

Q1. Use Copilot to identify and summarize missing values in the dataset.

Ans:-

F10

Order ID	Region	Country	Category	Sales Channel	Order Priority	Order Date	Units Sold	Unit Price	Unit Cost
ORD0001	East	Germany	Beverages	Online	High	01-01-2023 00:00	235	152.92	153.6
ORD0002	West	India	Food	Online	Low	02-01-2023 00:00	341	467.92	139.84
ORD0003	North	India	Clothing	Offline	High	03-01-2023 00:00	179	473.94	97.14
ORD0004	East	USA	Furniture	Offline	Medium	04-01-2023 00:00	18	314.53	204.87
ORD0005	East	India	Furniture	Offline	Medium	05-01-2023 00:00	472	392.79	330.46
ORD0006	West	UK	Clothing	Online	High	06-01-2023 00:00	49	308.07	113.32
ORD0007	North	Germany	Clothing	Online	Low	07-01-2023 00:00	34	244.78	377.07
ORD0008	North	India	Beverages	Online	High	08-01-2023 00:00	270	332.11	349.59
ORD0009	East	India	Beverages	Online	Low	09-01-2023 00:00	404	278.74	66.38
ORD0010	USA	USA	Furniture	Online	Medium	10-01-2023 00:00	452	300.75	314.94
ORD0011	East	USA	Food	Online	Low	11-01-2023 00:00	235	393	230.69
ORD0012	East	UK	Furniture	Offline	Medium	12-01-2023 00:00	481	243.05	227.5
ORD0013	East	Germany	Food	Offline	Low	13-01-2023 00:00	133	25.17	157.64
ORD0014	East	USA	Food	Offline	Low	14-01-2023 00:00	472	86.18	201.46
ORD0015	West	India	Beverages	Offline	Low	15-01-2023 00:00	47	222.11	160.08
ORD0016	North	Germany	Electronics	Online	High	16-01-2023 00:00	337	363.79	216.81
ORD0017	West	Germany	Electronics	Online	High	17-01-2023 00:00	260	298.67	251.92
ORD0018	India	India	Clothing	Offline	Medium	18-01-2023 00:00	398	326.9	270.37
ORD0019	West	USA	Beverages	Online	Medium	19-01-2023 00:00	185	242.24	213.93
ORD0020	East	India	Food	Offline	High	20-01-2023 00:00	99	309.79	289.13
ORD0021	South	Germany	Electronics	Offline	Medium	21-01-2023 00:00	411	167.86	58.23
ORD0022	North	Australia	Food	Offline	High	22-01-2023 00:00	463	237.74	86.37
ORD0023	South	Australia	Electronics	Online	Low	23-01-2023 00:00	46	373.42	327.86
ORD0024	West	UK	Electronics	Offline	Medium	24-01-2023 00:00	325	436.56	130.37
ORD0025	West	India	Furniture	Offline	Medium	25-01-2023 00:00	185	219.66	11.11
ORD0026	South	India	Beverages	Offline	High	26-01-2023 00:00	470	26.61	63.21
ORD0027	South	UK	Furniture	Online	Medium	27-01-2023 00:00	293	85.03	91
ORD0028	South	UK	Food	Online	Medium	28-01-2023 00:00	462	383.01	
ORD0029	West	UK	Beverages	Offline	Low	29-01-2023 00:00	470	328.37	230.07
ORD0030	West	Germany	Beverages	Online	Medium	30-01-2023 00:00	90	169.5	373.23
ORD0031	East	India	Beverages	Online	Low	31-01-2023 00:00	123	273.53	230.92
ORD0032	North	Germany	Beverages	Online	High	01-02-2023 00:00	49	249.17	192.78
ORD0033	West	UK	Beverages	Online	Medium	02-02-2023 00:00	310	45.36	126.86
ORD0034	South	India	Clothing	Online	Low	03-02-2023 00:00	233	204.61	243.34
ORD0035	South	Germany	Food	Online	High	04-02-2023 00:00	327	114.10	67.4

AI Chat Copilot

Sanjoy Das: identify and summarize missing values in the dataset.

Chat Copilot (GPT-4 1 min): In the dataset, missing values appear in several columns. Here's a summary of missing values by column:

- Region: Some records have missing region values.
- Category: Some records lack a category entry.
- Units Sold: There are missing values for units sold in some orders.
- Unit Price: Some rows have missing unit price values.

