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Using Tableau Prep to Join Data Streams

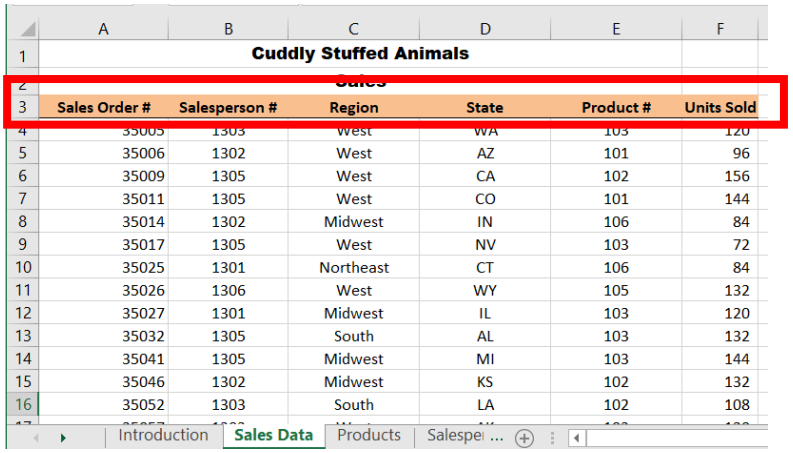
In this exercise using Tableau Prep Builder, you will:

Extract data files from Excel.

Transform the data into a flat data set in which all the data for a specific sales order is on one row. Aggregate the Number of units sold, sales and shipping cost by salesperson and shipping costs by product and region.

Load the transformed data into Excel.

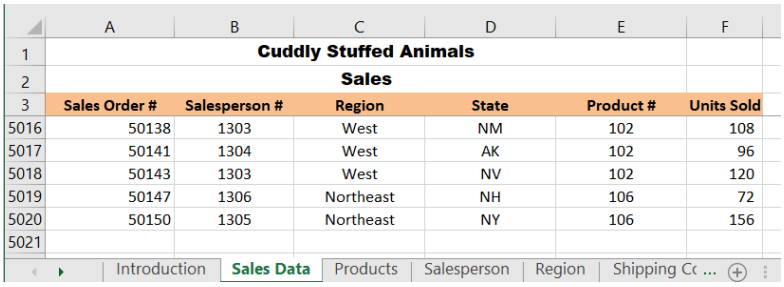
There are five streams of data in the Excel file, *Stuffed Animals.Join.Demo.xlsx.* The first stream is stored in a sheet titled "**Sales Data**". Notice that the column headings are in row three.



	A	B	C	D	E	F
1	Cuddly Stuffed Animals					
2	Sales					
3	Sales Order #	Salesperson #	Region	State	Product #	Units Sold
4	35005	1303	West	WA	103	120
5	35006	1302	West	AZ	101	96
6	35009	1305	West	CA	102	156
7	35011	1305	West	CO	101	144
8	35014	1302	Midwest	IN	106	84
9	35017	1305	West	NV	103	72
10	35025	1301	Northeast	CT	106	84
11	35026	1306	West	WY	105	132
12	35027	1301	Midwest	IL	103	120
13	35032	1305	South	AL	103	132
14	35041	1305	Midwest	MI	103	144
15	35046	1302	Midwest	KS	102	132
16	35052	1303	South	LA	102	108

Introduction | Sales Data | Products | Salespe ...

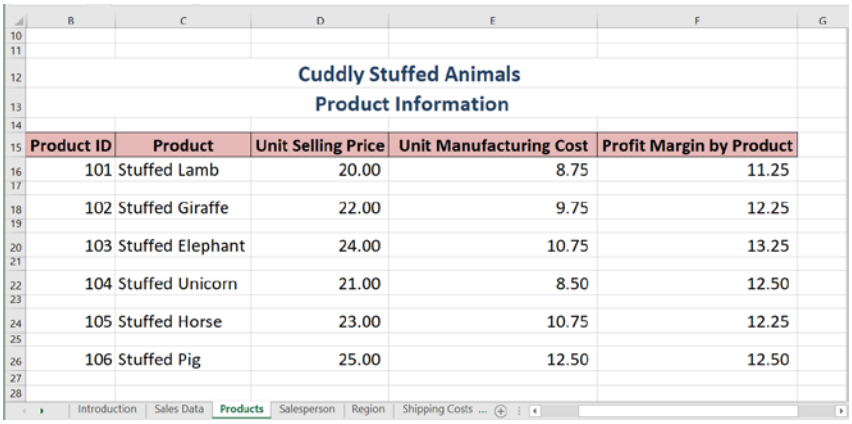
Notice that the last "Sales Order #" is 50150, and there are 5,017 rows of data (row 5020 – row 3 = 5017 rows).



	A	B	C	D	E	F
1	Cuddly Stuffed Animals					
2	Sales					
3	Sales Order #	Salesperson #	Region	State	Product #	Units Sold
5016	50138	1303	West	NM	102	108
5017	50141	1304	West	AK	102	96
5018	50143	1303	West	NV	102	120
5019	50147	1306	Northeast	NH	106	72
5020	50150	1305	Northeast	NY	106	156
5021						

Introduction | Sales Data | Products | Salesperson | Region | Shipping Cc ...

The second stream is stored in a sheet titled "**Products"**. Notice that the column headings are in row fifteen.



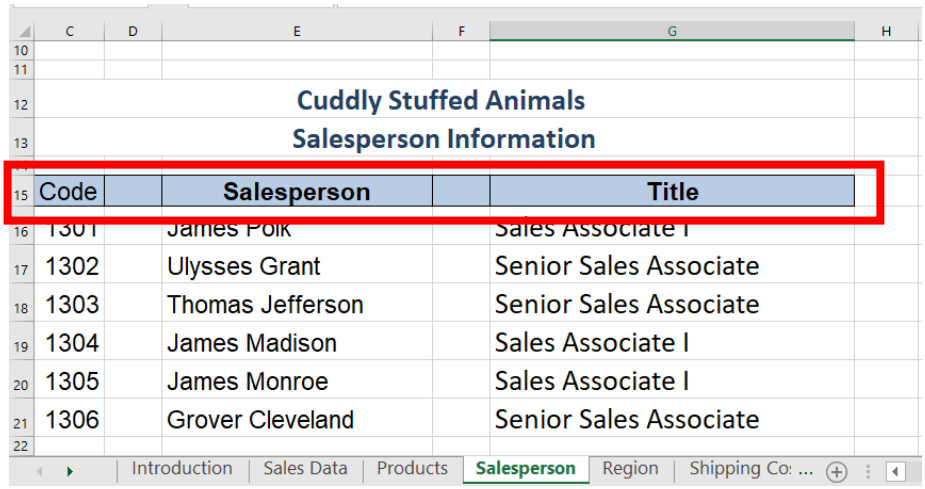
Cuddly Stuffed Animals
Product Information

Product ID	Product	Unit Selling Price	Unit Manufacturing Cost	Profit Margin by Product
101	Stuffed Lamb	20.00	8.75	11.25
102	Stuffed Giraffe	22.00	9.75	12.25
103	Stuffed Elephant	24.00	10.75	13.25
104	Stuffed Unicorn	21.00	8.50	12.50
105	Stuffed Horse	23.00	10.75	12.25
106	Stuffed Pig	25.00	12.50	12.50

Introduction | Sales Data | Products | Salesperson | Region | Shipping Costs ...

The last "Product ID" is 106, and there are 6 rows of data.

The third stream is stored in a sheet titled "**Salesperson"**. Notice that the column headings are in row fifteen.



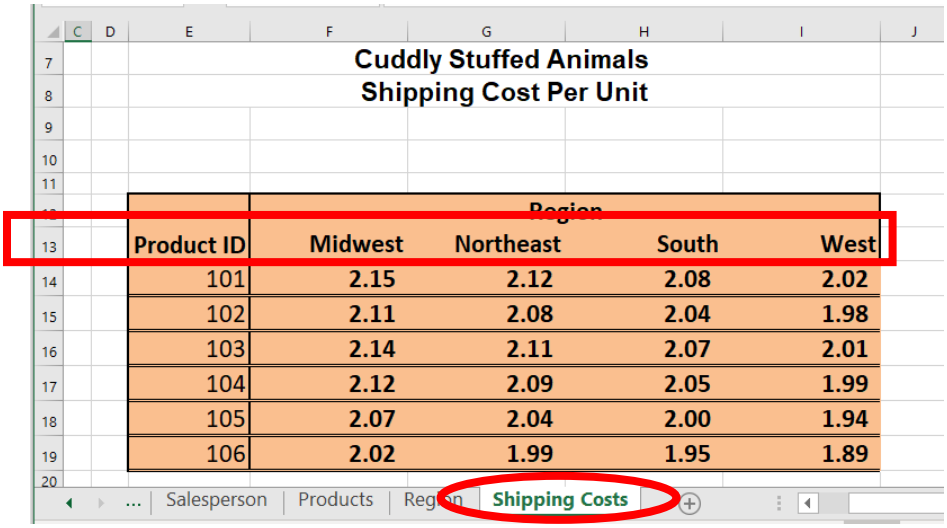
Cuddly Stuffed Animals
Salesperson Information

Code	Salesperson	Title
1301	James Polk	Sales Associate I
1302	Ulysses Grant	Senior Sales Associate
1303	Thomas Jefferson	Senior Sales Associate
1304	James Madison	Sales Associate I
1305	James Monroe	Sales Associate I
1306	Grover Cleveland	Senior Sales Associate

Introduction | Sales Data | Products | Salesperson | Region | Shipping Co: ...

The last "Code" is 1306, and there are 6 rows of data.

The fourth stream contains the shipping cost per unit by the product and region in which the sales were made is stored in a sheet titled "**Shipping Costs**". Notice that the column headings are in row thirteen.

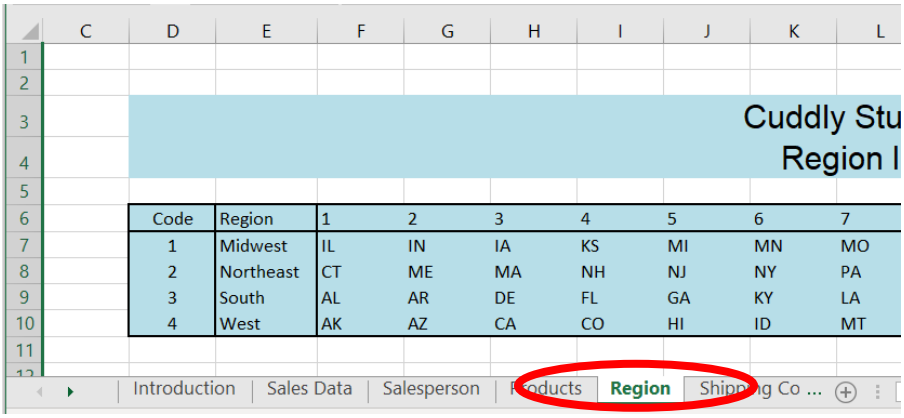


Cuddly Stuffed Animals
Shipping Cost Per Unit

	Region			
Product ID	Midwest	Northeast	South	West
101	2.15	2.12	2.08	2.02
102	2.11	2.08	2.04	1.98
103	2.14	2.11	2.07	2.01
104	2.12	2.09	2.05	1.99
105	2.07	2.04	2.00	1.94
106	2.02	1.99	1.95	1.89

The last "Product ID" is 106, and there are 6 rows of data.

The fifth stream contains data regarding the Regions and states in each region sold are stored in a sheet titled "**Region**".



Cuddly Stu
Region I

Code	Region	1	2	3	4	5	6	7
1	Midwest	IL	IN	IA	KS	MI	MN	MO
2	Northeast	CT	ME	MA	NH	NJ	NY	PA
3	South	AL	AR	DE	FL	GA	KY	LA
4	West	AK	AZ	CA	CO	HI	ID	MT

The deliverable consists of two reports exported to the original Excel file. The first report is a report by salesperson that shows the number of units sold, sales in dollars and shipping costs. The second report is a shipping cost report by product and region loaded back into Excel.

By Salesperson

Salesperson	Units Sold	Sales	Shipping Cost
Ulysses Grant	57,924	$ 1,317,384.00	$ 117,878.40
Thomas Jefferson	141,156	$ 3,210,924.00	$ 287,129.76
James Polk	43,200	$ 985,560.00	$ 87,710.64
James Monroe	121,236	$ 2,748,540.00	$ 246,882.36
James Madison	59,136	$ 1,349,352.00	$ 120,158.04
Grover Cleveland	76,680	$ 1,733,088.00	$ 156,216.00
Total	499,332	$ 11,344,848.00	$ 1,015,975.20

Automate the process so that the reports can be completed at the end of every month. The unit selling price and costs do not change during the year.

Shipping Costs by Product and Region

	Midwest	Northeast	South	West	Grand Total
Stuffed Elephant	$ 47,610.72	$ 35,625.24	$ 50,822.64	$ 63,990.36	$ 198,048.96
Stuffed Giraffe	$ 76,744.92	$ 56,958.72	$ 80,686.08	$ 91,095.84	$ 305,485.56
Stuffed Horse	$ 26,032.32	$ 17,062.56	$ 25,488.00	$ 31,916.88	$ 100,499.76
Stuffed Lamb	$ 30,263.40	$ 19,614.24	$ 29,877.12	$ 38,905.20	$ 118,659.96
Stuffed Pig	$ 47,898.24	$ 30,566.40	$ 47,361.60	$ 59,648.40	$ 185,474.64
Stuffed Unicorn	$ 25,999.68	$ 18,458.88	$ 29,987.40	$ 33,360.36	$ 107,806.32
Grand Total	$ 254,549.28	$ 178,286.04	$ 264,222.84	$ 318,917.04	$ 1,015,975.20

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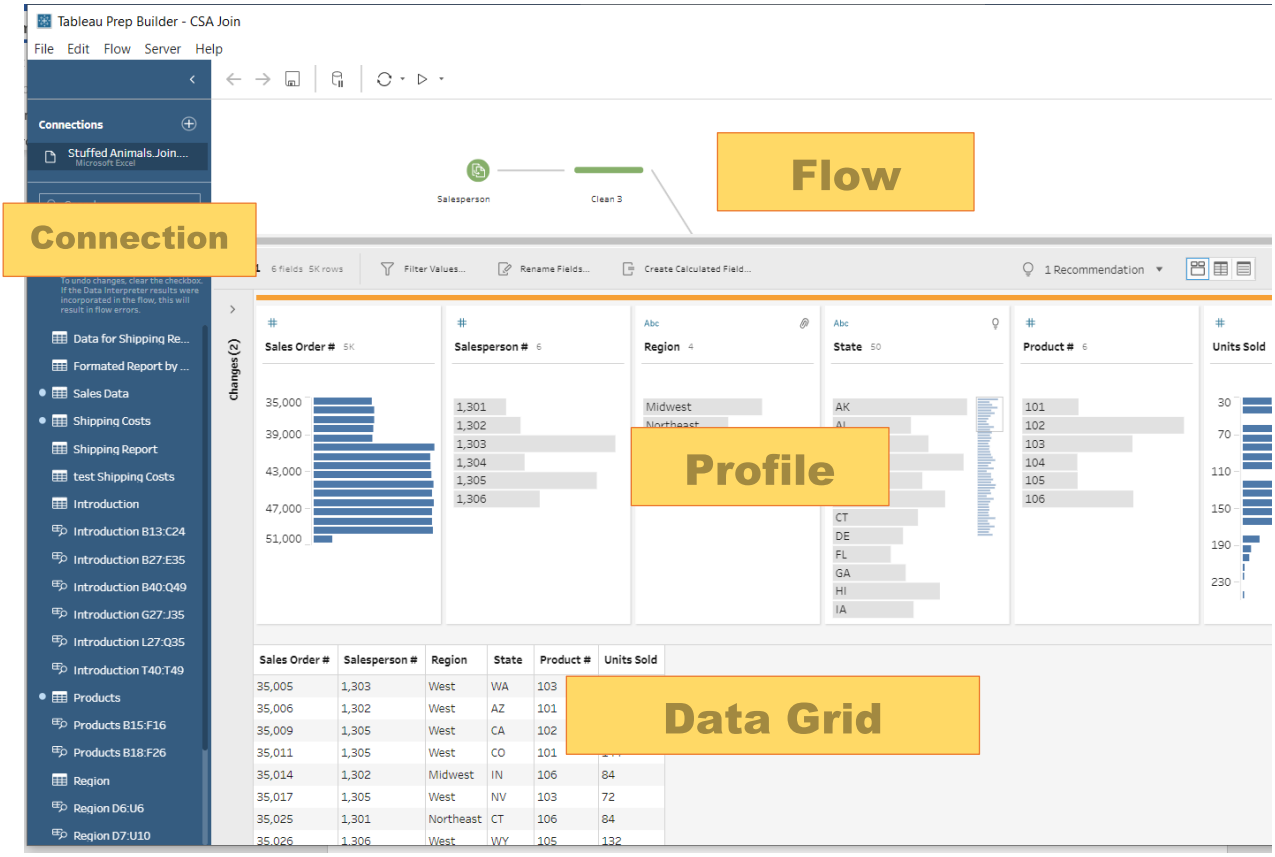
Start Tableau Prep

Note: You cannot extract data from an open Excel file, so make sure that the Excel file is closed before starting to input the data.

The Tableau Prep Builder workspace consists of the Connections pane and three coordinated areas that help you interact with and explore your data:

- Flow pane: A visual representation of your operation steps as you prepare your data.
- Profile pane: A summary of each field in your data sample. See the shape of your data and quickly find outliers and nulls.
- Data grid pane: The row level detail for your data.

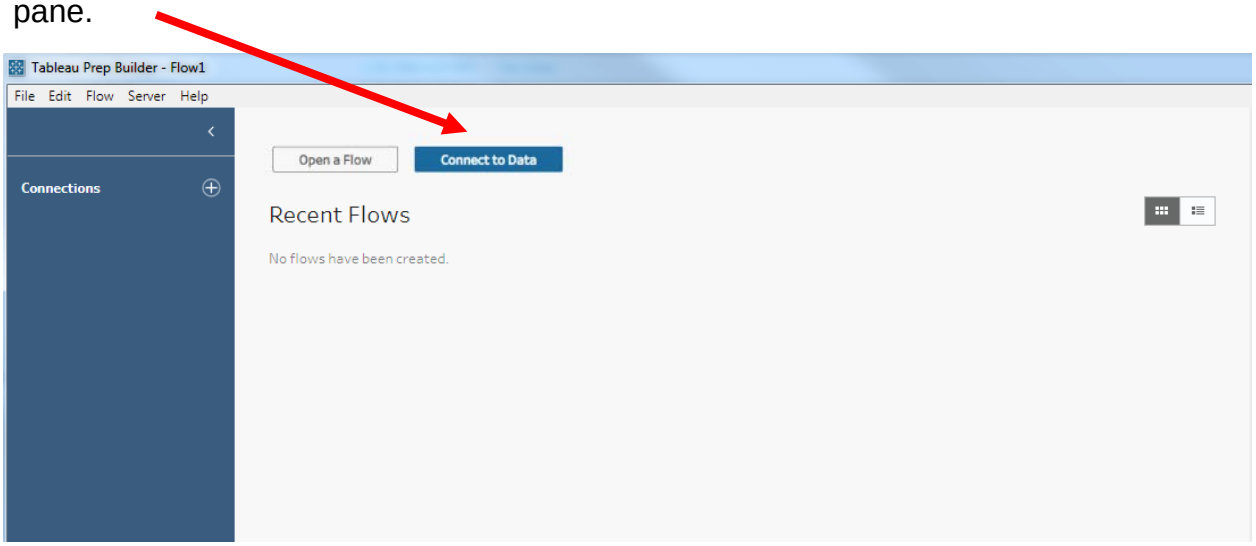


After you connect to your data and begin building your flow, you add steps in the Flow pane. These steps function as a lens into the structure of your data, as well as a summary of operations that is applied to your data. Each step represents a different category of operations that you define.

