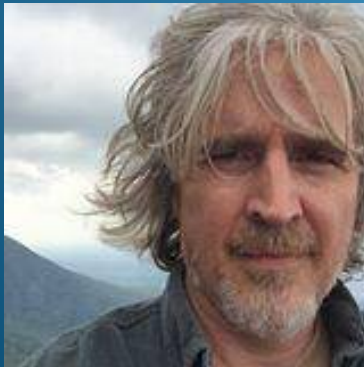




## Pivot Tables 101

Written and Presented by  
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**About the speaker:**

David H. Ringstrom, CPA, is an author and nationally recognized instructor who teaches scores of webinars each year. His Excel courses are based on over 25 years of consulting and teaching experience. His mantra is “Either you work Excel, or it works you.” David offers spreadsheet and database consulting services nationwide.

# Excel Versions

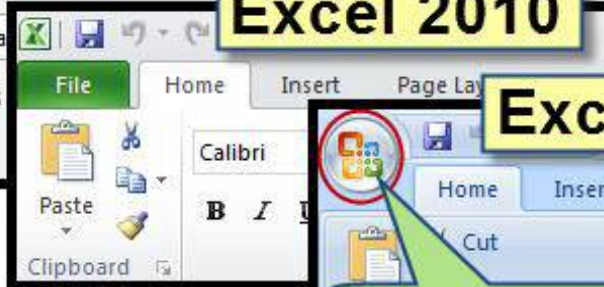
## Excel 2016



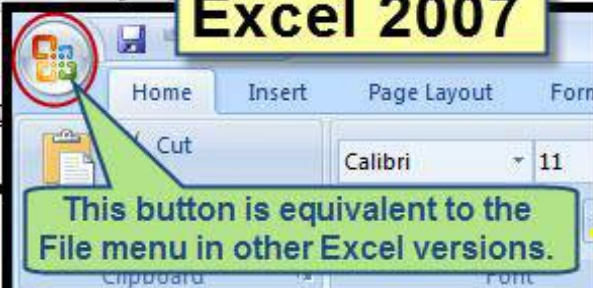
## Excel 2013



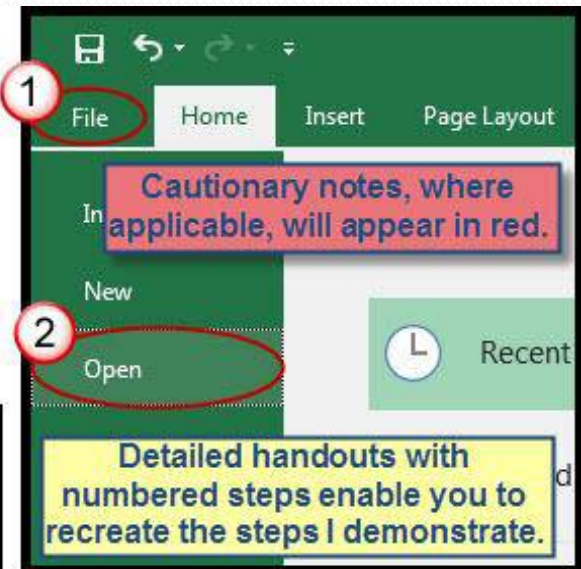
## Excel 2010



## Excel 2007



You can play back a recording of this presentation for free by way of your Lambers account.



19	<a href="#">Excel Tip: Calculating Interest</a>
20	<a href="#">Excel Tip: C</a>
21	<a href="#">Improving</a>
22	<a href="#">Exploring the Nuances of the SUM Function in Excel</a>
23	<a href="#">How to Find Circular References in Excel</a>

Related Articles

Links to articles I've written that relate to this presentation are included in the example workbook.

### As referred to during the presentation:

58	
59	Page 4
60	Page 5
61	Page 6
62	Page 7
63	Page 8

Car Payment

Hover over slide numbers within the example workbook to view the PowerPoint slides.

