

# Chapter 4

## Combining Data



Figure 4.1: Relationship between two tables.

How do relationships differ from joins? [Learn more](#)

Orders	Operator	Returns
Abc Order ID ▼	= ▼	Abc Order ID (Returr ▼

⊕ Add more fields

∨ Performance Options  
These settings help Tableau optimize queries during analysis. The default settings are recommended, if you aren't sure what to choose. [Learn more](#)

Cardinality  
Many ▼ Many ▼

Figure 4.2: Relationship created based on the Order ID field.

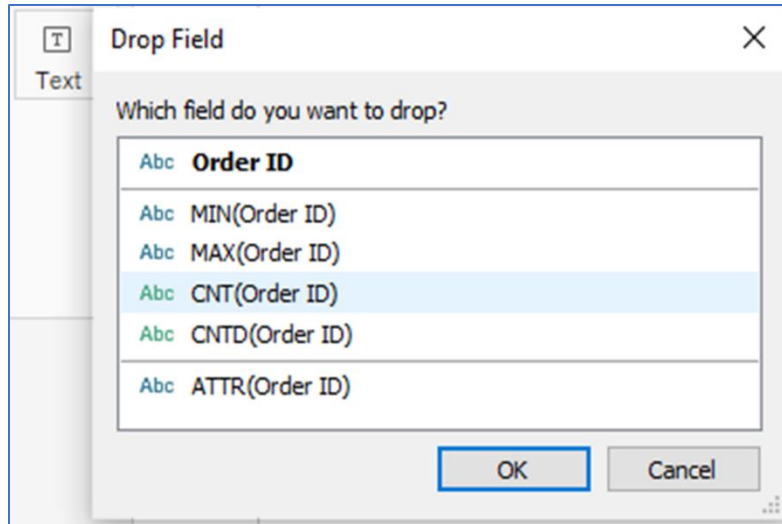


Figure 4.3: Drop field option to calculate a Count.

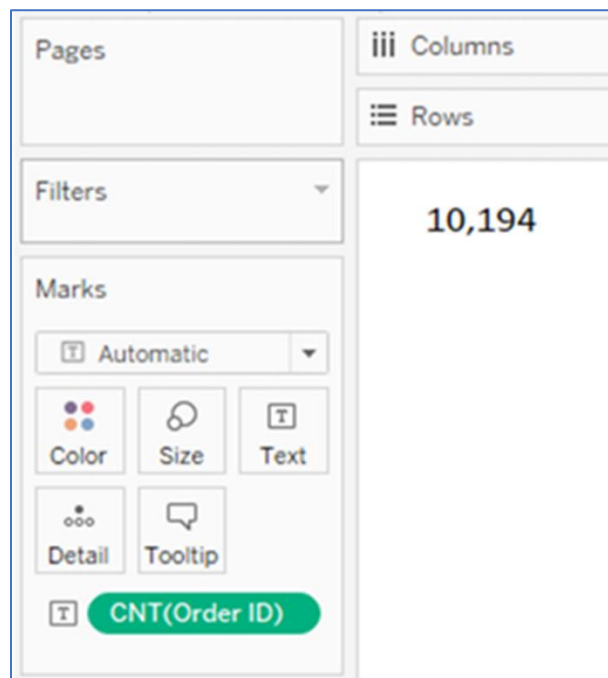


Figure 4.4: Count of Order ID in Orders.