New chat Examples Import

Ask anything. Press Shift+Enter to add newlines. Press Enter to send requests.

Q2. Use Copilot to fill missing values in the Region and Category columns.

Ans:-

B11

Order ID	Region	Country	Category	Sales Channel	Order Priority	Order Date	Units Sold	Unit Price	Unit Cost
ORD0001	East	Germany	Beverages	Online	High	01-01-2023 00:00	235	152.92	153.6
ORD0002	West	India	Food	Online	Low	02-01-2023 00:00	341	467.92	139.84
ORD0003	North	India	Clothing	Offline	High	03-01-2023 00:00	179	473.94	97.14
ORD0004	East	USA	Furniture	Offline	Medium	04-01-2023 00:00	18	314.53	204.87
ORD0005	East	India	Furniture	Offline	Medium	05-01-2023 00:00	472	392.79	330.46
ORD0006	West	UK	Clothing	Online	High	06-01-2023 00:00	49	308.07	113.32
ORD0007	North	Germany	Clothing	Online	Low	07-01-2023 00:00	34	244.78	377.07
ORD0008	North	India	Beverages	Online	High	08-01-2023 00:00	270	332.11	349.59
ORD0009	East	India	Beverages	Online	Low	09-01-2023 00:00	404	278.74	66.38
ORD0010	East	USA	Furniture	Online	Medium	10-01-2023 00:00	452	300.75	314.94
ORD0011	East	USA	Food	Online	Low	11-01-2023 00:00	235	393	230.69
ORD0012	East	UK	Furniture	Offline	Medium	12-01-2023 00:00	481	243.05	227.5
ORD0013	East	Germany	Food	Offline	Low	13-01-2023 00:00	133	25.17	157.64
ORD0014	East	USA	Food	Offline	Low	14-01-2023 00:00	472	86.18	201.46
ORD0015	West	India	Beverages	Offline	Low	15-01-2023 00:00	47	222.11	160.08
ORD0016	North	Germany	Electronics	Online	High	16-01-2023 00:00	337	363.79	216.81
ORD0017	West	Germany	Electronics	Online	High	17-01-2023 00:00	260	298.67	251.92
ORD0018	West	India	Clothing	Offline	Medium	18-01-2023 00:00	398	326.9	270.37
ORD0019	West	USA	Beverages	Online	Medium	19-01-2023 00:00	185	242.24	213.93
ORD0020	East	India	Food	Offline	High	20-01-2023 00:00	99	309.79	289.13
ORD0021	South	Germany	Electronics	Offline	Medium	21-01-2023 00:00	411	167.86	58.23
ORD0022	North	Australia	Food	Offline	High	22-01-2023 00:00	463	237.74	86.37
ORD0023	South	Australia	Electronics	Online	Low	23-01-2023 00:00	46	373.42	327.86
ORD0024	West	UK	Electronics	Offline	Medium	24-01-2023 00:00	325	436.56	130.37
ORD0025	West	India	Electronics	Offline	Medium	25-01-2023 00:00	185	219.66	11.11
ORD0026	South	India	Beverages	Offline	High	26-01-2023 00:00	470	26.61	63.21
ORD0027	South	UK	Furniture	Online	Medium	27-01-2023 00:00	293	85.03	91
ORD0028	South	UK	Food	Online	Medium	28-01-2023 00:00	462	383.01	
ORD0029	West	UK	Beverages	Offline	Low	29-01-2023 00:00	470	328.37	230.07
ORD0030	West	Germany	Beverages	Online	Medium	30-01-2023 00:00	90	169.5	373.23
ORD0031	West	India	Beverages	Online	Low	31-01-2023 00:00	123	273.53	230.92
ORD0032	North	Germany	Beverages	Online	High	01-02-2023 00:00	49	249.17	192.78

AI Chat Copilot

Sanjoy Das: Alternatively, to fill blanks without VBA, you can:

- Select the range `B2:B351`.
- Press `Ctrl+Shift+Enter` to fill all blanks with the value from the cell above.
- Copy the entire column `B` and then paste as values to remove formulas.

Fill Missing Values in "Category" Column (Column D)

Follow the same steps as for "Region" but on the range `D2:D351`.

If you want a formula to fill in missing values if there are some blanks (assuming first cell is not blank), you may use this formula in a new column for "Region" starting B2:

New chat Examples Import

Ask anything. Press Shift+Enter to add newlines. Press Enter to send requests.