Students Excel 

# Initiating a Pivot Table

**Step 1: Select any cell within your list.**

**Step 2: Insert > PivotTable**

**Step 3: Create PivotTable**

Choose the data that you want to analyze

☒ Select a table or range

Table/Range: 'Fruit Sales'!\$A\$1:\$F\$51

☐ 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

**Step 4: OK**

Region	City	Vendor	Product	Cases Sold	Total Sales
North GA	Atlanta	Fruit R Us	Oranges	6168	61680
North GA	Atlanta	Fruit R Us		079	85106
North GA	Atlanta	Fruit R Us		058	66638
North GA	Atlanta	Fruit R Us		868	75548
North GA	Atlanta	Fruit R Us		996	29940
North GA	Atlanta	Bob's Fruit		818	93816
North GA	Atlanta	Bob's Fruit		565	21910
North GA	Atlanta	Bob's Fruit		967	99670
North GA	Atlanta	Bob's Fruit		842	98420
North GA	Atlanta	Bob's Fruit		993	89930
North GA	Atlanta	Bob's Fruit		933	54263
North GA	Atlanta	Bob's Fruit		704	107856
North GA	Atlanta	Bob's Fruit		519	71747
North GA	Atlanta	Bob's Fruit		442	126630
North GA	Atlanta	Bob's Fruit		889	11557
North GA	Atlanta	Bob's Fruit		551	72061
North GA	Atlanta	Bob's Fruit		605	31260
North GA	Atlanta	Bob's Fruit		317	43121
North GA	Atlanta	Orange U Glad	Bananas	7411	81521
North GA	Atlanta	Orange U Glad	Mixed Berries	6227	93405
North GA	Blue Ridge	Mountain Fruit	Oranges	6415	89810

# Pivot Table Interfaces

**1** The PivotTable Tools menu (as well as the Field List) appear when you move your cursor inside of the pivot table.

The Analyze tab is labeled Options in Excel 2007/2010

**2** A blank pivot table canvas.

Turn on the PivotTable Field List to work with the PivotTable

**3** Use the PivotTable Field list to add/remove fields from your pivot table.

**4** If the PivotTable Field list isn't onscreen, right-click on the pivot table and choose Show Field List, or choose Field List from the Analyze (or Options) menu.

**PivotTable Fields**

Choose fields to add to report:

Search

- ☐ Region
- ☐ City
- ☐ Vendor
- ☐ Product
- ☐ Cases Sold
- ☐ Total Sales

Drag fields between areas below:

Filters	Columns
Rows	Σ Values

☐ Defer Layout Update Update

# Adding Fields to a Pivot Table

**1** Select Product, which Excel places in the Rows section.

**2** One of each product from the Fruit Sales list appears.

**3** Cases sold by product appears.

**4** Cases sold by product appears.

Row Labels	Sum of Cases Sold
Apples	48236
Bananas	63093
Kiwi	53671
Mixed Berries	43733
Oranges	58854
<b>Grand Total</b>	<b>267587</b>

# Adding Another Row Field

**1** Click Vendor to view cases sold by Product and then by Vendor.

**2**

**PivotTable Fields**

Search: Sea

☒ Vendor  
☒ Product  
☒ Cases Sold  
☐ Total Sales

Drag fields between areas below:

**Filters**

**Columns**

**Rows**  
 Product  
 Vendor

**Values**  
 Sum of Cases ...

☐ Defer Layout Update **Update**

Row Labels	Sum of Cases Sold
<b>Apples</b>	<b>48236</b>
Bob's Fruit	1565
Fruit Direct	8203
Fruit R Us	6079
Fruitju	7704
Middle Georgia Fruit	1126
Mountain Fruit	6426
Navel Oranges & More	1481
Orange U Glad	2605
Oranges 'n Onions	4728
Whistlestop Fruit Stand	8319
<b>Bananas</b>	<b>63093</b>
Bob's Fruit	9842
Fruit Direct	8262
Fruit R Us	6868
Fruitju	8442
Middle Georgia Fruit	1473
Mountain Fruit	5075
Navel Oranges & More	1561