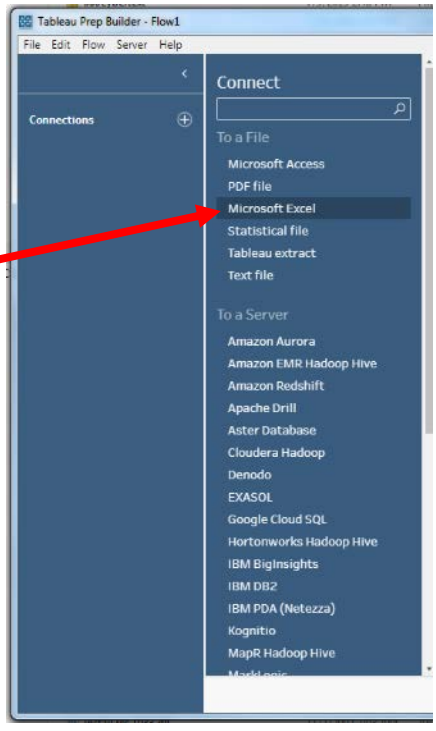
In the Configuration area, select the “Connect a File or Database” drop-down arrow.

Step 1: Input Excel file

To open Excel file via Tableau Prep, press green button “Connect to Data” on the Flow pane.

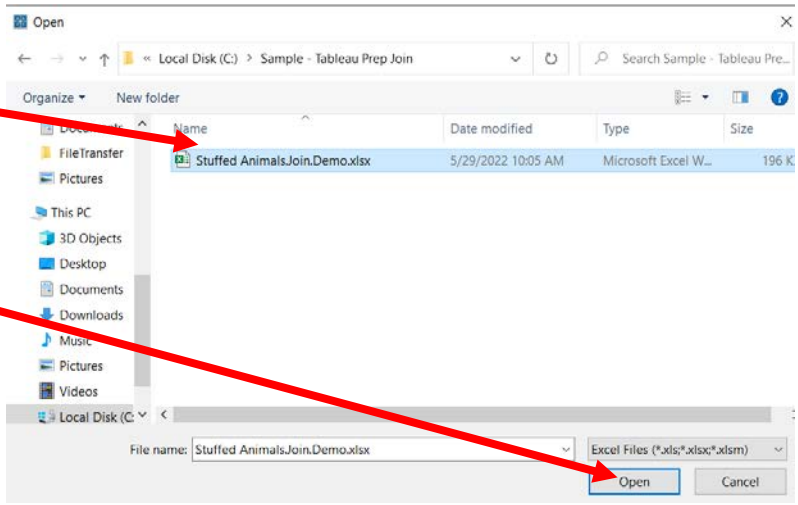


On the connections pane select Microsoft Excel.



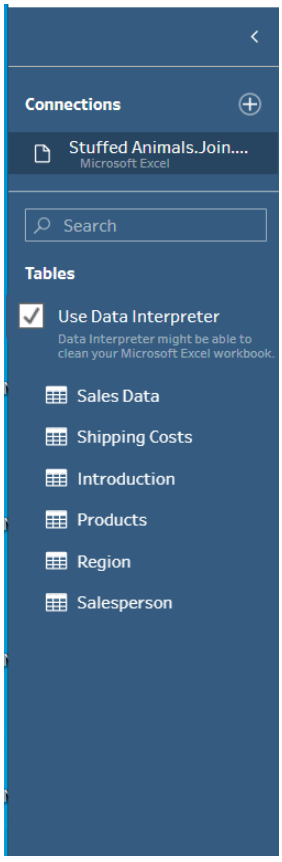
Select the file.

Select “Open”.

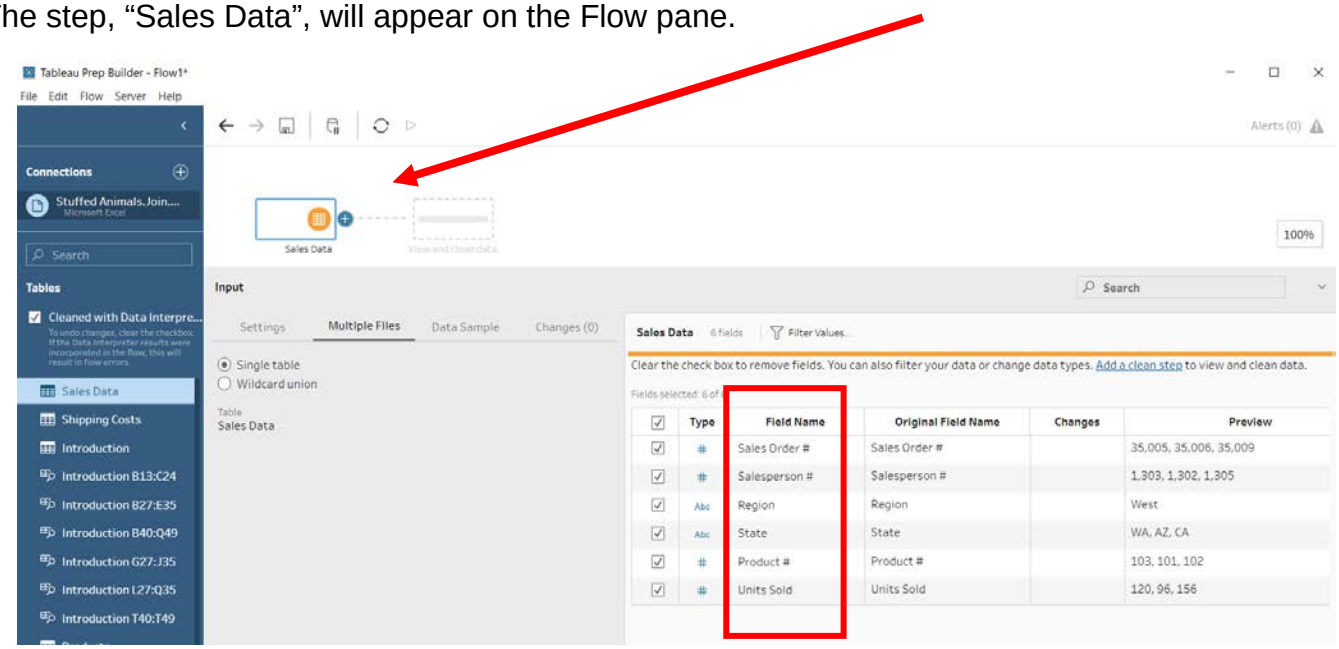


Remember that the field names are in the third row. Check “Use Data Interpreter” tick box to let Tableau Prep adjust for the input data.

Select the “Sales Data” sheet on the Connections pane by either double click on the sheet name or drag the sheet name to the canvas.



The step, “Sales Data”, will appear on the Flow pane.

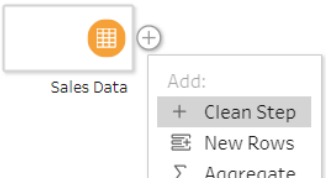


The sample data will be visible on the Profile pane.

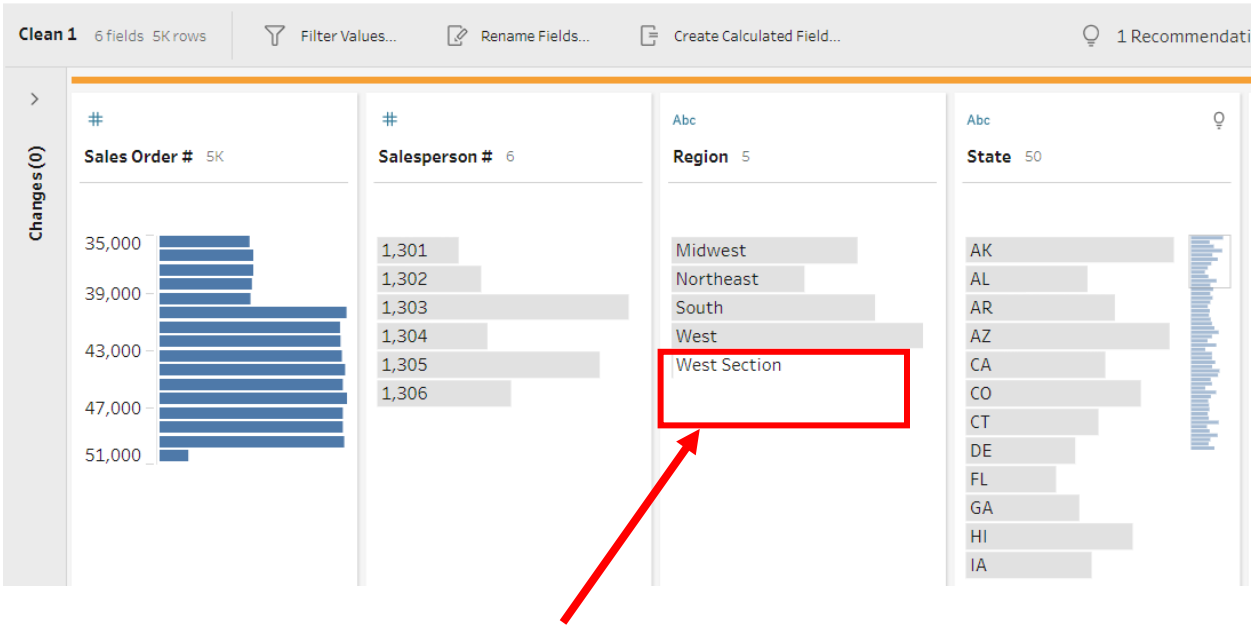
The “Use Data Interpreter” worked, and the “Field Name” column is correct.

Step 2: Clean the data

Review the data that we just added. Click the plus sign and add “Clean Step”.



On the profile pane review the data.

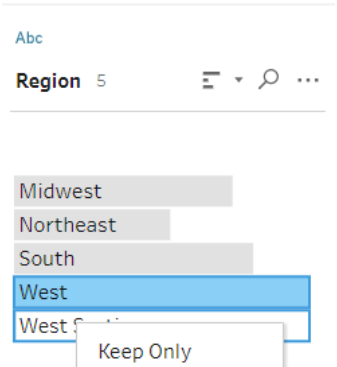


The “Region” column can only contain one of the four regions. Browse the data in the “Region” field to verify that all the data is correct. Make any changes that are required.

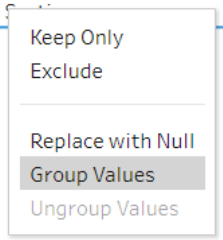
Code	Region
1	Midwest
2	Northeast
3	South
4	West

In the “Region” column two regions looks similar, but not the same: “West” and “West Section”. In one or more records “West” was incorrectly entered as “West Section”. We need to correct this manual input error.

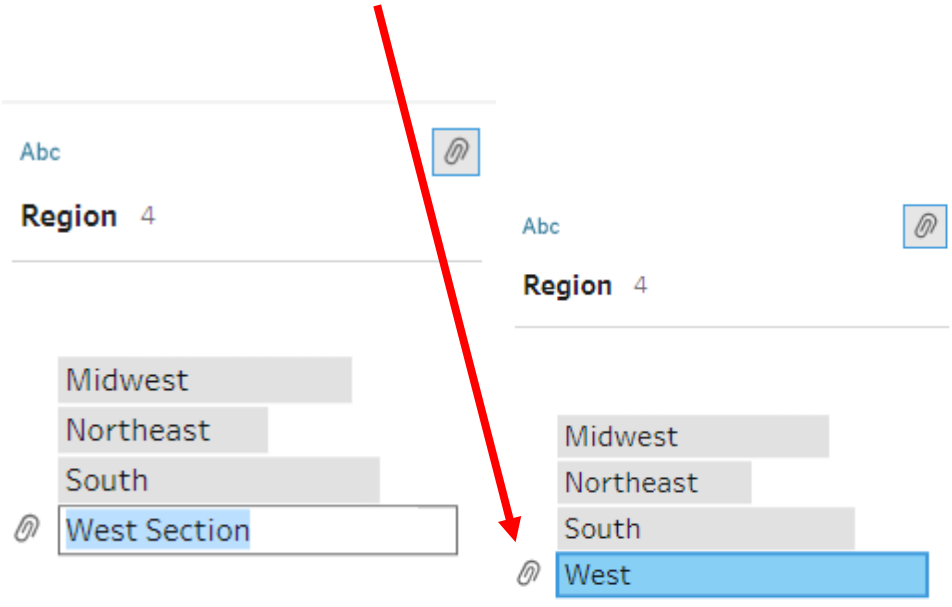
Group both values and give the group a common name. Select the two regions by first clicking on “West” then hold down the control key click on the second field “Western Section” and then release the control key (Ctr+).



While hovering over the selected items right click and select “Group”.



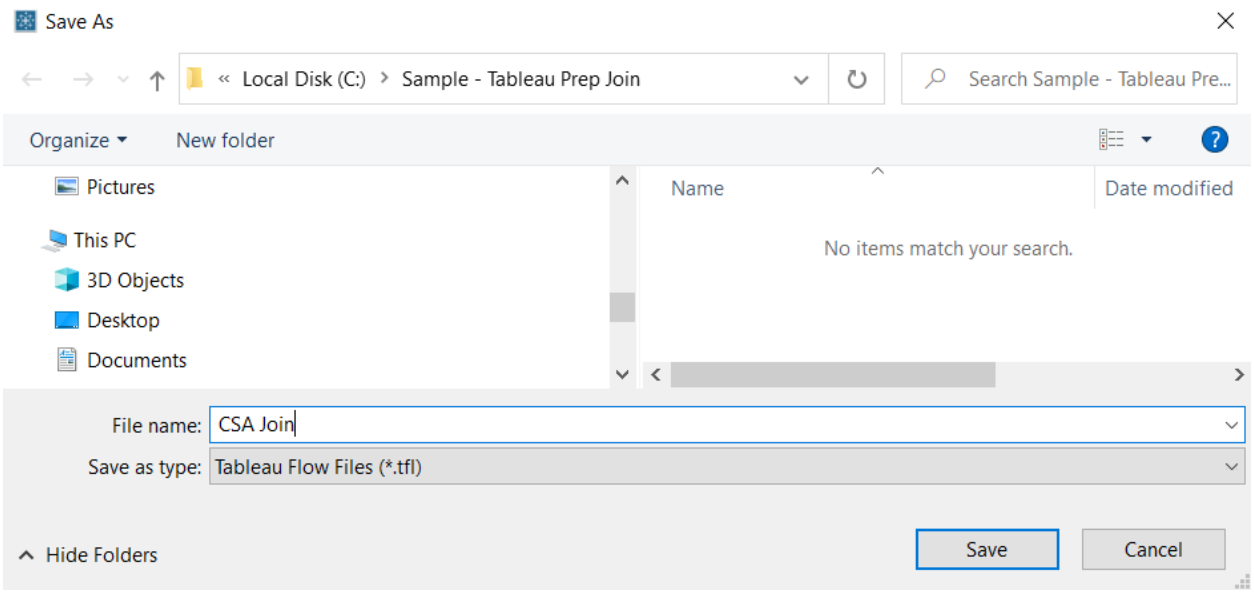
If necessary, name the group “West”.



Save the workflow regularly.

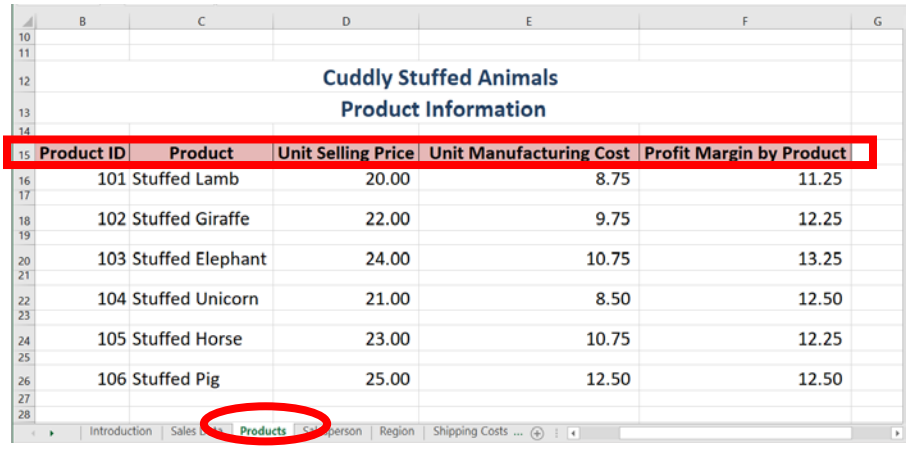
Select “File > Save As…”

Enter the “File name:” and Save.



Step 3: Extract the data from the "Products" sheet. Review the data, join to Stream 1 and verify the number of rows.

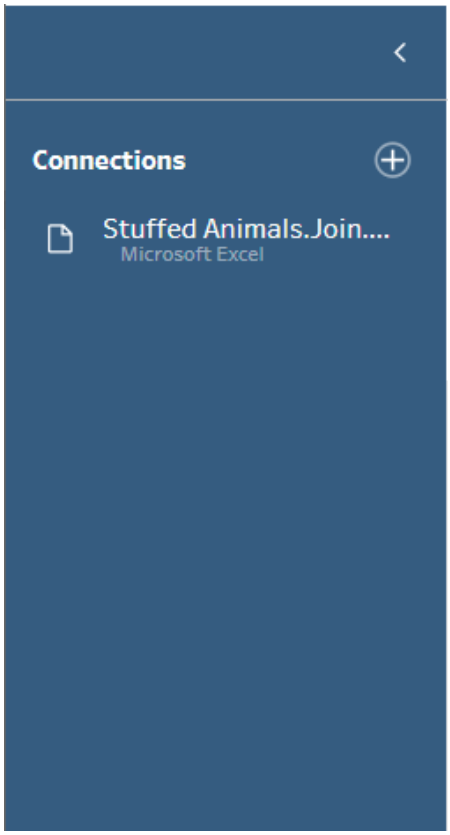
Data regarding the Product's ID, name selling price, manufacturing cost and profit margin are stored in an Excel sheet titled "Products". Notice that the column headings are in the fifteen row.



