

# Data Analytics Tutorial: Sales, Cost, and Gross Profit Analysis Using Excel Pivot Tables and Charts

---

Cabinet Accessories Company (CAC) dataset

Welcome to this data analytics tutorial that covers sales, cost, and gross profit analysis using pivot tables and charts in Excel.

## Cabinet Accessories Company (CAC)

---

- CAC is a fictitious company that sells cabinet hardware including knobs and pulls
- Data set contains sales and cost data for 2014 – 2018
- In this tutorial, we are using a small, 36-record data set
- For the actual activity, you will be using the full data set so answers will be different but the process will be similar

In this activity, we are using a sales and cost data set for a fictitious company, Cabinet Accessories Company (CAC.) The sales and cost data covers 2014 – 2018. For this tutorial only, we are using a small, 36-record data set. For the actual activity, you will be using the full data set so your answers for the activity requirements will be different – but the process will be similar.

## Pivot tables and pivot charts

---

- Using Office 365 Excel in Windows in this tutorial
- Other versions of Excel may be slightly different
- May be many ways of accomplishing the same thing – just presenting one way here

For this tutorial on pivot tables and pivot charts, we will be demonstrating using Office 365 Excel for Windows. Other versions of Excel may be slightly different. Also note that there may be many ways of accomplishing the same thing – we are just presenting one way here. Make sure your version of Office 365 is updated; you may not see things the same way if you have not updated recently.

# Start by opening Excel workbook

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128NBDEL	Elements	Lindos	128" CC pull	12.98	8.2	307			
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374			
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685			
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216			
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169			
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470			
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101			
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759			
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999			
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315			
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561			
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268			
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892			
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846			
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301			
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161			
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	24.4	14.22	698			
480137	Central	2/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612			
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566			
479529	Central	11/30/2017	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	387			
479471	Central	11/1/2015	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	132			
479566	Central	5/19/2018	885-224PC	Jeffrey Alexander	Hayworth	224 mm CC pull	24.4	15.68	246			
479529	Central	6/2/2018	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	623			
480137	Central	2/15/2017	878AE	Elements	Kingsport	Knob	3.29	2.27	501			
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207			
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186			
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487			
476614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30			

Start this activity by opening the Excel workbook containing the data set.

## General instructions

---

For each of the requirements (except Requirement 1), create a new pivot table in a new worksheet. Name each new worksheet as “Req 2,” “Req 3,” etc. If instructed, format the dollar amounts in each pivot table or pivot chart using the accounting format with two decimal places.

In general, for each of the requirements in this activity (except for Requirement 1), create a new pivot table in a new worksheet. Name each new worksheet as “Req 2,” “Req 3,” etc. If instructed, format the dollar amounts in each pivot table or pivot chart using the accounting format with two decimal places.

## Requirement 1

---

Create three columns in the Data worksheet that calculate sales revenue, cost, and gross profit for each sales record

Requirement 1 asks “Create three columns in the Data worksheet that calculate sales revenue, cost, and gross profit for each sales record.”

# Req 1: Create 3 columns

#1: Enter the formula for sales revenue, which is =h2\*j2 (point to the cells rather than typing them in)

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.29	307			
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374			
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685			
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216			
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169			
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470			
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101			
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759			
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999			
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315			
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561			
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268			
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892			
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846			
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301			
478												
477												
480												
478												
479												
479												
479												
479												
479												
480												
479												
480												
476614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30			

For the first step in the first requirement, to go Cell K2 in the Data worksheet, which is the cell under the column heading sales revenue. Enter the formula for sales revenue, which is =h2\*j2. Point to the cells rather than typing them in.

## Req 1: Create 3 columns

#2: Enter the formula for total cost, which is =i2\*j2

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.21	3071	3984.80	=i2*j2	
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89				
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685			
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216			
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169			
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470			
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101			
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759			
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999			
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315			
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561			
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268			
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892			
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846			
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301			
478												
477												
480												
478												
479												
479												
479												
479												
480137	Central	2/15/2017	878AE	Elements	Kingsport	Knob	3.29	2.27	501			
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207			
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186			
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487			
476614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30			

For the second step, click in Cell L2, which is right below the column heading total cost. Enter the formula for total cost, which is =i2\*j2. Again, point to the cells rather than typing in the names.



## Req 1: Create 3 columns

#3: Enter the formula for gross profit, which is sales revenue minus total cost or =K2-L2

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128NBDEL	Elements	Lindos	128" CC pull	12.98	8.2	307	3984.86	2517.4	=K2-L2
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374			
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685			
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216			
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169			
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470			
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101			
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759			
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999			
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315			
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561			
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268			
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892			
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846			
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301			
477												
480												
478												
479												
479												
479												
479												
479												
480												
479												
480												
476614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30			

For the third column, click in cell M2, which is the cell right below the column heading of gross profit. Enter the formula for gross profit, which is sales revenue minus total cost or=K2-L2 (again, point to the cells rather than typing them in – there is a lot less potential for error that way.)

## Req 1: Create 3 columns

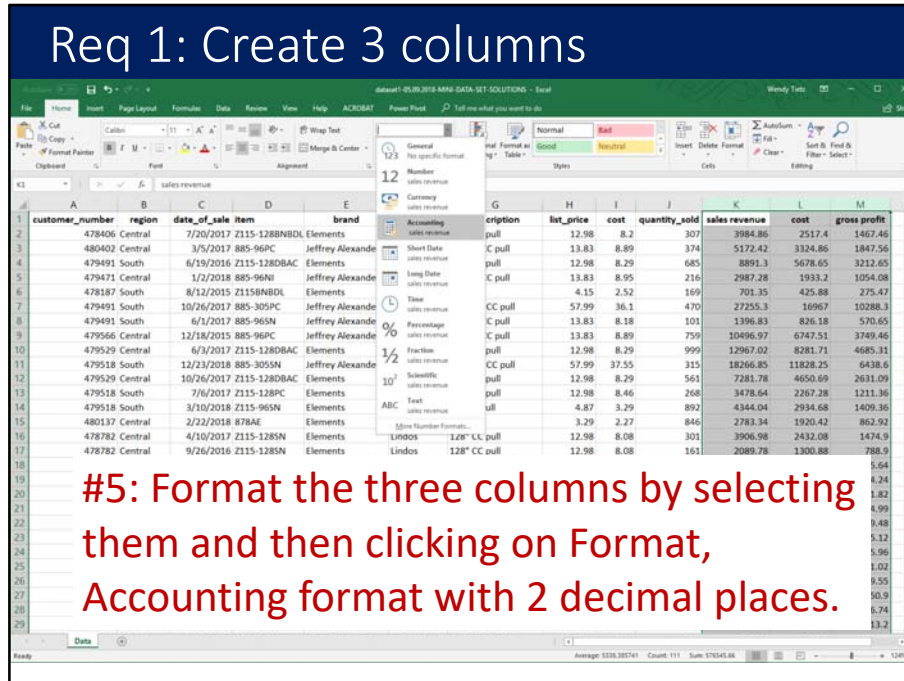
The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
2	478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	3984.80	2517.4	1467.40
3	480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374			
4	479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685			
5	479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216			
6	478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169			
7	479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470			
8	479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101			
9	479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759			

#4: To copy the three formulas down to the rest of the rows, select the three cells and then double-click the small box in the lower right-hand corner of cell M2

In the fourth step, copy the three formulas down to the rest of the rows by selecting the three cells and then double-clicking the small box in the lower right-hand corner of cell M2.

## Req 1: Create 3 columns



#5: Format the three columns by selecting them and then clicking on Format, Accounting format with 2 decimal places.

customer_number	region	date_of_sale	item	brand	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	pull	12.98	8.2	307	3984.86	2517.4	1467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexandre	C pull	13.83	8.89	374	5172.42	3324.86	1847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	pull	12.98	8.29	685	8891.3	5678.65	3212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexandre	C pull	13.83	8.95	216	2987.28	1933.2	1054.08
478187	South	8/12/2015	Z115BNBDL	Elements	pull	4.15	2.52	169	701.35	425.88	275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexandre	CC pull	57.99	36.1	470	27255.3	16967	10288.3
479566	Central	12/18/2015	885-96PC	Jeffrey Alexandre	C pull	13.83	8.18	101	1396.83	826.18	570.65
479529	Central	6/3/2017	Z115-128DBAC	Elements	C pull	13.83	8.89	759	10496.97	6747.51	3749.46
479518	South	12/23/2018	885-305SN	Jeffrey Alexandre	pull	12.98	8.29	999	12967.02	8281.71	4685.31
479529	Central	10/26/2017	Z115-128DBAC	Elements	CC pull	57.99	37.55	315	18266.85	11828.25	6438.6
479518	South	7/6/2017	Z115-128PC	Elements	pull	12.98	8.29	561	7281.78	4650.69	2631.09
479518	South	3/10/2018	Z115-96SN	Elements	pull	12.98	8.46	268	3478.64	2267.28	1211.36
480137	Central	2/22/2018	878AE	Elements	pull	4.87	3.29	892	4344.04	2934.68	1409.36
478782	Central	4/10/2017	Z115-128SN	Elements	pull	3.29	2.27	846	2783.34	1920.42	862.92
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos 128" LL pull	12.98	8.08	301	3906.98	2432.08	1474.9
					Lindos 128" CC pull	12.98	8.08	161	2089.78	1300.88	788.9
											5.64
											4.24
											1.82
											4.99
											8.48
											5.22
											5.96
											1.02
											9.55
											50.9
											6.74
											13.2

For Step 5, format the three columns by selecting the columns and then clicking on Format, Accounting format with 2 decimal places.