**Pivot Table** Fruit Sales

# Managing Subtotal Positions

**Subtotals generally appear at the top of each row field grouping, but appeared below each Row Field in early builds Office 365/Excel 2016.**

**1 Optional: Choose Subtotals from the Design menu.**

**2 Show all Subtotals at Bottom of Group**

**3 Subtotals now appear below each Row Field grouping.**

A	B
1	
2	
3	Row Labels Sum of Cases Sold
4	Apples 48236
5	Bob's Fruit 1565
6	Fruit Direct 8203
13	Oranges 'n Oni 4728
14	Whistlestop Fr 8319
15	Bananas 63093
16	Bob's Fruit 9842
17	Fruit Direct 8262
18	Fruit R Us 6868
19	Fruitju 8442
20	Middle Georgia 1473
21	Mountain Fruit 5075
22	Navel Oranges 1561
23	Orange U Glad 7411
24	Oranges 'n Oni 6165
25	Whistlestop Fr 7994
26	Kiwi 53671

A	B
1	
2	
3	Row Labels Sum of Cases Sold
4	Apples
5	Bob's Fruit 1565
6	Fruit Direct 8203
7	Fruit R Us 6079
8	Fruitju 7704
9	Middle Georgia 1126
10	
11	
12	
13	Oranges 'n Oni 4728
14	Whistlestop Fr 8319
15	Apples Total 48236
16	Bananas
17	Bob's Fruit 9842
18	Fruit Direct 8262
19	Fruit R Us 6868
20	Fruitju 8442
21	Middle Georgia 1473
22	Mountain Fruit 5075
23	Navel Oranges 1561
24	Orange U Glad 7411
25	Oranges 'n Oni 6165
26	Whistlestop Fr 7994

# Number Formatting

**FruitSales - Excel**

Formulas Data Review View Help

General \$ % .00 .00 Alignment Number

**It's best not to use the Number section of the Home menu for pivot tables.**

**1** Right-click any number within the pivot table.

**2** Number Format...

**3** Format Cells

Number

Category: General Number 4

Sample 48,236

Decimal places: 0

**5** ☒ Use 1000 Separator (,)

Negative numbers: -1,234 1,234 (1,234) (1,234)

Number is used for general display of numbers. Good formatting for monetary value.

**6** OK

**7** The entire field is formatted, and you eliminate the risk of losing the number formatting should you move fields around.

Row Labels	Sum of Cases Sold
Apples	48,236
Bob's Fruit	1,565
Fruit Direct	8,203
Fruit R Us	6,079
Fruitju	7,704
Middle Georgia	1,126
Mountain Fruit	6,426
Navel Oranges	1,481
Orange U Glad	2,605
Oranges 'n Onio	4,728
Whistlestop Fru	8,319
Bananas	63,093
Bob's Fruit	9,842
Fruit Direct	8,262
Fruit R Us	6,868

**Pivot Table** Fruit Sales

# Renaming Fields

**Left Screenshot:** The PivotTable Fields task pane shows 'Cases Sold' selected in the Values section. A yellow callout box with a red circle '1' points to the 'Sum of' text in the Values section, stating: "Delete 'Sum of ' and press Enter." A second yellow callout box with a red circle '2' points to the 'OK' button in a warning dialog box that says "PivotTable field name already exists." A third yellow callout box with a red circle '3' points to the 'Cases Sold' field in the Values section, stating: "Field names in the Values section cannot be the same as in the Field List, which occurs if we strip out Sum of."

**Right Screenshot:** The PivotTable Fields task pane shows the 'Cases Sold' field in the Values section. A yellow callout box with a red circle '4' points to the 'Cases Sold' field in the Values section, stating: "Solution: Leave a single space before or after the field name." A fifth yellow callout box with a red circle '5' points to the 'Cases Sold' field in the Values section, stating: "Solution: Leave a single space before or after the field name."