Cuddly Stuffed Animals
Product Information

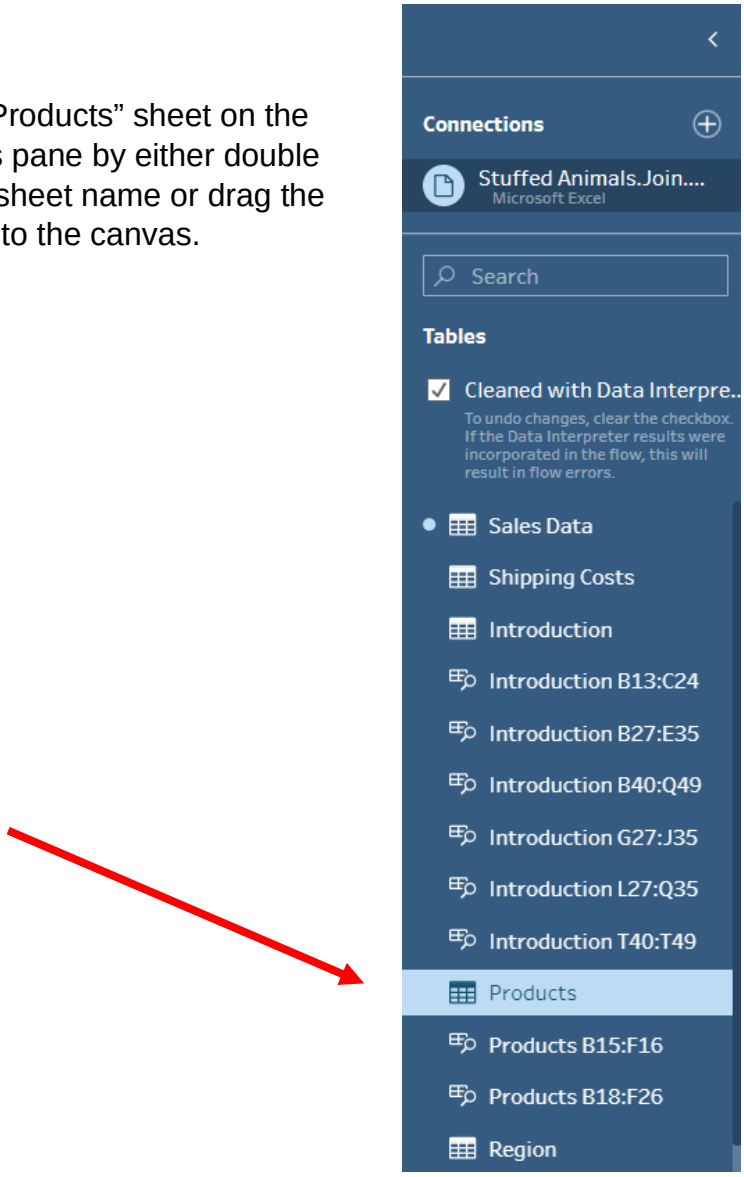
Product ID	Product	Unit Selling Price	Unit Manufacturing Cost	Profit Margin by Product
101	Stuffed Lamb	20.00	8.75	11.25
102	Stuffed Giraffe	22.00	9.75	12.25
103	Stuffed Elephant	24.00	10.75	13.25
104	Stuffed Unicorn	21.00	8.50	12.50
105	Stuffed Horse	23.00	10.75	12.25
106	Stuffed Pig	25.00	12.50	12.50

Select "Stuffed Animals.Join.Demo.xlsx".



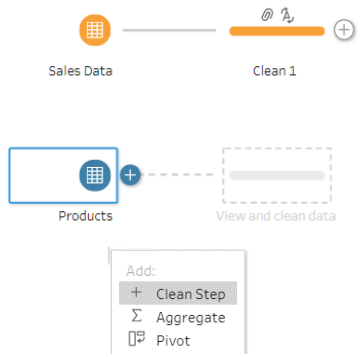
The “Cleaned with Data Interpreter” should still be selected.

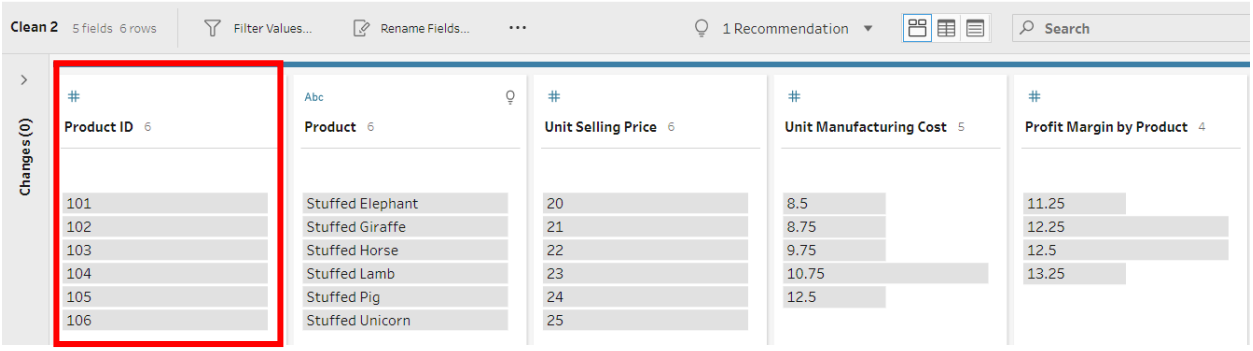
Select the “Products” sheet on the Connections pane by either double click on the sheet name or drag the sheet name to the canvas.



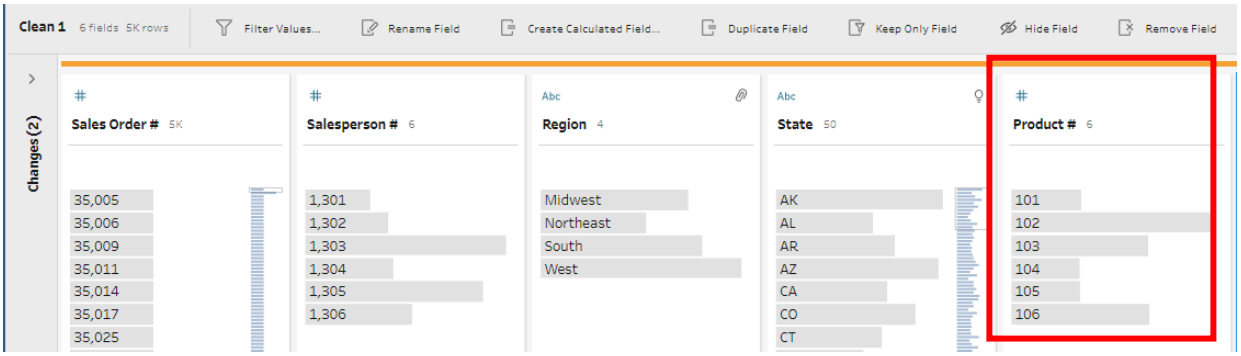
Step 4: Clean the data

Review the data that we just added. Click the plus sign and add step “Clean 2”.



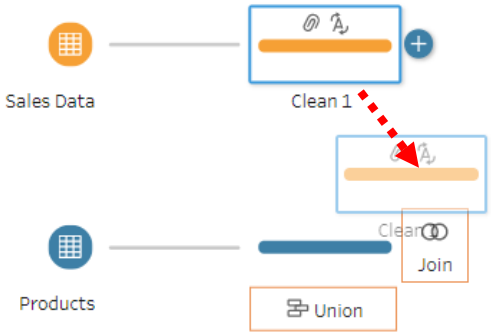


Everything looks correct. Step “Clean 2”, from the second stream has 6 records and contains the field “Product ID”. Step “Clean 1”, from the first steam has 5,017 records and contains the field “Product #”.



Step 5: Combine Data from first Two Streams on a Common Field

Now join the two the streams. Drag the “Clean 1” step from the first stream to the “Clean 2” step in the second stream and a Join box will appear. Drop the “Clean 1” step into the Join box.



As a result, step “Join 1”, a combination of the two streams will appear. Select the “Join 1” step.

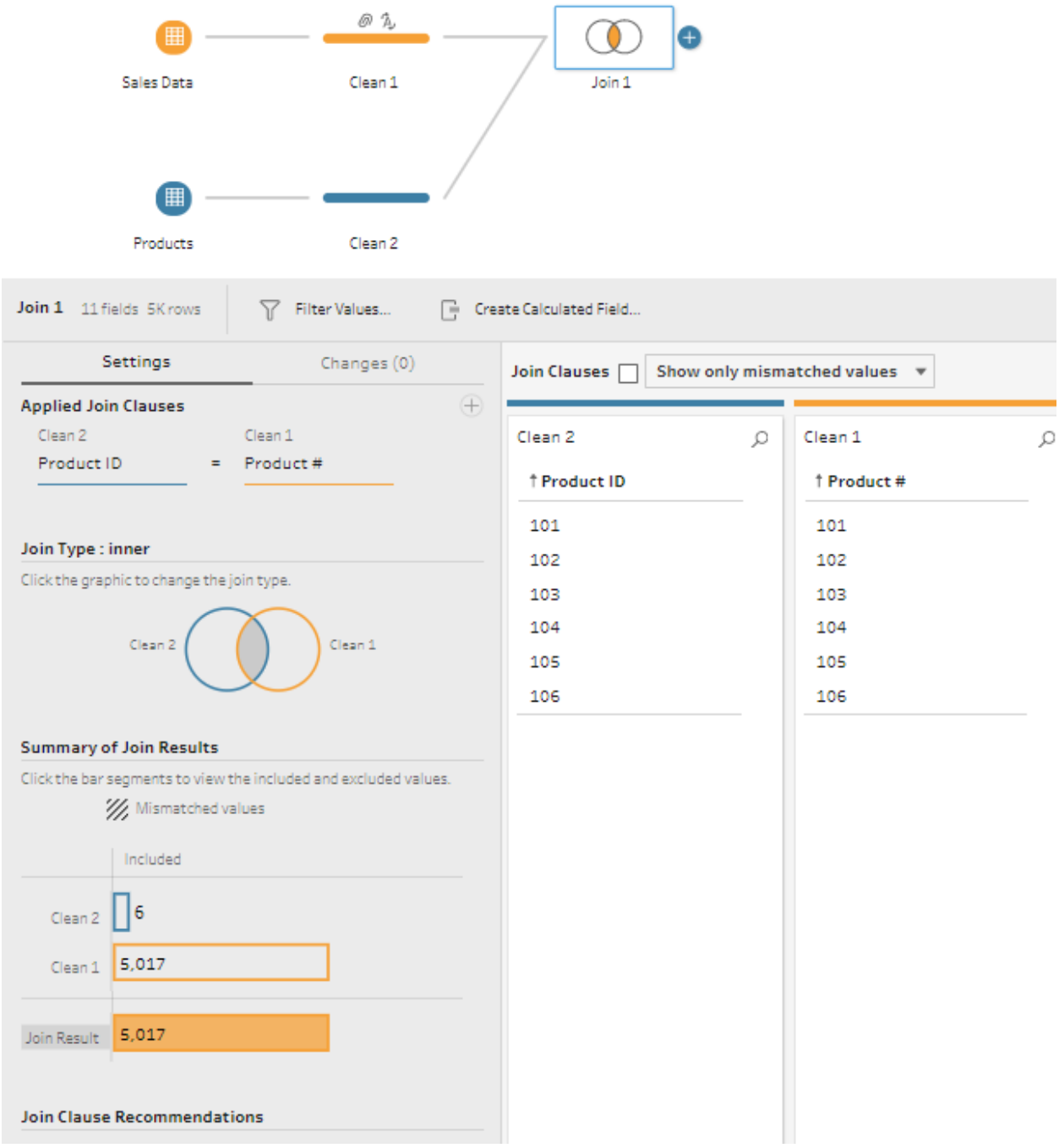


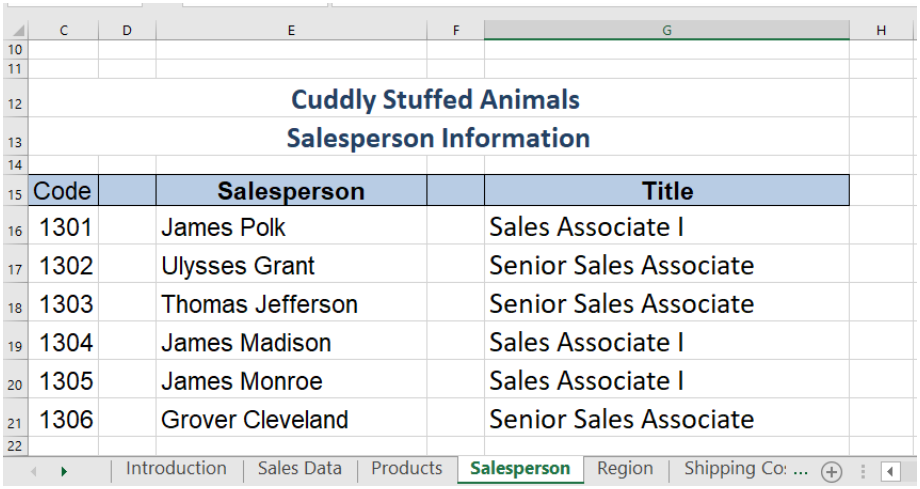
Tableau automatically joined based upon a match of “Product ID” in Clean 2 and “Product #” in Clean 1.

The Join result is 5,017 rows, everything was matched, there are no errors.

Sales Order #	Salesperson #	Region	State	Product #	Units Sold	Product ID	Product	Unit Selling Price	Unit Manufacturing Cost	Profit Margin by Product
35,005	1,303	West	WA	103	120	103	Stuffed Elephant	24	10.75	13.25
35,006	1,302	West	AZ	101	96	101	Stuffed Lamb	20	8.75	11.25
35,009	1,305	West	CA	102	156	102	Stuffed Giraffe	22	9.75	12.25
35,011	1,305	West	CO	101	144	101	Stuffed Lamb	20	8.75	11.25
35,014	1,302	Midwest	IN	106	84	106	Stuffed Pig	25	12.5	12.5

“Join 1” contains detailed product information.

Step 6: Extract the data from the "Salesperson" sheet. Review the data, join to the first two streams, and verify the number of rows.



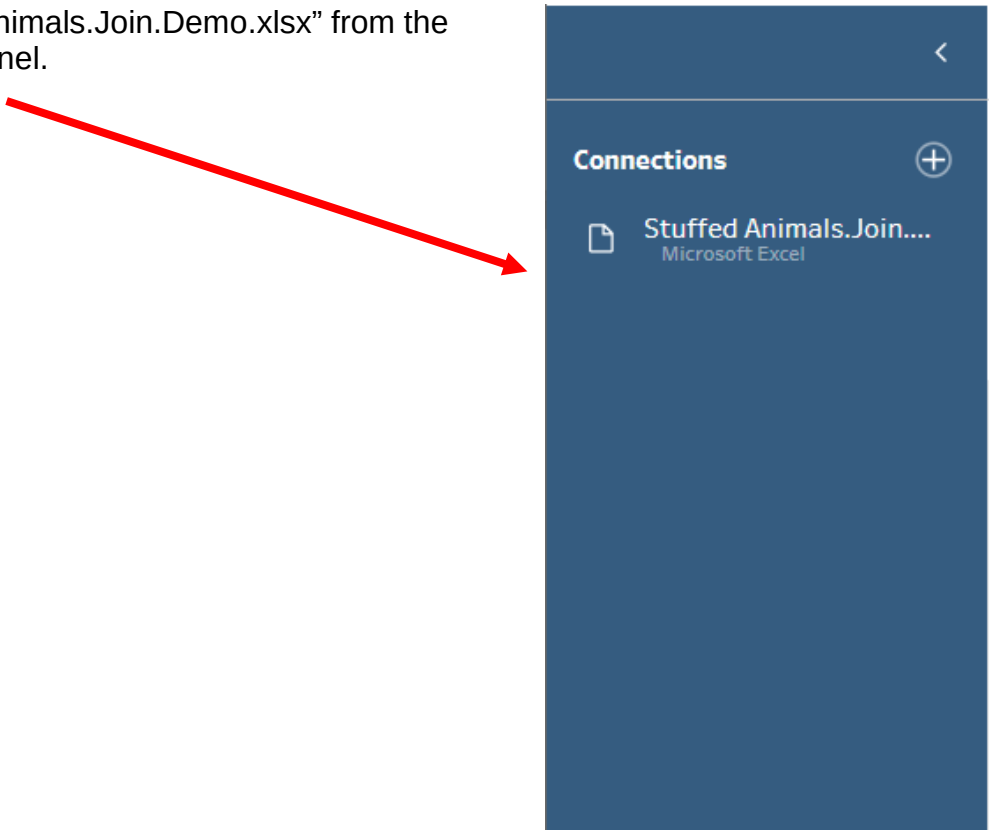
Cuddly Stuffed Animals
Salesperson Information

Code	Salesperson	Title
1301	James Polk	Sales Associate I
1302	Ulysses Grant	Senior Sales Associate
1303	Thomas Jefferson	Senior Sales Associate
1304	James Madison	Sales Associate I
1305	James Monroe	Sales Associate I
1306	Grover Cleveland	Senior Sales Associate

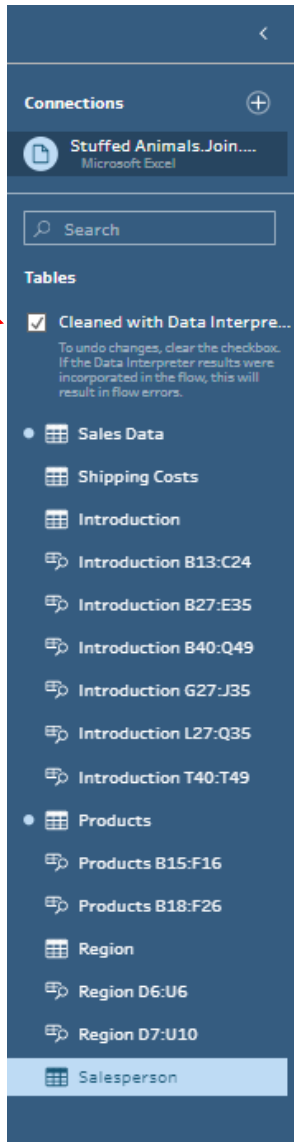
Introduction | Sales Data | Products | Salesperson | Region | Shipping Co: ...

Data regarding the salesperson's name and title are stored in an Excel sheet titled "Salesperson". Notice that the column headings are in the fifteen row.

Select "Stuffed Animals.Join.Demo.xlsx" from the "Connections" panel.



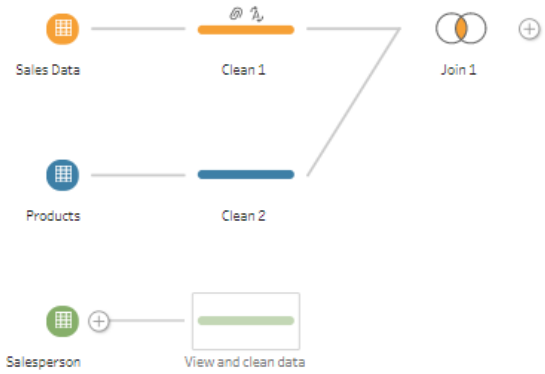
The “Cleaned with Data Interpreter” should still be selected.