# Req 1: Create 3 columns

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales_revenue	cost	gross_profit
478400	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	3,984.86	2,517.40	1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	5,172.42	3,324.86	1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	8,891.30	5,678.65	3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	2,987.28	1,933.20	1,054.08
478187	Central	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	701.35	425.88	275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	27,255.30	16,967.00	10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	1,396.83	826.18	570.65
479560	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	10,496.97	6,747.51	3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	12,967.02	8,281.71	4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	18,266.85	11,828.25	6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	7,281.78	4,650.69	2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	3,478.64	2,267.28	1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	4,344.04	2,534.68	1,809.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	2,783.34	1,520.42	1,262.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	3,906.98	2,432.08	1,474.90
												788.90
												1,056.64
												624.24
												1,001.82
												684.99
												889.48
												145.12
												815.96
480137	Central	2/15/2017	878AE	Elements	Kingsport	Knob	3.29	2.27	501	1,648.29	1,137.27	511.02
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207	2,862.81	1,693.26	1,169.55
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186	2,572.38	1,521.48	1,050.90
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487	1,602.23	1,105.49	496.74
476614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30	1,739.70	1,126.50	613.20

That's it, you have added three formatted columns to the Data worksheet.

## Requirement 2

---

Create a pivot table that shows sales revenue by region for each year.  
Correct any errors in the data set.  
Insert a pivot chart to show sales trends.

Requirement 2 states “Create a pivot table that shows sales revenue by region for each year. Correct any errors in the data set. Insert a pivot chart to show sales trends.”

## Req 2: Sales by region and error correction

#1: Click anywhere in the data in the Data worksheet

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales_revenue	cost	gross_profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	\$ 1,396.83	\$ 826.18	\$ 570.65
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	34.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
684.99												
2,889.48												
2,145.12												
2,815.96												
511.02												
1,169.55												
1,050.90												
496.74												
613.20												

The first step is to click anywhere in the data in the Data worksheet.

## Req 2: Sales by region and error correction

The screenshot shows an Excel spreadsheet with a data table and a PivotTable creation dialog box. The data table has the following columns: customer number, region, date of sale, item, brand, collection, and diameter. The PivotTable dialog box is open, showing the 'Create PivotTable' options. The dialog box has a 'Choose the data that you want to analyze' section with a 'Select a table or range' dropdown set to '\$A:\$M'. There are also options for 'Use an external data source', 'Choose where you want the PivotTable report to be placed', and 'Choose whether you want to analyze multiple tables'.

customer number	region	date of sale	item	brand	collection	diameter	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm	\$ 1,396.83	\$ 826.18	\$ 570.65
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	\$ 57.99	\$ 37.55	\$ 20.44
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	\$ 12.98	\$ 8.29	\$ 4.69
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	\$ 12.98	\$ 8.46	\$ 4.52
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	\$ 4.87	\$ 3.29	\$ 1.58
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	\$ 3.29	\$ 2.27	\$ 1.02
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	\$ 12.98	\$ 8.08	\$ 4.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	\$ 12.98	\$ 8.08	\$ 4.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	\$ 24.4	\$ 14.22	\$ 10.18
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	\$ 3.29	\$ 2.27	\$ 1.02
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	\$ 4.87	\$ 3.1	\$ 1.77

#2: On the ribbon, click Insert and then Pivot Table

Next, on the ribbon, click Insert and then Pivot Table.

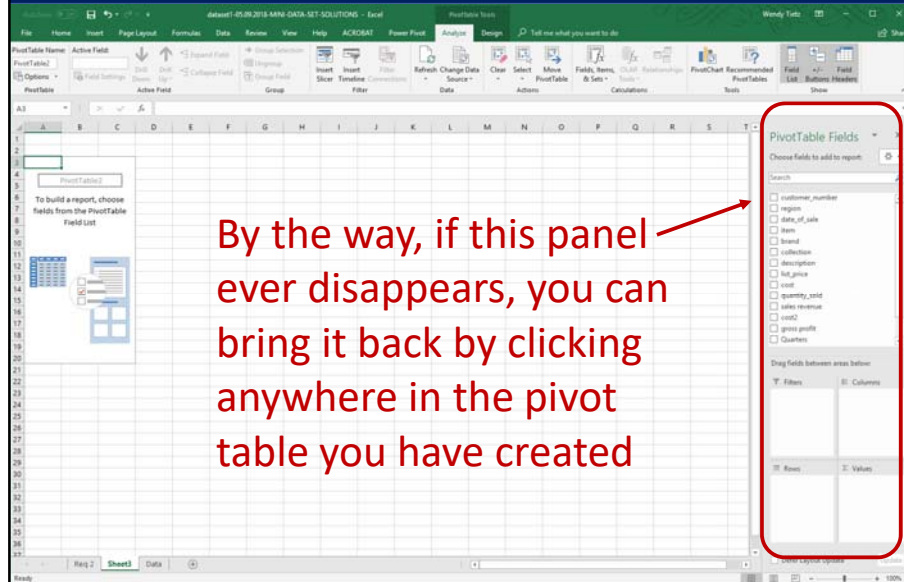
## Req 2: Sales by region and error correction

#3: Right-click the worksheet name to rename it as "Req 2"

Before we go any further, right-click the worksheet name tab and rename it "Req 2." That will help to keep track of the different pivot tables.



## Req 2: Sales by region and error correction



By the way, if this panel ever disappears, you can bring it back by clicking anywhere in the pivot table you have created

By the way, if the PivotTable Fields panel ever disappears, you can bring it back by clicking anywhere in the pivot table you have created.

## Req 2: Sales by region and error correction

#4: Drag “Region” in the PivotTable Fields panel down to the Rows box, “Sales revenue” down to the Values box, and “date\_of\_sale” down to the Columns box

The next step is to drag “Region” in the PivotTable Fields panel down to the Rows box, “Sales revenue” down to the Values box, and “date\_of\_sale” down to the Columns box.

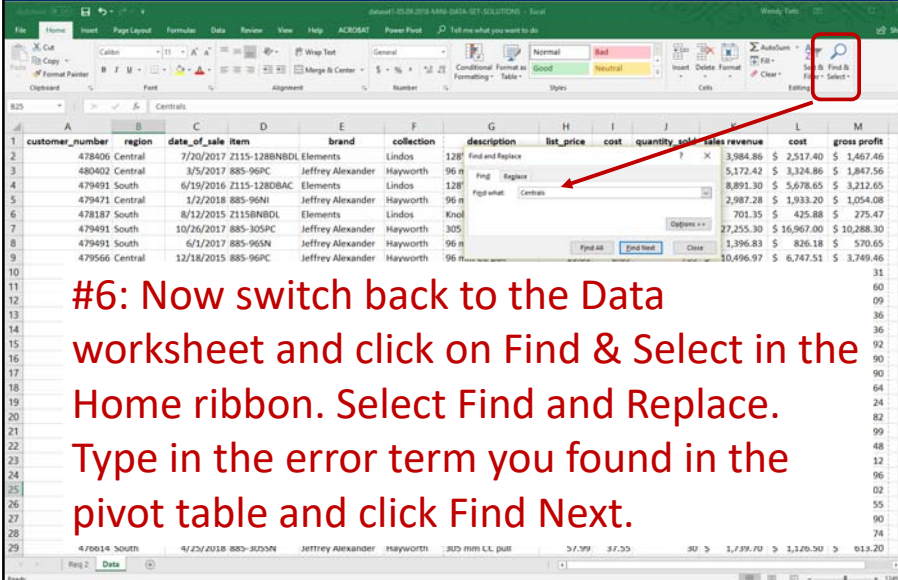
## Req 2: Sales by region and error correction

#5: Examine the pivot table now. Look for errors. Here we see that “Central” has been entered as “Centrals” at least once in the dataset.

Sum of sales revenue	Column Labels	2015	2016	2017	2018	Grand Total
	Row Labels					
	Central	61843.97	23842.14	35197.75	24738.75	155442.61
	South	6136.54	28544.03	32130.77	24350.59	91181.93
	Centrals		1648.29			1648.29
	Grand Total	67980.51	52426.17	69976.81	99089.34	286272.83

#5: Examine the pivot table now. Look for errors. Here we see that “Central” has been entered as “Centrals” at least once in the dataset. When you work on the large assigned dataset, there may be different error(s), but the same visual inspection technique will work to find any errors.

## Req 2: Sales by region and error correction



#6: Now switch back to the Data worksheet and click on Find & Select in the Home ribbon. Select Find and Replace. Type in the error term you found in the pivot table and click Find Next.

