



# Excel Pivot Tables

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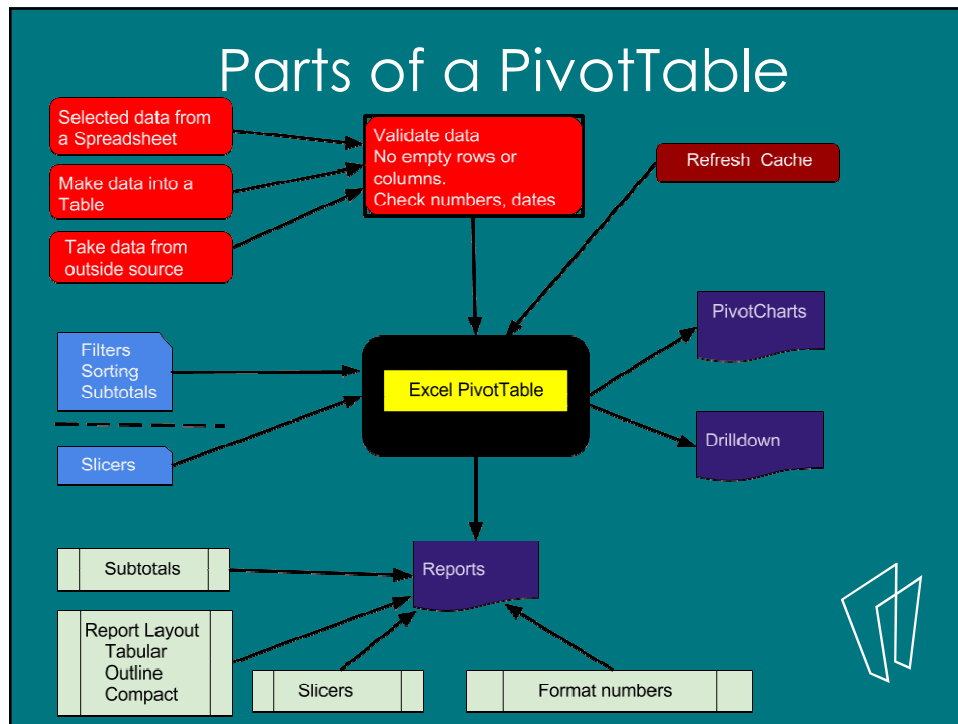
PivotTables summarize and analyze large amounts of data into summary reports.

	A	B	C	D	E
1	Product	Price	Qty Sold	Total	Date
2	511115	\$283	135	\$38,205	1/3/2015
3	392219	\$172	77	\$13,244	1/3/2015
4	392219	\$305	112	\$34,160	1/3/2015
5	933592	\$729	193	\$140,697	1/3/2015
6	933592	\$588	9	\$5,292	1/27/2015
7	933592	\$599	28	\$16,772	1/27/2015
8	511115	\$10	156	\$1,560	1/27/2015
9	833987	\$54	42	\$2,268	1/30/2015
10	392219	\$527	124	\$65,348	1/30/2015
11	933592	\$224	186	\$41,664	1/30/2015
12	392219	\$776	142	\$110,192	2/6/2015
13	933592	\$69	49	\$3,381	2/6/2015
14	392219	\$381	32	\$12,192	2/6/2015
15	231771	\$75	25	\$1,875	2/6/2015
16	933592	\$635	120	\$76,200	2/6/2015
17	392219	\$332	96	\$31,872	2/13/2015
18	511115	\$411	166	\$68,226	2/13/2015
19	933592	\$641	166	\$106,406	2/13/2015
20	392219	\$616	131	\$80,696	2/13/2015
21	511115	\$734	143	\$104,962	2/13/2015
22	933592	\$783	43	\$33,669	2/26/2015
23	231771	\$438	125	\$54,750	2/26/2015
24	392219	\$283	106	\$29,998	2/26/2015
25	511115	\$52	82	\$4,264	2/26/2015
26	392219	\$114	166	\$22,572	3/20/2015
27	511115	\$425	80	\$34,000	3/20/2015
28	833987	\$794	150	\$119,100	3/20/2015
29	833987	\$140	113	\$15,820	3/20/2015



Sum of Qty Sold				
	Jan	Feb	Mar	Grand Total
231771		150		150
392219	313	507	198	1018
511115	291	391	80	762
833987	42		263	305
933592	416	378		794
<b>Grand Total</b>	<b>1062</b>	<b>1426</b>	<b>541</b>	<b>3029</b>





## 1a) Let's create our first Pivot table.

1. Open file "PivotTableClass"
2. Click on Sales tab
3. Select a cell.
4. Insert tab > PivotTable (most left side)
5. Click "OK" on pop-up window
6. Automatically directed to new sheet, with PivotTable controls.

