000	100	2024-01-03							
5	D	West	2500	125	2024-01-04		Total Sales Amount	32500				
6	E	North	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							



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

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



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