# Office 2016– Excel Basics 20

Video/Class Project #32

#### Excel Basics 20: PivotTable Power: 14 Amazing PivotTable Reporting Tricks from Slicers to Show Values As!

**Goal in video # 20**: Learn about how to create summary reports that contain Calculations with Conditions or Criteria with PivotTables.

#### Topics Covered in Video:

We have already seen four Videos in this class that show how to create summary reports that contain Calculations with Conditions or Criteria with PivotTables:

1) Excel Basics 4: PivotTables & SUMIFS Function to Create Summary Reports (Intro Excel #4)

	A	В	С	D	Е	F	G	Н	Ι
1	Date	Region	SalesRep	Sales		Goal: Creating a Sa	les Report where	we added sales with	one condition,
2	10/20/17	West	Gigi	\$620		and if we cha	nge a number we v	vant it to update ins	tantly
3	10/20/17	Northwest	Gigi	\$484		Region	Total Sales		
4	10/20/17	West	Freddy	\$376		Northwest	\$1,486	=SUMIFS(\$D\$15:\$D	\$37,\$B\$15:\$B\$37,F4)
5	10/20/17	Northwest	Freddy	\$1,141		Southwest	\$1,423	SUMIFS adds with o	one condition
6	10/20/17	Northwest	Chin	\$725		West	\$2,705		
22	10/25/17	Northwest	June	\$546					
23	10/25/17	Northwest	Chin	\$162		PivotTables are us	ually easier to crea	te than SUMIFS,	
24						but require a	"Refresh" when so	urce data changes	
25									
26						Region 🕞	Sum of Sales		
27						Northwest	\$4,791		
28						Southwest	\$3,117		
29						West	\$6,215		
30						Grand Total	\$14,123		

#### 2) Excel Basics 5: Power of PivotTables to Create Reports with Various Calculations & Layouts

A	A	В	C	D	E	F	G	н
1	<b>PivotTables</b>	make it eas	y to make	Calculation	s (Count, S	Sum, Average	) with Conditions or	r Criteria
2								
3	Date	Region	SalesRep	Sales				
4	10/20/17	West	Gigi	\$620				
5	10/20/17	Northwest	Gigi	\$484	2	Region 🔽	Count of Region	
6	10/20/17	West	Freddy	\$376	-	Northwest	10	
7	10/20/17	Northwest	Freddy	\$1,141	5	Southwest	4	
8	10/20/17	Northwest	Chin	\$725		West	8	
9	10/20/17	West	Chin	\$222		Grand Total	22	
10	10/20/17	West	June	\$1,038				
11	10/21/17	Northwest	Chin	\$154				
12	10/21/17	Northwest	Gigi	\$205		Region 🕞	Sum of Sales	
13	10/21/17	Southwest	Gigi	\$895	2	Northwest	\$4,791.00	
14	10/21/17	West	Chin	\$1,254		Southwest	\$3,117.00	
15	10/22/17	Northwest	June	\$596	0	West	\$6,215.00	
16	10/24/17	Southwest	Gigi	\$799		Grand Total	\$14,123.00	
17	10/24/17	Northwest	Gigi	\$651	-			
18	10/24/17	West	June	\$1,235				
19	10/24/17	Southwest	Chin	\$684		Region 🕞	Average of Sales	
20	10/24/17	Northwest	June	\$127		Northwest	\$479.10	
21	10/24/17	West	June	\$269	2	Southwest	\$779.25	
22	10/25/17	Southwest	Chin	\$739		West	\$776.88	
23	10/25/17	West	Gigi	\$1,201		Grand Total	\$641.95	
24	10/25/17	Marthuract	luna	CEAC				

1	J	К	L	М	N C	D P	Q	R	S	Т	U
1	<b>PivotTables</b>	s make it easy	to make (	Calculation	s with multiple O	Conditions of	or Criteria				
2											
3	Date	Product	Sales Rep	Region	Sales						
4	6/13/2017	Quad	Fran	South	200.27	Salas	Don			ý= 💌	
5	2/22/2017	Yanaki	Kiki	Northwest	243.99	Jales	vep			≫- <b>×</b>	
6	8/4/2017	Quad	Fran	East	1817.8	Abdi	Fran	Gigi	Kiki	Tyrone	
7	10/13/2017	Yanaki	Fran	West	204.3						
8	11/18/2018	Majestic Beaut	Kiki	West	2063.08						
9	4/2/2018	Carlota	Tyrone	South	124.17	Sum of Sales	Region 🚽				
10	11/7/2018	Carlota	Abdi	South	139.4	Product	🖵 East	Northwest	South	West	Grand Total
11	7/12/2018	Quad	Tyrone	Northwest	480.05	Aspen	\$33,404.51	\$39,479.20	\$25,128.43	\$29,877.79	\$127,889.93
12	4/22/2017	Yanaki	Abdi	Northwest	666.63	Bellen	\$34,629.60	\$43,380.04	\$39,010.50	\$29,637.82	\$146,657.96
13	9/12/2018	Quad	Kiki	Northwest	211.36	Carlota	\$30,464.35	\$27,408.97	\$34,614.34	\$39,155.36	\$131,643.02
14	1/27/2017	Bellen	Gigi	West	318.02	Majestic Bea	ut \$31,631.01	\$31,437.13	\$23,706.93	\$28,812.67	\$115,587.74
15	5/28/2017	Quad	Tyrone	East	423.77	Quad	\$73,194.26	\$83,115.58	\$57,665.78	\$71,895.24	\$285,870.86
16	8/15/2017	Carlota	Abdi	Northwest	397.18	Yanaki	\$67,517.79	\$64,252.30	\$76,561.83	\$81,287.83	\$289,619.75
17	6/17/2018	Yanaki	Abdi	West	107.23	Grand Total	\$270,841.52	\$289,073.22	\$256,687.81	\$280,666.71	\$1,097,269.26
18	8/4/2017	Majestic Beaut	Tyrone	Northwest	98.43						
19	1/15/2017	Yanaki	Abdi	Northwest	181.63	**PivotTable	is adding with Th	ree Condition	5.		
20	4/20/2018	Quad	Gigi	East	212.13	The Red	cell with the valu	e \$83,115.58	is adding Sales	for the Produ	ct "Quad"
21	8/4/2018	Majestic Beaut	Kiki	South	449.11	AN	D the Region "No	thwest" AND t	the Sales Rep '	'Gigi".	
22	9/27/2017	Yanaki	Kiki	Northwest	482.08						

### 3) Excel Basics 13: IF Function Made Easy! IS Functions Too! 14 Epic Examples!!

1	А	В	C	D	E	F	G	Н	Ι	J	К	L	М	
1	Sometime	s we use IF Fu	nction or VLC	OKUP to c	reate a	Category	for our Data	Set, and ther	ı we	make	a PivotTabl	e Repoi	t	
2														
3						Date	Product	County Code	Units	Sales	Sales Category		Hurdle	Catego
4	Sum of Sales	Sales Category 💌				12/16/2018	Frido Fast Catch	USA	36	263.5	Large	9	250	Large
5	County Code	🗸 Large	Small	Grand Total		1/18/2018	Aspen	ESP	2	32.78	=IF(J5>\$M\$4,\$I	\$4 <b>,</b> \$0\$4)		
6	MAR	\$866.91	\$1,881.74	\$2,748.65		2/13/2018	Fun Fly	POL	2	37.82	S IF(logical_test, [valu	e_if_true], [value	_if_false])	
7	ARE	\$1,401.96	\$1,908.23	\$3,310.19		11/20/2018	Sunshine	ARE	2	38.4	Small			
8	ARG	\$4,929.96	\$4,322.55	\$9,252.51		11/18/2018	Fun Fly	CZE	2	32.5	Small			
9	ARM	\$2,799.99	\$1,720.21	\$4,520.20		12/18/2018	Fun Fly	USA	1	10.59	Small			
10	AUS	\$11,554.36	\$7,770.60	\$19,324.96		4/16/2018	Majestic Beaut	UKR	4	55	Small			
11	AUT	\$4,947.12	\$4,021.89	\$8,969.01		5/12/2018	Darnell Tri Fly	USA	3	38.34	Small			