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales_revenue	cost	gross_profit
478406	Central	7/20/2017	2115-128BNBDL	Elements	Lindos	128			7	3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 n			1	5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	2115-128DBAC	Elements	Lindos	128			1	8,891.30	\$ 5,678.05	\$ 3,212.05
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 n			1	2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	2115BNBDL	Elements	Lindos	Knol			1	701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305			1	22,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-965N	Jeffrey Alexander	Hayworth	96 n			1	1,396.83	\$ 826.18	\$ 570.65
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 n			1	10,496.97	\$ 6,747.53	\$ 3,749.46

Now switch back to the Data worksheet and click on Find & Select in the Home ribbon. Select Find and Replace. Type in the error term(s) you found in the pivot table and click Find Next. Replace with the corrected spelling. Do this process for each error you find in the pivot table. Here we had just one, Centrals instead of the correct Central.

## Req 2: Sales by region and error correction

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable is titled "Sum of sales revenue" and has "Columns Labels" set to "2015". The data is summarized by region: Central (\$5442.61), South (\$1181.93), and Central (\$148.29), with a Grand Total of \$6772.83. A right-click context menu is open over the Grand Total cell, with "Refresh" selected. The PivotTable Fields task pane on the right shows "region" and "date\_of\_sale" in the Filters area, and "sum of sales revenue" in the Values area.

**#7: Return to the Req 2 worksheet. Click in the data in the pivot table. Right-click and select Refresh.**

For Step 7, return to the Req 2 worksheet. Click in the data in the pivot table. Right-click and select Refresh. This process should update the pivot table so the errors you corrected are no longer in the pivot table.

## Req 2: Sales by region and error correction

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable has the following data:

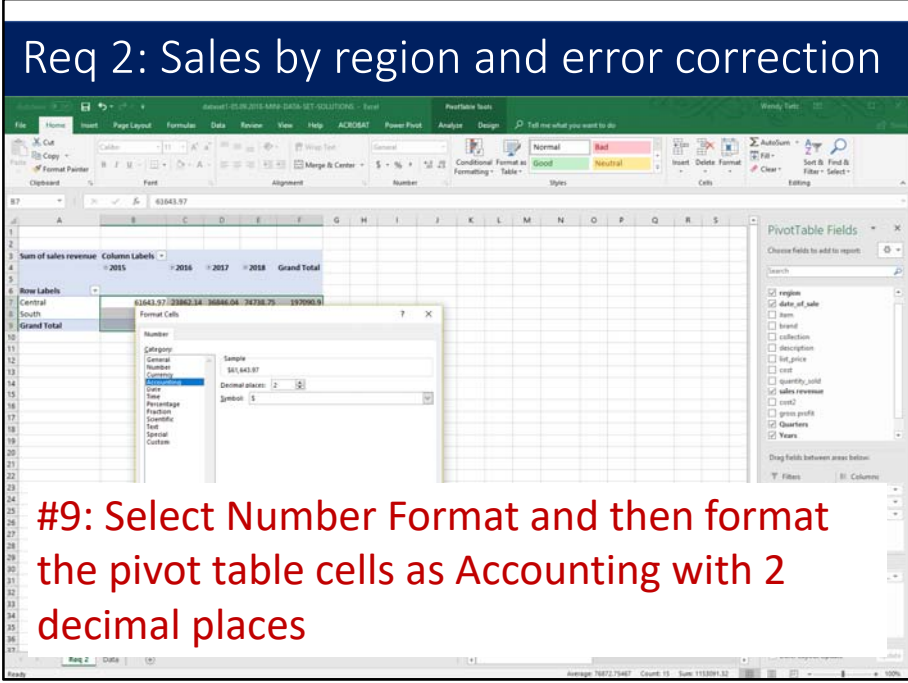
Row Labels	2015	2016	2017	2018	Grand Total
Central	61643.97	23862.34	36846.04	24738.75	157091.10
South	8136.54	28564.03	32130.77	24350.59	95482.93
Grand Total	67780.51	52426.37	68976.81	99089.34	288773.05

A right-click context menu is open over the Grand Total row, with 'Value Field Settings...' selected. The PivotTable Fields task pane on the right shows 'region' and 'date\_of\_sale' as filters, and 'sales revenue' as the value field.

**#8: Select the pivot table data and right-click to select Value Field Settings**

Next, we will format the data in the pivot table. Select the pivot table data and right-click to select Value Field Settings.

## Req 2: Sales by region and error correction



The screenshot displays an Excel spreadsheet with a PivotTable. The PivotTable is titled "Sum of sales revenue" and has columns for "2015", "2016", "2017", "2018", and "Grand Total". The rows are labeled "Central", "South", and "Grand Total". The values are: Central (83843.97, 23882.34, 36886.04, 24738.75, 197006.9), South (83843.97, 23882.34, 36886.04, 24738.75, 197006.9), and Grand Total (83843.97, 23882.34, 36886.04, 24738.75, 197006.9). A "Format Cells" dialog box is open, showing the "Number" category selected. The "Decimal places" field is set to 2, and the "Symbol" is set to "\$".

**#9: Select Number Format and then format the pivot table cells as Accounting with 2 decimal places**

Select Number Format and then format the pivot table cells as Accounting with 2 decimal places.

## Req 2: Sales by region and error correction

The screenshot shows the Microsoft Excel interface with a PivotTable and the PivotChart button highlighted on the Insert ribbon. A red arrow points from the PivotChart button to the PivotTable data.

**#10: Select the pivot table data. On the Insert ribbon, click on PivotChart**

Sum of sales revenue	Column Labels	2015	2016	2017	2018	Grand Total
Row Labels						
Central		\$ 61,643.97	\$23,862.14	\$36,846.04	\$74,735.75	\$197,087.90
South		\$ 6,136.54	\$26,544.03	\$32,130.77	\$24,350.59	\$ 91,161.93
Grand Total		\$ 67,780.51	\$52,406.17	\$68,976.81	\$99,086.34	\$288,272.83

Now we are going to insert a PivotChart in this same worksheet. Select the pivot table data. On the Insert ribbon, click on PivotChart.



## Req 2: Sales by region and error correction

The screenshot shows an Excel spreadsheet with a PivotTable summarizing sales revenue by region. The PivotTable is structured as follows:

Row Labels	2015	2016	2017
Central	\$ 61,643.97	\$23,862.14	\$36,846.04
South	\$ 6,136.54	\$26,344.03	\$32,130.77
<b>Grand Total</b>	<b>\$ 67,780.51</b>	<b>\$50,206.17</b>	<b>\$68,976.81</b>

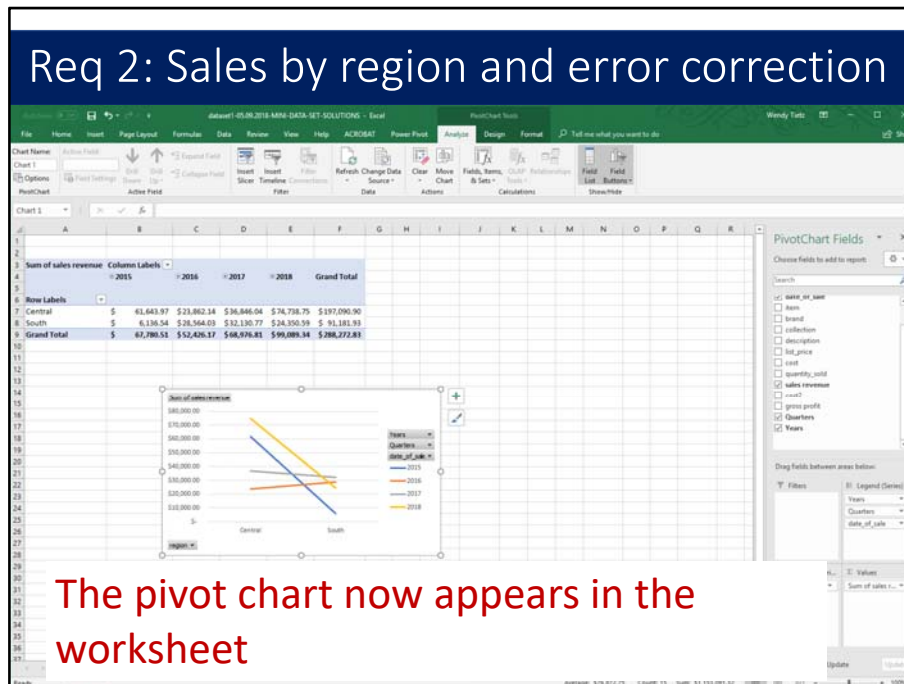
The 'Insert Chart' dialog box is open, showing the 'Line' chart type selected. The 'PivotTable Fields' task pane on the right shows the following configuration:

- Filters: Years (2015, 2016, 2017)
- Columns: date\_of\_sale, sales\_revenue

**#11: Next, select the Line type of chart**

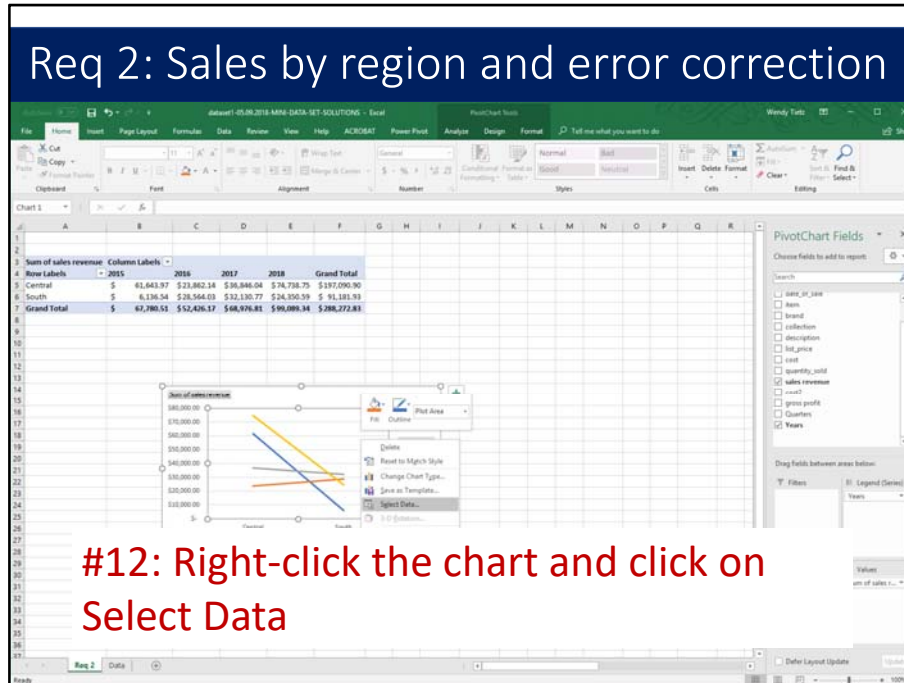
Next, select the Line type of chart and then click on OK.

## Req 2: Sales by region and error correction



The pivot chart now appears in the worksheet. However, we need to switch the data rows and columns.

## Req 2: Sales by region and error correction



#12: Right-click the chart and click on Select Data

To switch the rows and columns, right-click the chart and click on Select Data.

## Req 2: Sales by region and error correction

The screenshot displays an Excel spreadsheet with a PivotTable and a PivotChart. The PivotTable is titled 'Sum of sales revenue' and has 'Row Labels' (Central, South) and 'Column Labels' (2015, 2016, 2017, 2018, Grand Total). The PivotChart is a line chart showing sales revenue over time for each region. A 'Select Data Source' dialog box is open, with the 'Switch Row/Column' button highlighted by a red box. The dialog box also shows the 'Legend Entries (Series)' and 'Horizontal (Category)' options.

Row Labels	2015	2016	2017	2018	Grand Total
Central	\$ 61,643.97	\$ 21,482.14	\$ 36,848.04	\$ 74,738.75	\$ 194,712.90
South	\$ 6,136.14	\$ 28,564.03	\$ 21,130.77	\$ 24,590.59	\$ 80,421.53
Grand Total	\$ 67,780.11	\$ 52,436.17	\$ 68,978.81	\$ 99,329.34	\$ 275,536.44

**#13: Click on the Switch Row/Column button at the top of the box**

Next, click on the Switch Row/Column button at the top of the box.

## Req 2: Sales by region and error correction

The screenshot displays an Excel spreadsheet with a PivotTable and a PivotChart. The PivotTable is titled 'Sum of sales revenue' and has 'Columns Labels' as 'South' and 'Grand Total'. The data is as follows:

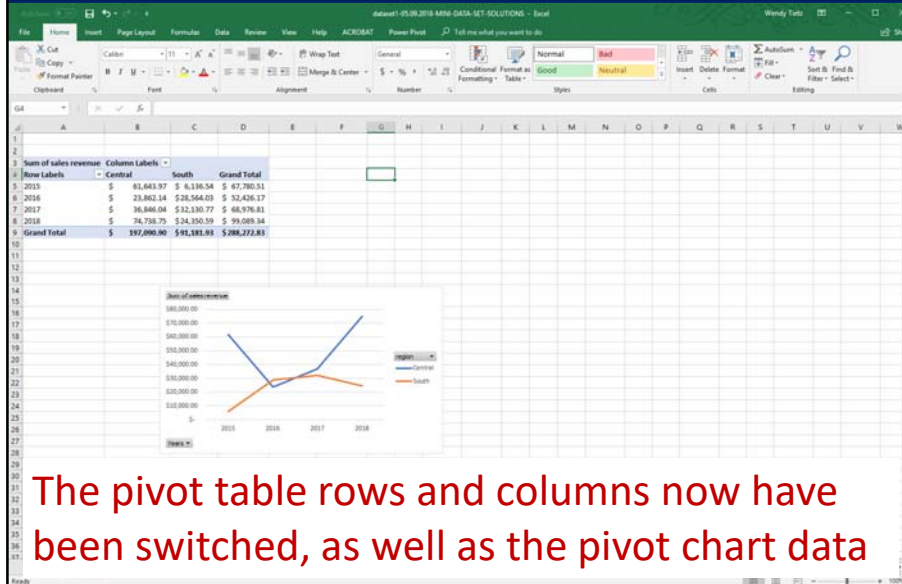
Row Labels	South	Grand Total
2015	\$ 81,643.97	\$ 67,790.31
2016	\$ 23,862.14	\$ 52,426.17
2017	\$ 36,846.04	\$ 12,130.77
2018	\$ 74,738.75	\$ 24,350.59
Grand Total	\$ 197,090.90	\$ 91,181.83

The PivotChart is a line chart titled 'Sum of sales revenue' showing sales revenue over time for three regions: Central, South, and North. The Y-axis represents sales revenue from \$0 to \$80,000.00. The X-axis represents years from 2015 to 2018. The legend indicates that the blue line represents Central, the orange line represents South, and the red line represents North.

**#14: Now click OK to finalize the switch of the rows and columns**

Now click OK to finalize the switch of the rows and columns.

## Req 2: Sales by region and error correction



The pivot table rows and columns now have been switched, as well as the pivot chart data

The pivot table rows and columns now have been switched, as well as the pivot chart data.

## Requirement 3

---

Create a pivot table that shows sales revenue, costs, and gross profit for each year. What is the impact on retained earnings each year?

Requirement 3 reads “Create a pivot table that shows sales revenue, costs, and gross profit for each year. What is the impact on retained earnings each year?”

## Req 3: Sales, costs and gross profit by year

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales_revenue	cost	gross_profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	\$ 1,396.83	\$ 826.18	\$ 570.65
479560	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	34.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
21										684.99		
22										2,889.48		
23										2,145.12		
24										2,815.96		
25										511.02		
26										1,169.55		
27										1,050.90		
28										496.74		
29										613.20		

#1: Click anywhere in the data in the Data worksheet

The first step is to click anywhere in the data in the Data worksheet.



## Req 3: Sales, costs and gross profit by year

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable is set to summarize data by year. The data source is a table with columns: region, date\_of\_sale, item, brand, collection, description, list\_price, cost, quantity\_sold, sales revenue, total cost, and gross profit. The PivotTable is currently empty, and the 'Insert' tab is selected in the ribbon. A red arrow points to the 'PivotTable' button in the 'Tables' group of the 'Insert' tab.

**#2: Click on the Insert tab and then click on Pivot Table**

region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	total cost	gross profit		
trial	7/20/2017	Z115-1288NBOL	Elements	Lindos	128" CC pull	12.98	8.2	307	3,994.86	\$ 2,517.40	\$ 1,487.46		
trial	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	5,172.42	\$ 3,324.86	\$ 1,847.56		
trial	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	8,891.30	\$ 5,678.65	\$ 3,212.65		
5	47971	Central	1/2/2018	885-96ANI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	2,987.28	\$ 1,933.20	\$ 1,054.08
6	47817	South	8/12/2018	Z1158NBOL	Elements	Lindos	Knob	4.15	2.52	169	701.35	\$ 425.88	\$ 275.47
7	47949	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	27,255.30	\$ 16,967.00	\$ 10,288.30
8	47949	South	6/1/2017	885-965N	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	1,396.83	\$ 826.18	\$ 570.65
9	47956	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	10,496.97	\$ 6,747.51	\$ 3,749.46
10	479529	Central	6/1/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	12,967.02	\$ 8,281.71	\$ 4,685.31
11	479518	South	12/21/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	18,266.85	\$ 11,828.25	\$ 6,438.60
12	479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	7,281.78	\$ 4,650.69	\$ 2,631.09
13	479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	3,474.64	\$ 2,267.28	\$ 1,211.36
14	479518	South	3/10/2018	Z115-965N	Elements	Lindos	96" CC pull	4.87	3.29	892	4,344.04	\$ 2,934.68	\$ 1,409.36
15	480137	Central	7/2/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	2,783.34	\$ 1,920.42	\$ 862.92
16	478782	Central	1/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	3,906.98	\$ 2,432.08	\$ 1,474.90
17	478782	Central	9/16/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	2,089.78	\$ 1,300.88	\$ 788.90
18	471												
19	486												
20	471												
21	471												
22	471												
23	471												
24	471												
25	486												
26	479491	South	7/11/2013	885-965N	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207	2,862.81	\$ 1,693.26	\$ 1,169.55
27	479491	South	7/3/2015	885-965N	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186	2,572.38	\$ 1,521.48	\$ 1,050.90
28	480137	Central	2/5/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	487	1,602.23	\$ 1,105.49	\$ 496.74
29	476414	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30	1,739.70	\$ 1,126.50	\$ 613.20
30	479471	Central	1/30/2018	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	653	37,867.47	\$ 23,573.30	\$ 14,294.17
31	478303	Central	7/3/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	630	3,063.33	\$ 1,648.90	\$ 1,414.43

Click on the Insert tab and then click on Pivot Table.