**Data Table (Left Screenshot):**

	Apples	
4	48,236	
5	Microsoft Excel	
6		
7		
8		
9		
10	Mountain Fruit	6,426
11	Navel Oranges {	1,481
12	Orange U Glad	2,605
13	Oranges 'n Onion	4,728
14	Whistlestop Fru	8,319
15	Bananas	63,093
16	Bob's Fruit	9,842
17	Fruit Direct	8,262
18	Fruit R Us	6,868
19	Fruitju	8,442
20	Middle Georgia	1,473
21	Mountain Fruit	5,075
22	Navel Oranges {	1,561

**Data Table (Right Screenshot):**

	Cases Sold
3	48,236
4	
5	
6	
7	
8	7,704
9	1,126
10	6,426
11	1,481
12	2,605
13	4,728
14	8,319
15	63,093
16	9,842
17	8,262
18	6,868
19	8,442
20	1,473
21	5,075
22	1,561
23	7,411

# Adding Columns to Pivot Tables

**PivotTable Fields**

Choose fields to add to report:

Search

☒ Vendor  
☒ Product  
☒ Cases Sold  
☐ Total Sales

Drag fields between areas below:

**Filters**

**Columns**

**Rows**

Product  
Vendor

**Values**

Sum of Cases ...

**Sum of Cases Sold**

Row Labels	Apples	Bananas	Kiwi	Mixed Berries	Oranges	Grand Total
Bob's Fruit	1,565	9,842	9,967	8,993	7,818	38,185
Fruit Direct	8,203	8,262	3,920	4,251	686	25,322
Fruit R Us	6,079	6,868	6,058	1,996	6,168	27,169
Fruitju	7,704	8,442	5,519	889	4,933	27,487
Middle Georgia Fruit	1,126	1,473	3,064	4,406	5,469	15,538
Mountain Fruit	6,426	5,075	8,035	3,064	6,415	29,015
Navel Oranges & Mor	1,481	1,561	5,879	5,668	5,591	20,180
Orange U Glad	2,605	7,411	3,317	6,227	6,551	26,111
Oranges 'n Onions	4,728	6,165	1,062	835	5,240	18,030
Whistlestop Fruit Sta	8,319	7,994	6,850	7,404	9,983	40,550
<b>Grand Total</b>	<b>48,236</b>	<b>63,093</b>	<b>53,671</b>	<b>43,733</b>	<b>58,854</b>	<b>267,587</b>

Drag a field into the Columns section to pivot the data. You can do so either from one of the quadrants or the field list itself.

# Filter Columns

**Left Screenshot: Column Labels Task Pane**

1. Column Labels dropdown arrow.

2. Clear these checkboxes.

3. OK button.

**Right Screenshot: PivotTable**

4. The funnel indicates that the columns are filtered; in this case to only show Apples and Oranges.

5. A lone triangle on a filter button indicates that all available records are shown.

Row Labels	Apples	Oranges	Grand Total
Bob's Fruit	565	7	9,383
Fruit Direct			
Fruit R Us			
Fruitju			
Middle Georgia Fruit	1,126	5,469	6,595
Mountain Fruit			2,841
Navel Oranges & M			7,072
Orange U Glad			9,156
Oranges 'n Onions			9,968
Whistlestop Fruit Stand	8,319	9,983	18,302
<b>Grand Total</b>	<b>48,236</b>	<b>58,854</b>	<b>107,090</b>

# Top 10 Filter

**1** Select the PivotTable.

**2** Click on 'Value Filters'.

**3** Click on 'Top 10...'.

**4** Change to 3.

**5** Click OK.

**6** The Pivot Table now displays the top three vendors based on cases sold.

**7** Right-click any number.

**8** Click Sort.

**9** Click Sort Largest to Smallest.

Row Labels	Sum of Cases Sold
Fruitju	7,704
Mountain Fruit	6,426
Whistlestop Fruit Stand	8,319
<b>Grand Total</b>	<b>22,449</b>

# Pivot Table Subtotaling Quirks

**1** Region

**2** Amounts appear doubled because of the field hierarchy.

**3** Drag Region above Vendor.

**4** The report is now grouped by Region, and shows the top 3 vendors in each region.

Sum of Cases Sold	Column Labels
Row Labels	Apples
Whistlestop Fruit Stan	8,319
Mid GA	8,319
Fruitju	7,704
North GA	7,704
Mountain Fruit	6,426
North GA	6,426
<b>Grand Total</b>	<b>22,449</b>