Q3. Fill missing numeric values in the Units Sold and Unit Price columns.

Ans:-

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Order ID	Region	Country	Category	Sales Channel	Order Priority	Order Date	Units Sold	Unit Price	Unit Cost						
2	ORD0001	East	Germany	Beverages	Online	High	01-01-2023 00:00	235	152.92	153.6						
3	ORD0002	West	India	Food	Online	Low	02-01-2023 00:00	341	467.92	139.84						
4	ORD0003	North	India	Clothing	Offline	High	03-01-2023 00:00	179	473.94	97.14						
5	ORD0004	East	USA	Furniture	Offline	Medium	04-01-2023 00:00	18	314.53	204.87						
6	ORD0005	East	India	Furniture	Offline	Medium	05-01-2023 00:00	472	392.79	330.46						
7	ORD0006	West	UK	Clothing	Online	High	06-01-2023 00:00	49	308.07	113.32						
8	ORD0007	North	Germany	Clothing	Online	Low	07-01-2023 00:00	34	244.78	377.07						
9	ORD0008	North	India	Beverages	Online	High	08-01-2023 00:00	270	332.11	349.59						
10	ORD0009	East	India	Beverages	Online	Low	09-01-2023 00:00	404	278.74	66.38						
11	ORD0010	East	USA	Furniture	Online	Medium	10-01-2023 00:00	452	300.75	314.94						
12	ORD0011	East	USA	Food	Online	Low	11-01-2023 00:00	235	393	230.69						
13	ORD0012	East	UK	Furniture	Offline	Medium	12-01-2023 00:00	481	243.05	227.5						
14	ORD0013	East	Germany	Food	Offline	Low	13-01-2023 00:00	133	25.17	157.64						
15	ORD0014	East	USA	Food	Offline	Low	14-01-2023 00:00	472	86.18	201.46						
16	ORD0015	West	India	Beverages	Offline	Low	15-01-2023 00:00	47	222.11	160.08						
17	ORD0016	North	Germany	Electronics	Online	High	16-01-2023 00:00	337	363.79	216.81						
18	ORD0017	West	Germany	Electronics	Online	High	17-01-2023 00:00	260	298.67	251.92						
19	ORD0018	West	India	Clothing	Offline	Medium	18-01-2023 00:00	398	326.9	270.37						
20	ORD0019	West	USA	Beverages	Online	Medium	19-01-2023 00:00	185	242.24	213.93						
21	ORD0020	East	India	Food	Offline	High	20-01-2023 00:00	99	309.79	289.13						
22	ORD0021	South	Germany	Electronics	Offline	Medium	21-01-2023 00:00	411	167.86	58.23						
23	ORD0022	North	Australia	Food	Offline	High	22-01-2023 00:00	463	237.74	86.37						
24	ORD0023	South	Australia	Electronics	Online	Low	23-01-2023 00:00	46	373.42	327.86						
25	ORD0024	West	UK	Electronics	Offline	Medium	24-01-2023 00:00	325	436.56	130.37						
26	ORD0025	West	India	Electronics	Offline	Medium	25-01-2023 00:00	185	219.66	11.11						
27	ORD0026	South	India	Beverages	Offline	High	26-01-2023 00:00	470	26.61	63.21						
28	ORD0027	South	UK	Furniture	Online	Medium	27-01-2023 00:00	293	85.03	91						
29	ORD0028	South	UK	Food	Online	Medium	28-01-2023 00:00	462	85.03	383.01						
30	ORD0029	West	UK	Beverages	Offline	Low	29-01-2023 00:00	470	328.37	230.07						
31	ORD0030	West	Germany	Beverages	Online	Medium	30-01-2023 00:00	90	169.5	373.23						
32	ORD0031	West	India	Beverages	Online	Low	31-01-2023 00:00	123	273.53	230.92						
33	ORD0032	North	Germany	Beverages	Online	High	01-02-2023 00:00	49	249.17	192.78						

AI Chat Copilot Sarjoy Das

To fill the missing numeric values in the "Units Sold" column (Sheet4!H2:H351) and "Unit Price" column (Sheet4!I2:I351) using appropriate averages:

- Calculate the average of the non-missing values in the respective column.
- Replace the missing values with these calculated averages.