## Req 3: Sales, costs and gross profit by year

**#3: Accept the defaults and click on OK**

customer number	region	date_of_sale	item	brand	collection	di	sales revenue	cost	gross profit			
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46			
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56			
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC	\$ 8,891.30	\$ 5,678.05	\$ 3,213.05			
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08			
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	\$ 701.35	\$ 425.88	\$ 275.47			
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm	\$ 22,255.30	\$ 16,967.00	\$ 10,288.30			
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm	\$ 1,396.83	\$ 826.18	\$ 570.65			
479560	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46			
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31			
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	24.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
										684.99		2,889.48
												2,145.12
												2,815.96
												511.02
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207	\$ 2,862.81	\$ 1,693.26	\$ 1,169.55
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186	\$ 2,572.38	\$ 1,521.48	\$ 1,050.90
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487	\$ 1,602.23	\$ 1,105.49	\$ 496.74
478614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30	\$ 1,739.70	\$ 1,126.50	\$ 613.20

Next, accept the defaults and click on OK.

## Req 3: Sales, costs and gross profit by year

#4: Right-click the worksheet name to rename it as “Req 3”

Before we go any further, right-click the worksheet name tab and rename it “Req 3.” That will just help to keep track of the various pivot tables.

## Req 3: Sales, costs and gross profit by year

**#5: Drag “Years” in the PivotTable Fields panel down to the Rows box. Drag “sales revenue”, “total cost”, and “gross profit” down to the Values box**

Row Labels	Sum of sales revenue	Sum of total cost	Sum of gross profit
2015	\$ 67,790.51	\$ 42,442.20	\$ 25,348.31
2016	\$ 52,409.57	\$ 32,704.44	\$ 19,705.13
2017	\$ 66,976.81	\$ 41,604.17	\$ 25,372.64
2018	\$ 99,089.34	\$ 63,116.01	\$ 35,973.33

In the next step, drag “Years” in the PivotTable Fields panel down to the Rows box. Drag “sales revenue”, “total cost”, and “gross profit” down to the Values box.

## Req 3: Sales, costs and gross profit by year

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable has the following data:

Row Labels	Sum of sales revenue	Sum of total cost	Sum of gross profit
2015	6780.51	43442.38	2338
2016	2426.37	32704.44	1972
2017	6879.31	43664.27	2372
2018	9909.34	61134.01	3597
Grand Total	29872.81	181964.9	10680

A right-click context menu is open over the data, with 'Value Field Settings...' selected. The PivotTable Fields task pane on the right shows the following fields:

- sales\_revenue
- total\_cost
- gross\_profit
- years

The Values area in the task pane shows 'Sum of sales revenue', 'Sum of total cost', and 'Sum of gross profit'.

**#6: Select the pivot table data. Right-click and select Value Field Settings**

Next, select the pivot table data. Right-click and select Value Field Settings.

## Req 3: Sales, costs and gross profit by year

The screenshot shows an Excel PivotTable with the following data:

Row Labels	Sum of sales revenue	Sum of total cost	Sum of gross profit
2015	6780.51	42442.28	25338.23
2016	2426.37	32704.44	19721.73
2017	6879.31	43604.17	23372.54
2018	9909.34	61134.01	35974.33
Grand Total	29872.81	181884.9	106405.83

The Value Field Settings dialog box is open, showing the 'Sum of sales revenue' field with 'Number Format' selected. A red box highlights the 'Number Format' button in the dialog.

#7: Click on Number Format

Next, click on Number Format.

## Req 3: Sales, costs and gross profit by year

The screenshot shows an Excel PivotTable with the following data:

Row Labels	Sum of sales revenue	Sum of total cost	Sum of gross profit
2015	67780.51	42442.28	25338.23
2016	24236.37	32706.84	19729.53
2017	60739.31		
2018	99093.34		
Grand Total	288772.81		

The 'Format Cells' dialog box is open, showing the 'Accounting' format selected with 2 decimal places. The 'PivotTable Fields' task pane is also visible on the right side of the screen.

**#8: Select Accounting format with 2 decimal places**

Select Accounting format with 2 decimal places.

## Req 3: Sales, costs and gross profit by year

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable has three columns: 'Sum of sales revenue', 'Sum of total cost', and 'Sum of gross profit'. The rows represent the years 2015, 2016, 2017, and 2018, followed by a 'Grand Total' row. The data is as follows:

Row Labels	Sum of sales revenue	Sum of total cost	Sum of gross profit
2015	\$ 67,700.01	\$ 42,442.28	\$ 25,338.23
2016	\$ 52,426.37	\$ 32,704.44	\$ 19,721.73
2017	\$ 48,976.81	\$ 43,604.17	\$ 25,372.64
2018	\$ 95,089.34	\$ 83,116.01	\$ 35,973.33
Grand Total	\$ 264,272.83	\$ 181,866.90	\$ 106,405.93

The PivotTable Fields task pane on the right shows the following configuration:

- Columns: (Empty)
- Rows: (Empty)
- Values: Sum of sales revenue, Sum of total cost, Sum of gross profit

This pivot table that shows sales revenue, total cost, and gross profit by year is finished

This pivot table that shows sales revenue, total cost, and gross profit by year is now finished. The requirements for the data project ask to calculate the net impact on retained earnings in each of the years from the transactions. Remember that gross profit will increase retained earnings.



## Requirement 4

---

Create a pivot table that shows the most profitable brand in each year, as measured by gross profit.

Requirement 4 reads “Create a pivot table that shows the most profitable brand in each year, as measured by gross profit.”

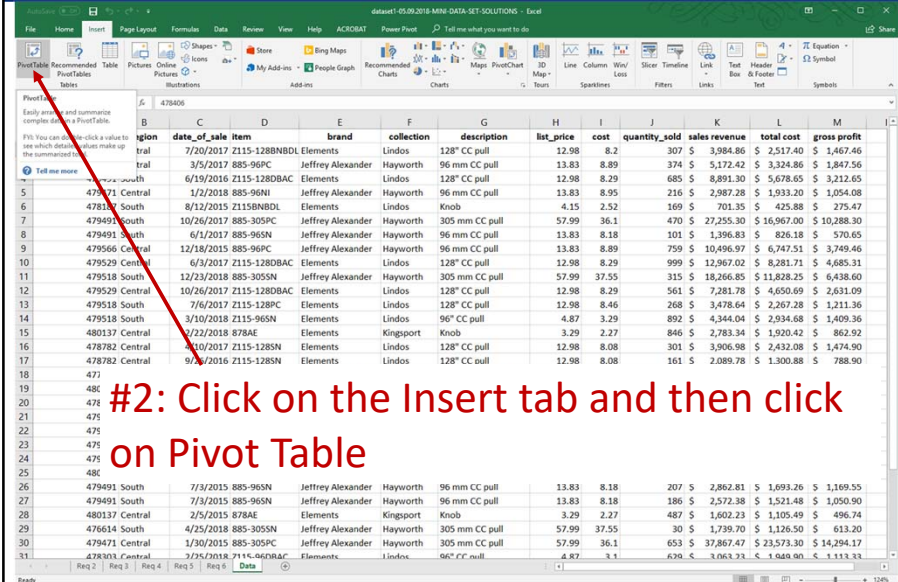
## Req 4: Most profitable by gross profit

#1: Click anywhere in the data in the Data worksheet

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	\$ 1,396.83	\$ 826.18	\$ 570.65
479560	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	34.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
684.99												2,889.48
												2,145.12
												2,815.96
												511.02
												1,169.55
												1,050.90
												496.74
												613.20

The first step is to click anywhere in the data in the Data worksheet.

## Req 4: Most profitable by gross profit



#2: Click on the Insert tab and then click on Pivot Table

Region	date_of_sale	Item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	total cost	gross profit	
Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	3,984.86	2,517.40	1,467.46	
Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	5,172.42	3,324.86	1,847.56	
Central	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	8,891.30	5,678.65	3,212.65	
Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	2,987.28	1,933.20	1,054.08	
South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	701.35	425.88	275.47	
South	10/26/2017	885-30SPC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	27,255.30	16,967.00	10,288.30	
South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	1,396.83	826.18	570.65	
Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	10,496.97	6,747.51	3,749.46	
Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	12,967.02	8,281.71	4,685.31	
South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	18,266.85	11,828.25	6,438.60	
Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	7,281.78	4,650.69	2,631.09	
South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	3,478.64	2,267.28	1,211.36	
South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	4,344.04	2,934.68	1,409.36	
Central	7/2/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	2,783.34	1,920.42	862.92	
Central	1/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	3,906.98	2,432.08	1,474.90	
Central	9/7/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	2,089.78	1,300.88	788.90	
477												
48C												
478												
475												
475												
475												
475												
48C												
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207	2,862.81	1,693.26	1,169.55
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186	2,572.38	1,521.48	1,050.90
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487	1,602.23	1,105.49	496.74
476414	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30	1,739.70	1,126.50	613.20
479471	Central	1/30/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	653	37,867.47	23,753.30	14,294.17
478303	Central	7/5/2018	Z115-96BNBDL	Elements	Lindos	96" CC pull	4.87	3.1	630	3,063.33	1,948.90	1,114.43

Click on the Insert tab and then click on Pivot Table.

