

Assignment 2 Instructions

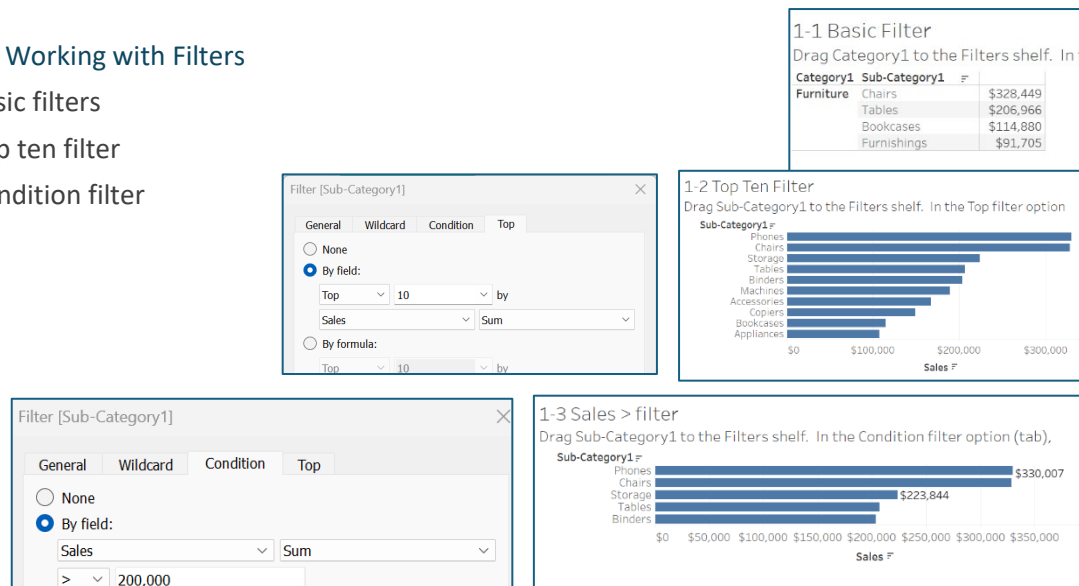
In this assignment, you will learn to use sorting, filtering, grouping, logic and calculations in your Tableau visualizations. Similar to Assignment 1, you will create tables and charts which incorporate these capabilities. The goal of this assignment is to learn how to apply calculations with filtering, grouping and logic to enhance your visualizations in Tableau.

The A2_Starter file includes worksheets that correspond by number to the list of tables and charts below (e.g., 1.1, 1.2 ...3.4, 3.5). You will use the starter Tableau package and create the needed filters, calculations and running totals on each of the worksheets provided. The images (screenprints) below provide calculations or screenshots to check your work. We will also review this assignment in class.

Let's get started: Download the Tableau starter package workbook (A2_Starter.twbx) and Excel file (Orders2012-2015.xlsx) to your computer. Open the packaged workbook in Tableau. Select the Data Source tab at the bottom (far left). If prompted, connect to the Orders2012-2015.xlsx file that you just saved to your computer. Now you are ready to start creating the visualizations below.

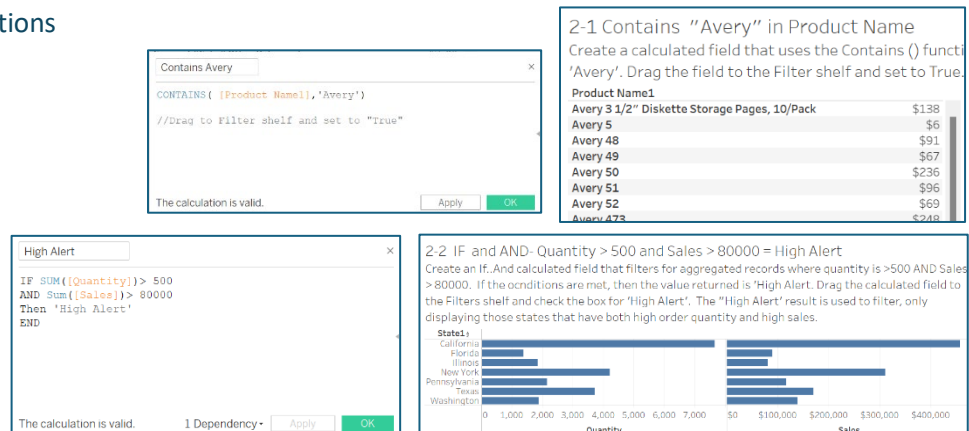
Section 1: Working with Filters

1. Basic filters
2. Top ten filter
3. Condition filter



Section 2: Basic Calculations

1. Contains ()
2. If ()



3. Profit Ratio Calc ()

Profit Ratio

```
sum([Profit])/sum([Sales])
```

The calculation is valid. 1 Dependency Apply OK

2-3 Profit Ratio at Order ID and Product Name Level

Create a calculated field 'Profit Ratio' which provides the ratio of Profit/Sales on each order. Format this calculated field as a percentage with 1 digit to decimal. Add the calculated field to the text table, by dragging it to the Marks card.