Here is how you can do it using Excel formulas:

For "Units Sold" (Column H)

- Calculate average excluding blanks:

```
=AVERAGEIF(H2:H351, "<>")
```

Assuming this result is stored in a cell, for example K1.

- Fill the missing entries in the range

New chat Examples Import

You need to upgrade your account to use AI Chat Copilot. Click on the top right of the tool and select 'Upgrade My Plan'.

Q4. Create a new calculated column Total Revenue.

Ans:-

A	B	C	D	E	F	G	H	I	J	K	
1	Order ID	Region	Country	Category	Sales Channel	Order Priority	Order Date	Units Sold	Unit Price	Total Revenue	Unit Cost
2	ORD0001	East	Germany	Beverages	Online	High	01-01-2023 00:00	235	152.92	35936.2	153.6
3	ORD0002	West	India	Food	Online	Low	02-01-2023 00:00	341	467.92	159560.72	139.84
4	ORD0003	North	India	Clothing	Offline	High	03-01-2023 00:00	179	473.94	84835.26	97.14
5	ORD0004	East	USA	Furniture	Offline	Medium	04-01-2023 00:00	18	314.53	5661.54	204.87
6	ORD0005	East	India	Furniture	Offline	Medium	05-01-2023 00:00	472	392.79	185396.88	330.46
7	ORD0006	West	UK	Clothing	Online	High	06-01-2023 00:00	49	308.07	15095.43	113.32
8	ORD0007	North	Germany	Clothing	Online	Low	07-01-2023 00:00	34	244.78	8322.52	377.07
9	ORD0008	North	India	Beverages	Online	High	08-01-2023 00:00	270	332.11	89669.7	349.59
10	ORD0009	East	India	Beverages	Online	Low	09-01-2023 00:00	404	278.74	112610.96	66.38
11	ORD0010	East	USA	Furniture	Online	Medium	10-01-2023 00:00	452	300.75	135939	314.94
12	ORD0011	East	USA	Food	Online	Low	11-01-2023 00:00	235	393	92355	230.69
13	ORD0012	East	UK	Furniture	Offline	Medium	12-01-2023 00:00	481	243.05	116907.05	227.5
14	ORD0013	East	Germany	Food	Offline	Low	13-01-2023 00:00	133	25.17	3347.61	157.64
15	ORD0014	East	USA	Food	Offline	Low	14-01-2023 00:00	472	86.18	40676.96	201.46
16	ORD0015	West	India	Beverages	Offline	Low	15-01-2023 00:00	47	222.11	10439.17	160.08
17	ORD0016	North	Germany	Electronics	Online	High	16-01-2023 00:00	337	363.79	122597.23	216.81
18	ORD0017	West	Germany	Electronics	Online	High	17-01-2023 00:00	260	298.67	77654.2	251.92
19	ORD0018	West	India	Clothing	Offline	Medium	18-01-2023 00:00	398	326.9	130106.2	270.37
20	ORD0019	West	USA	Beverages	Online	Medium	19-01-2023 00:00	185	242.24	44814.4	213.93
21	ORD0020	East	India	Food	Offline	High	20-01-2023 00:00	99	309.79	30669.21	289.13
22	ORD0021	South	Germany	Electronics	Offline	Medium	21-01-2023 00:00	411	167.86	68990.46	58.23
23	ORD0022	North	Australia	Food	Offline	High	22-01-2023 00:00	463	237.74	110073.62	86.37
24	ORD0023	South	Australia	Electronics	Online	Low	23-01-2023 00:00	46	373.42	17177.32	327.86
25	ORD0024	West	UK	Electronics	Offline	Medium	24-01-2023 00:00	325	436.56	141882	130.37
26	ORD0025	West	India	Electronics	Offline	Medium	25-01-2023 00:00	185	219.66	40637.1	11.11
27	ORD0026	South	India	Beverages	Offline	High	26-01-2023 00:00	470	26.61	12506.7	63.21
28	ORD0027	South	UK	Furniture	Online	Medium	27-01-2023 00:00	293	85.03	24913.79	91