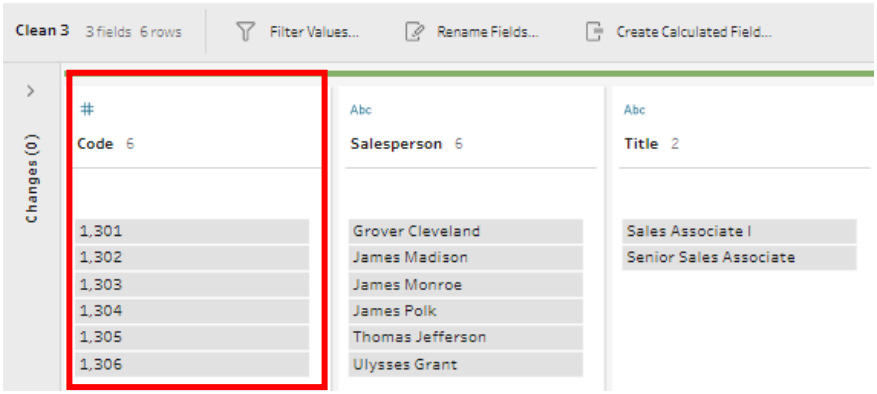
Select the “Salesperson” sheet on the Connections pane by either double click on the sheet name or drag the sheet name to the canvas.

Step 7: Clean the data

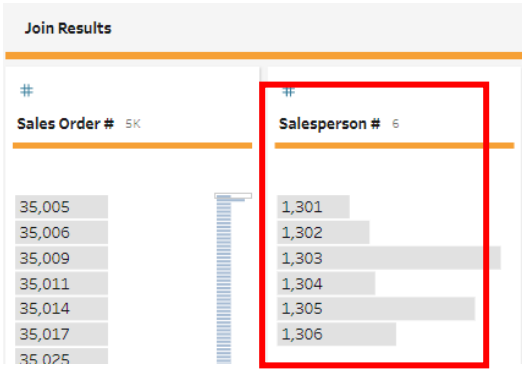
Review the data that we just added.



Click the “View and clean data” tool and add step “Clean 3”.

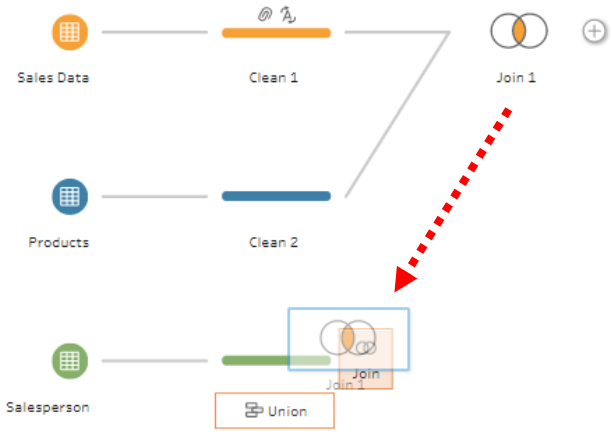


Everything looks correct. Join 1 with 5,017 records contains the field “Salesperson #” which contains the same data as the field “Code” in Clean 3.

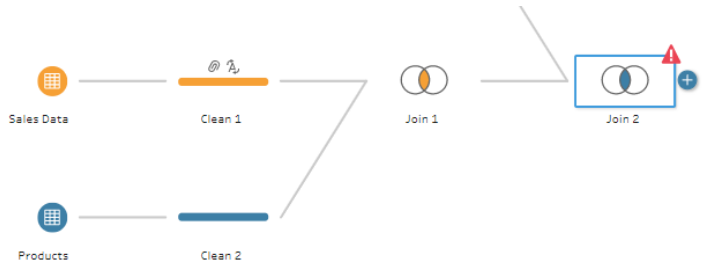


Step 8: Combine Data from first Two Streams on a Common Field

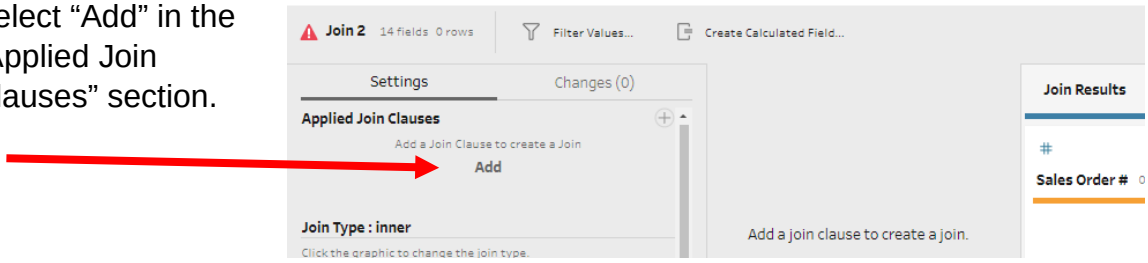
Now join the two the streams. Drag the “Join 1” step from the first and second stream to the “Clean 3” step from the third stream and a Join box will appear. Drop the “Join 1” step into the Join box.



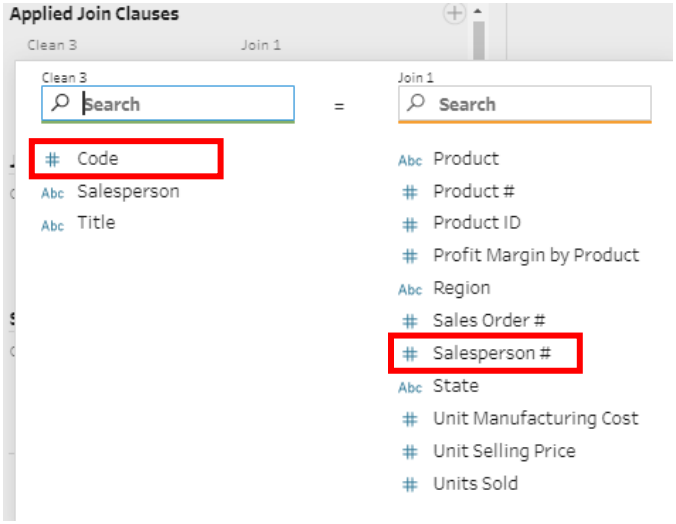
As a result, step “Join 2”, a combination of the two streams will appear. Tableau did not determine what fields should be used to join the two streams. Select the “Join 2” step.



Select “Add” in the “Applied Join Clauses” section.

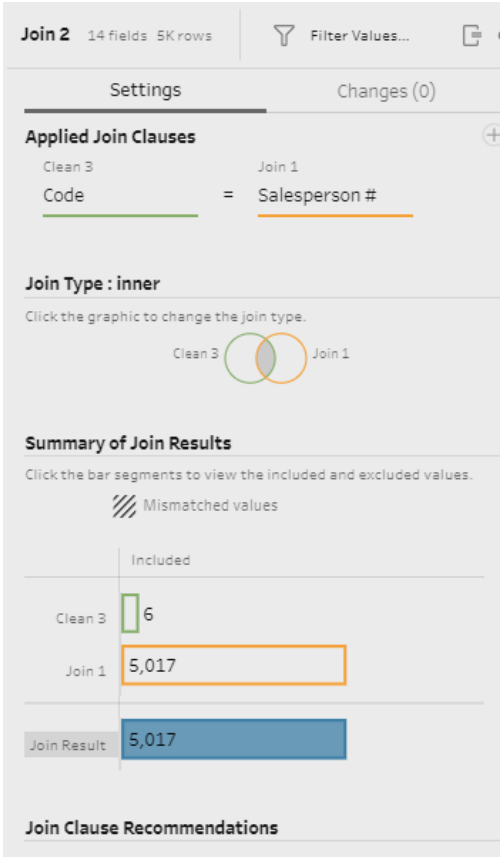


Select the fields to join on, “Code” from Clean 3 and “Salesperson #” from “Join 1”.

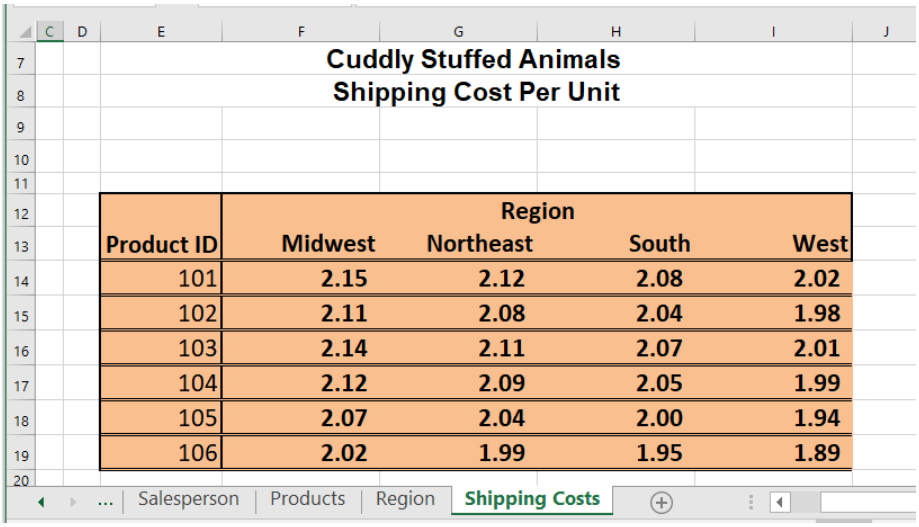


The default “Join Type” is “inner” which does not have to be changed.

The join was successful as 5,017 rows were combined.



Step 9: Extract the data from the "Shipping Costs" sheet. Review the data, join to Join 2 and verify the number of rows.

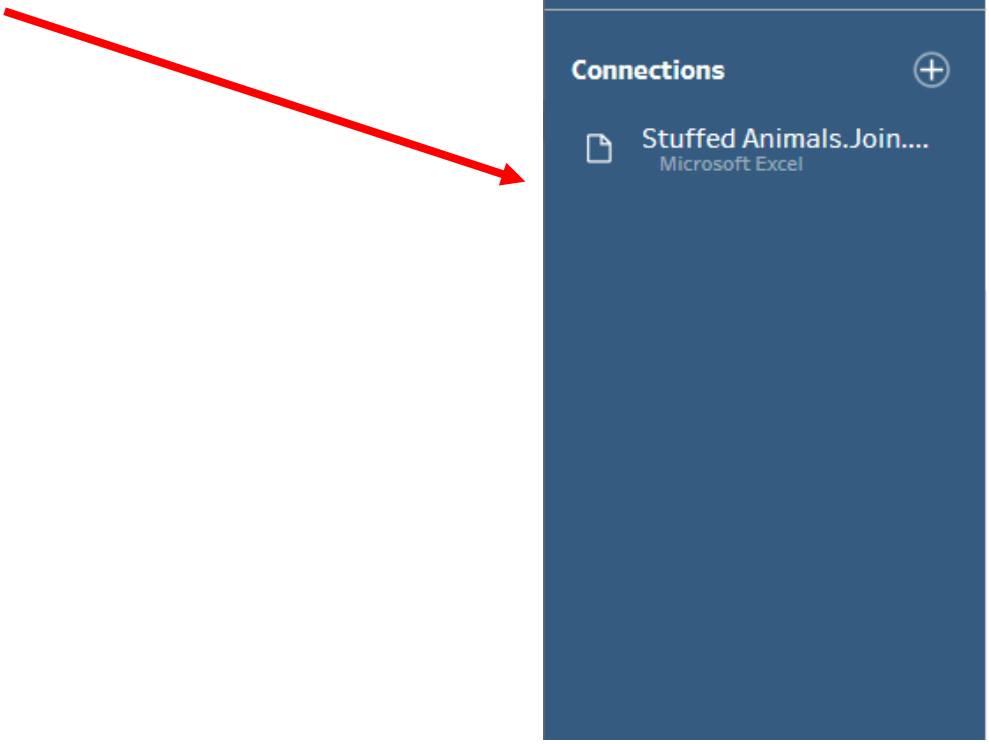


Cuddly Stuffed Animals
Shipping Cost Per Unit

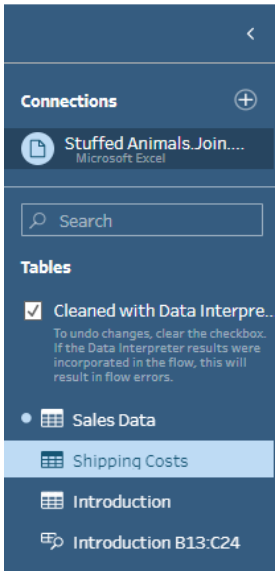
Product ID	Region			
	Midwest	Northeast	South	West
101	2.15	2.12	2.08	2.02
102	2.11	2.08	2.04	1.98
103	2.14	2.11	2.07	2.01
104	2.12	2.09	2.05	1.99
105	2.07	2.04	2.00	1.94
106	2.02	1.99	1.95	1.89

Notice that the column headings are in the thirteenth row.

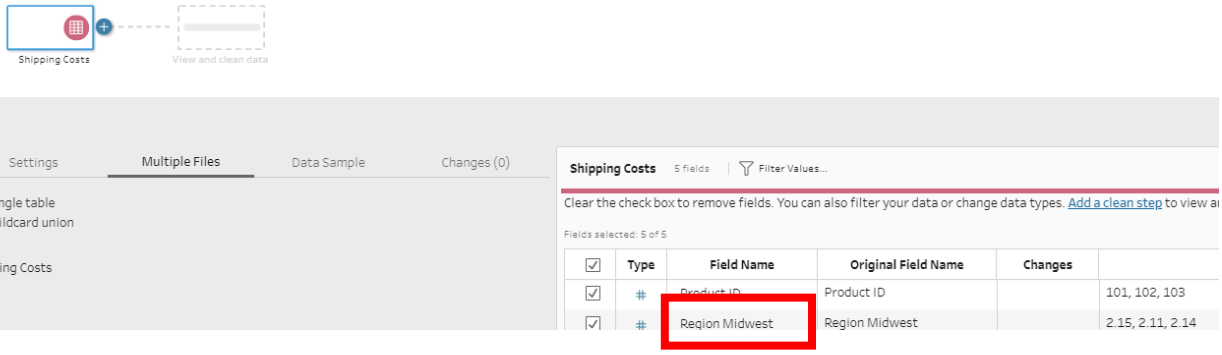
Select “Stuffed Animals.Join.Demo.xlsx” from the “Connections” panel.



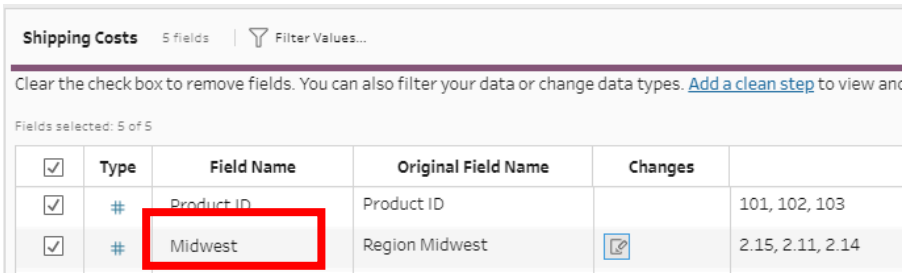
The “Cleaned with Data Interpreter” should still be selected.



Select the “Shipping Costs” sheet on the Connections pane by either double click on the sheet name or drag the sheet name to the canvas.



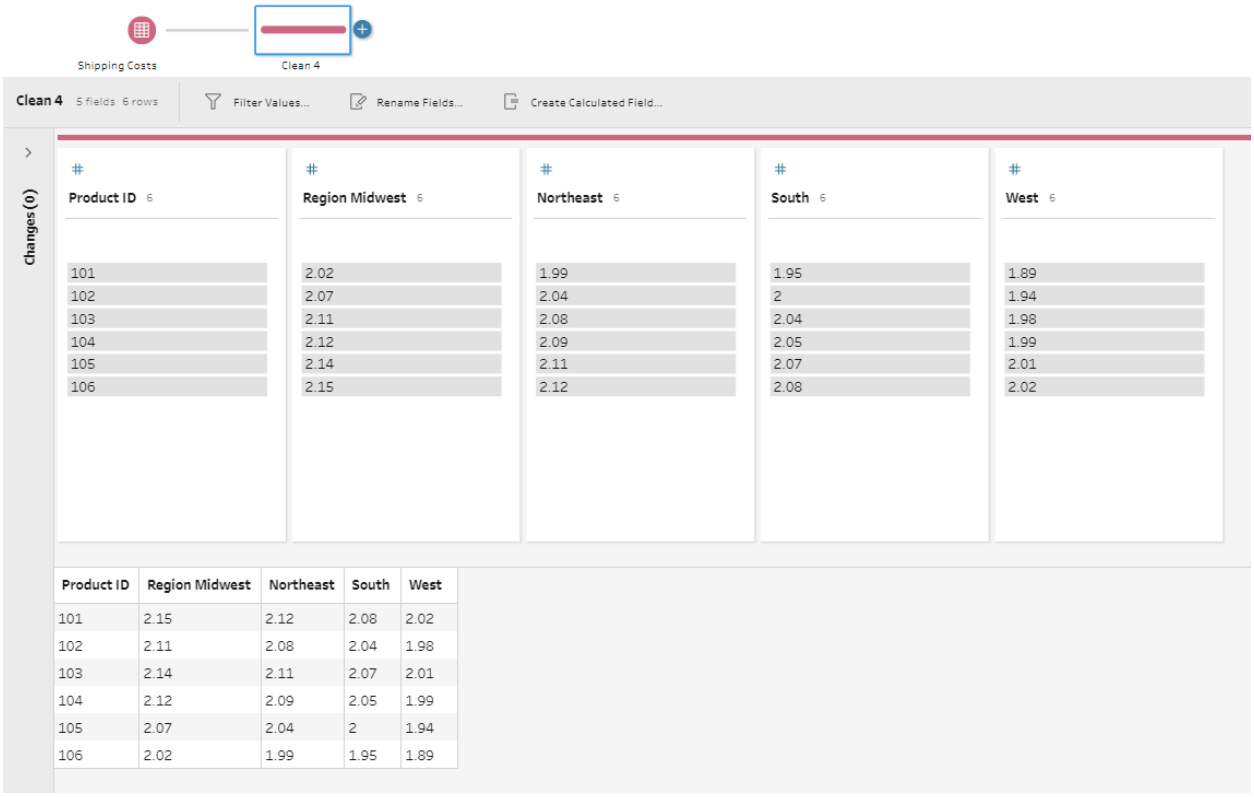
Change the field name from “Region Midwest” to “Midwest”.



Step 10: Clean the data

Review the data that we just added.

Click the “View and clean data” tool and add step “Clean 4”.

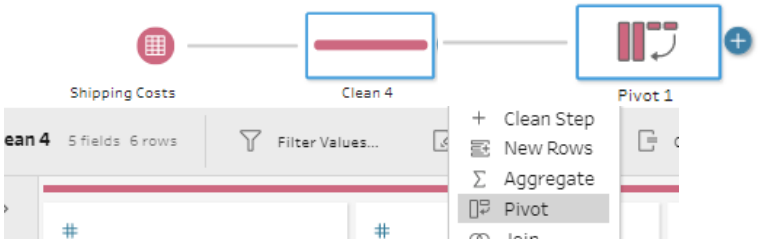


Data in a matrix format cannot be joined to the previous inputs in the current format. Each record must be converted into multiple records.