# 4) Excel Basics 15: Excel Table Feature & Dynamic Ranges for VLOOKUP, PivotTables, & more!

	A	В	C	D	E	F	G	Н	I
1	Sometime	s we use	e the Excel Ta	ble Fea	ture as ou	r Data Source			
2	so our F	PivotTab	le can be cor	nected	to a dynai	mic Data Source	(requir	es "Refre	esh")
3									
4	Date 💌	Product	🖌 Units Sold		Product 🕞	Sum of Units Sold			
5	11/2/2017	Quad	181		Quad	741			
6	11/4/2017	Yanaki	155		Sunset	287			
7	11/5/2017	Yanaki	56		V Rang	593			
8	11/5/2017	Yanaki	127		Yanaki	1,083			
9	11/7/2017	V Rang	159		<b>Grand Total</b>	2,704			
10	11/7/2017	Quad	100						
11	11/3/2017	Sunset	151						
12	11/2/2017	Yanaki	163						
13	11/6/2017	Yanaki	84						
14	11/6/2017	Yanaki	191						

5) Data Analysis:

Define: Data Analysis / Business Intelligence:



6) What is requires before we can use a PivotTable? You must have a Proper Data Set:

-	A	В	С	D	E	F	G	Н	Ι	J	K	L	М	N	0	Р	Q	R
1	Date	Region	SalesRep	Sales			<b>#C</b>		<i>n 1 (</i> (=: 1	1.51	<i>u</i> ) · <i>c</i> ·							
2	10/20/17	West	Gigi	\$620		1	"Columr	Headers	s" / "Field	d Name	s") in firs	trow						
3	10/20/17	Northwest	Gigi	\$484														
4	10/20/17	West	Freddy	\$376					-									
5	10/20/17	Northwest	Freddy	\$1,141		Ree	cords in e	ach row										
6	10/20/17	Northwest	Chin	\$725		Red	ords in e	ach row										
7	10/20/17	West	Chin	\$222		Red	ords in e	ach row										
8	10/20/17	West	June	\$1,038	<u> </u>													
9	10/21/17	Northwest	Chin	\$154														
10	10/21/17	Northwest	Gigi	\$205				Define:										
11	10/21/17	Southwest	Gigi	\$895				Proper Da	ta Set									
12	10/21/17	West	Chin	\$1,254				1) "Colur	nn Headers	s" <mark>(also k</mark> r	iown as "Fie	eld Names'	') in first row	1				
13	10/22/17	Northwest	June	\$596				Field	Names tell	the user w	/hat data go	es into the	e column: Da	te? Sales?	And so on.	•••		
14	10/24/17	Southwest	Gigi	\$799				2) Each r	ow after ro	w with Fi	eld Names n	nust have	a transaction	n or record	(for our ex	cample it is o	one sale in	each row)
15	10/24/17	Northwest	Gigi	\$651				3) Must	have empty	cells or r	ow/column	headers a	ll around dat	a set.				
16	10/24/17	West	June	\$1,235														
17	10/24/17	Southwest	Chin	\$684														
18	10/24/17	Northwest	June	\$127														
19	10/24/17	West	June	\$269														
20	10/25/17	Southwest	Chin	\$739														
21	10/25/17	West	Gigi	\$1,201														
22	10/25/17	Northwest	June	\$546		emp	tv cells o	r row/co	lumn hea	ders								
23	10/25/17	Northwest	Chin	\$162			, all ar		a cot									
24							anar	ound dat	aser									
25																		
26																		

7) What PivotTables do:

i.

- Create Summary Reports that contain calculations with Conditions or Criteria.
- 8) Summary of how to create PivotTable:
  - i. Click in one cell in Proper Data Set
  - ii. Insert Ribbon Tab, Tables group, PivotTable button.
    - 1. Keyboard = Alt, N, V.
  - iii. From Field List, drag field name to Rows area or Columns area or Filter area. These are the conditions/criteria for the calculation in the Values area of the PivotTable.
    - 1. Fields in the Rows area add a condition/criterion to the row
    - 2. Fields in the Columns area add a condition/criterion to the column
    - 3. Fields in the Filter area add a condition/criterion to the entire PivotTable.
  - iv. From Field List drag the field you would like to make a calculation on to values area.
    - 1. Number fields default to a SUM calculation (add numbers)
    - 2. Text fields default to a COUNTA calculation (count non-empty cells)
  - v. With a cell selected in the PivotTable, click on PivotTable Tools Design Ribbon Tab, go to the Layout group, click drop-down for Report Layout and then click on "Show in Tabular Form" or "Show in Outline Form". These Layouts shows the Field Names in your Report.
  - vi. To add Number Formatting to the Values area of the PivotTable, click in one cell in the Values area of the PivotTable, Right-click the cell and click on "Number Format...", then in the Number Formatting dialog box select the Number Formatting that you would like and then click OK.
  - vii. Slicers can be added to the PivotTable to add a condition/criterion to the entire PivotTable, similar to a field in the Filter area. To insert a Slicer into a PivotTable, click in one cell in the PivotTable Report, then go to the PivotTable Tools Analyze Ribbon Tab, then in the Filter Group, click the Insert Slicer button
  - viii. If you want to change the summary calculation in the Values area, right-click the Values area in the PivotTable Report, point to one of these two options:
    - 1. "Summarize Values By" and then select an aggregate calculation such as "Average", or "Max", or "More Options".
    - 2. "Show Values As" and then select a calculation such as "% of Column Total", "Running Total", "Difference From" or other calculations.

#### 9) New PivotTable features seen in this video:

i. List of "Summarize Values By" Aggregate Calculations:

11 Functions ava	ilable in a Pi	votTable
What you see in Value Field Settings dialog		
box	Function	What it does
Average	AVERAGE	Calculates arithmetic mean
Count Numbers	COUNT	Counts numbers
Count	COUNTA	Counts non empty cells
Max	MAX	Finds largest value
Min	MIN	Finds smallest value
Product	PRODUCT	Multiplies
Stdev	STDEV	Standard Deviation for a sample
Stdevp	STDEVP	Standard Deviation for a population
Sum	SUM	Adds
Var	VAR	Variation for a sample
Varp	VARP	Variation for a population

- ii. PivotTable Styles:
  - 1. PivotTable Tools Design Ribbon Tab, Styles, More button, New PivotTable Style, then use dialog box to create your own style.
- iii. Name PivotTable:
  - 1. Right-click PivotTable, Select PivotTable Options
  - 2. PivotTable Tools Analyze Ribbon Tab, PivotTable group
- iv. Grouping Daily Dates into Years, Quarters, Months
  - 1. In Excel 2016, when you drag a Date Field into the Row area of a PivotTable, it is automatically grouping into:
    - i. Year
    - ii. Quarter
    - iii. Month
  - 2. If you WANT a unique list of Dates (like for a Daily Sales Report) you must:
    - i. Right-click the date field in the PivotTable
    - ii. Click on Ungroup.
- v. If your Field List goes away:
  - 1. It may be that your cursor is not inside the PivotTable, try clicking back inside the PivotTable
  - Right-click the PivotTable and point to "Show Field List"
- vi. If source data changes, you must Refresh the PivotTable
  - 1. Right-click PivotTable, Refresh
  - 2. Refresh PivotTable keyboard: Alt + F5
- vii. Inside the Pivot:
  - 1. Pivot: drag and drop fields in Field List to "Pivot" the report.
  - 2. Filter from dropdown arrows.
  - 3. Sort from dropdown arrows
- viii. Slicer:
  - 1. To Select Items not next to each other is a Slicer, use the Ctrl Key.
  - 2. To Clear the selected items in the Slicer, use the "Red X" Clear Button in the Upper Right area of the Slicer.
  - 3. Hide Buttons in Slicer when there is no data:
    - i. Right-click Slicer and point to "Slicer Settings", then check the box for: "Hide items with no data."
  - 4. Connect Multiple PivotTables to a Slicer:
    - i. Right-click Slicer and point to "Report Connections" and then check the boxes for the desired PivotTables.

#### ix. Using "Show Values As" to make calculations in a PivotTable.

Show Values As Calculation	What it does
% of Grand Total	Divides each value inside the PivotTable by The Grand Total, and
	adds Number Formatting.
% of Column Total	Divides each value in the Column by the Column Total, and adds
	Number Formatting.
% of Pow Total	Divides each value in the Row by the Row Total, and adds
	Number Formatting.
	Displays values as the difference from the value of the Base
Difference From	item in the Base field. Our Example takes current month and
Difference From	subracts the previous month to get the "Change" from month to
	month.
	Displays values as the difference from the value of the <b>Base</b>
% Difference From	item in the Base field. Our Example takes current month and
78 Difference from	subracts the previous month and calculates the "% Change" from
	month to month.
	Displays the value for successive items in the <b>Base field</b> as a
Running Total in	running total. Our Example adds each successive month to get
	the "Running" Total or "Cummulative" Total.