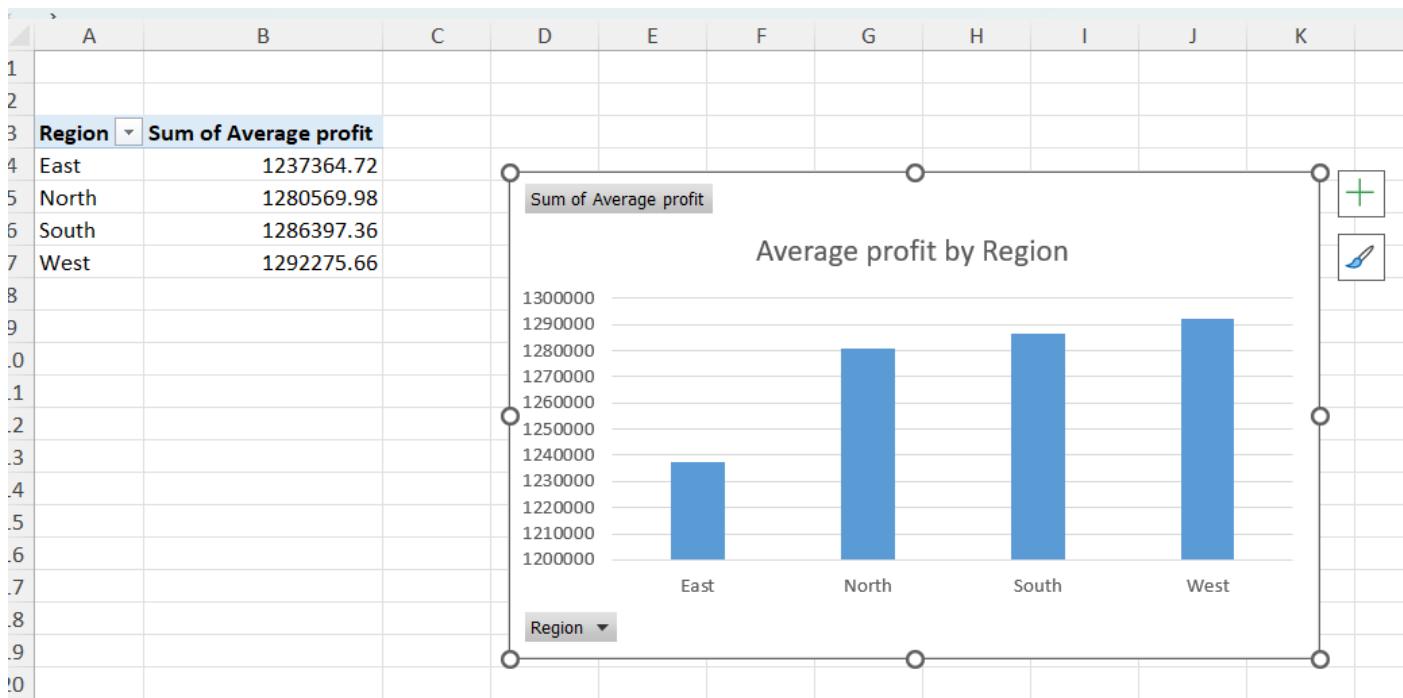
Q5. Use Copilot to find the total price of Order ID = 'ORD0123'.