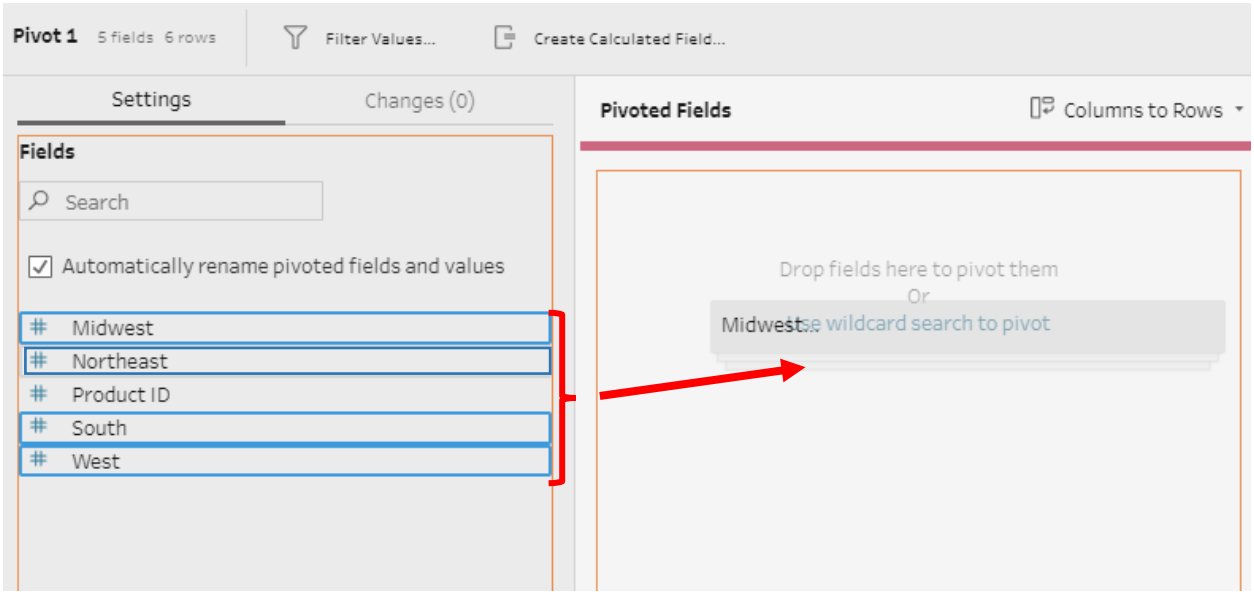
.

Step 11: Pivot the data.

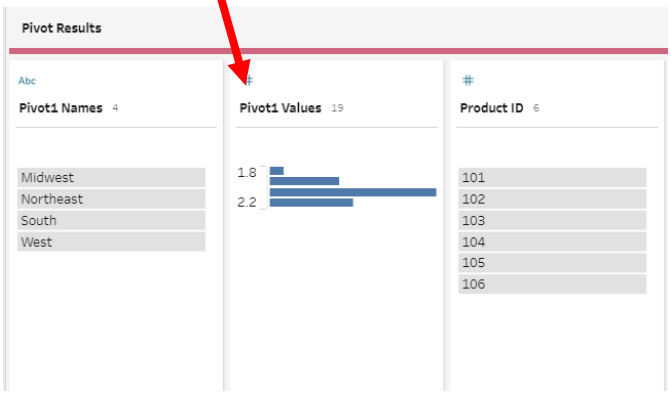
Add a “Pivot” step to the “Clean 4” step.

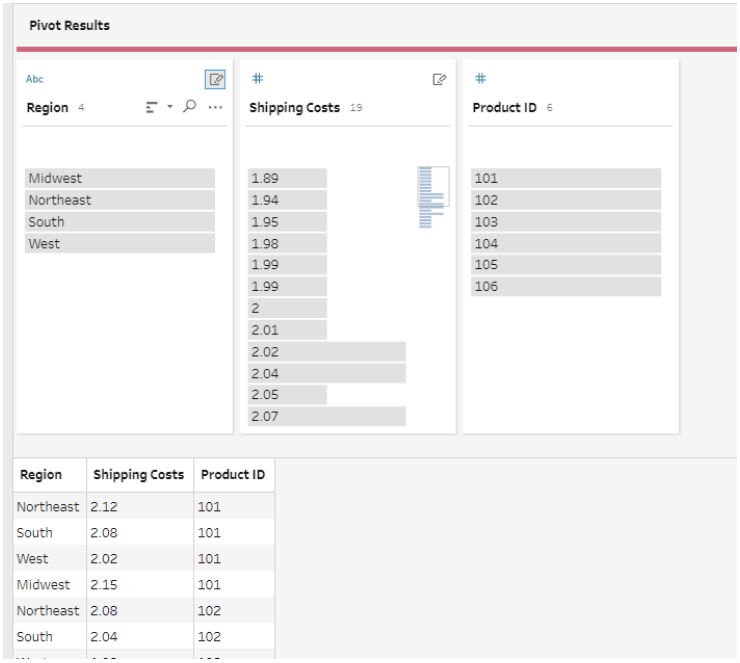


Select all four region columns and drag them to Pivoted Fields Area.



Select the “Pivot Results” section, double click on “Pivot1 Values”, and rename the column “Shipping Costs “. Then rename “Pivot1 Names” with “Region”.





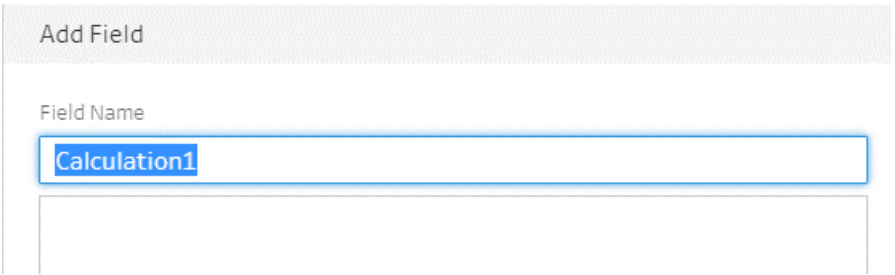
Region	Shipping Costs	Product ID
Northeast	2.12	101
South	2.08	101
West	2.02	101
Midwest	2.15	101
Northeast	2.08	102
South	2.04	102

To combine two streams of data there must be a unique key. That unique field is referred to as the primary key in the one side of the join. The primary field will be created by combining the “Product ID” field with a “.” and the “Region” field. The primary key for the first record will be “101.Northeast”. Since a numeric field “Product ID” is being combined with a string field, “Region” the numeric field must be converted to a string field.

Step 12: Create a Primary Key Field

Add step “Clean 5” to step “Pivot 1”.

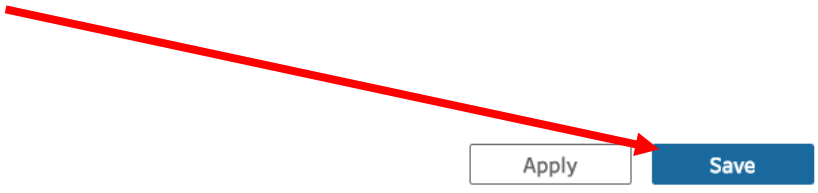
To create a Primary Key field, select “Create Calculated Field”.



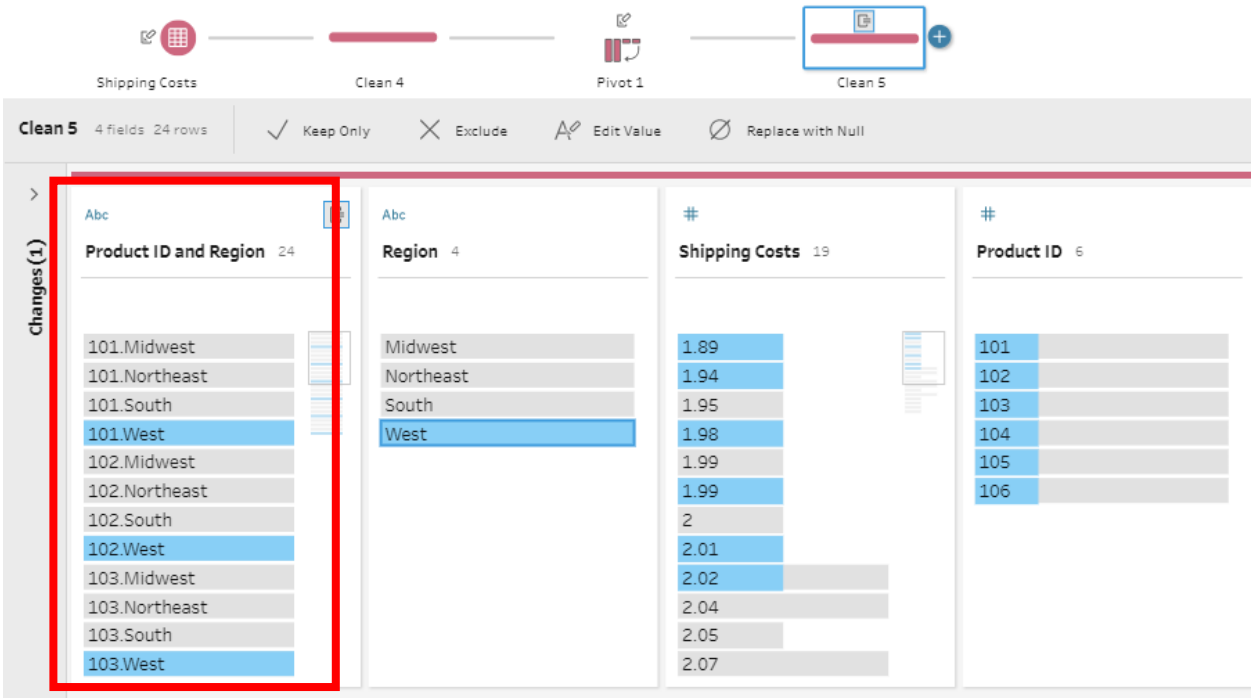
Change the “Field Name” to “Product ID and Region”.

Type: **STR([Product ID]) + "." + [Region]**

then click Save.



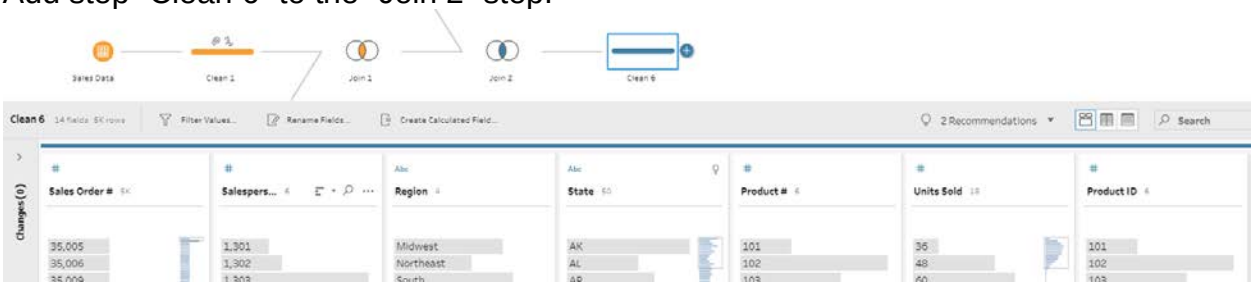
The “SPID and Region” field has been populated.



Step 13: Create a Foreign Key Field

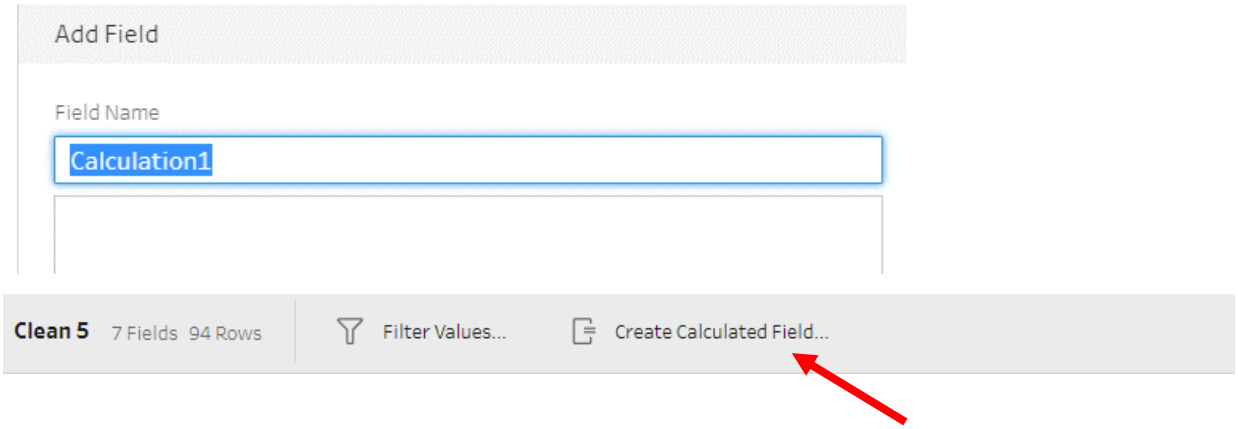
The combined first, second and third stream of data, now combined in step Join 2, also needs a field that combines the “Product ID” and the “Region” in the same exact format that was used in the fourth stream. This new field is referred to as a foreign key and will be used to link to the data in the third stream.

Add step “Clean 6” to the “Join 2” step.



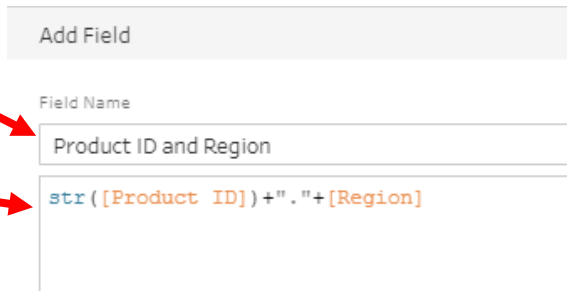
Since step “Join 2” contains both “Product #” and “Product ID” either can be used in creating the new field.

To create a Foreign Key field, select “Create Calculated Field”.



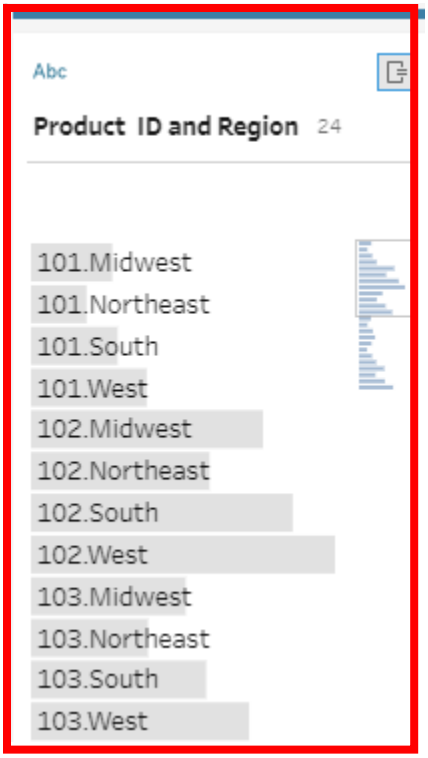
Change the “Field Name” to “Product ID and Region”.

Type: **STR([Product ID]) + "." + [Region]**



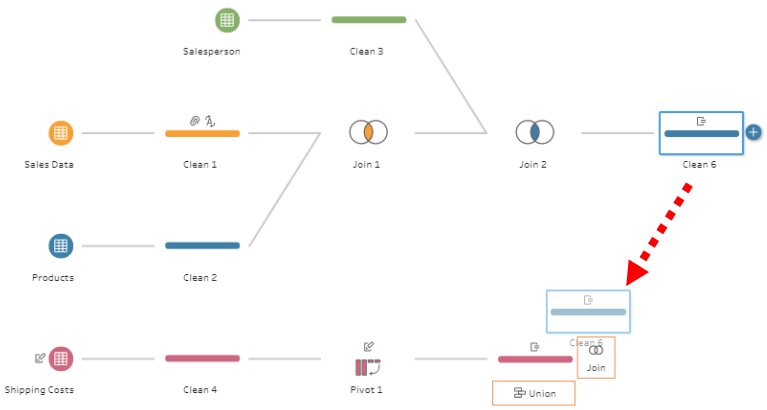
then click Save.

The “SPID and Region” field has been populated with 24 different values for “Product ID and Region”.



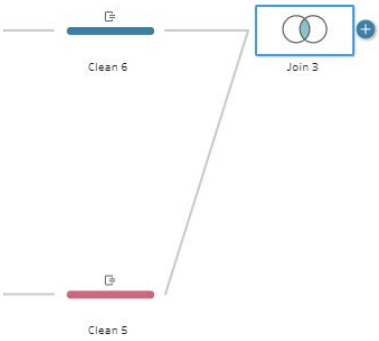
Step 14: Combine First Three Streams of Data to the Fourth Stream of Data

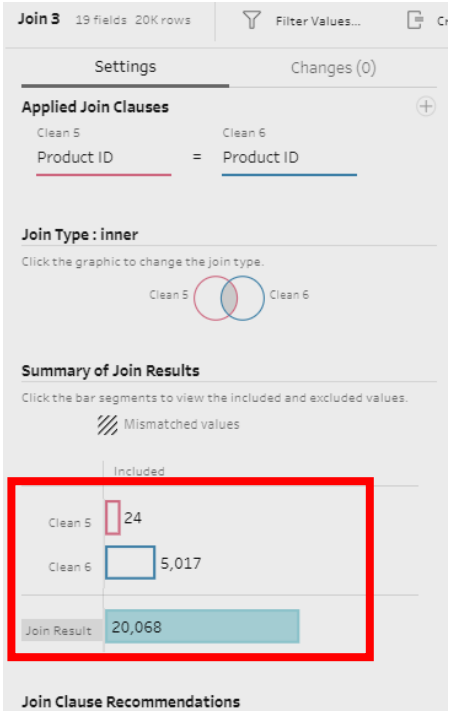
Now that we have a primary key and a foreign key, we can join the fourth stream of data with the combined first three streams. Drag the “Clean 6” step from the combined first, second and third stream to the “Clean 5” step in the fourth stream. Drop the “Clean 6” step into the Join box.



Step “Join 3” will appear. If the Join is named differently, double click on the name and change it.

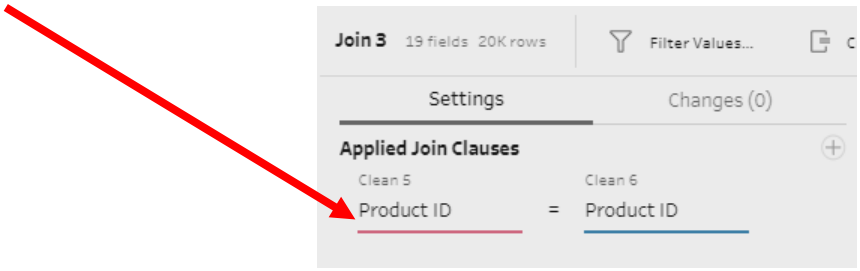
Select the “Join 3” step.



