Build a Text Table

In Tableau, you typically create text tables (also called cross-tabs or pivot tables) by placing one dimension on the **Rows** shelf and another dimension on the **Columns** shelf. You then complete the view by dragging one or more measures to **Text** on the **Marks** card.

A text table uses the text mark type. Tableau uses this mark type automatically if the view is constructed using only dimensions (assuming the mark type is set to **Automatic**). For more information about the text mark type, see Text Mark.

To create a text table that shows sales totals by year and category, follow these steps:

1. Connect to the **Sample - Superstore** data source.

2. Drag the **Order Date** dimension to **Columns**.

   Tableau aggregates the date by year and creates column headers.

3. Drag the **Sub-Category** dimension to **Rows**.

   Tableau creates row headers. Columns with headers plus rows with headers means that a valid table structure now exists. Now you can add a measure to the view to see actual data.

4. Drag the **Sales** measure to **Text** on the **Marks** card.

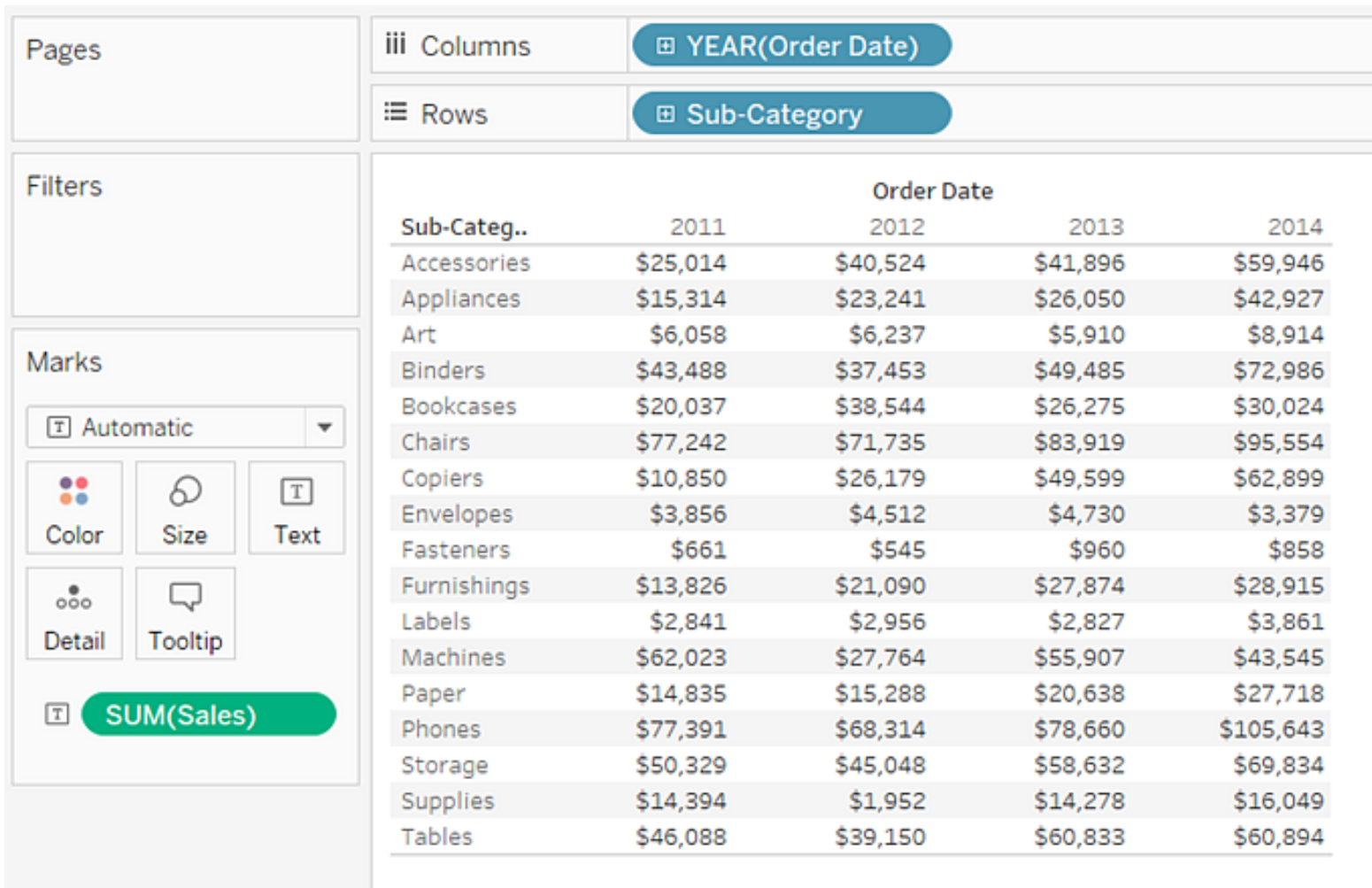   Tableau aggregates the measure as a sum.