Ans:-

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Order ID	Region	Country	Category	Sales Channel	Order Priority	Order Date	Units Sold	Unit Price	Total Revenue	Unit Cost					
2	ORD0001	East	Germany	Beverages	Online	High	01-01-2023 00:00	235	152.92	35936.2	153.6					
3	ORD0002	West	India	Food	Online	Low	02-01-2023 00:00	341	467.92	159560.72	139.84					
4	ORD0003	North	India	Clothing	Offline	High	03-01-2023 00:00	179	473.94	84835.26	97.14					
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7	ORD0006	West	UK	Clothing	Online	High	06-01-2023 00:00	49	308.07	15095.43	113.32					
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9	ORD0008	North	India	Beverages	Online	High	08-01-2023 00:00	270	332.11	89669.7	349.59					
10	ORD0009	East	India	Beverages	Online	Low	09-01-2023 00:00	404	278.74	112610.96	66.38					
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12	ORD0011	East	USA	Food	Online	Low	11-01-2023 00:00	235	393	92355	230.69					
13	ORD0012	East	UK	Furniture	Offline	Medium	12-01-2023 00:00	481	243.05	116907.05	227.5					
14	ORD0013	East	Germany	Food	Offline	Low	13-01-2023 00:00	133	25.17	3347.61	157.64					
15	ORD0014	East	USA	Food	Offline	Low	14-01-2023 00:00	472	86.18	40676.96	201.46					
16	ORD0015	West	India	Beverages	Offline	Low	15-01-2023 00:00	47	222.11	10439.17	160.08					
17	ORD0016	North	Germany	Electronics	Online	High	16-01-2023 00:00	337	363.79	122597.23	216.81					
18	ORD0017	West	Germany	Electronics	Online	High	17-01-2023 00:00	260	298.67	77654.2	251.92					
19	ORD0018	West	India	Clothing	Offline	Medium	18-01-2023 00:00	398	326.9	130106.2	270.37					
20	ORD0019	West	USA	Beverages	Online	Medium	19-01-2023 00:00	185	242.24	44814.4	213.93					
21	ORD0020	East	India	Food	Offline	High	20-01-2023 00:00	99	309.79	30669.21	289.13					
22	ORD0021	South	Germany	Electronics	Offline	Medium	21-01-2023 00:00	411	167.86	68990.46	58.23					
23	ORD0022	North	Australia	Food	Offline	High	22-01-2023 00:00	463	237.74	110073.62	86.37					
24	ORD0023	South	Australia	Electronics	Online	Low	23-01-2023 00:00	46	373.42	17177.32	327.86					
25	ORD0024	West	UK	Electronics	Offline	Medium	24-01-2023 00:00	325	436.56	141882	130.37					
26	ORD0025	West	India	Electronics	Offline	Medium	25-01-2023 00:00	185	219.66	40637.1	11.11					
27	ORD0026	South	India	Beverages	Offline	High	26-01-2023 00:00	470	26.61	12506.7	63.21					
28	ORD0027	South	UK	Furniture	Online	Medium	27-01-2023 00:00	293	85.03	24913.79	91					

Q6. Use Copilot to generate a summary chart of average profit by region.

Ans:-



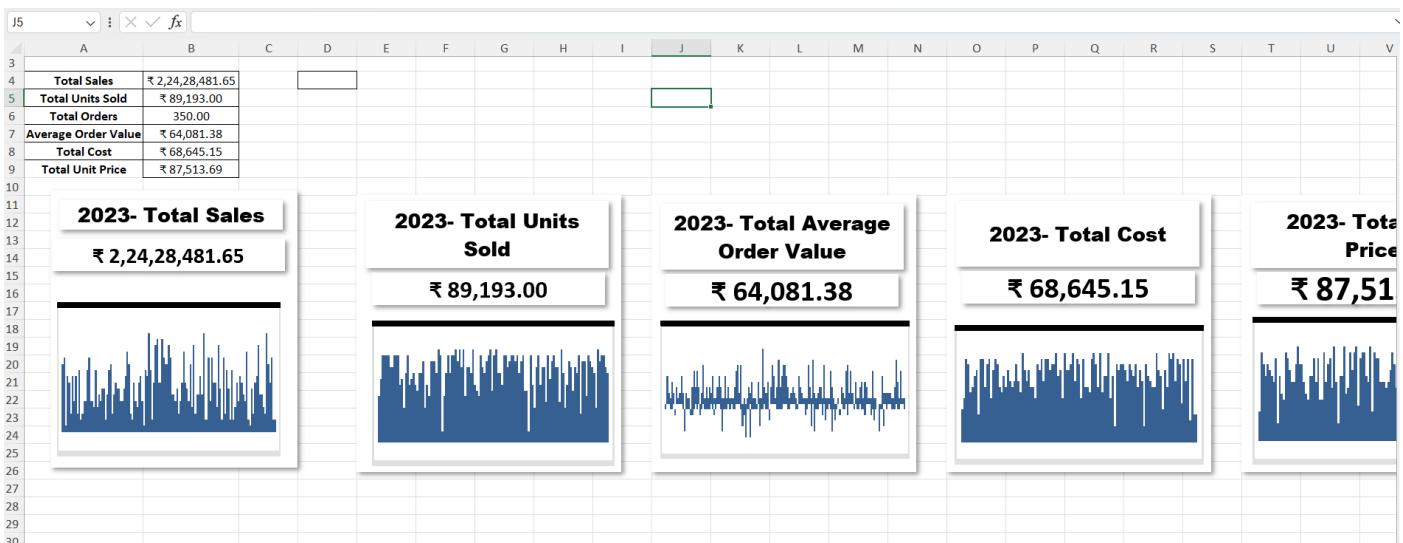
Q7. Create a pivot table summarizing total sales by category and region