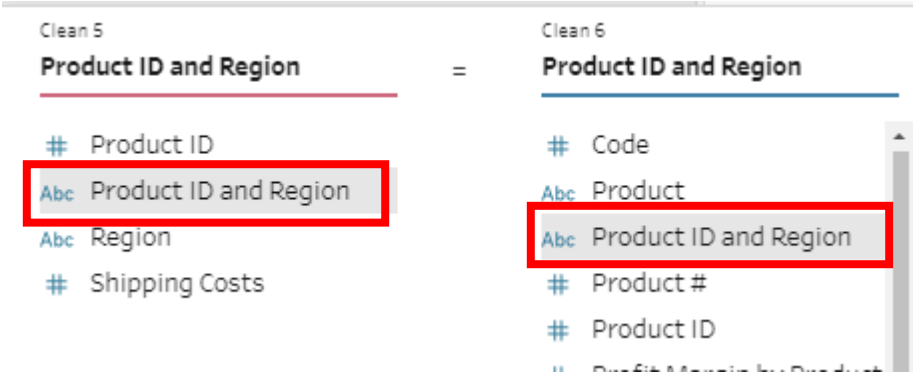


The join is incorrect because the result is **20,068** rows and there are supposed to be **5,017** rows**.**

Select “Product ID” in the “Applied Join Clauses” section.

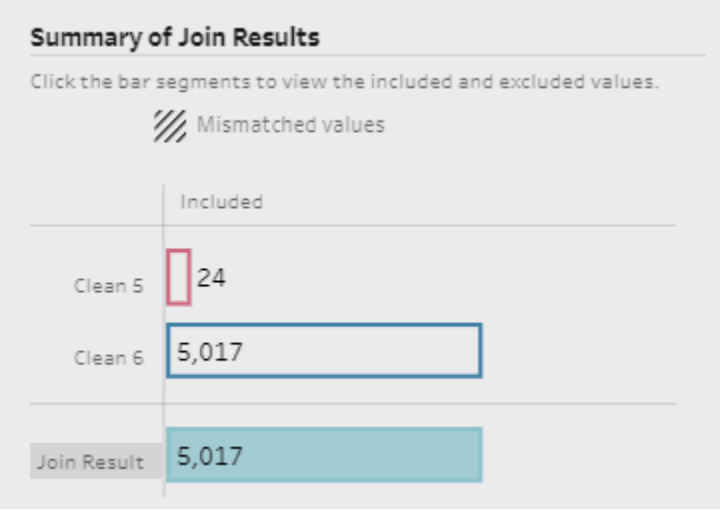


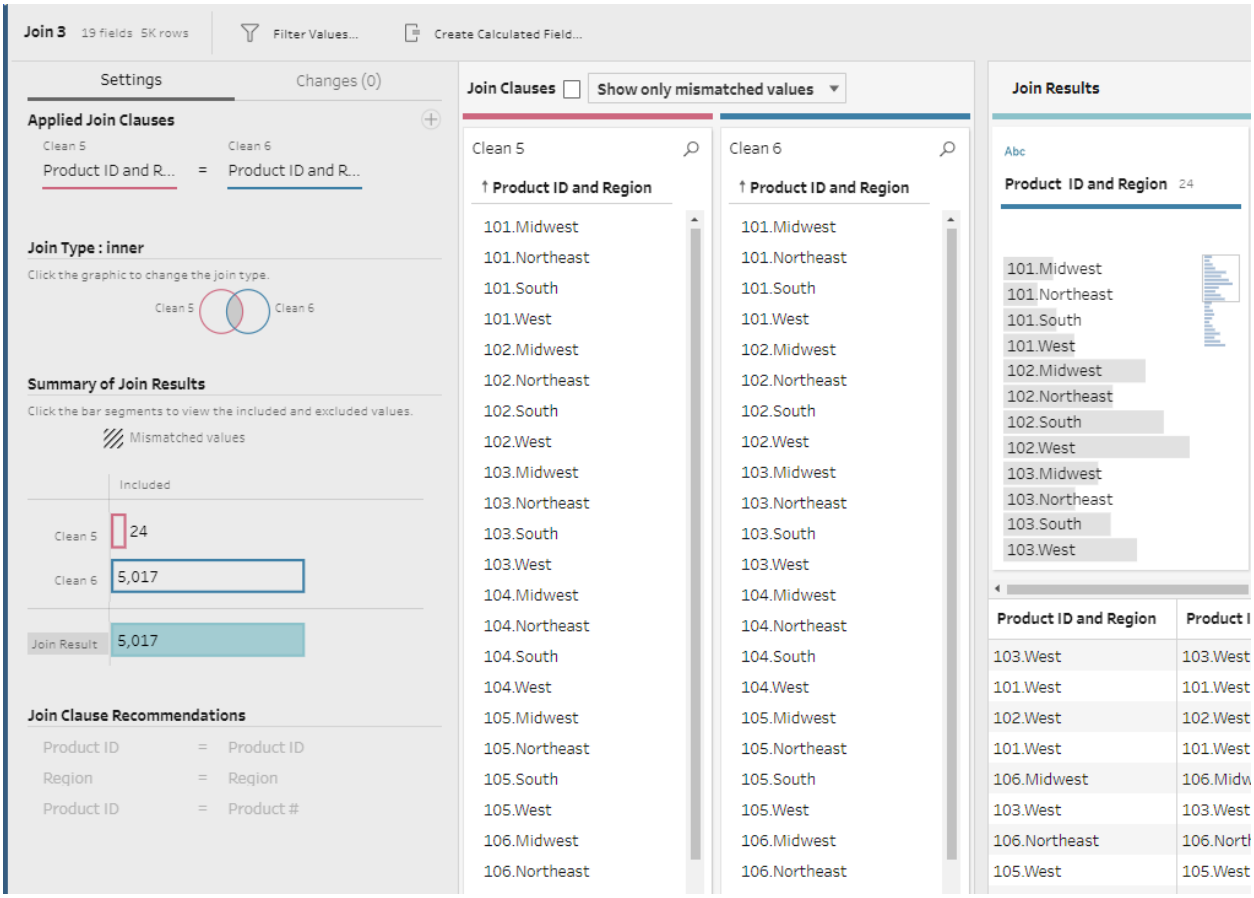
Change the fields from “Product ID” to “Product ID and Region” in both “Clean 5” and “Clean 6” steps.



The default “Join Type” is “inner” which does not have to be changed.

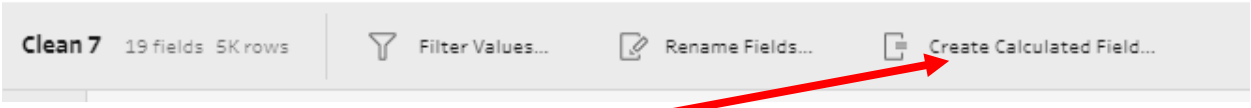
The join was successful as 5,017 rows were combined.




Join 3 19 fields 5K rows
Filter Values...
Create Calculated Field...
Settings
Changes (0)
Applied Join Clauses
Clean 5
Product ID and R...
=
Clean 6
Product ID and R...
Join Type : inner
Click the graphic to change the join type.
Clean 5
Clean 6
Summary of Join Results
Click the bar segments to view the included and excluded values.
Mismatched values
Included
Clean 5
24
Clean 6
5,017
Join Result
5,017
Join Clause Recommendations
Product ID = Product ID
Region = Region
Product ID = Product #
Join Clauses
Show only mismatched values
Clean 5
Product ID and Region
101.Midwest
101.Northeast
101.South
101.West
102.Midwest
102.Northeast
102.South
102.West
103.Midwest
103.Northeast
103.South
103.West
104.Midwest
104.Northeast
104.South
104.West
105.Midwest
105.Northeast
105.South
105.West
106.Midwest
106.Northeast
Clean 6
Product ID and Region
101.Midwest
101.Northeast
101.South
101.West
102.Midwest
102.Northeast
102.South
102.West
103.Midwest
103.Northeast
103.South
103.West
104.Midwest
104.Northeast
104.South
104.West
105.Midwest
105.Northeast
105.South
105.West
106.Midwest
106.Northeast
Join Results
Abc
Product ID and Region 24
101.Midwest
101.Northeast
101.South
101.West
102.Midwest
102.Northeast
102.South
102.West
103.Midwest
103.Northeast
103.South
103.West
Product ID and Region
Product I
103.West
103.West
101.West
101.West
102.West
102.West
101.West
101.West
106.Midwest
106.Midw
103.West
103.West
106.Northeast
106.North
105.West
105.West

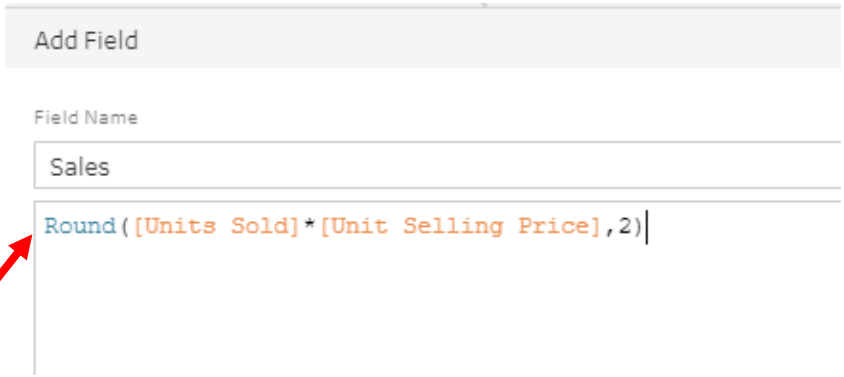
Step 15: Calculate the Sales and the Shipping Cost on Every Sales Order

Add a step “Clean 7” after the step “Join 3” and calculate the sales for every sales order.



Click on “Create Calculated Field”

Enter “Sales” as the “Field Name”.

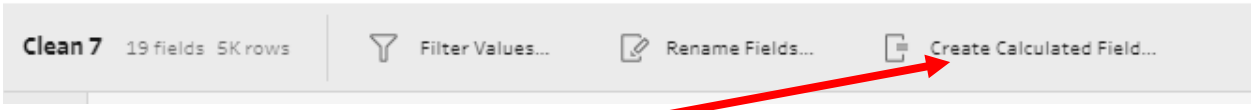


Type the formula Round([Units Sold]*[Unit Selling Price],2)**)**

then click Save.

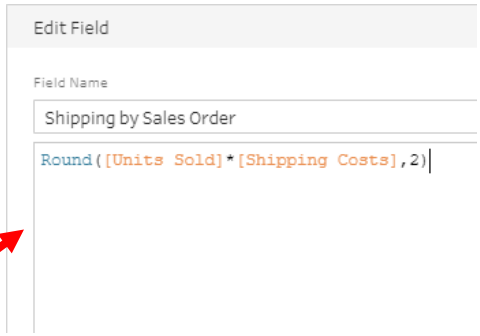
Sales	Product ID and Region	Product ID and Region	Region	Shipping Costs	Sales Order #	Salesperson #	Region-1	State	Product #	Units Sold	Product ID-1	Product	Unit Selling Price
2,880	03.West	103.West	West	2.01	35,005	1,303	West	WA	103	120	103	Stuffed Elephan	24

120 x 24 = 2,880.



Click on “Create Calculated Field”.

Enter “Shipping by Sales Order” as the “Field Name”.



Type the formula Round([Units Sold]*[Unit Selling Price],2)**)**

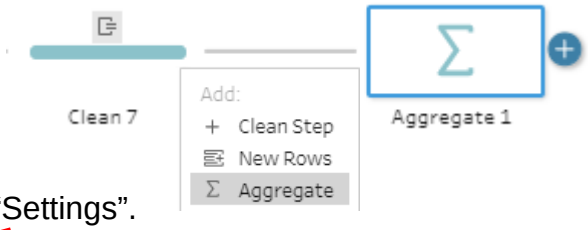
then click Save.

Shipping by Sales Order	Sales	Product ID and Region	Product ID and Region	Region	Shipping Costs	Sales Order #	Salesperson #	Region-1	State	Product #	Units Sold	Product ID-1
241.2	2,880	103.West	103.West	West	2.01	5,005	1,303	West	WA	103	120	103

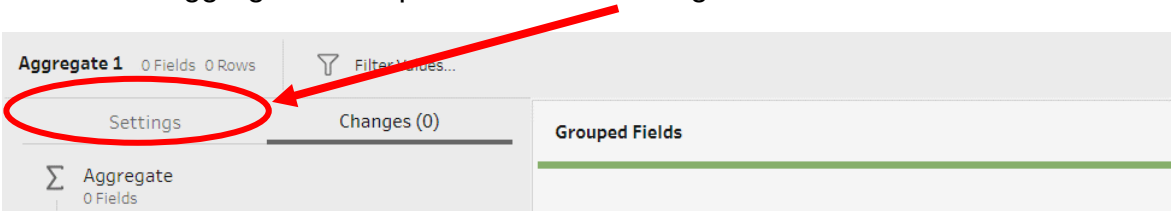
120 x 2.01 = 241.2

Step 16: Create a "Units Sold, Sales and Shipping Costs by Salesperson" Report

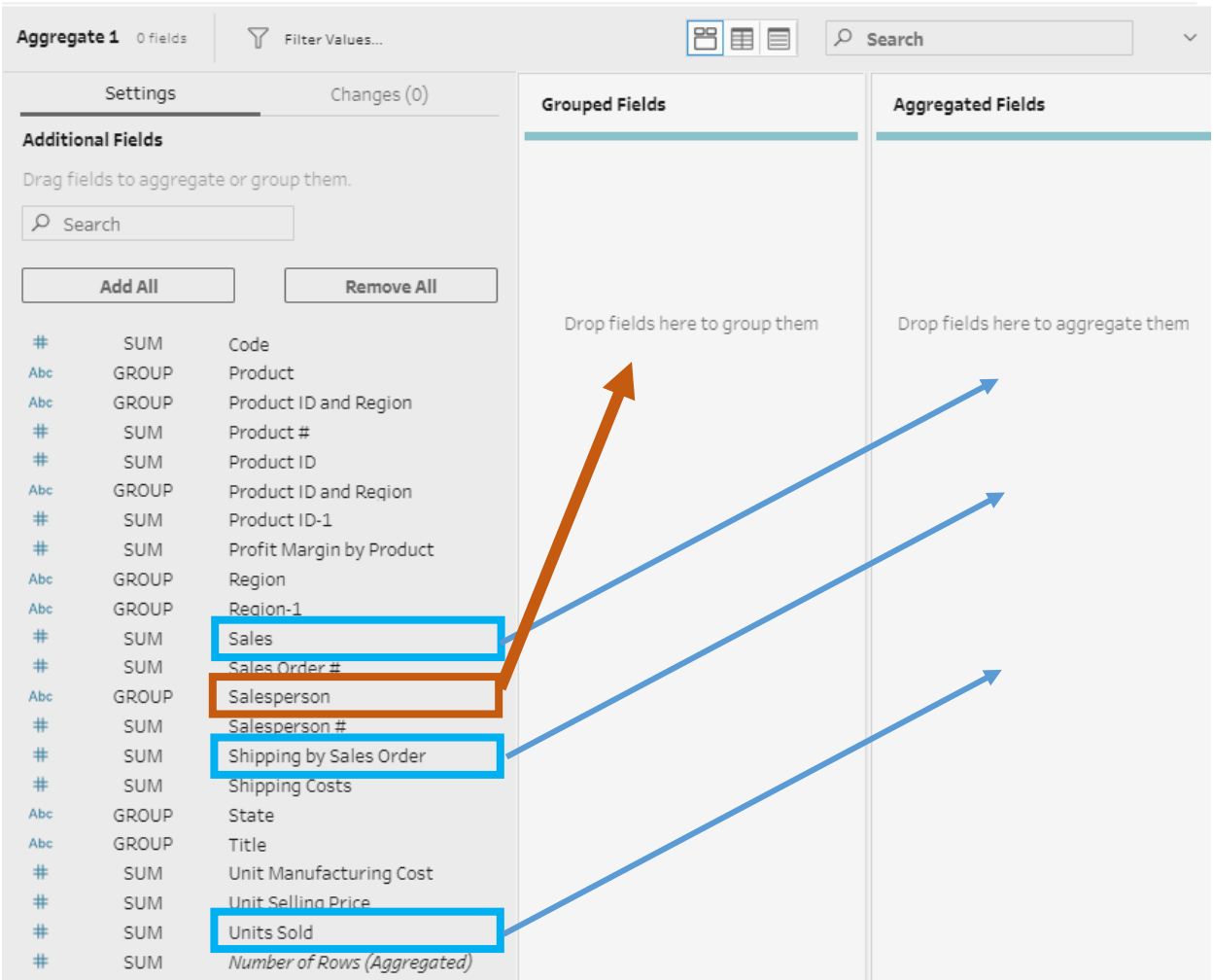
Add a step "Aggregate 1" after the step "Clean 7".



Select the "Aggregate 1" step, then select "Settings".



Drag the "Salesperson" field to the "Grouped Fields" area and "Sales", "Shipping Costs by Sales Order" and "Units Sold" fields to the "Aggregated Fields" area.



The decimal places in the “Shipping by Sales Order” field are not uniform.

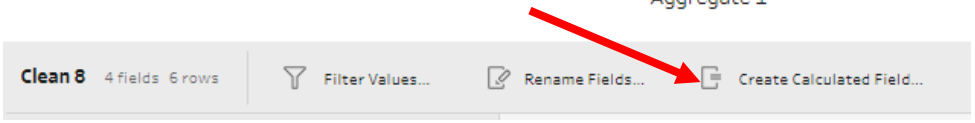
Aggregated Fields

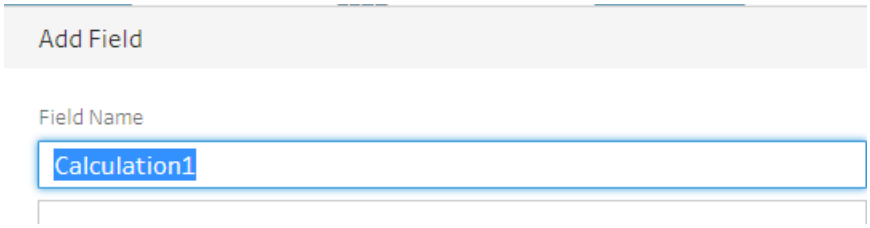
# SUM Shipping by Sales Order 6	# SUM Sales 6	# SUM Units Sold 6
87,710.63999999996	985,560	43,200
117,878.39999999997	1,317,384	57,924
120,158.04	1,349,352	59,136
156,215.99999999968	1,733,088	76,680
246,882.3599999989	2,748,540	121,236
287,129.75999999995	3,210,924	141,156

Step 17: Round the Shipping Costs

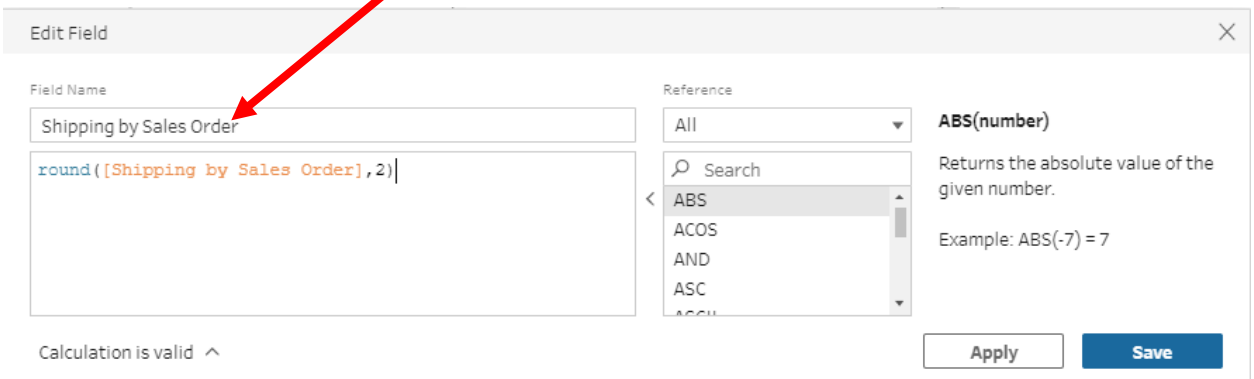
Add a step “Clean 8” after the step “Aggregate 1”.