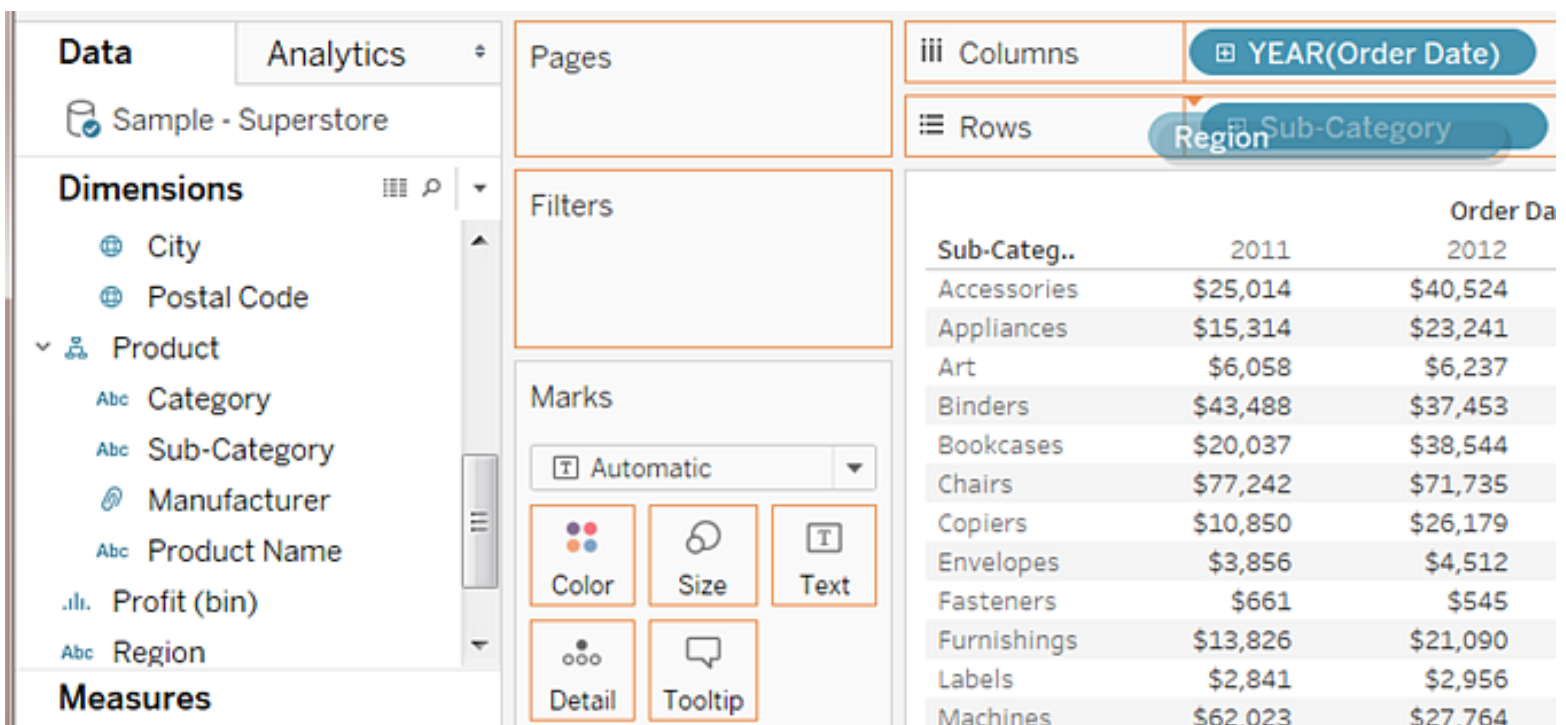| Sub-Categ..	2011	2012	2013	2014
Accessories	$25,014	$40,524	$41,896	$59,946
Appliances	$15,314	$23,241	$26,050	$42,927
Art	$6,058	$6,237	$5,910	$8,914
Binders	$43,488	$37,453	$49,485	$72,986
Bookcases	$20,037	$38,544	$26,275	$30,024
Chairs	$77,242	$71,735	$83,919	$95,554
Copiers	$10,850	$26,179	$49,599	$62,899
Envelopes	$3,856	$4,512	$4,730	$3,379
Fasteners	$661	$545	$960	$858
Furnishings	$13,826	$21,090	$27,874	$28,915
Labels	$2,841	$2,956	$2,827	$3,861
Machines	$62,023	$27,764	$55,907	$43,545
Paper	$14,835	$15,288	$20,638	$27,718
Phones	$77,391	$68,314	$78,660	$105,643
Storage	$50,329	$45,048	$58,632	$69,834
Supplies	$14,394	$1,952	$14,278	$16,049
Tables	$46,088	$39,150	$60,833	$60,894