Sum of Cases Sold	Column Labels
Row Labels	Apples
Mid GA	9,445
Whistlestop Fruit St	8,319
Middle Georgia Frui	1,126
North GA	20,209
	7,704
	6,426
	6,079
South GA	6,209
Oranges 'n Onions	4,728
	1,403

# Tabular Form

**1** Drag Region below Vendor.

**2** Choose Report Layout on the Design menu.

**3** Show in Tabular Form

**4** Region appears as a separate column.

**5** Choose Subtotals on the Design menu.

**6** Do Not Show Subtotals

**7** The pivot table shows the top 3 vendors and their respective region.

Sum of Cases Sold	Region	Product
Vendor		Apples
Whistlestop Fruit Stand	Mid GA	8,319
Fruitju	North GA	7,704
Mountain Fruit	North GA	6,426
Grand Total		22,449

# Clear Filters

**1** The pivot table is presently filtered to show top 3 sales of apples and oranges.

**2** PivotTable Tools

**3** Analyze Design Tell me what you want to do

**4** Clear Clear All Clear Filters

Sum of Cases Sold	Product	Region	Apples	Bananas	Kiwi	Mixed Ben	Oranges	Grand Total
Whistlestop Fruit	Mid GA	8,319	7,994	6,850	7,404	9,983	40,550	
Fruitju	North GA	7,704	8,262	3,920	4,251	686	25,322	
Mountain Fruit	North GA	6,426					27,487	
Grand Total		22,449					29,015	
Fruit R Us	North GA						27,169	
Oranges 'n Onions	South GA						18,030	
Orange U Glad	North GA	2,605	7,411	3,317	6,227	6,551	26,111	
Bob's Fruit	North GA	1,565	9,842	9,967	8,993	7,818	38,185	
Navel Oranges & I	South GA	1,481	1,561	5,879	5,668	5,591	20,180	
Middle Georgia F	Mid GA	1,126	1,473	3,064	4,406	5,469	15,538	
Grand Total		48,236	63,093	53,671	43,733	58,854	267,587	

**5** All data is now shown on the pivot table. You can confirm this by noticing as no filter arrows show funnels now.

# 4 Ways to Remove Fields

The image displays four different methods to remove fields from an Excel PivotTable, each shown in a separate screenshot of the PivotTable Fields task pane.

- Method 1 (Top Left):** A red circle highlights the checkbox for the 'Region' field. A yellow callout box with a red '1' says: "Clear the checkbox for the field you wish to remove."
- Method 2 (Top Middle):** A red circle highlights the 'Product' field in the Columns area. A yellow callout box with a red '1' says: "You can also remove fields by dragging the field name off of the field". A red arrow points from the 'Product' field to the 'Product' field in the Rows area, where a red 'X' is shown.
- Method 3 (Top Right):** A red circle highlights the 'Remove Field' option in the context menu. A yellow callout box with a red '2' says: "Right-click any item in the Region column." A red circle highlights the 'Region' field in the Columns area.
- Method 4 (Bottom Right):** A red circle highlights the 'Remove "Region"' option in the context menu. A yellow callout box with a red '1' says: "Right-click any item in the Region column." A red circle highlights the 'Region' field in the Columns area.

# Report Filter Feature

**1** Choose fields to add to report:

**Drag City into the Filters section.**

**2** A new field appears above the pivot table.

**3**

**4**

**5** OK

**6** Only vendors in Atlanta appear.

**7**

**8**

**9** OK

City	Vendor	Sum of Cases Sold
Atlanta	Bob's Fruit	38,185
Atlanta	Fruit R Us	27,169
Atlanta	Fruitju	27,487
Atlanta	Orange U Glad	26,111
Atlanta	<b>Grand Total</b>	<b>118,952</b>

# Generate Multiple Pivot Tables

**1** Click this arrow on the first PivotTable Tools menu.

**2** Show Report Filter Pages...

**3** OK

**4** A new worksheet appears for every city in the same workbook as the original pivot table.

	A	B	C	D	E	F	G
1	City	Atlanta					
2							
3	Vendor	Sum of Cases Sold					
4	Bob's Fruit	38,185					
5	Fruit R Us	27,169					
6	Fruitju	27,487					
7	Orange U Glad	26,111					
8	Grand Total	118,952					
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

Pivot Table   Fruit Sales   Atlanta   Blue Ridge   Brunswick   Clarkesville   Macon   Val...