Select “Create a Calculated Field”



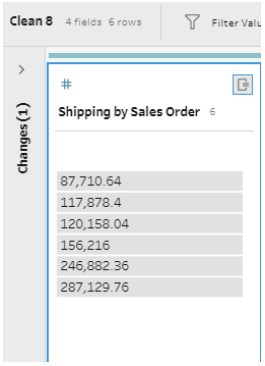


Put the result back in the “Shipping Cost” field by naming the field “Shipping Cost”.



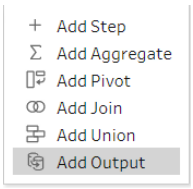
Type in the formula, Round([Shipping by Sales Order],2) and select “Save”.

The data in the “Shipping by Sales Order” field now has two decimal places.



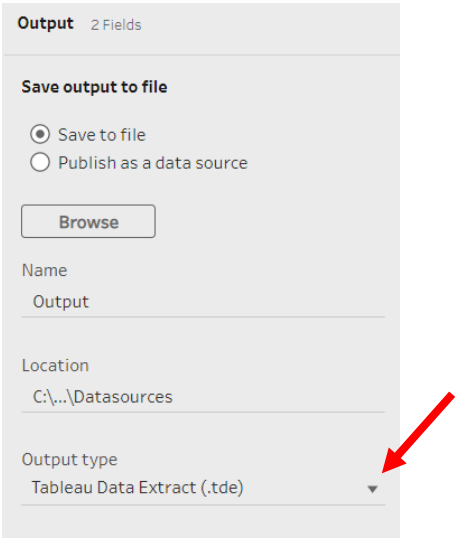
Step 18: Export Report to Excel

Add a step “Output” after the step “Clean 8”.

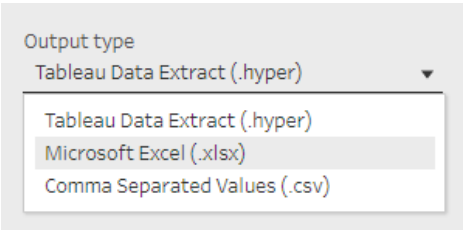


Select the step “Output”.

Select the “Output type” drop down.

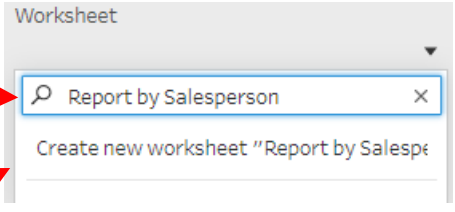


Select the Microsoft Excel (.xlsx) file type.

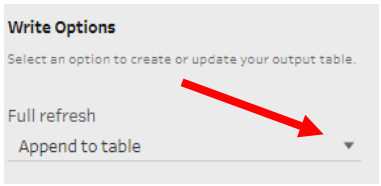


Type the name of the worksheet, Report by Salesperson.

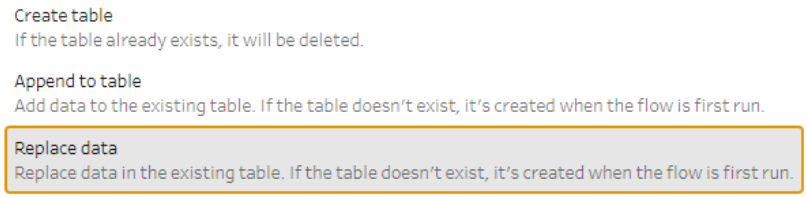
Select “Create new worksheet “Report by Salesperson”.



Select the “Full refresh” drop down.

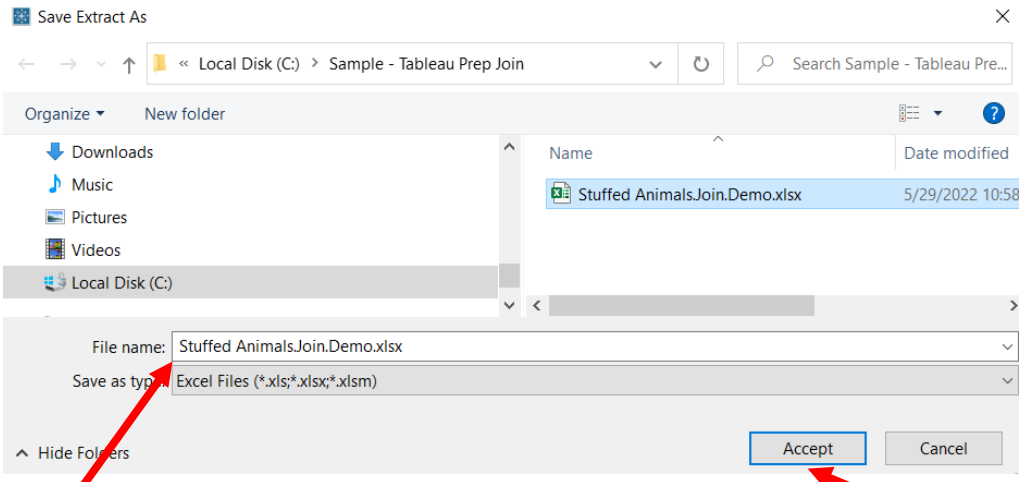


Select “Replace data”.



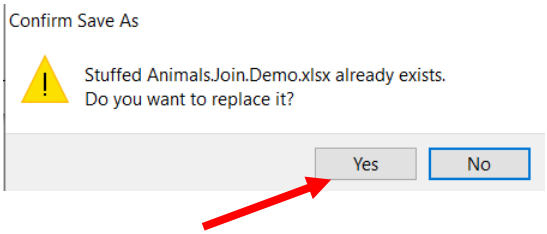
“Save output to” should be “File”.

Select “Browse” button.

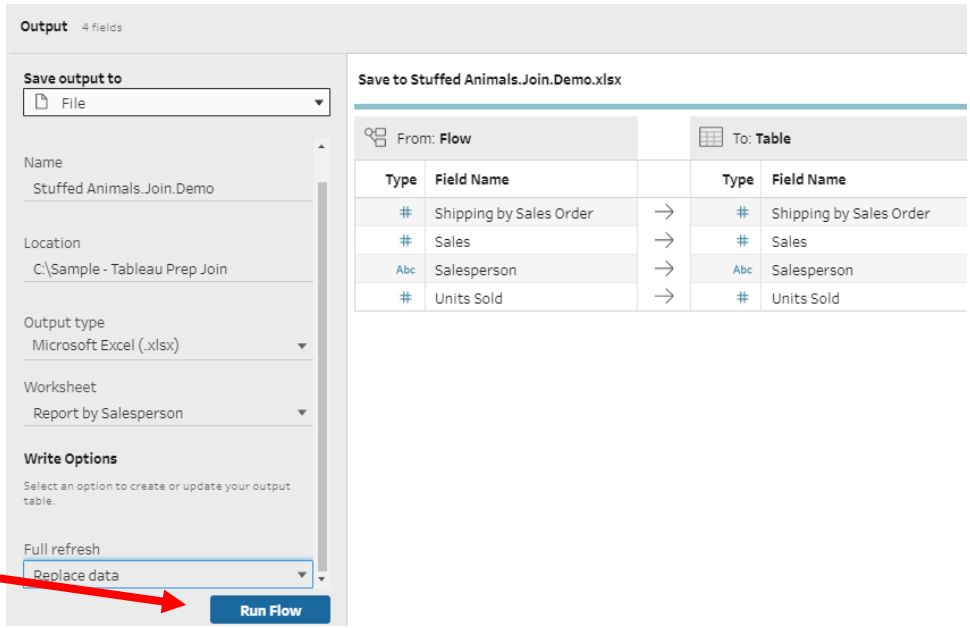


Select the location for the file, specify the file name and select “Accept”.

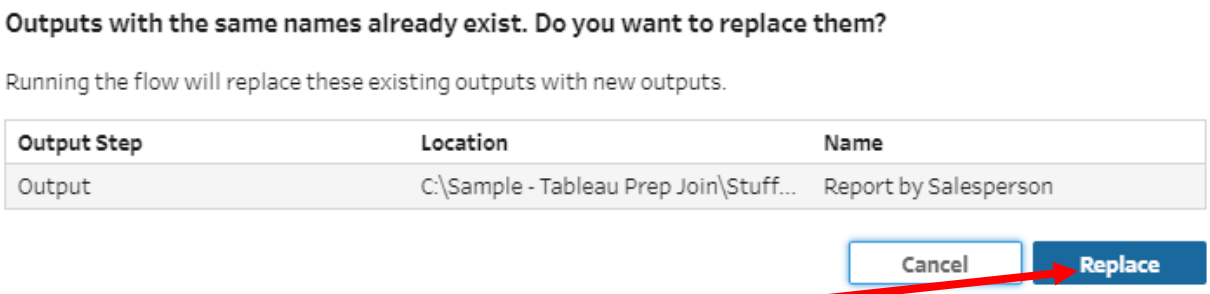
Confirm.



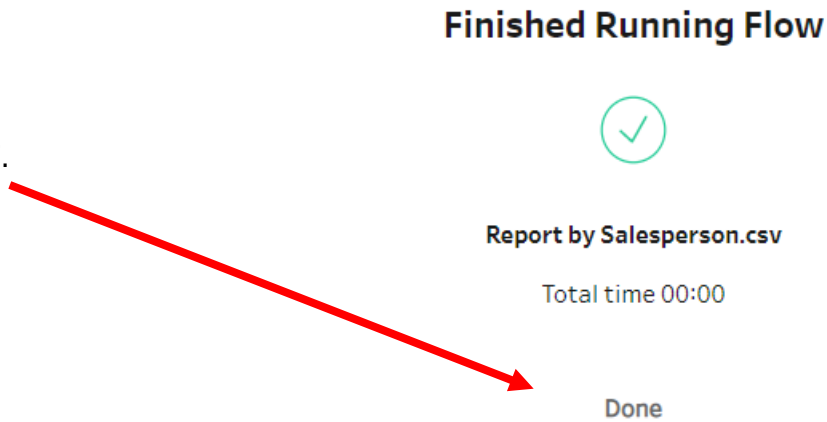
Select “Run Flow”.



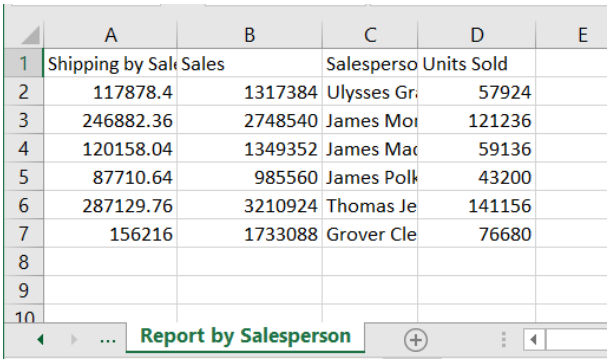
If asked, select “Replace”.



Select “Done”.



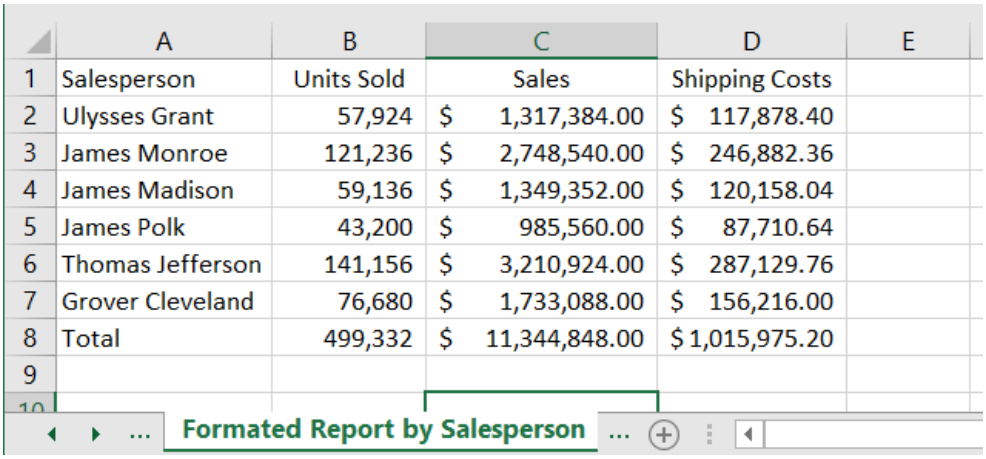
Open the *Stuffed Animals.Join.Demo.xlsx* file and select the Report by Salesperson sheet.



	A	B	C	D	E
1	Shipping by Sal	Sales	Salesperso	Units Sold	
2	117878.4	1317384	Ulysses Gr	57924	
3	246882.36	2748540	James Mor	121236	
4	120158.04	1349352	James Mac	59136	
5	87710.64	985560	James Polk	43200	
6	287129.76	3210924	Thomas Je	141156	
7	156216	1733088	Grover Cle	76680	
8					
9					
10					

... Report by Salesperson

Make any format changes and change the name of the tab so that it will not be automatically overwritten by Tableau.



	A	B	C	D	E
1	Salesperson	Units Sold	Sales	Shipping Costs	
2	Ulysses Grant	57,924	$ 1,317,384.00	$ 117,878.40	
3	James Monroe	121,236	$ 2,748,540.00	$ 246,882.36	
4	James Madison	59,136	$ 1,349,352.00	$ 120,158.04	
5	James Polk	43,200	$ 985,560.00	$ 87,710.64	
6	Thomas Jefferson	141,156	$ 3,210,924.00	$ 287,129.76	
7	Grover Cleveland	76,680	$ 1,733,088.00	$ 156,216.00	
8	Total	499,332	$ 11,344,848.00	$ 1,015,975.20	
9					
10					

... Formated Report by Salesperson ...

Save and close the Excel file and return to Tableau.

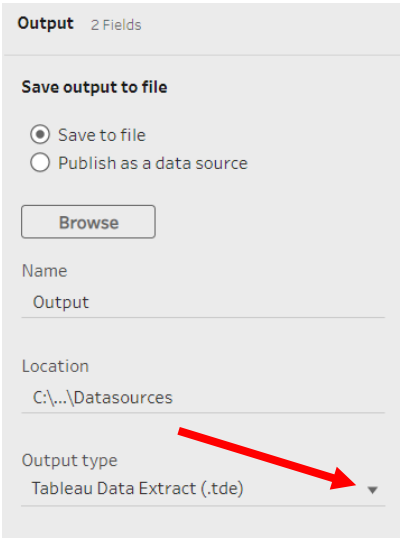
Step 19: Create a Shipping Cost report by Salesperson by Region.

It is going to be much easier to create the "Commission by Salesperson by Region" report in Excel since all the data has already been transformed.

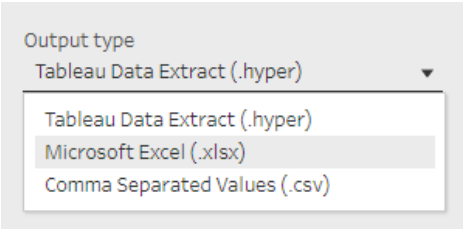
Add a step "Output 2" after the step "Clean 7".

Select the step "Output 2"

Select the "Output type" drop down.

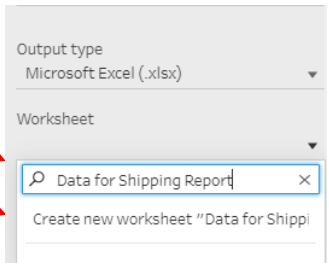


Select the Microsoft Excel (.xlsx) file type.

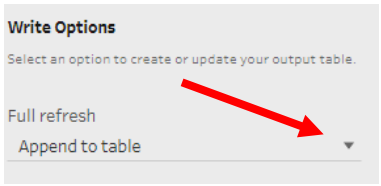


Type the name of the worksheet, "Data for Shipping Report".

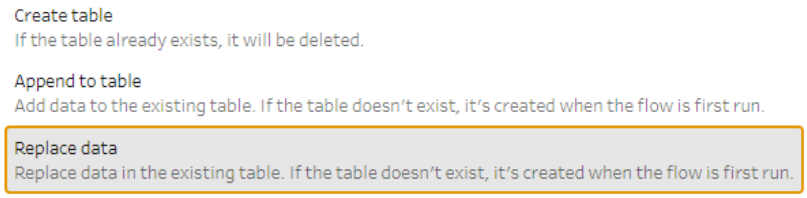
Select "Create new worksheet "Data for Shipping Report".



Select the “Full refresh” drop down.

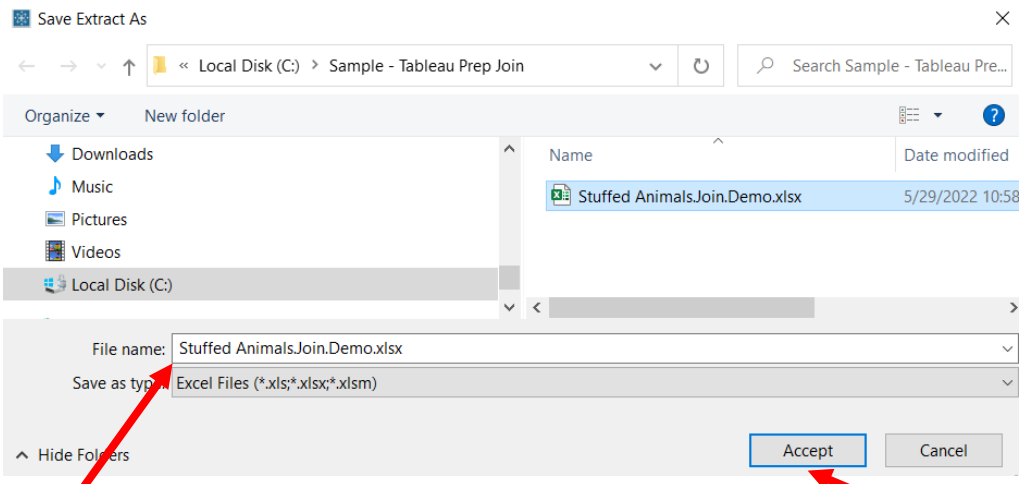


Select “Replace data”.



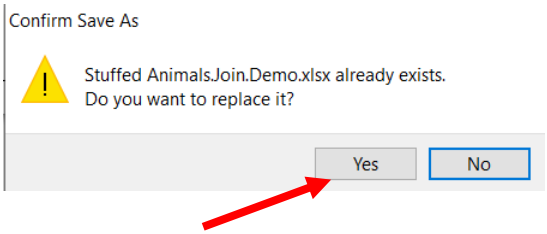
“Save output to” should be “File”.