Tableau uses text as the mark type. Each cell in the table displays the sum of sales for a particular year and sub-category.

We can see that the chairs and phones sub-categories had the highest sales in every year.

5. Drag the **Region** dimension to **Rows** and drop it to the left of **Sub-Category**. A small triangle will appear to indicate that the new field will be inserted to the left of the existing field.

The view now breaks out sales by region, in addition to year and sub-category.

		Columns		⊞ YEAR(Order Date)			
		Rows		Region		⊞ Sub-Category	

			Order Date			
Region	**Sub-Categ..**	**2011**	**2012**	**2013**	**2014**	
Central	Accessories	$4,439	$7,795	$10,802	$10,920	
	Appliances	$3,659	$4,975	$6,015	$8,933	
	Art	$822	$1,132	$1,520	$2,291	
	Binders	$15,871	$5,891	$14,056	$21,105	
	Bookcases	$1,834	$8,298	$8,385	$5,640	
	Chairs	$20,754	$17,909	$23,350	$23,218	
	Copiers	$3,270	$12,810	$17,500	$3,680	
	Envelopes	$1,599	$871	$971	$1,197	
	Fasteners	$122	$89	$247	$320	
	Furnishings	$2,536	$2,529	$5,116	$5,074	
	Labels	$1,048	$305	$511	$587	
	Machines	$16,292	$1,852	$2,659	$5,995	
	Paper	$2,347	$3,544	$5,366	$6,235	
	Phones	$9,926	$19,364	$19,902	$23,211	
	Storage	$11,093	$8,331	$12,812	$13,694	
	Supplies	$440	$324	$4,295	$4,408	
	Tables	$7,785	$6,857	$13,923	$10,589	
East	Accessories	$6,054	$17,911	$6,231	$14,837	
	Appliances	$5,779	$6,691	$9,427	$12,291	

Regions are listed alphabetically. You can drag **Region** to the right of **Sub–Category** to organize the view first by sub–category, and then by region.

		Order Date			
Sub-Categ..	Region	2011	2012	2013	2014
Accessories	Central	$4,439	$7,795	$10,802	$10,920
	East	$6,054	$17,911	$6,231	$14,837
	South	$5,595	$4,142	$9,380	$8,160
	West	$8,926	$10,676	$15,482	$26,030
Appliances	Central	$3,659	$4,975	$6,015	$8,933
	East	$5,779	$6,691	$9,427	$12,291
	South	$2,120	$3,850	$5,607	$7,948
	West	$3,755	$7,725	$5,001	$13,754
Art	Central	$822	$1,132	$1,520	$2,291
	East	$1,290	$1,707	$1,883	$2,606
	South	$566	$1,362	$1,391	$1,337
	West	$3,380	$2,035	$1,116	$2,681
Binders	Central	$15,871	$5,891	$14,056	$21,105
	East	$6,347	$14,207	$18,956	$13,989
	South	$8,307	$13,467	$4,112	$11,143
	West	$12,963	$3,889	$12,361	$26,748
Bookcases	Central	$1,834	$8,298	$8,385	$5,640
	East	$10,863	$19,653	$5,964	$7,338
	South	$794	$1,239	$3,709	$5,157
	West	$6,545	$9,354	$8,217	$11,888

You can use a table calculation to show percentages of total instead of raw dollar values. First, you must determine how to frame the calculation.

In this case, there are three dimensions in the view: **Order Date**, **Sub–Category**, and **Region**.

You could show percentages of total for a single dimension, but that can be unwieldy. For example, if you show percentages just by region, the percentages would be calculated across the two remaining dimensions: **Sub–Category** (there are 17 sub–categories) and **Year(Order Date)** (there are 4 years). So you would be dividing the total 17 x 4 = 68 ways. That would make for some tiny percentages.