1.

10) Compare SUMIFS and similar Functions and PivotTables for making Calculations with Conditions or Criteria.

- Advantage of PivotTable:
  - 1. Quick and easy to make.
  - 2. Conditions or Criteria in Rows or Columns area are created automatically by dragging a field to Rows or Columns area. When you drag a field to the Rows or Columns area a unique list of items from the field is created.
- Disadvantage of PivotTable:
  - 1. If source data changes, you must right-click PivotTable and point to Refresh.
  - 2. Sometimes the Conditions or Criteria you want to use in your calculation is hard to create using a PivotTable. For example, if you use a comparative operator with your Conditions or Criteria, it may be hard to create the calculation using a PivotTable.
- Advantage of SUMIFS:
  - 1. If source data changes, formulas update instantly.
  - 2. If you have Conditions or Criteria that use Comparative Operators, it is often easier to use SUMIFS and other similar Functions than it is to use a PivotTable.
- Disadvantage of SUMIFS:
  - 1. Have to type out conditions/criteria for Rows or Columns area.
  - 1. When making Calculations with Conditions or Criteria, it often takes longer to create a formula solution than it does to create a PivotTable solution.

# Following are the 14 examples as seen in the video:

1) **Example 1:** Use VLOOKUP to add new Fields/Columns to our Proper Data Set. We can then use these new Fields in our PivotTable Reports.

A	В	C	D	E	F	G	н	I	J	ĸ			L	
Example 1	Use VLOOK	UP to Add Ney	w Fie	elds/Co	lumn t	to the Data Set:								
Date	Product	_County Code	Units	Rev	COGS	Country	ProductCategory			CountyCode	Countr	1		
12/16/201	7 Fun Fly	MEX	36	161.05	114.66	=VLOOKUP(C4,\$K\$4:\$L\$	129,2,0)			AFG	Afghan	istan		
8/12/201	7 Eagle	DZA	1	23.95	9.15	A VLOOKUP(lookup_value,	, table_array, col_index_nu	um, [r	ange	lookup])	Albania	1		
12/28/201	8 Carlota	FRA	3	65.85	26.97	France	Beginner			APR	Aprine			
12/28/201	8 Phoenix	USA	4	103.8	41.23	United States	Intermediate			ARE	United	Arab Emirates		
4/2/201	7 Yanaki	CAN	2	51.98	21.64	Canada	Intermediate			ARG	Argenti	na		
10/3/201	Manu LD	USA	4	1008	376.94	United States	Advanced			ARM	Armeni	a		
0 11/17/201	Aspen	JPN	2	47.9	20.67	Japan	Beginner			AUS	Austral	ia		
A	В	C	D	E	F	G	Н	М	N	0		P	Q	R
Example 1:	Use VLOOK	UP to Add Nev	w Fie	lds/Co	lumn t	o the Data Set:								
,														
Date	_Product	_County Code	Units	Rev	COGS	Country	ProductCategory			Product		Retail Price St	andard Cost	ProductCateg
12/16/201	Fun Fly	MEX	36	161.05	114.66	Mexico	=VLOOKUP(B4,\$O\$4	4:\$R\$	25,4	,0)		23.95	10.09	Beginner
8/12/201	/ Eagle	DZA	1	23.95	9.15	Algeria	I VLOOKUP(lookup_v	value,	table	_array, col_inde	ex_num, [ra	nge_lookup])	9.48	Beginner
12/28/2018	Carlota	FRA	3	65.85	26.97	France	Beginner			Bellen		26.99	10.75	Beginner
12/28/2018	Phoenix	USA	4	103.8	41.23	United States	Intermediate			Bower Aussi	e Round	45	18.45	Competition
4/2/201	7 Yanaki	CAN	2	51.98	21.64	Canada	Intermediate			Carlota		21.95	8.48	Beginner
10/3/2018	Manu LD	USA	4	1008	376.94	United States	Advanced			Carlota Doub	olers	71	30.25	Freestyle

- 2) **Example 2:** Create Country & Product Category Total Revenue Report including Number Formatting, Tabular Layout and a label to indicate the Unit, like: "Sum of Rev (\$)".
  - i. Create a new PivotTable in cell A7 on the sheet named "PT(1)" from the Proper Data Set on the sheet named "SalesData".

1	A	B	C	D	E	F
1 <b>Ex</b>	ample 1: Use VLO	OKUP to Add New Fields/C	olumn to the Data	Set:		
Exa	ample 2: Create C	ountry & Product Category	Total Revenue Rep	ort including Numbe	r Formatting,	
Ta	bular Layout and a	a label to indicate the Unit,	like: "Sum of Rev (\$	\$)"		
2	•					
5						
4 c				PivotTable Fie	elds	÷ )
5						
7 60	untry	- ProductCategory -	Sum of Pey (\$)	Choose fields to add to	report:	8
8 9	Algeria	Advanced	12 322 85	Search		
0	Algenia	Beginner	20 578 54			
10		Compatition	12 212 20	Date Date		-
1		Erosstula	7 202 00	County Code		
12		Intermediate	14 716 07	Units		
12		Nevelte	14,/10.9/	✓ Rev		
		Noverty	707.34			
	geria lotal	Alexand	/8,081.59	Country		
15 3	Argentina	Advanced	18,011.89	ProductCategory     Ouarters		
.6		Beginner	54,561.52	Vears		
1/		Competition	11,465.31	3		
18		Freestyle	10,265.75	Drag fields between are	eas below:	
19		Intermediate	38,493.26	T Filters	III Colum	une l
20	Re- Nilli L	Novelty	672.22	1 THEIS	and Colum	113
21 <b>Ar</b>	gentina Total		133,469.95			
22 🖃	Armenia	Advanced	3,336.00			
23		Beginner	26,318.47			
24		Competition	7,301.13	Rows	$\Sigma$ Values	
25		Freestyle	4,346.35	Country	▼ Sum of R	ev (\$) 🔹
26		Intermediate	15,369.15	ProductCategory	•	
77		100 Dec	120 50			

- 3) **Example 3:** Change SUM Function to Average Function.
  - i. Right-click in PivotTable
  - ii. Point to "Summarize Values By"
  - iii. Click on Average

4	A	В	C	D				
1	Example 1: Use VLO	DKUP to Add New Fields/	Column to the I	Data Set:				
2	Example 2: Create Co Tabular Layout and a	ountry & Product Category label to indicate the Unit,	y Average Reve like: "Sum of F	nue Report includii Rev (\$)"	ng N	lumber Form <mark>atting</mark> ,		
3	Example 3: Change S	UM Function to Average F	unction					
4				PivotTah	le	Fields		
5			Cali	bri - 11 - A A	\$ -	% , 🖽		
6	<b>~</b>		B	I = 🖄 • 🗛 • 🖽		.00 💉		
1	Country	<ul> <li>ProductCategory</li> </ul>	Sum of R	Search	240			
9 10 11 12 13	GAIgeria	Beginner Competition Freestyle Intermediate Novelty	12,3, 30,5 = 12,3 = 7,3; 14,7: © 7(	<u>C</u> opy Eormat Cells Number Forma <u>t</u> <u>R</u> efresh Sort	Þ			
14	Algeria Total		78,08	Move	2			
15 16 17	■ Argentina	Advanced Beginner Competition	18,0: × 54,5( 11,4(	Remove "Sum of Rev (\$) Summarize Values By Show Values As	- 	y ✓ <u>S</u> um		
18		Freestyle	10,2( +=	Show Details		Average		
19 20		Intermediate Novelty	38,4	Show/ <u>H</u> ide Fields	P.	Max		
21	Argentina Total		133,4(	Value Field Settings		Desiduat		
22 23	🗏 Armenia	Advanced Beginner	3,3: 26.3 <sup>.</sup>	PivotTable <u>Options</u> Hide Fiel <u>d</u> List		More Options		

4) **Example 4:** Change the PivotTable Style (If you want)

- i. Click in one cell in PivotTable
- ii. In the PivotTable Tools Design Ribbon Tab, click the Styles More button and select a Style.