# Req 4: Most profitable by gross profit

The screenshot shows an Excel spreadsheet with a PivotTable creation dialog box open. The dialog box is titled 'Create PivotTable' and has the following settings:

- Choose the data that you want to analyze:  Enter a table or range (John Range: \$A\$1:\$M\$32)
- Use an external data source
- Choose the PivotTable report to be placed:  New Worksheet
- Existing Worksheet (Location: )
- Choose whether you want to analyze multiple tables:  Add this data to the Data Model

The data table in the background has the following columns:

customer number	region	date_of_sale	item	brand	collection	di	sales revenue	cost	gross profit			
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46			
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56			
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC	\$ 8,891.30	\$ 5,678.05	\$ 3,212.05			
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08			
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	\$ 701.35	\$ 425.88	\$ 275.47			
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30			
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm	\$ 1,396.83	\$ 826.18	\$ 570.65			
479560	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46			
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31			
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	24.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207	\$ 2,862.81	\$ 1,693.26	\$ 1,169.55
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186	\$ 2,572.38	\$ 1,521.48	\$ 1,050.90
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487	\$ 1,602.23	\$ 1,105.49	\$ 496.74
478614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30	\$ 1,739.70	\$ 1,126.50	\$ 613.20

Below the data table, a red text overlay reads: **#3: Accept the defaults and click on OK**

Accept the defaults and click on OK.

## Req 4: Most profitable by gross profit

#4: Right-click the worksheet name to rename it as "Req 4"

Before we go any further, right-click the worksheet name tab and rename it "Req 4." That will help to keep track of the pivot tables.

## Req 4: Most profitable by gross profit

**#5: Drag “Years” in the PivotTable Fields panel down to the Columns box. Drag “brand” and “collection” down to the Rows box. Drag “gross profit” down to the Values box.**

Sum of gross profit	Column Labels	2015	2016	2017	2018	Grand Total
Row Labels						
Elements	\$	2,184.67	\$ 10,393.31	\$ 12,666.13	\$ 7,203.39	\$ 32,447.50
Jeffrey Alexander	\$	23,153.56	\$ 9,328.42	\$ 12,706.51	\$ 28,769.94	\$ 73,958.43

In the next step, drag “Years” in the PivotTable Fields panel down to the Columns box. Drag “brand” and “collection” down to the Rows box. Drag “gross profit” down to the Values box.

## Req 4: Most profitable by gross profit

Sum of gross profit	Column Labels				
Row Labels	2015	2016	2017	2018	Grand Total
Elements	2184.67	10393.31	12666.13	7203.39	32447.5
Jeffrey Alexander	23153.56	9328.42	12706.51	28769.94	73958.43
Grand Total	25338.23	19721.73	25372.64	35973.33	106405.93

#6: Select the pivot table data, right-click, click Value Field Settings, Number Format, and format as Accounting with 2 decimal places

Next, select the pivot table data, right-click, click Value Field Settings, Number Format, and format as Accounting with 2 decimal places.

## Req 4: Most profitable by gross profit

The pivot table is now done – it shows the most profitable brand each year.

Sum of gross profit	Column Labels	2015	2016	2017	2018	Grand Total
Row Labels						
Elements	\$	2,184.67	\$10,393.31	\$12,666.13	\$ 7,203.39	\$ 32,447.50
Kingsport	\$	496.74	\$ 624.24	\$ 511.02	\$ 862.92	\$ 2,494.92
Lindos	\$	1,687.93	\$ 9,769.07	\$ 12,155.11	\$ 6,340.47	\$ 29,952.58
Jeffrey Alexander	\$	23,153.56	\$ 9,328.42	\$12,706.51	\$28,769.94	\$ 73,958.43
Hayworth	\$	23,153.56	\$ 9,328.42	\$ 12,706.51	\$ 28,769.94	\$ 73,958.43
Grand Total	\$	25,338.23	\$19,721.73	\$25,372.64	\$35,973.33	\$106,405.93

The pivot table is now done – it shows the most profitable brand each year.



## Requirement 5

---

Create a pivot table to answer the question “Within each brand, what was the most profitable brand in each year, as measured by gross profit?”

Requirement 5 reads ““Within each brand, what was the most profitable collection in 2018, as measured by the gross profit percentage? The least most profitable collection for each brand?” Use the field “years” to filter the data to include just the year of 2018. You will need to add a calculated field to the pivot table to calculate the gross profit percentage. Within each brand, sort the collections by gross profit percentage, from the largest to the smallest. Interpret your findings.”

## Req 5: Most profitable brand by gross profit

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales_revenue	cost	gross_profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	\$ 1,396.83	\$ 826.18	\$ 570.65
479560	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	34.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
479529	Central	11/30/2017	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	387	\$ 1,884.69	\$ 1,199.70	\$ 684.99
479471	Central	11/1/2015	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	132	\$ 7,654.68	\$ 4,765.20	\$ 2,889.48

The first step is to click anywhere in the data in the Data worksheet.

## Req 5: Most profitable brand by gross profit

customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	\$ 1,396.83	\$ 826.18	\$ 570.65
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	24.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
480137	Central	3/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	207	\$ 2,862.81	\$ 1,693.26	\$ 1,169.55
479491	South	7/3/2015	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	186	\$ 2,572.38	\$ 1,521.48	\$ 1,050.90
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	487	\$ 1,602.23	\$ 1,105.49	\$ 496.74
475614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	30	\$ 1,739.70	\$ 1,126.50	\$ 613.20

Next, click on Insert and then Pivot Table.

## Req 5: Most profitable brand by gross profit

The screenshot shows an Excel spreadsheet with a data table and a 'Create PivotTable' dialog box. The data table has the following columns: customer number, region, date of sale, item, brand, collection, and dimensions. The pivot table summary table is visible on the right side of the spreadsheet.

customer number	region	date of sale	item	brand	collection	dimensions	sales revenue	cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC	\$ 8,891.30	\$ 5,678.05	\$ 3,212.05
479471	Central	1/2/2018	885-96NI	Jeffrey Alexander	Hayworth	96 mm	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm	\$ 22,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm	\$ 1,396.83	\$ 826.18	\$ 570.65
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/3/2017	Z115-128DBAC	Elements	Lindos	128" CC	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
479518	South	12/23/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	\$ 57.99	\$ 37.55	\$ 315
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	\$ 12.98	\$ 8.29	\$ 561
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	\$ 12.98	\$ 8.46	\$ 268
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	\$ 4.87	\$ 3.29	\$ 892
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	\$ 3.29	\$ 2.27	\$ 846

The 'Create PivotTable' dialog box is open, showing the 'data\_range' as '\$A\$1:\$M\$32'. The 'OK' button is highlighted.

#3: Accept the defaults for the pivot table and click OK

Next, accept the defaults for the pivot table and click OK.

## Req 5: Most profitable brand by gross profit

The screenshot shows the Microsoft Excel interface. At the top, a dark blue banner contains the text "Req 5: Most profitable brand by gross profit". Below this, the Excel ribbon is visible, with the "PivotTable Tools" context menu open. The "PivotTable Fields" task pane is on the right side, showing a list of fields to add to the report, including "customer\_number", "region", "date\_of\_sale", "item", "brand", "collection", "description", "list\_price", "cost", "quantity\_sold", "sales\_revenue", "total\_cost", "gross\_profit", and "Quartiles". The "Filters" and "Columns" sections are empty. The "Rows" and "Values" sections are also empty. In the bottom-left corner, the worksheet tab "Req 1" is highlighted with a red box, and a red arrow points from a red text box to it. The text box contains the instruction: "#4: Right-click the worksheet name to rename it as 'Req 5'".

Before we go any further, right-click the worksheet name tab and rename it "Req 5." Numbering the worksheets helps to keep track of the pivot tables.

## Req 5: Most profitable brand by gross profit

#5: Drag “Years” in the PivotTable Fields panel down to the Filters box. Drag “brand” and “collection” down to the Rows box. Finally, drag gross profit down to the Values box.

Brand	Collection	Gross Profit
Elements		3242.5
Kingsport		2494.32
Lindos		20952.58
Jeffrey Alexander		73958.43
Hayworth		73958.43

Next, drag “Years” in the PivotTable Fields panel down to the Filters box. Drag “brand” and “collection” down to the Rows box. Finally, drag gross profit down to the Values box.

## Req 5: Most profitable brand by gross profit

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable is set to show 'Sum of gross profit' by 'Elements' for the year 2018. The PivotTable Fields task pane is open on the right, and the 'Fields, Items, & Sets' group is selected. A context menu is open over the 'Fields, Items, & Sets' group, with 'Insert Calculated Field' highlighted.

Elements	Sum of gross profit
Kingssport	2494.92
Lindos	20953.58
Jeffrey Alexander	73958.43
Hayworth	73958.43
Grand Total	106405.99

**#6: In the Analyze ribbon, click on Fields, Items, & Sets to add a Calculated Field**

Next, in the Analyze ribbon, click on Fields, Items, & Sets to add a Calculated Field.