Instead, show percentages using two dimensions: **Year(Order Date)** and **Region**. Then the percentages are calculated on the remaining dimension, **Sub–Category**, that is, you calculate percent of total within each highlighted area shown below.
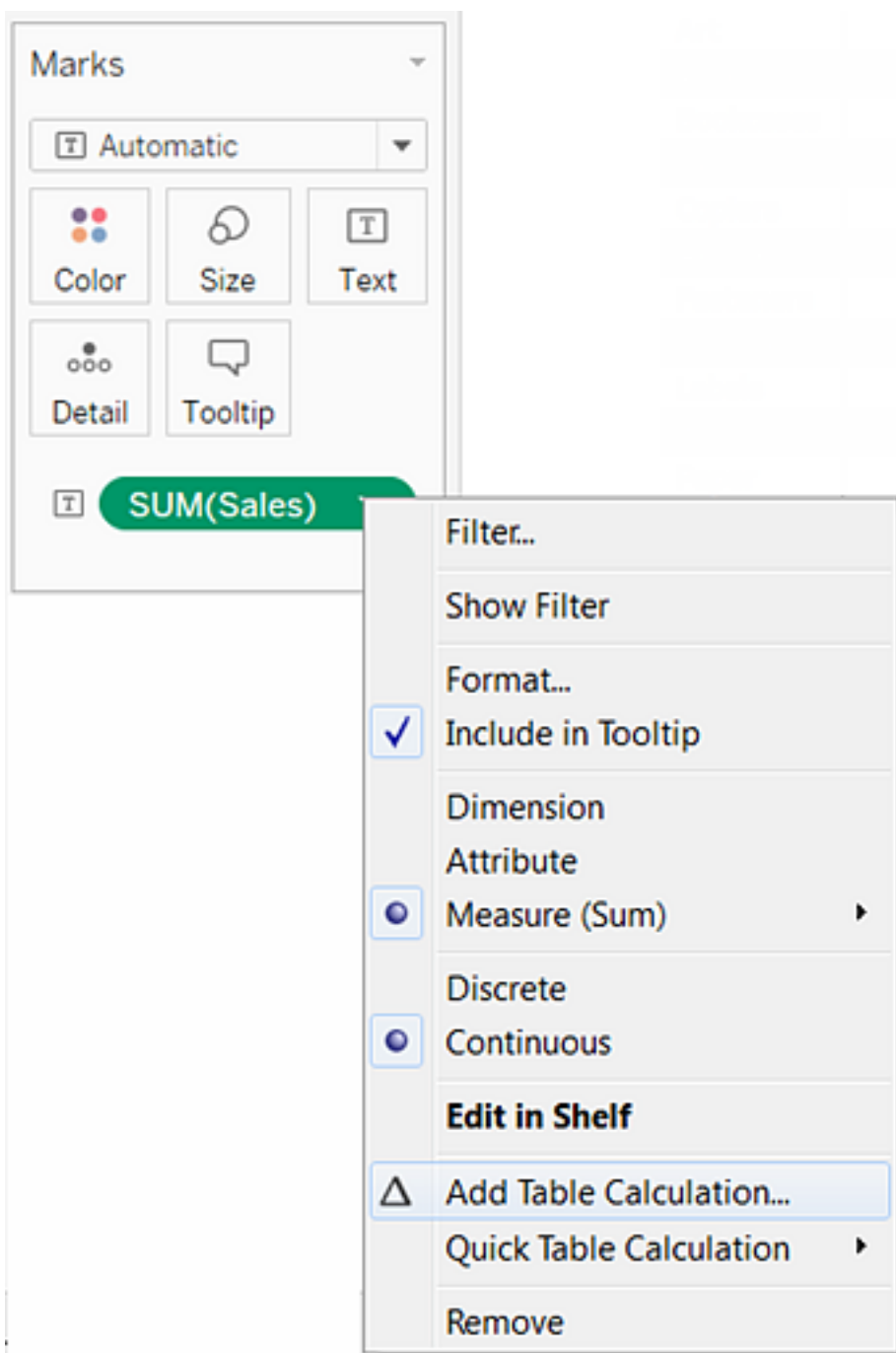
Columns		⊞ YEAR(Order Date)			
Rows		Region	⊞ Sub-Category		