			EB20	)-PivotTable	esFinishe	d.xlsm - Exc	el					PivotTable	Tools	
File	e Home Insert	Page Layout	Formulas	Data	Review	View	Developer	Add-ins	ACROB/	AT Powe	er Pivot	Analyze	Design	Q Tell me wh
		Row H	eaders 🗌 I	Banded Row	rs	Light								
Subto	tals Grand Report B Totals * Layout * R Layout	lank 🔽 Colum ows *	n Headers 🔲 I PivotTable Style (	Banded Colu Options	umns									
.00. ◆.0	\$8 ₽∂ • ∎ • ⊙ • 9	2 12 12 -												
C8	• ÷ >	$\checkmark f_x$	770.178125				=====	=====	=====	=====	====			
1	А		В	1	С									G
1	Example 1: Use VLC	OCKUP to Add	New Fields	/Column	to the									
	Example 2: Create	Country & Pro	duct Catego	ry Avera	ge Rev	EEEEE								
2	Tabular Layout and	a label to indi	cate the Uni	t, like: "S	Sum of									
3	Example 3: Change	SUM Function	to Average	Function	n									
4	Example 4: Change	the PivotTabl	e Style (If yo	u want)		Medium								
5												_	3	
6							33335		88888					
7	Country	💌 Produ	ictCategory	💌 Avera	ige of		=====			=====				
8	🖯 Algeria	Advar	nced											
9		Begin	ner			<u>====</u>	<u> = = = = =</u>	<u>====</u>	EEEE	<u>====</u>	====	=====		<u></u>
10		Comp	etition			00000		00000	00000	00000		inght Gre	en, Pivot	style iviedium 14
11		Frees	tyle			EEEEE	EEEEE	EEEEE	EEEEE	EEEEE	EEEE	EEEE		
12		Interr	nediate			acica		مقققة	ōāāāā	ōāāā				

	A	В	С	D	E		F
1	Example 1: Use VLO	OKUP to Add New Fields/C	olumn to the Data Set:				
2	Example 2: Create C Tabular Layout and a	Country & Product Category a label to indicate the Unit,	Average Revenue Repo like: "Sum of Rev (\$)"	ort including Number I	Formattir	ng,	
3	Example 3: Change 5	SUM Function to Average F	unction				
4	Example 4: Change t	the PivotTable Style (If you	want)	PivotTable Fiel	lds		* ×
6		and the second second second	1000 0000 0000	Choose fields to add to re	eport:		\$ T
7	Country	ProductCategory	Average of Rev (\$)	Search			Q
8	🗆 Algeria	Advanced	770.18				
9		Beginner	80.68	Date Date			<b></b>
10		Competition	293.16	County Code			
11		Freestyle	238.16	Units			
12	_	Intermediate	91.41	✓ Rev			
13		Novelty	69.76				
14	Algeria Total		122.00	Country			
15	🖻 Argentina	Advanced	418.88	ProductCategory     Ouarters			
16		Beginner	78.51	Vears			w
17		Competition	173.72				
18		Freestyle	186.65	Drag fields between area	is below:		
19		Intermediate	111.57	T Filters			
20		Novelty	51.71			Conditinio	
21	Argentina Total		109.67				
22	🗆 Armenia	Advanced	185.33				
23		Beginner	78.56				
24		Competition	182.53	Rows		$\Sigma$ Values	
25		Freestyle	188.97	Country	*	Average of Rev (\$)	•
26		Intermediate	92.59	ProductCategory	Ŧ		
27		Novelty	18.64				

### 5) **Example 5:** Name PivotTable:

- i. Click in one cell in PivotTable
- ii. In the PivotTable Tools Analyze Ribbon Tab, in the PivotTable group, click in the PivotTable Name textbox and type a smart name, like "CountryReport" (No spaces)

Hit Enter. iii.

		EB	20-PivotTabl	lesFinished.xlsm - E	xcel				PivotT	able To
Ei	la Home Insert Pag	ge Layout Formulas	Data	Review View	Developer	Add-ins	ACROBAT Pow	er Pivot	Analyze	0
Pivot	Table Name: Active Held:	L A HE Evnan	d Field	➔ Group Selection					1	
Cou	ntryReport Average of Rev (\$)		erricia (	🗐 Ungroup		5 <u>17</u>			Calaat	
1	Options a 10 Field Settings	Down Up *	ose Field	7 Group Field	Slicer Timeline	e Connections	* Source	ata Clear	÷	Pivot
P	PivotTable	Active Field		Group	Filt	er	Data		Action	5
C8	• : × •	f <sub>x</sub> 770.178125								
1	A	В		C	D		E		F	
1	A Example 1: Use VLOOKU	B P to Add New Field	ls <mark>/Co</mark> lumn	C n to the Data Se	D.		E		F	
1 2 3 4 5 6	A Example 1: Use VLOOKU Example 2: Create Count Tabular Layout and a labe Example 3: Change SUM Example 4: Change the P Example 5: Name PivotT	B P to Add New Field try & Product Categ el to indicate the Un Function to Averag PivotTable Style (If y able	ls/Column ory Avera nit, like: ": te Functio you want)	C n to the Data Se age Revenue Re Sum of Rev (\$)' n	D t: port including PivotT Choose fie	g Number F able Fiel	E Formatting, ds		F	×
1 2 3 4 5 6 7	A Example 1: Use VLOOKU Example 2: Create Count Tabular Layout and a labe Example 3: Change SUM Example 4: Change the P Example 5: Name PivotTi	B P to Add New Field try & Product Categ el to indicate the Un Function to Averag PivotTable Style (If y able	ory Avera nit, like: ": e Functio you want)	C n to the Data Se age Revenue Re Sum of Rev (\$)' n age of Rev (\$)	D tt: port including PivotT Choose fie	g Number F able Fiel	E Formatting, ds		F	×
1 2 3 4 5 6 7 8	A Example 1: Use VLOOKU Example 2: Create Count Tabular Layout and a labe Example 3: Change SUM Example 4: Change the P Example 5: Name PivotTr Country	B P to Add New Field ry & Product Categ el to indicate the Un Function to Averag PivotTable Style (If y able ProductCategon Advanced	ory Avera nit, like: " e Functio you want)	C n to the Data Se age Revenue Re Sum of Rev (\$)' n age of Rev (\$) 770.18	D tt: port including PivotT Choose fie Search	g Number F able Fiel	E Formatting, ds		₹ 	×

- 6) **Example 6:** Group Daily Dates into Months and Years using PivotTables automatic Grouping Feature:
  - i. Start PivotTable from the Proper Data Set on the sheet named "SalesData" and place it in cell A9 on the sheet named "PT(2)".
  - ii. Drag Rev Field to Values area of PivotTable Fields Task Pane.
  - iii. Drag Date Field to Rows area of PivotTable Fields Task Pane. When you drag a daily Date Field to the Rows area of a PivotTable, the PivotTable will automatically group the daily dates into Months, Quarters and Years.

1	A	В	C	D	E	F	G	
1	Example 6: Gr	oup Daily Dates in	nto Months and Y	ears using Pi	votTables au	itomatic Grou	ping Feature:	
2			2		1			
3			PivotTable F	ields		- ×		
4			Choose fields to add t	o report:		8 -		
5				lo reporti				
6			Search			2		
7		(	🗹 Date 🔍 🤻	×				
8				13			When	n you drag a Daily Date
9	Row Labels	Sum of Rev	Units	$\sim$			Field	to the Row area of the
10	<b>± 2016</b>	2652480.8	Rev Rev				PivotTa	hle Fields Task Pane the
11	<b>± 2017</b>	2963595.25	COGS				Dellur	
12	<b>± 2018</b>	3186666.64	ProductCategory				Dally L	Dates automatically get
13	Grand Total	8802742.69	Quarters		+		grouped	d into Months, Quarters,
14	· · · · · · · · · · · · · · · · · · ·		V Years			-	and Yea	ars so that you can make
15			Data Galda babuara		200520052005200		calcu	Ilations at the Month
16			Drag fields between a	ireas pelow.			calca	
17			Y Filters		Columns		Qu	arter and year level.
18				/				
19								
20								
21			Rows	Σ	Values			
22			Years	• S	um of Rev	•		
23			Quarters	•				
24			Date	· · · · ·				
25		1		1.22				
							I R	ows