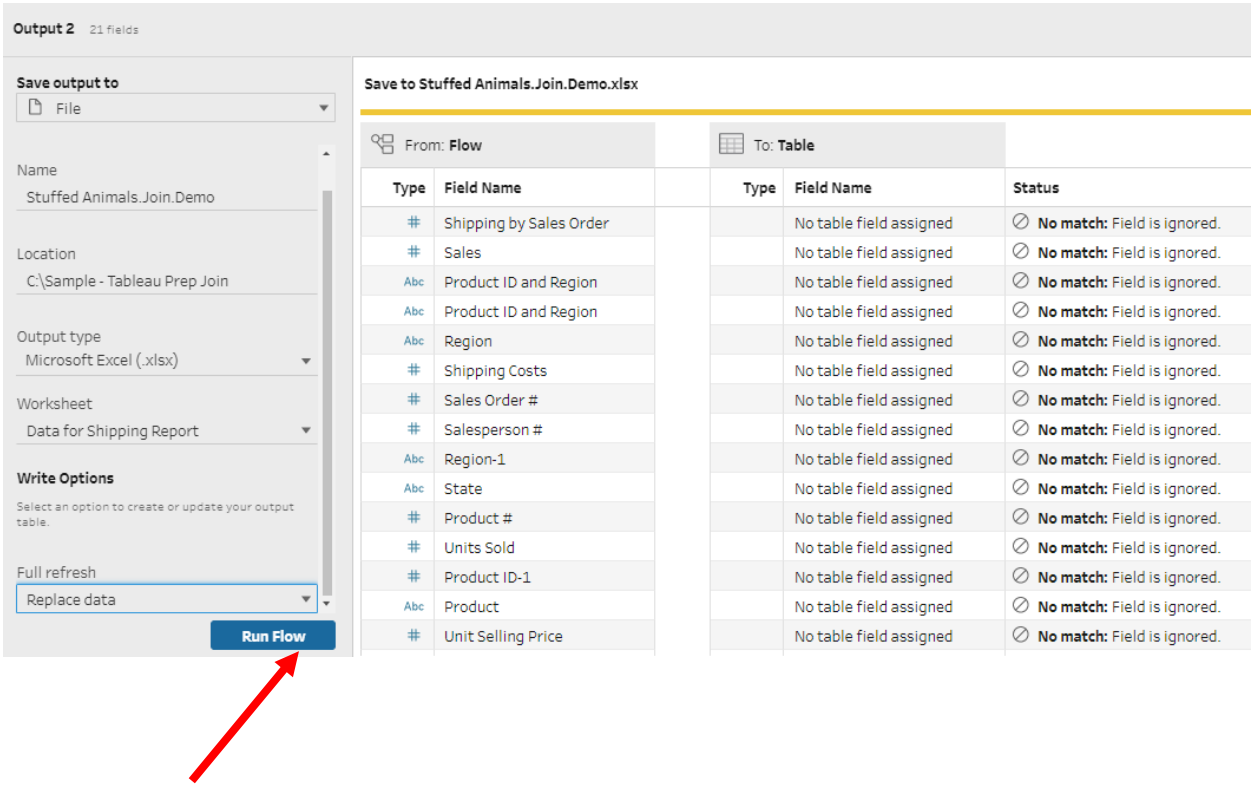
Select “Browse” button.



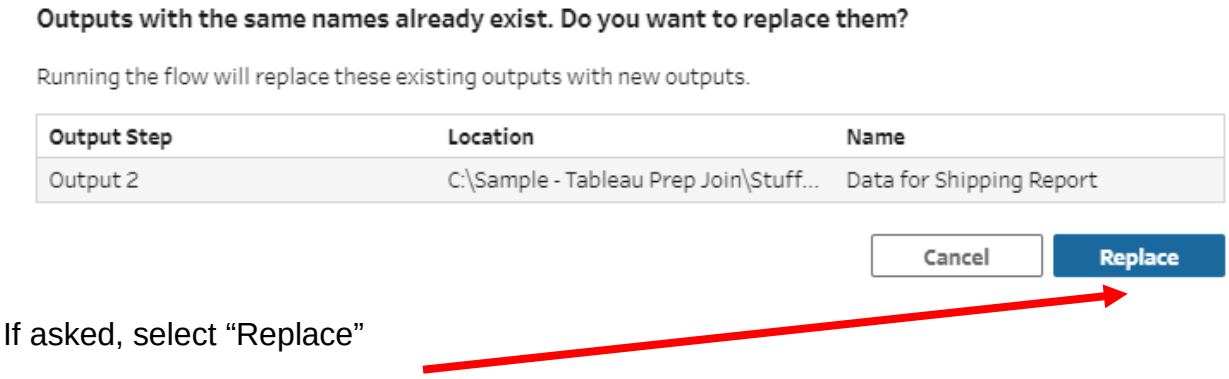
Select the location for the file, specify the file name and select “Accept”.

Confirm.



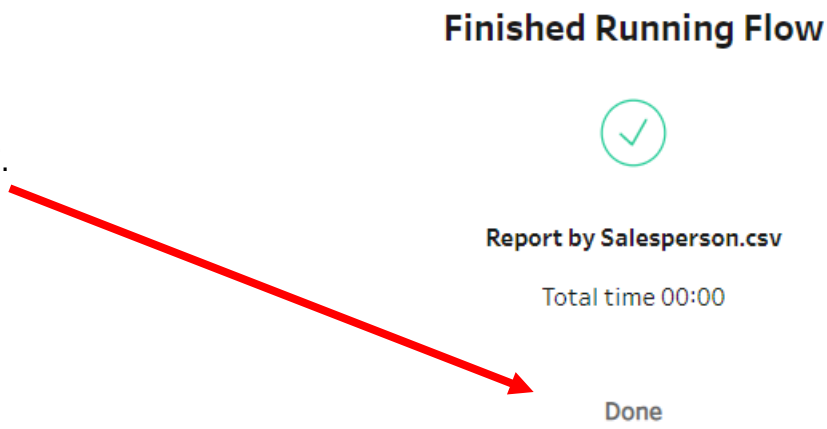


Select “Run Flow”.



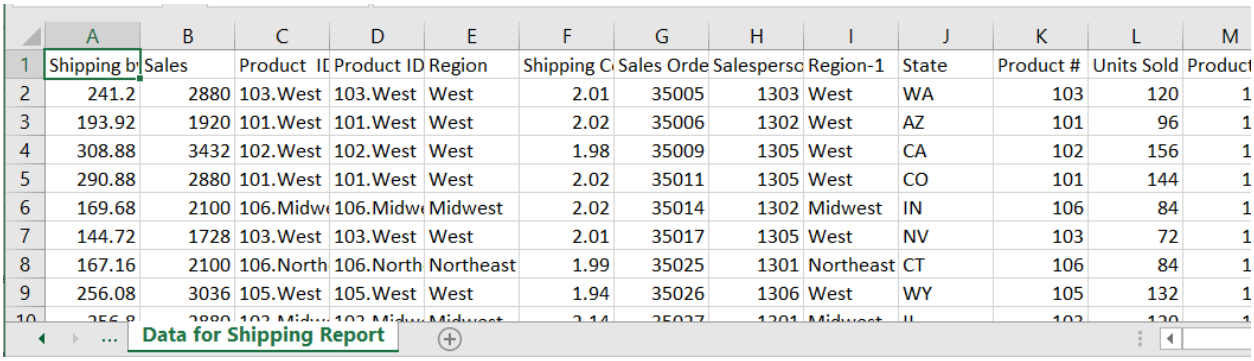
If asked, select “Replace”

Select “Done”.


Finished Running Flow
Report by Salesperson.csv
Total time 00:00
Done

Open the *Stuffed Animals.Join.Demo.xlsx* file and select the Data for Shipping Report sheet.

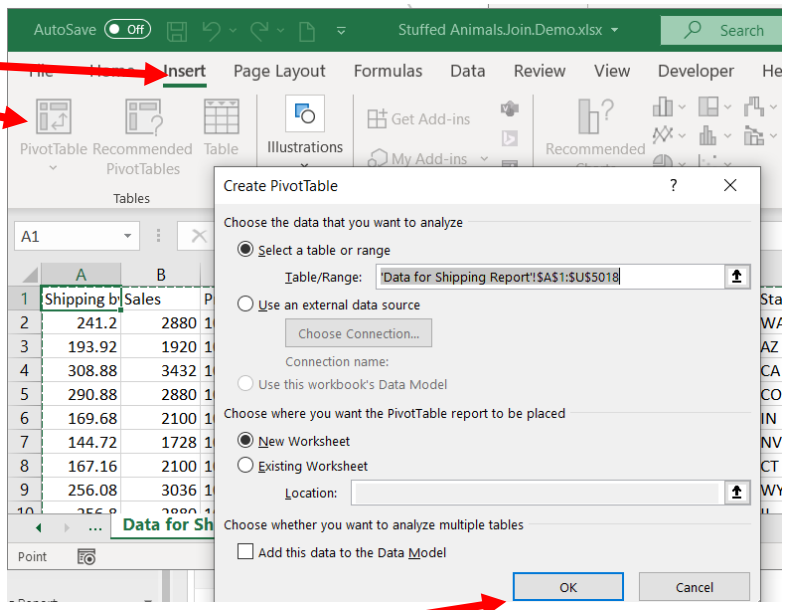
Select a cell, perhaps A1, in the data range on the “Data by Shipping Report”.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Shipping b	Sales	Product ID	Product ID	Region	Shipping C	Sales Orde	Salespersc	Region-1	State	Product #	Units Sold	Product
2	241.2	2880	103.West	103.West	West	2.01	35005	1303	West	WA	103	120	1
3	193.92	1920	101.West	101.West	West	2.02	35006	1302	West	AZ	101	96	1
4	308.88	3432	102.West	102.West	West	1.98	35009	1305	West	CA	102	156	1
5	290.88	2880	101.West	101.West	West	2.02	35011	1305	West	CO	101	144	1
6	169.68	2100	106.Midw	106.Midw	Midwest	2.02	35014	1302	Midwest	IN	106	84	1
7	144.72	1728	103.West	103.West	West	2.01	35017	1305	West	NV	103	72	1
8	167.16	2100	106.North	106.North	Northeast	1.99	35025	1301	Northeast	CT	106	84	1
9	256.08	3036	105.West	105.West	West	1.94	35026	1306	West	WY	105	132	1

Data for Shipping Report

Select Insert.
Select Pivot table.



This will insert a Pivot Table in a new sheet. Pivot tables help summarize the data in various formats.

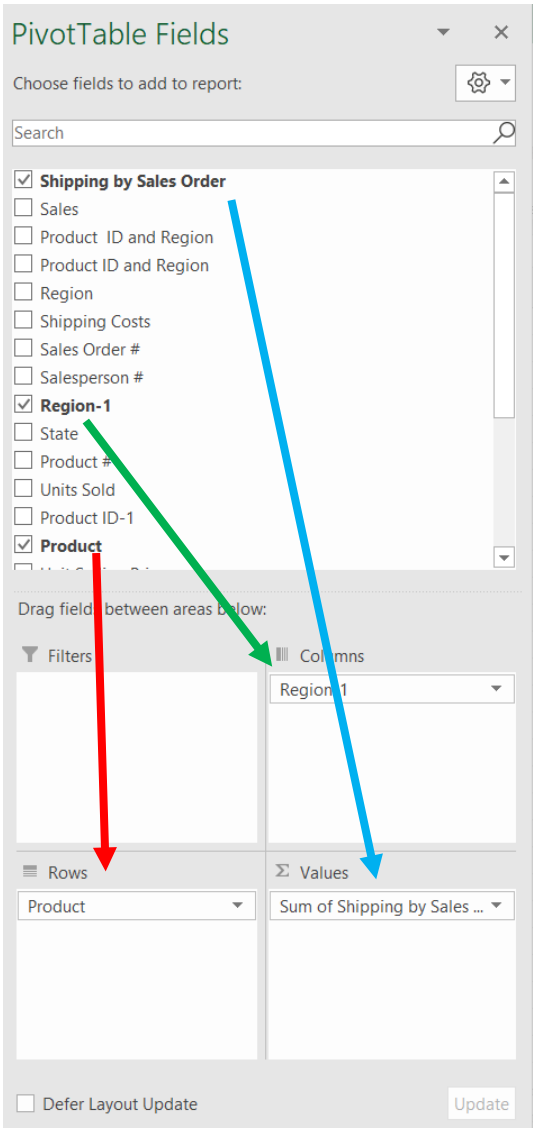
Select OK.

Once a Pivot table is inserted, the Pivot Table Fields are displayed.

Drag the fields

1. **Product to Rows**
2. **Region-1 to Columns** and
3. **Shipping by Sales Order to Values**

As indicated in the diagram.



If “Count of Shipping …” appears instead of the “Sum of Shipping …”, left click on “Count of Shipping …”, select Value Field Setting > Sum > OK.

This summarizes the data in the following format:

Sum of Shipping by Sales Order	Column Labels				
Row Labels	Midwest	Northeast	South	West	Grand Total
Stuffed Elephant	47610.72	35625.24	50822.64	63990.36	198048.96
Stuffed Giraffe	76744.92	56958.72	80686.08	91095.84	305485.56
Stuffed Horse	26032.32	17062.56	25488	31916.88	100499.76
Stuffed Lamb	30263.4	19614.24	29877.12	38905.2	118659.96
Stuffed Pig	47898.24	30566.4	47361.6	59648.4	185474.64
Stuffed Unicorn	25999.68	18458.88	29987.4	33360.36	107806.32
Grand Total	**254549.28**	**178286.04**	**264222.84**	**318917.04**	**1015975.2**

Sheet1 | Data for Shipping Report

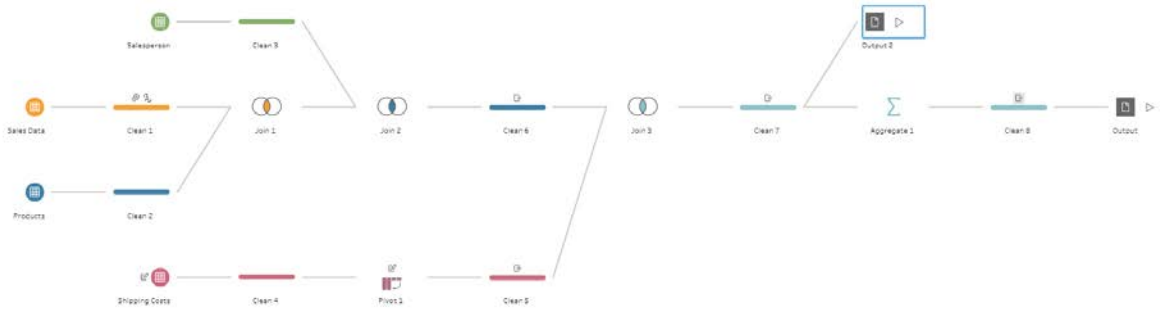
Right click on cell A3, number format > currency > 2.
Rename “Sheet1” to “Shipping Report”

Sum of Shipping by Sales Order	Column Labels				
Row Labels	Midwest	Northeast	South	West	Grand Total
Stuffed Elephant	$47,610.72	$35,625.24	$50,822.64	$63,990.36	$198,048.96
Stuffed Giraffe	$76,744.92	$56,958.72	$80,686.08	$91,095.84	$305,485.56
Stuffed Horse	$26,032.32	$17,062.56	$25,488.00	$31,916.88	$100,499.76
Stuffed Lamb	$30,263.40	$19,614.24	$29,877.12	$38,905.20	$118,659.96
Stuffed Pig	$47,898.24	$30,566.40	$47,361.60	$59,648.40	$185,474.64
Stuffed Unicorn	$25,999.68	$18,458.88	$29,987.40	$33,360.36	$107,806.32
Grand Total	**$254,549.28**	**$178,286.04**	**$264,222.84**	**$318,917.04**	**$1,015,975.20**

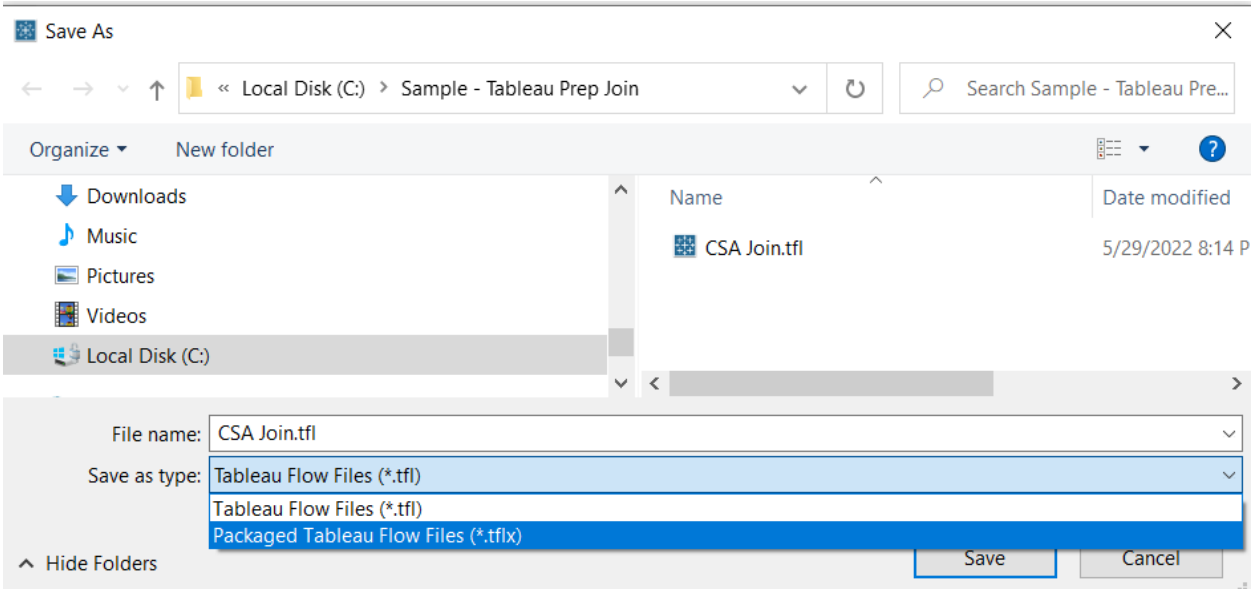
Shipping Report | Data for Shipping Report

Save and close the Excel file.

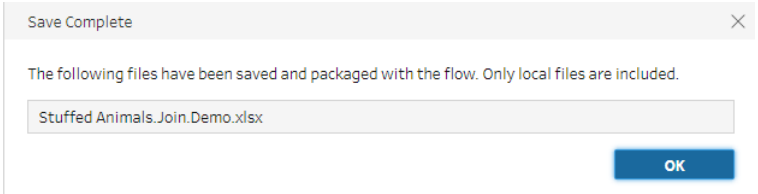
Return to the Tableau Prep flow file.



Select File > Save As..



Select the Packaged Tableau Flow Files (*.tflx) which bundles the data file with the flow.



Select OK.

Close Tableau.