Order ID1	Product Name1	Profit	Sales	Profit Ratio
CA-2011-100006	AT&T EL51110 DECT	\$110	\$378	29.0%
CA-2011-100090	Hon 2111 Invitation Se...	-\$88	\$502	-17.5%
CA-2011-100293	Wilson Jones Ledger Si...	\$69	\$197	35.0%
CA-2011-100328	Xerox 1887	\$32	\$91	35.0%
CA-2011-100328	Pressboard Covers wit...	\$1	\$4	33.0%
CA-2011-100363	Binder Clips by OIC	\$1	\$2	35.0%

4. Concatenate strings

Concatenate

```
UPPER(LEFT([Category1], 3)) + " " + [Product Name1]
```

The calculation is valid. 1 Dependency Apply OK

2-4 Strings

Create a calculated field which combines the first 3 letters of Category 1 with the first 3 letters of Product Name 1. The first 3 letters of Category 1 must be upper case.

FUR: Balt Solid Wood Round Tables

Product Name1	Concatenate	
Anderson Hickey Conga Table Tops & Access...	FUR: Anderson Hickey Conga Table Tops & Access...	\$52
Balt Solid Wood Rectangular Table	FUR: Balt Solid Wood Rectangular Table	\$828
Balt Solid Wood Round Tables	FUR: Balt Solid Wood Round Tables	\$6,519
Balt Split Level Computer Training Table	FUR: Balt Split Level Computer Training Table	\$1,041
Barricks 18" x 48" Non-Folding Utility Table...	FUR: Barricks 18" x 48" Non-Folding Utility Ta...	\$1,089
Barricks Non-Folding Utility Table with Sta...	FUR: Barricks Non-Folding Utility Table with S...	\$1,366

5. DateDiff ()

Ship Prep Time

```
DATEDIFF('day', [Order Date], [Ship Date])
```

The calculation is valid. 1 Dependency Apply OK

2-5 DateDiff Average Ship Prep time

Create a calculated field that uses DateDiff to calculate the average ship prep time for each mode. Format the average ship prep time to integer.

Ship Mode1

Same Day	0.0
First Class	2.2
Second Class	3.2
Standard Class	5.0

Section 3: Running Totals

- % of Total, across
- % of Total, down
- % of Total, entire table
- Running Total, across
- Running Total, West region
- Running Total, Home Office 2014
- Rank order by top sales.

3-1 % of Total : In 2014, what's the %

Segment1	2012	2013	2014
Consumer	32%	32%	36%
Corporate	28%	28%	45%
Home Office	33%	28%	39%

3-2 % of Total: For all sales in 2014, what % came from Home Office?
Answer: 17%

Segment1	2012	2013	2014
Consumer	55%	57%	49%
Corporate	27%	27%	34%
Home Office	19%	16%	17%

3-3 % of Total. What's the % of total sales in the table below (for all segments)?
Answer: 6.7%

Segment1	2012	2013	2014
Consumer	17.0%	17.1%	19.0%
Corporate	8.2%	8.2%	13.2%
Home Office	5.7%	4.8%	6.7%

3-4 Running Total: What's the running total of sales

Answer: \$270,190

Before table calc:

Segment1	2012	2013	2014
Home Office	\$89,716	\$164,955	\$270,190
Consumer	\$266,097	\$532,633	\$828,928
Corporate	\$128,435	\$257,192	\$464,135

3-5 Running Total: What's the running total of sales for Home Office in the West region?
Answer: \$80,131

Before table calc:

Segment1	Region1	2012	2013	2014
Home Office	Central	\$16,620	\$40,752	\$60,760
	East	\$14,537	\$41,119	\$74,591
	South	\$36,850	\$40,897	\$54,708
	West	\$21,709	\$42,188	\$80,131
Consumer	Central	\$67,316	\$116,979	\$192,696

3-7 Rank: Rank each item with the top sales being 1. The rank should be shown as a number.