Click anywhere inside the data

Insert > Tables > PivotTable

## Create your first table

## The Create PivotTable Dialog box.

The address of the data we just selected appears here.

Most frequently we put the new PivotTable on a new worksheet.

Click OK

Create PivotTable

Choose the data that you want to analyze

Select a table or range

Table/Range: Sheet1!\$A\$1:\$E\$29

Use an external data source

Choose Connection...

Connection name:

Use this workbook's Data Model

Choose where you want 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

OK Cancel

The Analyze and Design tabs for PivotTable Tools

A placeholder PivotTable

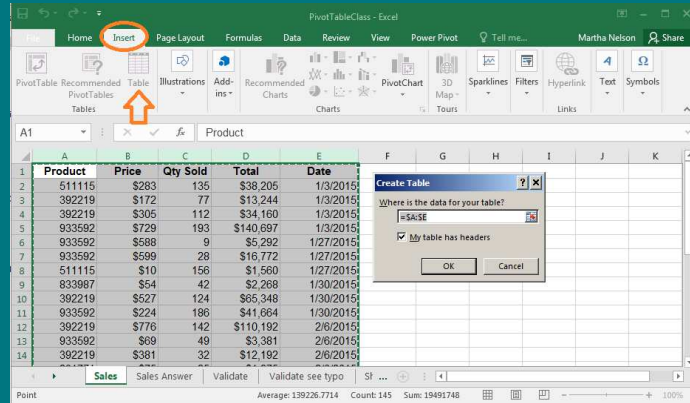
Column Headings from Data

## 1b) Let's create our second PivotTable, using a Table.

1. Click on Make a Table tab
2. Select columns A - E.
3. Insert > Table
4. Click "OK" on pop-up window
5. Automatically directed to Table Tools
6. Insert > PivotTable Click "OK" on pop-up window
7. Automatically directed to new sheet, with PivotTable controls.



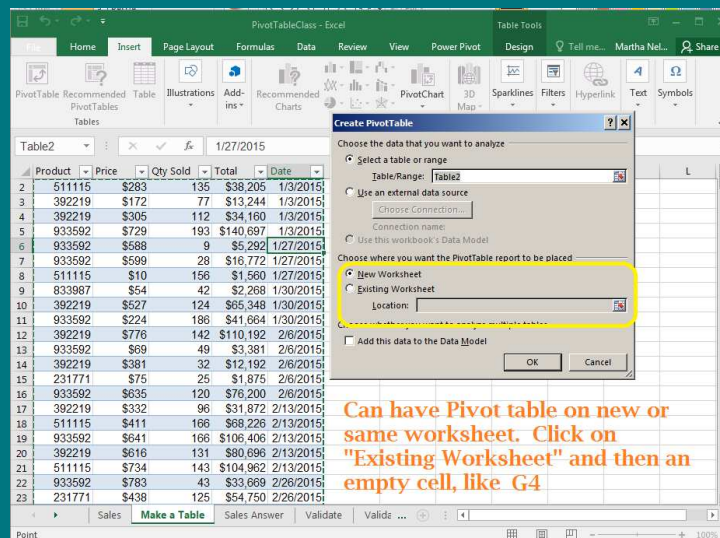
# Create a Table



Make data into a Table. Then create a PivotTable. You don't need to "Refresh" data when it is updated.



# Put PivotTable on same page



Can have Pivot table on new or same worksheet. Click on "Existing Worksheet" and then an empty cell, like G4