## Req 5: Most profitable brand by gross profit

Insert Calculated Field

Name:

Formula:

Fields:

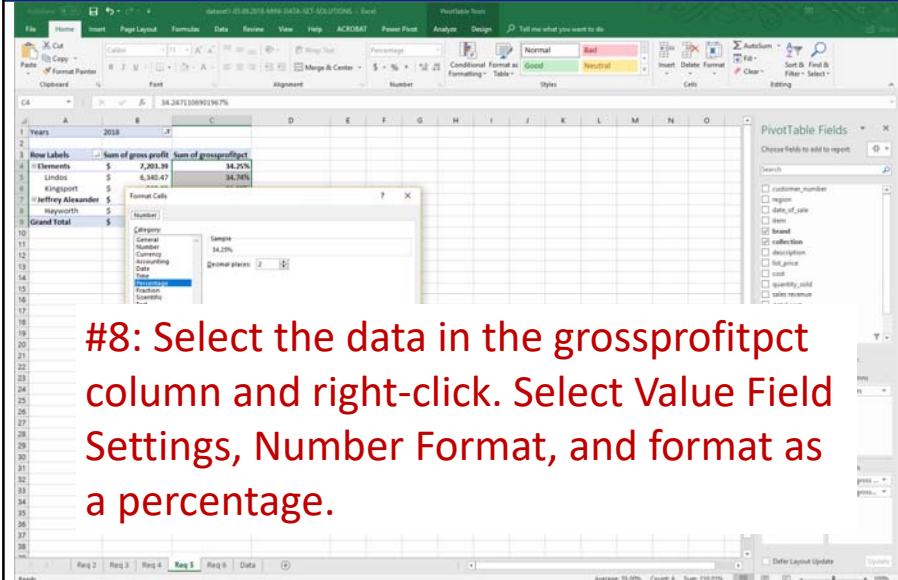
- cost
- quantity sold
- sales revenue
- total cost
- gross profit
- Quarters
- Years
- grossprofitper

#7: Insert Calculated field using the name of "grossprofitpct" and the formula of = 'gross profit' / 'sales revenue'

For the next step, insert Calculated field using the name of "grossprofitpct" and the formula of = 'gross profit' / 'sales revenue'. Point to the fields and click insert rather than typing them in.



## Req 5: Most profitable brand by gross profit



**#8: Select the data in the grossprofitct column and right-click. Select Value Field Settings, Number Format, and format as a percentage.**

Next, select the data in the grossprofitct column and right-click. Select Value Field Settings, Number Format, and format as a percentage.

## Req 5: Most profitable brand by gross profit

#9: In the Years filter box, select 2018 as the year to display only 2018 data

Year	Sum of grossprofitpct
2016	35.24%
2017	31.00%
2018	35.65%
2019	37.69%
2018	36.91%

In the next step, in the Years filter box, select 2018 as the year to display only 2018 data.

## Req 5: Most profitable brand by gross profit

The screenshot shows an Excel PivotTable with the following data:

Years	2018	2017	
How Labels	Sum of gross profit	Sum of gross profit	
Elements	\$ 2,263.39	34.7	Copy
Lindos	\$ 6,340.47	33.6	Format Cells...
Kingsport	\$ 862.92	36.8	Number Form...
Jeffrey Alexander	\$ 26,769.94	36.8	Options
Hayworth	\$ 28,761.94	36.8	Sort
Grand Total	\$ 35,973.33	36.3	Sort Largest to Smallest

The context menu is open over the 'Sort' option, with 'Sort Largest to Smallest' selected. The PivotTable Fields task pane on the right shows 'brand' and 'collection' in the Columns area, and 'Sum of gross profit' in the Values area.

#10: Sort the pivot table by collections, from largest to smallest

Click on a cell in the pivot table at the collection level. Here we will click on Cell C5. Next, right-click and select Sort, and then Sort Largest to Smallest.

## Req 5: Most profitable brand by gross profit

Pivot table is finished

Years	2018		
Row Labels	Sum of gross profit	Sum of grossprofitct	
Elements	\$ 7,263.39	34.25%	
Lindor	\$ 6,365.47	34.76%	
Kingsport	\$ 962.52	33.00%	
Jeffrey Alexander	\$ 26,766.94	36.80%	
Heyworth	\$ 28,789.54	36.00%	
Grand Total	\$ 35,973.33	36.30%	

The pivot table is finished. We can see the most profitable and least profitable brands as measured by gross profit dollars.

## Requirement 6

---

Create a pivot table to answer the question “Which region was the most profitable in 2018, as measured by the gross profit percentage?”

Requirement 6 reads “Create a pivot table to answer the question “Which region was the most profitable in 2018, as measured by the gross profit percentage?” Use a filter to include only sales from 2018 in this pivot table. Again, you will need to add a calculated field to the pivot table to calculate the gross profit percentage. Sort the regions by gross profit percentage, from largest to smallest.”

## Req 6: 2018 most profitable by gross profit %

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	customer_number	region	date_of_sale	item	brand	collection	description	list_price	cost	quantity_sold	sales revenue	total cost	gross profit
2	478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC pull	12.98	8.2	307	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
3	480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	374	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
4	479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	685	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
5	479471	Central	1/2/2018	885-96ANI	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.95	216	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
6	478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	4.15	2.52	169	\$ 701.35	\$ 425.88	\$ 275.47
7	479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	470	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
8	479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.18	101	\$ 1,396.83	\$ 826.18	\$ 570.65
9	479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm CC pull	13.83	8.89	759	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
10	479529	Central	6/1/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	999	\$ 12,967.02	\$ 8,281.71	\$ 4,685.31
11	479518	South	12/21/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	315	\$ 18,266.85	\$ 11,828.25	\$ 6,438.60
12	479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	561	\$ 7,281.78	\$ 4,650.69	\$ 2,631.09
13	479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	268	\$ 3,478.64	\$ 2,267.28	\$ 1,211.36
14	479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	892	\$ 4,344.04	\$ 2,934.68	\$ 1,409.36
15	480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	846	\$ 2,783.34	\$ 1,920.42	\$ 862.92
16	478782	Central	4/10/2017	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	301	\$ 3,906.98	\$ 2,432.08	\$ 1,474.90
17	478782	Central	9/26/2016	Z115-128SN	Elements	Lindos	128" CC pull	12.98	8.08	161	\$ 2,089.78	\$ 1,300.88	\$ 788.90
18	477402	South	3/11/2016	885-224SN	Jeffrey Alexander	Hayworth	224 mm CC pull	24.4	14.22	698	\$ 17,031.20	\$ 9,925.56	\$ 7,105.64
19	480137	Central	2/1/2016	878AE	Elements	Kingsport	Knob	3.29	2.27	612	\$ 2,013.48	\$ 1,389.24	\$ 624.24
20	478406	Central	1/18/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	566	\$ 2,756.42	\$ 1,754.60	\$ 1,001.82
21	479529	Central	11/30/2017	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	387	\$ 1,884.69	\$ 1,199.70	\$ 684.99
22													1.48
23													1.12
24													1.96
25													1.02
26													1.55
27													1.90
28													1.74
29													1.20
30													1.17
31	478303	Central	2/7/2018	Z115-96DBAC	Elements	Lindos	96" CC pull	4.87	3.1	630	\$ 3,063.33	\$ 1,948.00	\$ 1,115.33

#1: Click anywhere in the data in the Data worksheet

The first step is to click anywhere in the data in the Data worksheet.

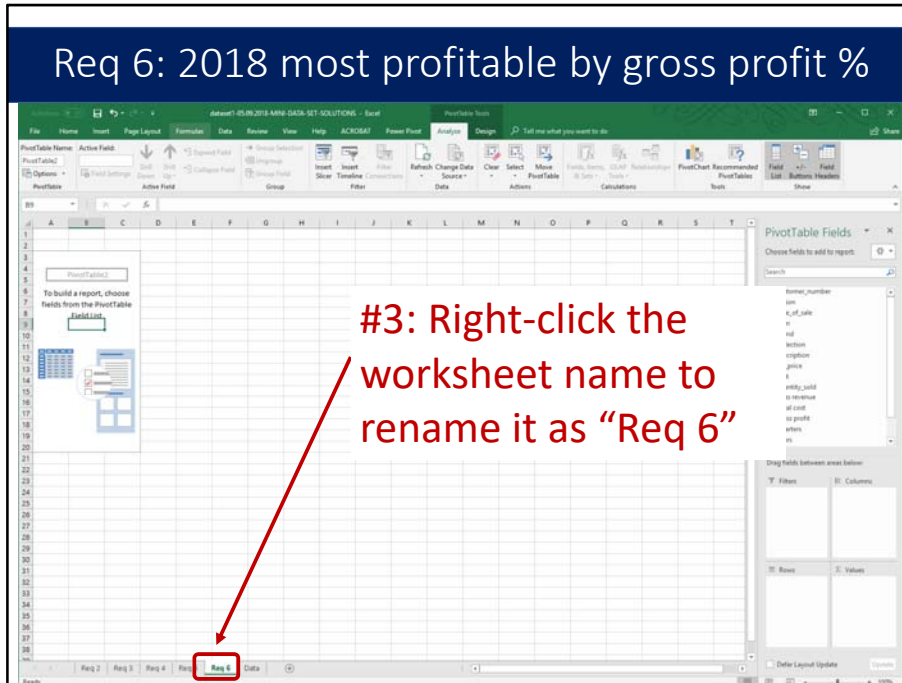
## Req 6: 2018 most profitable by gross profit %