- iv. We don't want "Quarters" so we can drag it off, away from Rows area:
- v. You can Right-click the Years in the PivotTable Row area and point to "Expand/Collapse and then click on "Expand Entire Field". Then we can see the Months for each Year:

Years Date



- vi. Format Report with Number Formatting, Style Formatting and Layout. Name the PivotTable "MonthlyReport".
- vii. Click in cell B9 (where it says Date) and type the new label, "Month", for this column in the PivotTable. This is what it could look like:

			EB20-Piv	rotTablesStart.xlsm - Exc	el					PivotTa	ble Too
File	e Home I	nsert Page Layoi	ut Formulas Data	a Review View	Developer	Add-ins	ACROBAT	Power Piv	ot	Analyze	Des
vivotī	Table Name: Active	Field:	↑ +∃ Expand Field	→ Group Selection					2	2	2
Mont	thlyReport Sun	of Rev (\$)	Drill - Collapse Field	년물 Ungroup	Insert Insert	9 <u>– 1</u> t Filter	Refresh Ch	iange Data	Clear	Select	Move
0	ptions E	eld Settings Down	Up +	[7] Group Field	Slicer Timelin	ne Connections	•	Source *	-	+ P	PivotTab
Pi	ivotTable	Active	Field	Group	Fi	lter	Da	ta		Actions	
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C10	•	$\times \checkmark f_x$	158422.11								
2	A	B	С	D	E	F	G	Н		Ι	
1	Example 6: G	roup Daily Dat	es into Months a	nd Years using P	ivotTables a	automatic	Grouping	Feature	:		
2											
3											
4											
5											
6							d ol				
7				PivotTable	rields		Ŧ	×			
8				Choose fields to add	l to report:			<u>ې چ</u>			
9	Years	🚽 Month 🖵 S	Sun of Rev (\$)	Search			1	0			
10	<b>□ 2016</b>	Jan	158,422								
11		Feb	150,745	Month				<b></b>			
12		Mar	179,461	County Code							
13		Apr	199,539								
14		May	163,527	COGS							
15		Jun	163,252	Country							
16	-	Jul	164,258	ProductCategor	Ý						
17		Aug	169,511					-			
18	-	Sep	175,717	Drag fields between	areas below:						
19		Oct	137,800								
20		Nov	385,081	T Filters		Columns					
21		Dec	605,168								
22	2016 Total		2,652,481								
23	<b>2017</b>	Jan	204,760	Rows		$\Sigma$ Values					
24		Feb	169,867	Years	*	Sum of Rev (	\$)	*			
25		Mar	187,735	Month	¥						
26		Apr	167.374								

#### 7) **Example 7:** Add Year Slicer to our "Country Report" PivotTable:

- i. Go back to "PT(1)" Sheet and click in one cell in the "Country Report" PivotTable Report
- ii. Go to the PivotTable Tools Analyze Ribbon Tab
- iii. In the Filter Group, click the Insert Slicer button
- iv. Check the Year Field

EB20-PivotTablesFinished.xls												PivotTa	ble Tools					
Fi	le Hom	e Insert	Page Layout	Formulas	Data	Review	View	Sur-lope	r Add-ins	ACROBAT	Power P	ivot	Analyze	Design	♀ Tell	me what y	rou want to d	
Pivot Cou Cou	Table Name: ntryReport Options * PivotTable	Active Field: Average of F	Rev (S) Drill Down Active Fiel	N +∃ Expan II =∃ Collap d	d Field ise Field	→ Group Se Ungroup Group Fi Grou	election ) eld p	Insert In Slicer Tin	ert Filter Filter	Refresh C	Change Data Source *	Clear T	Select • P Actions	Move ivotTable	Fields, Items & Sets *	JA OLAP Tools -	Relationships	PivotChart R
.00. →.0	€0 C⊗ * I	II - ○ - ∇																
C8		• : ×	√ f <sub>x</sub>	770.178125														
		A		В		С		C	)	E			F		G			н
2 3 4 5	Example Tabular L Example Example Example	2: Create C ayout and a 3: Change 4: Change 5: Name Pi	Country & Proc a label to indic SUM Function the PivotTable ivotTable	luct Categ ate the Ur to Averag Style (If y	ory Ave nit, like: e Functi ou wan	rage Reve "Sum of F ion t)	nue Re Rev (\$)'	Da Da Pro Co Un Re	te oduct unty Code its v			Pivot	tTable	e Fields	5		•	X
7	Country		💌 Produ	ctCategory	🗸 🔽 Ave	erage of R	ev (\$)		untry			choose	neius to t	idd to iepo				-
8	🗏 Algeria		Advan	ced		77	70.18	Pro	oductCategory			Search						<b>P</b>
9			Beginr	ner		8	30.68	- Qu	arters			Date	2					-
10			Comp	etition		29	93.16	V Yea	ars				duct ntv Code					
11	-		Interm	vie vediate		23	00.10		ОК	Cancel		Unit	s					
13			Novel	Y		6	59.76					Rev	20					



Slicer Settings ...

0-

- v. You will see a Slicer with Greyed-out buttons, like this:
- vi. Right-click Slicer and click on "Slicer Settings", like this:
- vii. In the Slicer Settings dialog Box, check "Hide items with no data":

Source Name: Years Name to use in formulas: Slicer_Years	
Name: Years	
Header           Image: Display header	
Caption: Years	
Item Sorting and Filtering	
<u>A</u> scending (Oldest to Newest)	Hide items with no data
Descending (Newest to Oldest)	Visually indicate items with no data
Use Custo <u>m</u> Lists when sorting	Show items deleted from the data source
	OK Cancel

viii. Format the Slicer using the Slicer Tools Options Ribbon Tab:

	EB20-PivotTablesFinished.xlsm - Excel												cer Tools						
File	Home	Insert	Page Layout	Formulas	Data	Review	View	Developer	Add-ins	ACROBA	T Pov	ver Pivot	C	ptions	♀ Tell me what ye	ou want	to do		
Slicer Captio Years	on: ettings	Report							Bring	Send Rachward •	Selection	<b>€</b> Align	Group	2 Rotate	·	4 2 4 2	UHeight: 1	.67" .44"	4 7 4 7
	Slicer	connections			Slicer	Styles			Torward	Dackward	Arrange				Buttons		Size		5

- 8) **Example 8:** From "SalesData" Table, Create a new PivotTable (Product Revenue Report) that shows SUM, AVERAGE and COUNTA for Product
  - i. Create this new PivotTable Report Next to "Country Report" and Year Slicer on the sheet "PT(1)".
  - ii. Use the picture below as your guide.
  - iii. Remember: Numbers default to SUM and Text defaults to COUNTA
  - iv. Name PivotTable "ProductReport"

			EB20-Pivot7	lablesFinished.	xlsm - Ex	cel				PivotTa	ible Tools
F	ïle Home Insert	Page Layout	Formulas Data	Review	View	Developer	Add-ins	ACROBAT	Power Pivot	Analyze	Design
Pive Pro	Active Field: AuctReport Options • PivotTable	acti Drill Drill Igs Down Up - Active Field	* Expand Field	→ Group Se 현립 Ungroup ⑦ Group Fi Grou	election ) eld p	Insert Insert Slicer Timelin Fil	t Filter ne Connections Iter	Refresh (	Change Data Clear Source * *	Select + P Actions	Move VivotTable
.00. →.0	58 12 + 11 + ○ + 12										
18	• : ×	√ <i>f</i> <sub>x</sub> 3	127								
1	F	G	Н		I		J	К	L		M
2 3 4 5 6	Example 7: Add Tear Si Example 8: From "Sales that shows SUM, A Remember: Numbe Create Report Nex	Data" Table, C VERAGE and C ers default to t to "Country	Create Product R COUNTA for Proc SUM and Text de Report" and Yea	evenue Rep duct efaulst to CC r Slicer	oort DUNTA						
7	Product 🔽 S	um of Rev (\$)	Average of Rev	(\$) Numbe	er Trans	actions					
8	Alpine	323,523	103	3.46		3,127					
10	Bellen	864 554	110	9.45 9.41		7 240					
11	Bower Aussie Bound	224 305	21	1 01		1 063					
12	Carlota	693,496	91	5.80		7,239					
13	Carlota Doublers	279,639	274	4.96		1.017					
14	Crested Beaut	97.443	9(	0.98		1.071					
15	Darnell Tri Fly	58,618	54	4.94		1.067					
16	Eagle	319,444	103	3.38		3,090					
17	Fire Aspen	116,147	109	9.16		1,064					
18	Frido Fast Catch	187,795	19:	1.24		982					
19	Fun Fly	405,217	30	0.71		13,196					
20	GelFast	124,302	119	9.41		1,041					
21	Majestic Beaut	641,742	124	4.71		5,146					
22	Manu LD	1,223,742	1,142	2.62		1,071					
23	Manu MTA	537,383	51	7.21		1,039					
24	Phoenix	341,049	108	8.4 <mark>1</mark>		3,146					
25	Quad	364,892	18:	1.99		2,005					
26	Sunset	110,450	104	4.30		1,059					
27	Sunshine	478,774	. 94	4.56		5,063					
28	Sunspot	68,709	6	3.38		1,084					
29	Yanaki	808,222	112	2.07		7,212					
30	Grand Total	8,802,743	120	0.29		73,177					