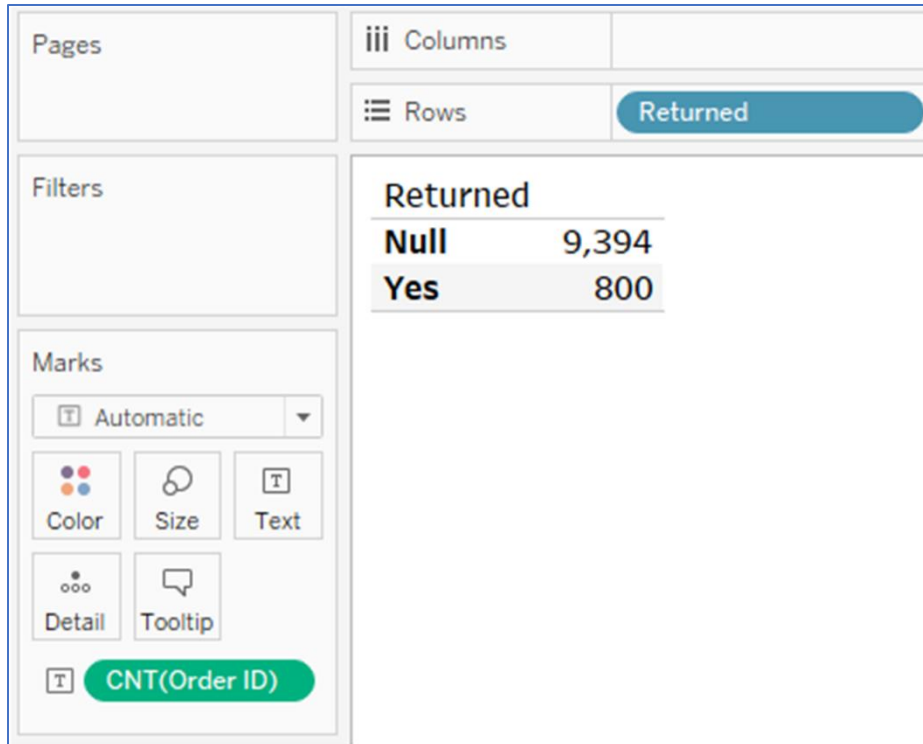


Figure 4.5: Count of Returned Orders.

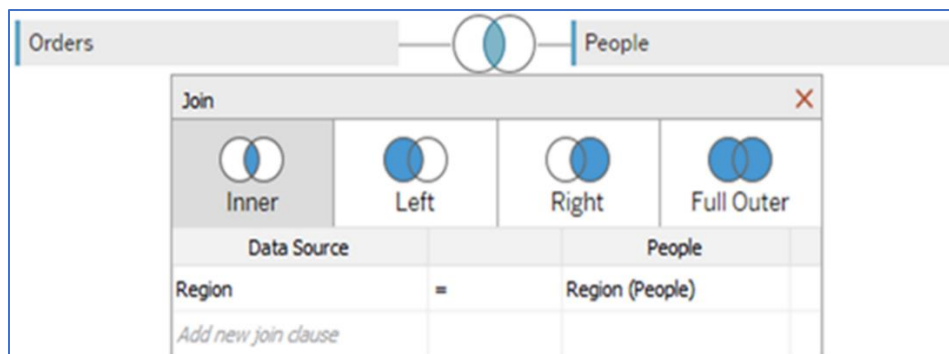


Figure 4.6: Join between the two tables.

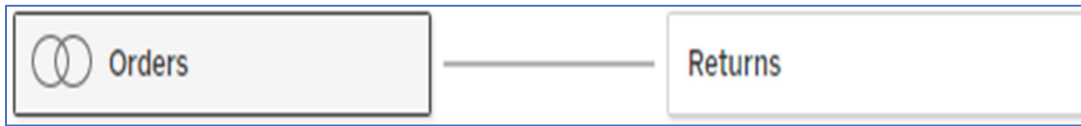


Figure 4.7: Tables with join and a relationship.

Region	Regional Man..	Returned	
<b>Central</b>	Roxanne	Null	2,243
	Rodriguez	Yes	92
<b>East</b>	Chuck Magee	Null	2,837
		Yes	149
<b>South</b>	Fred Suzuki	Null	1,551
		Yes	69
<b>West</b>	Sadie	Null	2,763
	Pawthorne	Yes	490

Figure 4.8: Visual using the fields from Orders/People and Returned.

Sales Manager	Sales Target
Sadie Pawthorne	\$7,000
Chuck Magee	\$6,000
Roxanne Rodriguez	\$8,000
Fred Suzuki	\$4,000

Figure 4.9: Format of the SalesTarget sheets.

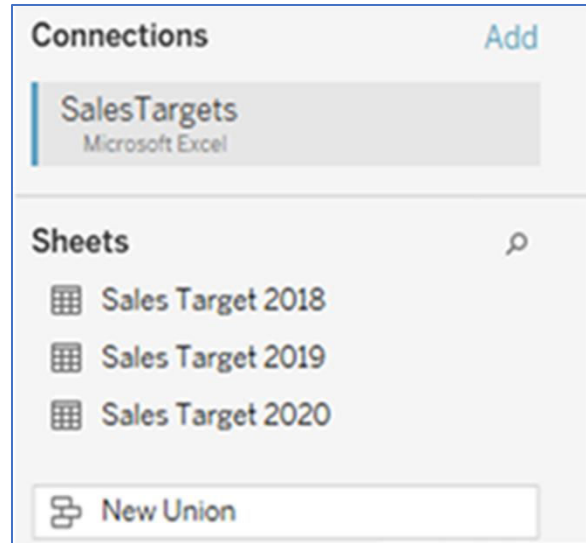


Figure 4.10: New Union option to perform a union.