		Order Date			
Region	**Sub-Categ..**	**2011**	**2012**	**2013**	**2014**
Central	Accessories	$4,439	$7,795	$10,802	$10,920
	Appliances	$3,659	$4,975	$6,015	$8,933
	Art	$822	$1,132	$1,520	$2,291
	Binders	$15,871	$5,891	$14,056	$21,105
	Bookcases	$1,834	$8,298	$8,385	$5,640
	Chairs	$20,754	$17,909	$23,350	$23,218
	Copiers	$3,270	$12,810	$17,500	$3,680
	Envelopes	$1,599	$871	$971	$1,197
	Fasteners	$122	$89	$247	$320
	Furnishings	$2,536	$2,529	$5,116	$5,074
	Labels	$1,048	$305	$511	$587
	Machines	$16,292	$1,852	$2,659	$5,995
	Paper	$2,347	$3,544	$5,366	$6,235
	Phones	$9,926	$19,364	$19,902	$23,211
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	Tables	$7,785	$6,857	$13,923	$10,589
East	Accessories	$6,054	$17,911	$6,231	$14,837
	Appliances	$5,779	$6,691	$9,427	$12,291

The dimensions that you use to frame your calculation are called the *addressing fields*, and the fields in which you run your calculation are the *partition fields*.

For more information about these concepts, see Table Calculations: Addressing and Partitioning.

6. To create a table calculation to show percentages, right-click (control-click on Mac) the **SUM(Sales)** field on the **Marks** card, and then select **Add Table Calculation**.

Marks

T Automatic ▼

⠿ Color	🔵 Size	T Text
⠿⠿ Detail	🗩 Tooltip	

T **SUM(Sales)**

	Filter...
	Show Filter
	Format...
✓	Include in Tooltip
	Dimension
	Attribute
●	Measure (Sum) ▶
	Discrete
●	Continuous
	Edit in Shelf
△	Add Table Calculation...
	Quick Table Calculation ▶
	Remove

7. In the Table Calculation dialog box, set **Calculation Type** to **Percent of Total**.

The options in the dialog box change depending on the type of calculation you choose.

Table Calculation
% of Total Sales

Calculation Type

Percent of Total

☐ Compute total across all pages

Compute Using

Table (across)
Table (down)
Table
Pane (down)
Pane
Cell
Specific Dimensions

☑ Year of Order Date
☐ Region
☐ Sub-Category

At the level

For more information about using table calculations, see Transform Values with Table Calculations.

8. For the Calculation definition, select **Pane (Down)**, and then close the Table Calculation dialog box.

Now we see percentages calculated within each sub-category, duplicated for each year within each region. The numbers within each highlighted area add up to 100%.

Pages		

iii Columns	⊞ YEAR(Order Date)	
☰ Rows	Region	⊞ Sub-Category

Filters

Marks

T Automatic ▼

| Color | Size | Text |
| Detail | Tooltip | |

T SUM(Sales) △

		Order Date			
Region	**Sub-Categ..**	**2011**	**2012**	**2013**	**2014**
Central	Accessories	4.27%	7.58%	7.33%	7.42%
	Appliances	3.52%	4.84%	4.08%	6.07%
	Art	0.79%	1.10%	1.03%	1.56%
	Binders	15.28%	5.73%	9.53%	14.35%
	Bookcases	1.77%	8.07%	5.69%	3.83%
	Chairs	19.99%	17.41%	15.84%	15.78%
	Copiers	3.15%	12.45%	11.87%	2.50%
	Envelopes	1.54%	0.85%	0.66%	0.81%
	Fasteners	0.12%	0.09%	0.17%	0.22%
	Furnishings	2.44%	2.46%	3.47%	3.45%
	Labels	1.01%	0.30%	0.35%	0.40%
	Machines	15.69%	1.80%	1.80%	4.08%
	Paper	2.26%	3.45%	3.64%	4.24%
	Phones	9.56%	18.82%	13.50%	15.78%
	Storage	10.68%	8.10%	8.69%	9.31%
	Supplies	0.42%	0.32%	2.91%	3.00%
	Tables	7.50%	6.67%	9.44%	7.20%
East	Accessories	4.70%	11.46%	3.45%	6.96%
	Appliances	4.49%	4.28%	5.22%	5.76%

Pane (Down) is the appropriate choice because it specifies that the calculation should be performed from top to bottom within each pane of the table. The table has two vertical dimensions, so **Table (Down)** would have calculated the percent of total from top to bottom for the entire table, ignoring the **Region** dimension.

The pane is always the finest level of detail for the relevant direction (across or down). If you had three dimensions on the vertical axis, you might have had to use field names to define the calculation, because only the dimension furthest to the left on the **Rows** shelf (defined as Table) and the dimension furthest to the right (defined as Pane) could be captured with the structural options.