- 9) **Example 9:** Connect Slicer to the PivotTable Reports "CountryReport" and "ProductReport"
  - i. Right-click Slicer and click on "Report Connections", like in this picture:

1	A	B	C	D	E	F		G	H	I
1	Example 1: Use VLOC	DKUP to Add New Fields/Colu	mn to the Data Set:			Example 7: Ad	d Year Slic	er to our "Countr	y Report" PivotTable	
2	Example 2: Create Co Tabular Layout and	ountry & Product Category Av a label to indicate the Unit, lil	verage Revenue Report ke: "Sum of Rev (\$)"	t including Number I	Formattin	g, Example 8: Fro	m "SalesD	ata" Table, Create	e Product Revenue R	eport
3	Example 3: Change S	SUM Function to Average Fund	tion			that show	s SUM, AV	ERAGE and COUN	ITA for Product	
4	Example 4: Change t	he PivotTable Style (If you wa	int)			Remembe	r: Number	s default to SUM	and Text defaulst to	COUNTA
5	Example 5: Name Piv	votTable				Create Re	port Next t	to "Country Repo	rt" and Year Slicer	
6	12			00	0	2		10 1949	No. Math.	
7	Country	ProductCategory Av	verage of Rev (\$)	Years 🛛 🎉	K L	Product	👻 Su	m of Rev (\$) Ave	rage of Rev (\$) Num	ber Transactions
8	🗏 Algeria	Advanced	770.18	and c		Cut		323,523	103.46	3,127
9		Beginner	80.68	2016	6	<u>C</u> opy		533,296	103.45	5,155
10		Competition	293.16	2017	临	Paste Options:		864,554	119.41	7,240
11		Freestyle	238.16	2019		1	und	224,305	211.01	1,063
12		Intermediate	91.41	2010	Da.	Refrech	-	693,496	95.80	7,239
13		Novelty	69.76		Le		-	279,639	274.96	1,017
14	Algeria Total		122.00		24	Sort Oldest to Newest		97,443	90.98	1,071
15	Argentina	Advanced	418.88	0 0	Á.	Sort Newest to Oldest		58,618	54.94	1,067
16		Beginner	78.51		15	Clear Filter from "Years"		319,444	103.38	3,090
17		Competition	173.72		¥-	Multi-Select "Years"		116,147	109.16	1,064
18		Freestyle	186.65		G	Report Connections		187,795	191.24	982
19		Intermediate	111.57		993	New "Vere"		405,217	30.71	13,196
20		Novelty	51 71		~	Martin Martin Contractor		124 302	119 41	1 041

ii. Check both PivotTables", like in this picture:

		otiable and PivotChart i	eports to connect to this	Titter
		Name	Sheet	
/	t,	CountryReport	PT(1)	
7	t,	ProductReport	PT(1)	

## iii. Two PivotTables Connected to One Slicer Finished Report:

1	A	В	C	D	E	F	G	Н	I
1	Example 1: Use VLC	OKUP to Add New Fields/Col	umn to the Data Set:			Example 7: Add Year S	licer to our "Country	Report" PivotTable	
	Example 2: Create	Country & Product Category A	verage Revenue Report	t including Nu	mber Formatting,				
2	Tabular Layout and	a label to indicate the Unit,	like: "Sum of Rev (\$)"	•	5,	Formula & Formula I	Detall Table Courts	Deadlast Deares De	
2	Evenuela 2: Change	SUM Evention to Avenue Ev				Example 8: From Sale	SData Table, Create	Product Revenue Re	port
0	Example 5: Change	the BivetTable Style (If you u	(ant) Even	nale 9: Canada	+ Clines to 2 Divets	Personal Number Number	average and COON	and Taxt defaulat to (	OUNTA
5	Example 4: Change	the Protrable Style (if you w	zant) Exam	npie 5. connec	t Silder to 2 Pivots	Create Benert Ne	tto "Country Poner	t" and Vers Slices	OUNTA
6	Example 5. Name P	IVOLIABLE				create Report Ne	ter to country kepoi	t and real Silcer	
7	Country	ProductCategory	Average of Rev (\$)	Years	5= 😴	Product 🗾	Sum of Rev (\$) Aver	age of Rev (\$) Numb	er Transactions
8	🗉 Algeria	Advanced	1,322.59			Alpine	104,885	94.83	1,106
9		Beginner	84.06	2016		Aspen	186,048	102.06	1,823
10		Competition	376.70	2017		Bellen	285,071	117.80	2,420
11		Freestyle	88.51	2010		Bower Aussie Round	72,711	204.82	355
12		Intermediate	106.82	2018	]	Carlota	244,365	97.71	2,501
13		Novelty	125.86			Carlota Doublers	101,111	283.22	357
14	Algeria Total		145.24			Crested Beaut	33,980	92.09	369
15	⊖Argentina	Advanced	185.07	-		Darnell Tri Fly	19,506	53.30	366
16		Beginner	70.63			Eagle	100,254	95.66	1,048
17		Competition	193.46			Fire Aspen	38,763	103.92	373
18		Freestyle	211.03			Frido Fast Catch	62,342	188.92	330
19		Intermediate	109.20			Fun Fly	140,649	31.55	4,458
20		Novelty	37.70			GelFast	38,965	114.94	339
21	Argentina Total		98.91			Majestic Beaut	215,492	123.49	1,745
22	⊟Armenia	Advanced	215.44			Manu LD	395,637	1,143.46	346
23		Beginner	62.66			Manu MTA	186,211	555.85	335
24		Competition	91.83			Phoenix	130,488	118.41	1,102
25		Freestyle	108.91			Quad	118,640	169.24	701
26		Intermediate	94.26			Sunset	34,485	95.00	363
27		Novelty	18.13			Sunshine	160,336	94.20	1,702
28	Armenia Total		81.92			Sunspot	21,632	55.33	391
29	🗆 Australia	Advanced	559.33			Yanaki	272,021	110.22	2,468
30		Beginner	63.42			Grand Total	2,963,595	118.55	24,998
31		Competition	319.13						

10) **Example 10:** Add a "Show Values As" "Difference From" calculation to the "MonthlyReport" PivotTable:

- i. Go back to the "MonthlyReport" PivotTable on the sheet named "PT(2)".
- ii. Drag the Rev Field to the Values area of the PivotTable Field Task Pane for a second time, like here:

	A	В	C	D	E	F	G	Н	Ι
1	Example 6: Gro	oup Daily D	ates into Months	and Years usi	ng PivotTa	ables auton	natic Gr	ouping Featu	ire:
2	Example 10: A	dd a "Shov	v Values As" "Diff	erence From"	calculatio	on to the "N	Nonthly	Report" Pivo	tTable
3									
4									
5					Piv	otTable Fie	elds		- ×
6					Choo	se fields to add to	report:		8 -
7					Citor		ispond.		
8					Searc	h			<b></b>
9	Years 🗸	Month	Sum of Rev (\$)	Sum of Rev	M	lonth roduct			<b>A</b>
10	∃2016	Jan	158,422	158422.11		ounty Code			
11		Feb	150,745	150745.43		ev Ka			
12		Mar	179,461	179460.55		005 × 2	5		
13		Apr	199,539	199538.66		ountry roductCategory	~	<	
14		May	163,527	163527.12		uarters		$\mathbf{i}$	
15		Jun	163,252	163251.9	1./1 ¥	Pars			
16		Jul	164,258	164257.81	Drag	fields between are	eas below:		
17	-	Aug	169,511	169511.43	T F	ilters		III Columns	
18		Sep	175,717	175716.5				$\Sigma$ Values	<b>•</b>
19		Oct	137,800	137799.6					
20		Nov	385,081	385081.48	= F	lows		$\Sigma$ Values	
21		Dec	605,168	605168.21	Yea	rs	•	Sum of Rev (\$)	•
22	2016 Total		2,652,481	2652480.8	Mo	nth	•	Sum of Rev	• •
22	00017	Yes.	204 700	204750 75					

iii. Right-click the Values area of the PivotTable

9	Years	Month	Sum of Rev (\$)	В	I = 💁 • 🛕 • 🛛	•	6.0 00 ≪
10	<b>∃2016</b>	Jan	158,422	En	Conv	5	County Code
11		Feb	150,745	8	Eormat Cells		Units Rev
12		Mar	179,461		Number Forma <u>t</u>		COGS
13	-	Apr	199,539	G	<u>R</u> efresh		Country ProductCategory
14	-	May	163,527		Sort	*	✓ <u>N</u> o Calculation
15		Jun	163,252	1	Move	×	% of <u>G</u> rand Total
16		Jul	164,258	×	Remove "Sum of Rev"	_	% of <u>C</u> olumn Total
17		Aug	169,511		Summarize Values By Show Values As	-	% of <u>R</u> ow Total % Of
18		Sep	175,717	+	Show Details	_	% of <u>P</u> arent Row Total
19	-	Oct	137,800		Show/ <u>H</u> ide Fields	÷	% of P <u>a</u> rent Column Total
20		Nov	385,081	6	Value Field Settings		% of Parent Total
21	-	Dec	605,168		PivotTable Options	4	Difference From
22	2016 Total		2,652,481		Hide Fiel <u>d</u> List	_	% Digterence From Running Total In
		1.	204 700		1750 75		Norming Total Inter

iv. In the Show Values As (Sum of Rev) dialog Box, select "Date" for Base Field and "(previous)" for Base Item, like here:

Calculation:	Difference From					
Base <u>F</u> ield:	Month					
Base Item:	(previous)					

v. Add Number Formatting to the calculation, change the name at the top of the column and add Word Wrap (Home Ribbon Tab, Alignment group). Show Values As" "Difference From" calculation now shows the change in Revenue from month to month, like here:

6					ľ	D' LIT LL C'LL		D'ATTLE C'ALL		
7						- PivotTable Fields				
8						Choose fields to add to repo	Choose fields to add to report:	Choose fields to add to report:	Choose fields to add to report:	
				Change in Rev from		Search	Search	Search	Search	
9	Years	Month	Sum of Rev (\$)	Previous Month			- Manak			
10	<b>2016</b>	Jan	158,422			Product	Product	Product	Product	
11		Feb	150,745	-7,677		County Code	County Code	County Code	County Code	
12	0.	Mar	179,461	28,715		Units Rev	Units Rev		Units	
13		Apr	199,539	20,078		COGS				
14		May	163,527	-36,012		Country				
15		Jun	163,252	-275		ProductCategory     Ouarters				
16		Jul	164,258	1,006		Vears	Vears	Vears	Vears	
17		Aug	169,511	5,254		Drag fields between areas b	Drag fields between areas below:	Drag fields between areas below:	Drag fields between areas below:	
18		Sep	175,717	6,205		Tiber	Tillion	V Change	T STRees	
19		Oct	137,800	-37,917		T Filters	T Filters	T Filters	Σ Values	
20		Nov	385,081	247,282				L Fundes	2 voices	
21		Dec	605,168	220,087						
22	2016 Total		2,652,481			Rows	Rows	■ Rows ∑ Values	≡ Rows Σ Values	
23	<b>2017</b>	Jan	204,760			Years	Years 💌	Years The Sum of Rev (\$)	Years The Sum of Rev (\$)	
24		Feb	169,867	-34,893		Month	Month	Month   Change in Rev from	Month   Month	
25		Mar	187,735	17,868				1		
26		Apr	167,374	-20,361		Defer Layout Update	Defer Layout Update	Defer Layout Update	Defer Layout Update	

- 11) **Example 11:** Add a "Show Values As" "% Difference From" calculation to the "MonthlyReport" PivotTable
  - i. Repeat the steps from Example 10, but now use the Show Values As" "% Difference From" calculation. This will calculation will show the percentage change from month to month. Here is the Show Values As dialog box and finished PivotTable:

Calculation	% Difference From						
Base <u>F</u> ield:	Month						
Base <u>I</u> tem:	(previous)						

1	A	B	C	D	E	F	G	H	Ι	J	K	L		
1	Example 6: G	roup Daily [	Dates into Month	s and Years using Pive	otTables autor	matic Gro	uping Feat	ure:						
2	Example 10:	Add a "Shov	v Values As" "Diff	ference From" calcula	tion to the "N	<b>IonthlyRe</b>	eport" Pive	otTable						
3	Example 11:	Add a "Shov	w Values As" "% D	)ifference From" calcu	lation to the	"Monthly	Report" P	ivotTable						
4							D' 17							
5							Pivoti		▼ X					
6							Choose fie	ds to add to repo	ort:					
7							Search							
8														
				Change in Rev from			Monti	1 ct				<b>^</b>		
9	Years	Month	Sum of Rev (\$)	Previous Month	% Change		Count	y Code						
10	<b>⊇2016</b>	Jan	158,422				Units							
11		Feb	150,745	-7,677 -4.85%										
12		Mar	179,461	28,715	19.05%		Country							
13		Apr	199,539	20,078	11.19%		Produ	ctCategory						
14		May	163,527	-36,012	-18.05%		V Years	ers						
15		Jun	163,252	-275	-0.17%									
16		Jul	164,258	1,006	0.62%		Drag field	s between areas b	elow:					
17		Aug	169,511	5,254	3.20%		<b>W</b> Filter	:		III Column	5			
18		Sep	175,717	6,205	3.66%					$\Sigma$ Values		•		
19		Oct	137,800	-37,917	-21.58%									
20		Nov	385,081	247,282	179.45%									
21		Dec	605,168	220,087	57.15%		Rows			$\boldsymbol{\Sigma}$ Values				
22	2016 Total		2,652,481				Years		•	Sum of Rev	(\$)	*		
23	∃ 2017	Jan	204,760				Month		*	Change in	Rev from Previo	us Month 🔻		
24		Feb	169,867	-34,893	-17.04%					1 /s change				
25		Mar	187,735	17,868	10.52%		Defer	Layout Update				Update		
26		Anr	167 37/	-20 361	-10 85%			10			10		ļ	

- 12) **Example 12:** Add a "Show Values As" Running Total" calculation to the "MonthlyReport" PivotTable
  - i. Repeat the steps from Example 11, but now use the Show Values As" Running Total" calculation. This will calculation will show the cumulative or running total throughout the year, with the December amount equal to the total for the year. Here is the Show Values As dialog box and finished PivotTable:

how Values A	As (Sum of Rev)	8 X
Calculation: F	Running Total In	
Base <u>F</u> ield:	Month	
	ОК	Cancel