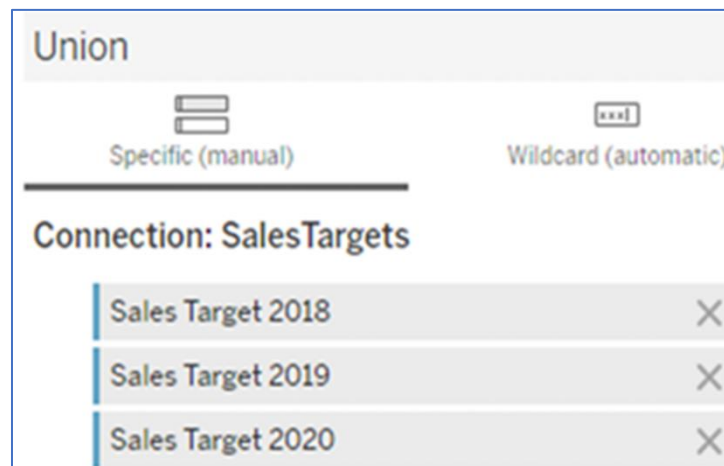


Figure 4.11: Selecting tables to perform a union.

Sales Manager	
Ade Kunle	3,000
Chuck Magee	6,000
Emy Whitefield	7,000
Fred Suzuki	4,000
Jennifer Lawrence	7,000
Mary Ann	4,000
Mike Smith	4,000
Roxanne Rodriguez	8,000
Sadie Pawthorne	7,000
Selina Gomes	5,000
Shawn Nimoji	2,000
William Scott	5,000

Figure 4.12: Tables with appended values.

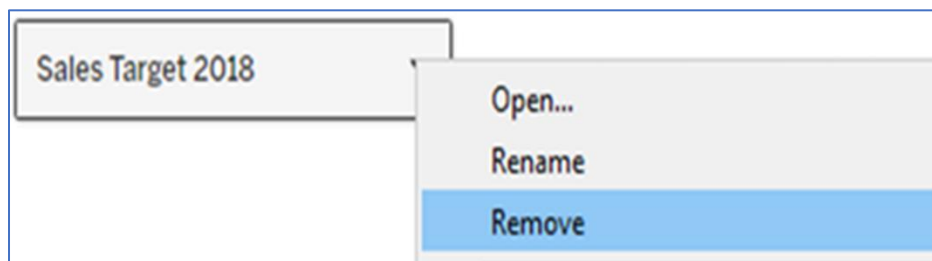


Figure 4.13: Remove SalesTarget 2018.

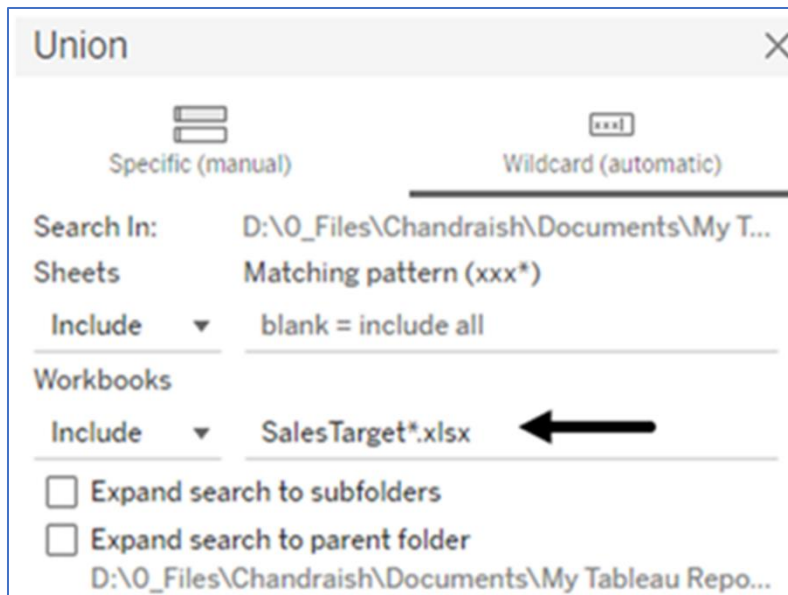


Figure 4.14: Combine files with Wildcard(automatic).