Before Table Calc

Region1	Category1	Rank of Sales al..	Sales
Central	Furniture	9	\$163,797
	Office Supplies	8	\$167,026
	Technology	7	\$170,416
East	Furniture	5	\$208,291
	Office Supplies	6	\$205,516
	Technology	1	\$264,974
South	Furniture	12	\$117,299
	Office Supplies	11	\$125,651
	Technology	10	\$148,772
West	Furniture	2	\$252,613
	Office Supplies	4	\$220,853
	Technology	3	\$251,992

3-6 Running Total: What's the running total of sales for Home Office for 2014?
Answer: \$105,235

Before table calc:

Segment1	Region1	2012	2013	2014
Home Office	Central	\$16,620	\$24,132	\$20,008
	East	\$31,157	\$50,714	\$53,481
	South	\$68,007	\$54,760	\$67,292
	West	\$89,716	\$75,239	\$105,235
Consumer	Central	\$67,316	\$49,662	\$66,707

8. Rank order by top sales by region.

9. Rank order by top sales, different table format

3-9 Rank: Rank each item with the top sales being 1. Note this is the same as Q7, Before Table Calc

Region1		Furniture	Office Supplies	Technology
Central	Rank of Sales along with	9	8	7
	Sales	\$163,797	\$167,026	\$170,416
East	Rank of Sales along with	5	6	1
	Sales	\$208,291	\$205,516	\$264,974
South	Rank of Sales along with	12	11	10
	Sales	\$117,299	\$125,651	\$148,772
West	Rank of Sales along with	2	4	3
	Sales	\$252,613	\$220,853	\$251,992

3-8 Rank: Rank each category within its specific region. Before Table Calc

Region1	Category1	Rank of Sales	Sales
Central	Furniture	3	\$163,797
	Office Supplies	2	\$167,026
	Technology	1	\$170,416
East	Furniture	2	\$208,291
	Office Supplies	3	\$205,516
	Technology	1	\$264,974
South	Furniture	3	\$117,299
	Office Supplies	2	\$125,651
	Technology	1	\$148,772
West	Furniture	1	\$252,613
	Office Supplies	3	\$220,853
	Technology	2	\$251,992

10. Difference in Sales from previous month

3-10 Difference from previous. Show the difference in sales from the previous month. March 2012 should be \$50,880. Before table calc

Month of Order ..	
February 2012	-\$9,136
March 2012	\$50,880
April 2012	-\$27,396
May 2012	-\$4,647
June 2012	\$10,947
July 2012	-\$649
August 2012	-\$6,037
September 2012	\$53,868
October 2012	-\$50,324
November 2012	\$47,175
December 2012	-\$9,083
January 2013	-\$51,372
February 2013	-\$6,223

11. Difference in Sales for every month, form Jan 2012

Table Calculation

% Difference in Sales

Calculation Type

Difference From

Compute Using

Table (down)

Cell

Specific Dimensions

☒ Month of Order Date

At the level

Relative to January 2012

Sort order Specific Dimensions

☒ Show calculation assistance

3-11. Difference from first. Show the difference in sales from the first month. March 2012 should be \$41,745. Before table calc

Month of Order ..	
January 2012	\$0
February 2012	-\$9,136
March 2012	\$41,745
April 2012	\$14,349
May 2012	\$9,702
June 2012	\$20,649
July 2012	\$20,000
August 2012	\$13,963
September 2012	\$67,831
October 2012	\$17,507
November 2012	\$64,682
December 2012	-\$55,500

12. Show Year over Year growth (% difference) for same period, prior year

Table Calculation

% Difference in Sales

Calculation Type

Percent Difference From

Compute Using

Table (down)

Pane (down)

Pane (across then down)

Pane (down then across)

Cell

Specific Dimensions

☒ Month of Order Date
 ☒ Year of Order Date

At the level

Relative to Previous

Sort order

☒ Show calculation assistance

3-12 % Difference: Show Year over Year growth (or % difference) of sales. February 2014 should be 91.3%. Before table calc

Month of ..	Year of Ord..	% Difference in Sales f..	Sales
January	2012		\$13,946
	2013	30.32%	\$18,174
	2014	2.03%	\$18,542
	2015	141.08%	\$44,703
February	2012	-89.24%	\$4,811
	2013	148.44%	\$11,951
	2014	91.34%	\$22,868
	2015	-11.30%	\$20,284
March	2012	174.56%	\$55,691
	2013	-30.46%	\$38,726
	2014	32.17%	\$51,186