**#2: On the Insert ribbon, click on Pivot Table and accept the defaults to insert a new pivot table in the workbook**

customer_number	region	date_of_sale	Item	brand	collection	di	sales revenue	total cost	gross profit
478406	Central	7/20/2017	Z115-128BNBDL	Elements	Lindos	128" CC	\$ 3,984.86	\$ 2,517.40	\$ 1,467.46
480402	Central	3/5/2017	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 5,172.42	\$ 3,324.86	\$ 1,847.56
479491	South	6/19/2016	Z115-128DBAC	Elements	Lindos	128" CC	\$ 8,891.30	\$ 5,678.65	\$ 3,212.65
479471	Central	1/2/2018	885-96ANI	Jeffrey Alexander	Hayworth	96 mm	\$ 2,987.28	\$ 1,933.20	\$ 1,054.08
478187	South	8/12/2015	Z115BNBDL	Elements	Lindos	Knob	\$ 701.35	\$ 425.88	\$ 275.47
479491	South	10/26/2017	885-305PC	Jeffrey Alexander	Hayworth	305 mm	\$ 27,255.30	\$ 16,967.00	\$ 10,288.30
479491	South	6/1/2017	885-96SN	Jeffrey Alexander	Hayworth	96 mm	\$ 1,396.83	\$ 826.18	\$ 570.65
479566	Central	12/18/2015	885-96PC	Jeffrey Alexander	Hayworth	96 mm	\$ 10,496.97	\$ 6,747.51	\$ 3,749.46
479529	Central	6/1/2017	Z115-128DBAC	Elements	Lindos	128" CC	\$ 12,967.02	\$ 8,781.71	\$ 4,185.31
479518	South	12/21/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	20.44
479529	Central	10/26/2017	Z115-128DBAC	Elements	Lindos	128" CC pull	12.98	8.29	4.69
479518	South	7/6/2017	Z115-128PC	Elements	Lindos	128" CC pull	12.98	8.46	4.52
479518	South	3/10/2018	Z115-96SN	Elements	Lindos	96" CC pull	4.87	3.29	1.58
480137	Central	2/22/2018	878AE	Elements	Kingsport	Knob	3.29	2.27	1.02
480137	Central	2/5/2015	878AE	Elements	Kingsport	Knob	3.29	2.27	1.02
476614	South	4/25/2018	885-305SN	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	37.55	20.44
479471	Central	1/30/2018	885-305PC	Jeffrey Alexander	Hayworth	305 mm CC pull	57.99	36.1	21.89
478303	Central	7/15/2018	Z115-86DBAC	Elements	Lindos	96" CC pull	4.87	3.1	1.77

On the Insert ribbon, click on Pivot Table and accept the defaults to insert a new pivot table in the workbook.

## Req 6: 2018 most profitable by gross profit %



#3: Right-click the worksheet name to rename it as “Req 6”

Before we go any further, right-click the worksheet name tab and rename it “Req 6.” That will help to keep track of the pivot tables.



## Req 6: 2018 most profitable by gross profit %

**#4: Drag “Years” in the PivotTable Fields panel down to the Filters box. Drag “region” down to the Rows box. Finally, drag “gross profit” and “grossprofitpct” down to the Values box**

Row Labels	sum of gross profit	sum of grossprofitpct
Central	71961.1	0.37
South	34226.83	0.38
Grand Total	106187.93	0.37

Next, drag “Years” in the PivotTable Fields panel down to the Filters box. Drag “region” down to the Rows box. Finally, drag “gross profit” and “grossprofitpct” down to the Values box.

## Req 6: 2018 most profitable by gross profit %

The screenshot shows an Excel PivotTable with the following data:

Years	Sum of gross profit
Central	27512.17
South	3481.16
<b>Grand Total</b>	<b>30993.33</b>

The context menu for the 'Sum of gross profit' column includes options like Copy, Paste, Format Cells, Number Format, Sort, and Value Field Settings. The PivotTable Fields task pane on the right shows 'Sum of gross profit' in the Values area.

**#5: Select the data in the Sum of grossprofitpct column, right-click, and select Value Field Settings**

Select the data in the Sum of grossprofitpct column, right-click, and select Value Field Settings.

## Req 6: 2018 most profitable by gross profit %

The screenshot displays an Excel PivotTable with the following data:

Years	2018	
Row Labels	Sum of gross profit	Sum of grossprofitact
Central	27512.17	36.81%
South	34851.88	34.70%
Grand Total	35974.93	36.30%

The Value Field Settings dialog box is open, showing the following options:

- Source Name: grossprofitact
- Custom Name: Sum of grossprofitact
- Summarize values by: Sum of Values As
- Summarize values field by: **Number** (selected)

The 'Number Format' option in the 'Summarize values field by' list is highlighted with a red box.

**#6: Select the Number Format box**

Next, in the Value Field Settings, select the Number Format box.

## Req 6: 2018 most profitable by gross profit %

The screenshot shows an Excel PivotTable with the following data:

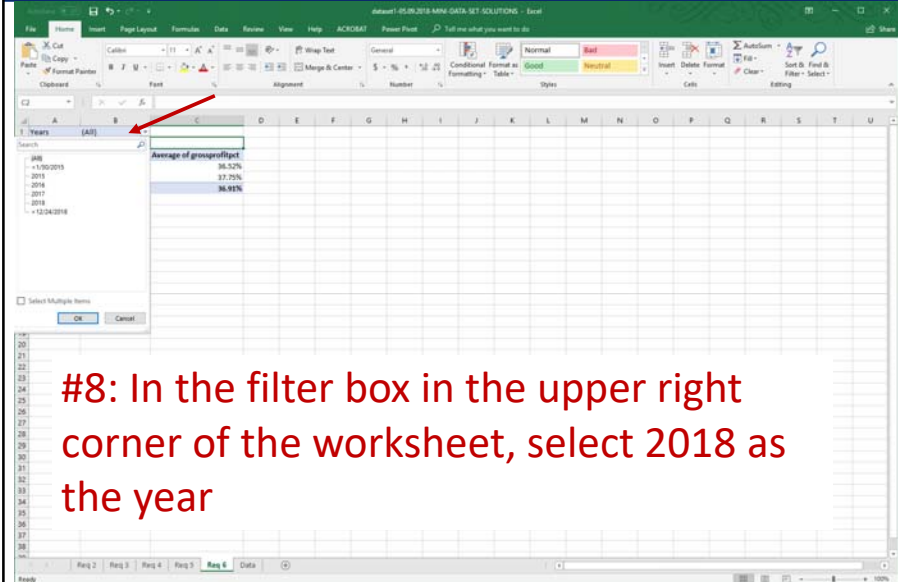
Years	2018
Central	27512.37
South	1881.16
Grand Total	358

The 'Format Cells' dialog box is open, showing the 'Number' tab. The 'Category' is set to 'Percentage' and 'Decimal places' is set to 2. The dialog also includes a note: 'Percentage formats multiply the cell value by 100 and display the result with a percent symbol.'

**#7: Format the data as percentage with 2 decimal places and click OK**

Format the data as percentage with 2 decimal places and click OK.

## Req 6: 2018 most profitable by gross profit %



The screenshot shows an Excel spreadsheet with a filter box open for the 'Years' column. The filter box is located in the upper right corner of the worksheet. The filter box contains a search bar and a list of years: 2015, 2016, 2017, 2018, and 2019. The year 2018 is selected. The spreadsheet shows a table with columns for years and a calculated column for 'Average of grossprofitpct.'.

Years	Average of grossprofitpct.
2015	36.52%
2016	37.25%
2017	36.91%
2018	
2019	

**#8: In the filter box in the upper right corner of the worksheet, select 2018 as the year**

In the filter box in the upper right corner of the worksheet, select 2018 as the year.

## Req 6: 2018 most profitable by gross profit %

**#9: Sort from largest to smallest even though here it is already in that order**

Region	sum of gross profit
Central	27512.17
South	1865.16
Grand Total	30977.33

Sort the data from largest to smallest even though here in this small data set, it is already in that order. In the large data set, sorting from largest to smallest will make a difference.

## Req 6: 2018 most profitable by gross profit %

That's it – we can see the most profitable region in 2018 as measured by gross profit percentage.

Row Labels	sum of gross profit	sum of grossprofit
Central	27512.17	38.81%
South	8865.18	38.25%
Grand Total	35977.33	36.50%

That's it – we can see the most profitable region in 2018 as measured by gross profit percentage.



*Prepared by:*  
Wendy M. Tietz, PhD, CPA, CMA, CSCA

Copyright © 2018 Wendy M. Tietz, LLC

That concludes this data analytics tutorial covering sales, cost, and gross profit analysis using pivot tables and charts in Excel. Thanks for watching!