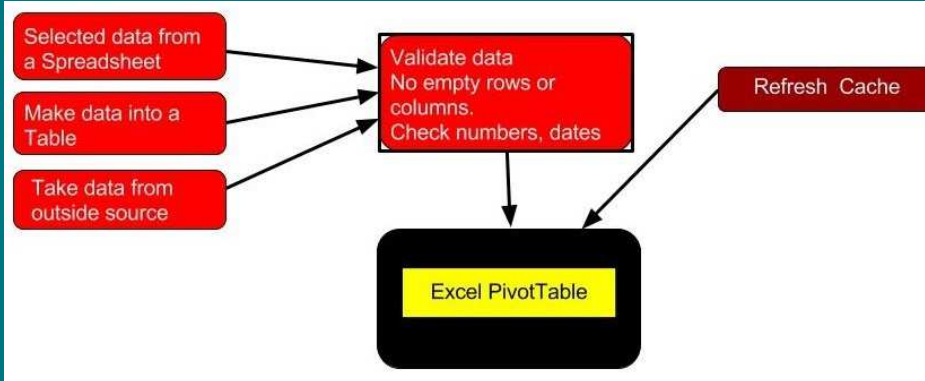
The ribbon for PivotTables

# Parts of a PivotTable

	Jan	Feb	Mar	Grand Total
231771		150		150
392219	313	507	198	1018
511115	291	391	80	762
833487	42		263	305
933832	416	378		794
<b>Grand Total</b>	<b>1062</b>	<b>1426</b>	<b>541</b>	<b>3029</b>

Field list - Drag & Drop to task pane

## A closer view:

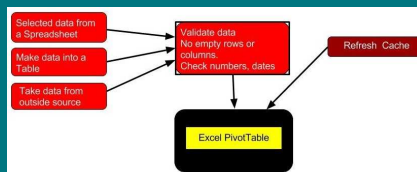


## Input to a PivotTable



## 2) Data

- Select data from a spreadsheet
- A Table
- External Data (not covered in this class)

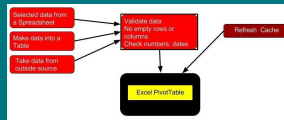


- Select data from a spreadsheet

Method 1: Click on a cell in the data  
Or

Method 2: Make data into a Table, then  
create Pivot Table

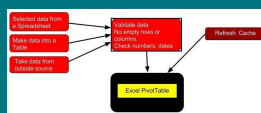
Insert > PivotTable button (on left most of  
ribbon.)



When you create a PivotTable, a copy of the data is stored in a pivot cache. Any changes to the data won't show up in the report until you refresh the cache.

To refresh the data:

- Right-click the pivot table and click Refresh Data.  
Or
- Go to the PivotTable Tools Analyze tab, and click the Refresh button in the Data section.





The data needs to be clean.  
Any blank rows, blank columns, or text in a number field will give unpredictable results.

Ex: Summing a number field with blanks becomes a Count.



Use Conditional formatting on number fields to search for invalid data.



## Find invalid numbers

1. Select a column or range of cells.
2. Home > Conditional Formatting

April classes [Read-Only] - Excel

Tell me what you want to do...

General

Number

Conditional Formatting

Highlight Cells Rules

- Greater Than...
- Less Than...
- Between...
- Equal To...
- Text that Contains...
- A Date Occurring...
- Duplicate Values...

Less Than

Format cells that are LESS THAN:

0.5 with Light Red Fill with Dark Red Text

4
4
4
0
-5
1
1.55
4
4
4
4



The data :



- Must have Column Headings in the first row.
- Must have tabular layout - no blank rows or columns.
- No repeating columns of data

Normalized data



	A	B	C	D	E
1	<b>Product</b>	<b>Price</b>	<b>Qty Sold</b>	<b>Total</b>	<b>Date</b>
2	511115	\$283	135	\$38,205	1/3/2015
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Discuss why this is a good source of data for a PivotTable



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2	North					
3	January	33,073				
4	February	35,880				
5	March	90,258				
6	April	13,250				
7	May	100,197				

3	Midwest	Chicago	132	106	110	90
4		Kansas City	413	504	2,571	505
5		Omaha	332	543	372	424
6	North	Dakotas	130	136	106	90
7		Great Lakes	488	445	4,140	517

17	Midwest	Chicago	808	0	3,912	0
18		Kansas City	824	1,761	11,181	1,616
19		Omaha	0	8,147	2,968	3,118
20	North	Dakotas	0	0	5,463	2,370
21		Great Lakes	751	808	13,814	1,632

Discuss why these are bad sources of data for a PivotTable

I recommend this book as the best PivotTable reference available. Skokie Library has it available as an electronic book. (EPUB)

Excel 2015 Pivot Table Data Crunching, by Bill Jelen and Michael Alexander

## More Excel classes:

- Charts and Graphs
- Formulas and Functions
- Making a Budget using Excel



## Thank You

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where this presentation will be available  
for four weeks.



## 2) What is a PivotTable?

And how to get good data to create one.