# Delete Report Filter Worksheets

**1** Click on first worksheet you wish to delete.

**2** Hold down Shift key while you click on last worksheet you wish to delete.

**3** Right-click any worksheet tab.

**4** Delete

**5** Delete

**6** Only the original two worksheets remain.

City	Sum of Cases Sold
Bob's Fruit	38,185
Fruit R Us	27,169
Fruitju	27,169
Middle Georgia	27,169
Mountain Fruit	27,169
Navel Oranges & More	20,180

# Pivot Table Sorting Nuances

**1** Add the fields in this order.

**2** Choose Report Layout from the Design menu.

**3** Show in Compact Form

**4** Choose Subtotals from the Design menu.

**5** Show all Subtotals at Top of Group

**6** Right-click any amount associated with a product.

**7** Sort

**8** Sort Largest to Smallest

Make sure to click on an amount, as opposed to a product name if you're trying to rank sales highest to lowest.

Region	City	Vendor	Product	Sum of Cases S...
Region	City	Vendor	Product	Sum of Cases S...

Region	City	Vendor	Product	Sum of Cases S...
Region	City	Vendor	Product	Sum of Cases S...

Region	City	Vendor	Product	Sum of Cases S...
Region	City	Vendor	Product	Sum of Cases S...

# Pivot Table Sorting Nuances

**1** Unlike sorting a worksheet, pivot tables only sort one row field at a time, thus Regions, Cities, and Vendors are still in alphabetical order.

**2** Select any amount associated with a vendor.

**3** Data

**4** Sort

**5** Repeat steps 2, 3, and 4 for any city as well as any region.

**6** The entire pivot table is now sorted in descending order by amount.

**7** Rule of thumb: one sort per row field.

Row Labels	Sum of Cases Sold
Mid GA	56088
Macon	56088
Middle Georgia	15538
Oranges	5469
Mixed Berries	4406
Kiwi	3064
Bananas	1473
Apples	1126
Whistlestop Fru	40550
Atlanta	118952
Bob's Fruit	38185
Kiwi	9967
Bananas	9842
Mixed Berries	8993
Oranges	7818

# Expanding/Collapsing

**1** Select any cell with a product.

Row Labels	Sum of Cases Sold
Bob's Fruit	38185
Kiwi	9967
Bananas	9842
Mixed Berries	8993
Oranges	7818
Apples	1565
Fruitful	27487

**2** Click on Collapse Field three times (in this case because there are 4 fields in the Rows section).

**3** Click on Collapse Field three times (in this case because there are 4 fields in the Rows section).

Row Labels	Sum of Cases Sold
North GA	173,289
Mid GA	56,088
South GA	38,210
Grand Total	267,587

**4** The whole pivot table has been collapsed. Click any + sign to drill back into the pivot table.

Row Labels	Sum of Cases Sold
North GA	173289
Mid GA	56088
Macon	56088
Whistlestop Fruit	40550
Oranges	9983
Apples	8319
Bananas	7994

**5** Optional: Click the - button to collapse a section back.

**6** Click on Expand Field three times to undo the collapsing for the whole pivot table.

# Insert Blank Lines

**1** Right-click on worksheet frame.

**2** Insert...

**3** OK

**4** Click on any cell within the pivot table and choose Design tab.

**5** Blank Rows

**6** Insert Blank Line after Each Item

**7** In this case Excel puts a blank row after each product grouping because Product is the last field in the Rows section. You cannot add blank rows within pivot tables any other way.