Ans:-

	Name Box	A	B	C	D	E	F
1							
2							
3	Sum of Total Revenue	Column Labels					
4	Row Labels	East	North	South	West	Grand Total	
5	Beverages	888153.51	985999.04	1145872.84	1886167.84	4906193.23	
6	Clothing	1699221.48	642532.23	496502.89	1100342.17	3938598.77	
7	Electronics	1038814.54	1272313.48	1123019.61	1536044.97	4970192.6	
8	Food	889450.34	1687044.94	648417.75	830269.61	4055182.64	
9	Furniture	2000201.97	731274.15	832820.25	994018.04	4558314.41	
10	Grand Total	6515841.84	5319163.84	4246633.34	6346842.63	22428481.65	

Q8. Build a dashboard combining key KPIs and charts.

Ans:-



Q9. Use Copilot to generate a summary report

Ans:-

Introduction

Key Performance Indicators (KPIs) and charts are important tools used to measure and evaluate organizational performance. They help in tracking progress toward goals and

support effective decision-making. This report summarizes the insights obtained from the completed KPIs and graphical analysis.

Analysis of KPIs

The KPIs provide a quantitative assessment of performance across various operational areas. They indicate how efficiently objectives have been achieved in comparison to set targets. The analysis reveals areas of strong performance as well as areas that require improvement. By monitoring these indicators, organizations can measure productivity, efficiency, and effectiveness in a structured manner.

Interpretation of Charts

Charts present the KPI data in a visual format, making it easier to identify trends, patterns, and comparisons over time. Through graphical representation, variations in performance become more visible, helping stakeholders quickly understand key outcomes. Charts also enable easy comparison between actual performance and target values.

Sales Summary Report

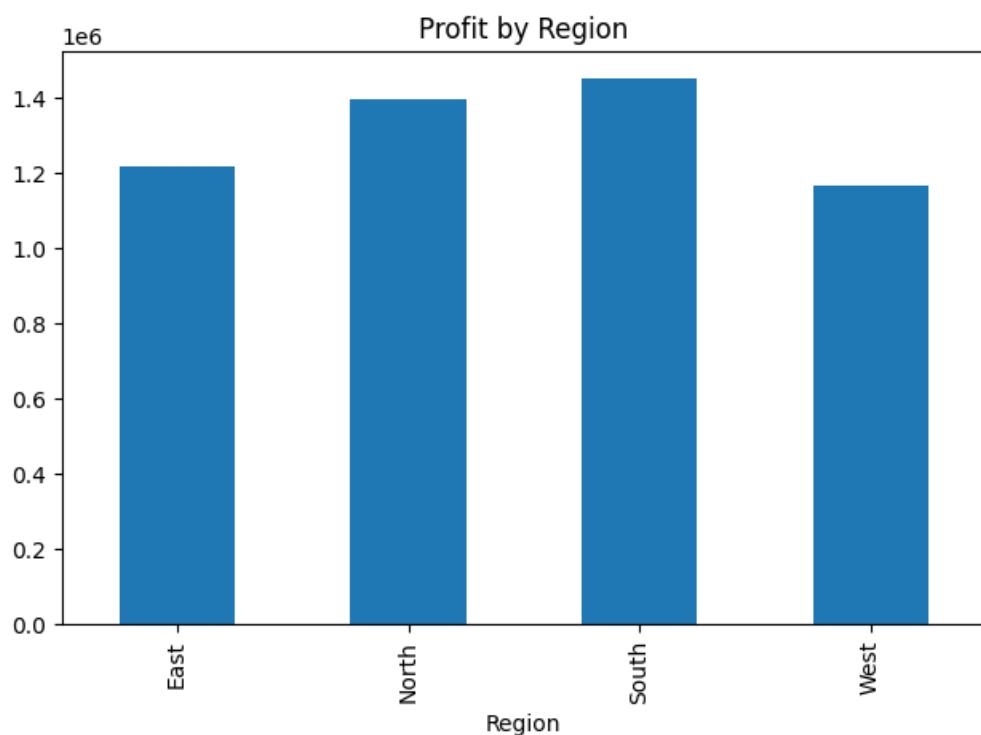
Total Orders: 350

Total Revenue: 21,381,624.96

Total Profit: 5,182,516.49

Average Order Value: 64,792.80

Profit by Region



Profit by Category