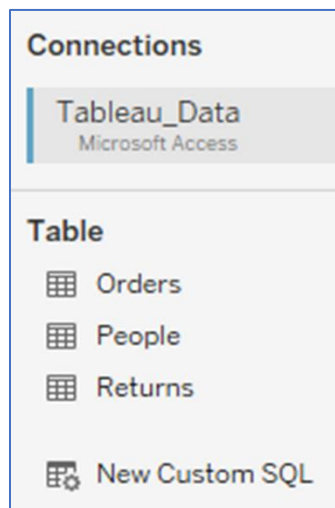


Figure 4.15: New Custom SQL option.

```
Edit Custom SQL
SELECT
  O.[Order ID] as [Order ID],
  R.Returned as Returned
FROM [Orders] O
INNER JOIN RETURNS R on O.[Order ID] = R.[Order ID]
```

Figure 4.16: Writing Custom SQL.

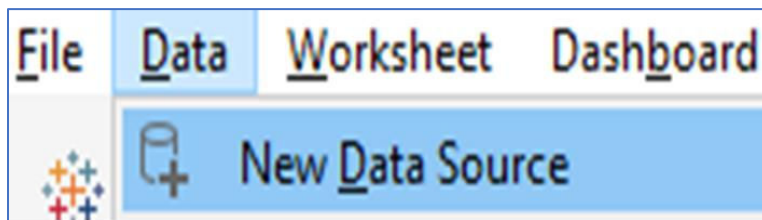


Figure 4.17: Adding new data source.

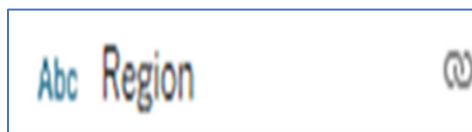


Figure 4.18: Link icon displaying automatic blend.

Category	Region	Purchase	
		Amt	Sales
Furniture	Central	374,889	164,538
	East	532,043	212,232
	South	343,506	117,299
	West	607,141	260,680
Office Supplies	Central	374,889	168,217
	East	532,043	211,658
	South	343,506	125,651
	West	607,141	226,367
Technology	Central	374,889	170,416
	East	532,043	267,938
	South	343,506	148,772
	West	607,141	252,767

Figure 4.19: Table displaying columns from two data sources.

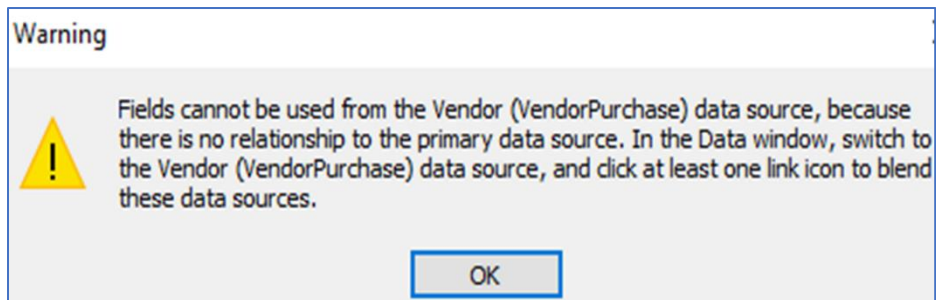


Figure 4.20: Warning in the absence of a blend relationship.

**Add/Edit Field Mapping**

Primary data source field:	Secondary data source field:
Search	Search
ProductLevel1	Category
ProductLevel2	City
Region	Country/Region
Vendor Name	Customer Fname
	Customer Lname

Figure 4.21: Creating manual blend relationship.

Pages

Columns: Measure Names

Rows: ProductLevel1, ProductLevel2

Filters: Measure Names

Marks: Automatic

Color, Size, Text

Detail, Tooltip

Measure Values: Measure Values

SUM(Profit), SUM(Purchase Amt)

ProductLevel1	ProductLevel2	Purchase	
		Profit	Amt
Furniture	Bookcases	-3,632	87,137
	Chairs	27,224	206,767
	Furnishings	13,892	71,134
	Tables	-17,753	162,343
Office Supplies	Appliances	18,329	104,532
	Art	6,653	27,119
	Binders	31,426	153,411
	Envelopes	6,988	16,476
	Fasteners	2,429	3,024
	Labels	5,573	12,486
	Paper	34,512	78,479
	Storage	21,285	180,842
	Supplies	-1,171	46,674
	Technology	Accessories	41,937
Copiers		56,094	129,528
Machines		3,462	158,239
Phones		45,051	268,007

Figure 4.22: Table resulting from manual blend relationship.