1	A	В	C	D	E	F	G	Н	Ι	J	K	L	М		
1	Example 6: G	roup Daily	Dates into Month	s and Years using Pive	tTables au	tomatic Group	oing Feature	:							
2	Example 10:	Add a "Sho	w Values As" "Dif	ference From" calcula	tion to the	"MonthlyRep	ort" PivotTa	ble							
3	Example 11:	Add a "Sho	w Values As" "% [	Difference From" calcu	lation to t	he "MonthlyR	eport" Pivot	Table							
4	Example 12:	Add a "Sho	w Values As" Run	ning Total" calculation	to the "M	onthlyReport	' PivotTable	Dive	T-LL C						
5								rivotrable rielus							
6								Choose fields to add to report:							
7															
8															
		4. 		Change in Rev from		Running		✓ Moi Proi	nth duct				1	<u>^</u>	
9	Years	Month	- Sum of Rev (\$)	Previous Month	% Change	Total			unty Code						
10	<b>⊇2016</b>	Jan	158,422			158,422		Unit	ts						
11		Feb	150,745	-7,677	-4.85%	309,168									
12		Mar	179,461	28,715	19.05%	488,628		Country							
13	-	Apr	199,539	20,078	11.19%	688,167		Pro	ductCategory						
14		May	163,527	-36,012	-18.05%	851,694		✓ Yea	irs						
15		Jun	163,252	-275	-0.17%	1,014,946									
16		Jul	164,258	1,006	0.62%	1,179,204		Drag fi	elds between a	reas below:					
17		Aug	169,511	5,254	3.20%	1,348,715		T Filt	ters		III Colu	imns			
18		Sep	175,717	6,205	3.66%	1,524,432					Σ Valu	ies		•	
19		Oct	137,800	-37,917	-21.58%	1,662,231									
20		Nov	385,081	247,282	179.45%	2,047,313									
21		Dec	605,168	220,087	57.15%	2,652,481					_				
22	2016 Total		2,652,481					🗏 Ro	ws		Σ Valu	es			
23	<b>2017</b>	Jan	204,760			204,760		Years			▼ Sum of	Rev (\$)	Ŧ	-	
24		Feb	169,867	-34,893	-17.04%	374,627		Mont	h		- Change	e in Rev from Pre	vious Month 🔻	•	
25		Mar	187,735	17,868	10.52%	562,361					% Char	ige a Total			
26		Apr	167,374	-20,361	-10.85%	729,736					Kunnin	g iotai			

#### 13) **Example 13:** Count of Phones Purchased Report & % Phones Purchased Report

- i. Create a New PivotTable Report from the "Phones Purchased' Table on the "CellPhoneData" sheet.
- ii. Drag the "Phones Purchased" Field to the Rows area of the PivotTable Task Pane.
- iii. Drag the "Phones Purchased" Field to the Values area of the PivotTable Task Pane.
  - 1. Notice that the "Text" Cell Phone Purchase Data in Values area defaults to a Counting Calculation, which is exactly what we want.
  - 2. This allows you to count how many of each phone was purchased from a sample of cell phone sales.
- iv. Drag the "Phones Purchased" Field to the Values area of the PivotTable Task Pane for a second time. Then change the calculation to "Show Values As", "% of Column Total".
- v. The report should look like this:

1	A	B		С		D	E	F				
1	Data From sample of Phone P	urchases:	Example 13: Count of Phones Purchased Report & % Phones Purchased Report									
2				(Frequency & % F	requency Rep	port)						
3	Phones Purchased			10 253 dos								
4	Apple iPhone 9		Pho	nes Purchased 🔽	Count of Phones Purchased		% Phones Purch		d			
5	Apple iPhone 9		Appl	e iPhone 10	ĺ.	87	15		5%			
6	Apple iPhone 9		Appl	e iPhone 9		123	22		)%			
7	Samsung Galaxy S8	8 	LeEc	0		74	13		1%			
8	Apple iPhone 10		Mot	o G Plus		20	3.5		3%			
9	Samsung Galaxy S5		Pixe	É		39		6.98	3%			
10	Samsung Galaxy S5		Sam	sung Galaxy S5		64	11.4		5%			
11	Apple iPhone 10		Sam	sung Galaxy S8		152	27		1%			
12	Apple iPhone 9		Gran	nd Total		559		0%				
13	Apple iPhone 9											
14	Samsung Galaxy S8			PivotTable	Fields	▼ X						
15	Samsung Galaxy S5											
16	Apple iPhone 10			Choose fields to ac	8 *							
17	Apple iPhone 9			Search	Q							
18	Moto G Plus											
19	Apple iPhone 9			Phones Purcha	ased	*						
20	Samsung Galaxy S8											
21	Pixel			Drag fields betwee								
22	Samsung Galaxy S8			<b>Filters</b>	T Filters							
23	Samsung Galaxy S8		į.			$\Sigma$ Values	*					
24	LeEco		_			1						
25	Samsung Galaxy S8											
26	Apple iPhone 9			≡ Rows		$\Sigma$ Values						
27	Samsung Galaxy S8			Phones Purchase	ed 👻	Count of Phones Pr	urchased 🔻					
28	LeEco					% Phones Purchase	d 💌					
29	Apple iPhone 9					1						
30	Moto G Plus			Defer Layout U	lpdate		Update					
31	Moto G Plus				8	1	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -					
32	Samsung Galaxy S5		1									
	🗆 🕨 📖 🔁 Summarize Values As	Show Value	S AS	SVA-Full PT(1)	PT(2) Sale	sData CellPhon	eData CPA-	Data	HW==>>			

14) **Example 14:** Example 14: Show Values As % of Row Total: Does CPA Prep Course Help? Report

- i. Using the Proper Data Set on the sheet "CPA Data", create a PivotTable on the sheet "CPA Data".
- ii. Drag the "CPA Prep Course?" Field to the Rows area of the PivotTable Task Pane.
- iii. Drag the "Test Pass/Fail" Field to the Columns area of the PivotTable Task Pane.
- iv. Drag the "Test Pass/Fail" Field to the Values area of the PivotTable Task Pane.
- v. Change the calculation to "Show Values As", "% of Row Total".
- vi. Type the Report name "Does Prep Course Help?" in cell F4.
- vii. Here is what is should look like:

1	A	B	C		D	E		F		G	Н	I	
1	Survey of pe	ople who took	CPA exam:				Exam	nple 14: Show Values As %	of Row T	otal: Does CPA Pre	p Course	Help? Report	t
2				18-1	Hor								
3	CPA Score	Prep Course?	CPA Prep Cours	e?	Test Pass/Fai		Does	Prep Course Help?		Test Pass/Fail 👻			
4	945	PC	Took CPA Prepa	ration Course	Pass		CPA	Prep Course?	-	Fail	Pass		
5	846	PC	Took CPA Prepa	ration Course	Pass		Did N	NOT Take CPA Preparation (	Course	83.81%	16.19%		
6	903	PC	Took CPA Prepa	ration Course	Pass	-8	Took	CPA Preparation Course		60.78%	39.22%		
7	795	PC	Took CPA Prepa	ration Course	Pass		Gran	d Total		75.00%	25.00%		
8	865	PC	Took CPA Prepa	ration Course	Pass								
9	765	PC	Took CPA Prepa	ration Course	Pass			DivotTable Fields					
10	802	PC	Took CPA Prepa	ration Course	Pass			FIVOLITABLE FIElds					
11	921	PC	Took CPA Prepa	ration Course	Pass			Choose fields to add to report:					
12	948	PC	Took CPA Prepa	ration Course	Pass	1		Search					
13	893	PC	Took CPA Prepa	ration Course	Pass								
14	800	PC	Took CPA Prepa	ration Course	Pass			Prep Course?		·	•		
15	891	PC	Took CPA Prepa	ration Course	Pass			CPA Prep Course?					
16	878	PC	Took CPA Prepa	ration Course	Pass			✓ Test Pass/Fail		<b>v</b>			
17	874	PC	Took CPA Prepa	ration Course	Pass			Drag fields between areas below:					
18	810	PC	Took CPA Prepa	ration Course	Pass			▼ Filters	▼ Eiter				
19	824	PC	Took CPA Prepa	ration Course	Pass			in the state	Test Pi	ass/Fail 🔹			
20	762	PC	Took CPA Prepa	ration Course	Pass				-				
21	761	PC	Took CPA Prepa	ration Course	Pass	1							
22	893	PC	Took CPA Prepa	ration Course	Pass			Rows	Σ Valu	les			
23	898	PC	Took CPA Prepa	ration Course	Pass			CPA Prep Course?	Does P	rep Course Help? 🔹			
24	965	PC	Took CPA Prepa	ration Course	Pass								
25	874	PC	Took CPA Prepa	ration Course	Pass				1.1.				
26	940	PC	Took CPA Prepa	ration Course	Pass			Defer Layout Update		Update			
27	754	PC	Took CPA Prepa	ration Course	Pass								
28	928	PC	Took CPA Prepa	ration Course	Pass								
	· ··· Sum	imarize Values As	Show Values As	SVA-Full PT(1) PT(2)	SalesData Ce	llPhone	Data	CPA-Data HW==>> (+)		: •		l//	

- viii. Notice that 75% of the people who took all four parts of CPA did not pass. Only 25% passed the test.
- ix. Of the people who took a CPA Preparation Course 39.22 % Passed the Test.