Row Labels	Sum of Cases Sold
North GA	173,289
Atlanta	118,952
Bob's Fruit	38,185
Kiwi	9,967
Bananas	9,842
Mixed Berries	8,993
Oranges	7,818
Apples	1,565
Fruit R Us	27,169
Bananas	6,868
Oranges	6,168
Apples	6,079
Kiwi	6,058
Mixed Berries	1,996
Fruitju	27,487
Bananas	8,442
Apples	7,704

# Number Fields Treated As Text

Product	Cases Sold	Total Sales
Oranges	6,168	
Apples	8,079	85,106
Bananas	5,842	58,420
Mixed Berries	8,993	89,930
Oranges	4,933	54,263
Apples	7,704	107,856
Kiwi	5,519	71,747
Bananas	8,442	126,630
Mixed Berries	889	11,557
Oranges	6,551	72,061
Apples	2,605	31,260
Kiwi		
Bananas		
Mixed Berries		
Oranges	6,415	89,810

**1** Recall that Total Sales on Source Data worksheet has a single blank cell, which means most Excel versions treat the entire column as containing words instead of numbers.

This behavior no longer occurs in the Office 365 version of Excel 2016.

PivotTable Fields

Choose fields to add to report:

Search

☐ Vendor

☐ Product

☒ Cases Sold

☒ Total Sales

Drag fields between areas below:

Filters

Columns

Rows

Vendor

Total Sales

Values

Sum of Cases ...

☐ Defer Layout Update

Update

Row Labels	Sum of Cases Sold
Bob's Fruit	
21910	1565
89930	8993
93816	7818
98420	9842
99670	9967
Bob's Fruit Total	38185
Fruit Direct	
9604	686
51012	4251
58800	3920
82030	8203
107406	8262
Fruit Direct Total	25322
Fruit R Us	
29940	1996

**3** Excel displays each sales amount as text rather than adding a Sum of Total Sales column.

# Correcting Number Fields Treated as Text

The image shows the Excel PivotTable Fields task pane on the left and a PivotTable on the right. The task pane has four numbered callouts: 1 points to 'Total Sales' in the Values section; 2 points to the 'Choose fields to add to report' section; 3 points to the 'Total Sales' field in the Values section; 4 points to the 'Summarize Values By' dropdown; 5 points to the 'Sum' option in the dropdown. The PivotTable on the right has a sixth numbered callout: 6 points to the 'Grand Total' row, which shows summed values.

**1** Drag Total Sales into the Values section.

**2** Excel generally counts the records instead of summing.

**3** Right-click any count.

**4** Summarize Values By

**5** Sum

**6** The amounts are now summed.

Row Lab	Sum of Cases	Sum of Total Sales
Bob's Fruit	38185	40374
Fruit Direct	25322	30885
Fruit R Us	27169	25723
Fruitju	27487	37205
Middle Geor	15538	19601
Mountain F	29015	38350
Navel Oran	20180	23537
Orange U G	26111	32136
Oranges 'n	18030	21404
Whistlesto	40550	49577
<b>Grand Total</b>	<b>267587</b>	<b>318795</b>

# Counting Text Instances in a Pivot Table

**1** Select any cell within the source data list.

**2** Click the PivotTable icon in the Insert tab.

**3** Click the PivotTable icon in the PivotTables task pane.

**4** Create PivotTable dialog box:

- Choose the data that you want to analyze:
  - Select a table or range: Table/Range: 'Fruit Sales'!\$A\$1:\$F\$51
  - Use an external data source: Choose Connection...
  - Use this workbook's Data Model
- Choose where you want the PivotTable report to be placed:
  - New Worksheet
  - Existing Worksheet: Location: 'Pivot Table'!\$D\$3
- Choose whether you want to analyze multiple tables:
  - Add this data to the Data Model
- Buttons: OK, Cancel

**5** New Worksheet

**6** Location: 'Pivot Table'!\$D\$3

**7** OK

**8** Drag City to both Rows and Values

**9** The pivot table counts the instances of each city.

Row Labels	Count of City
Atlanta	20
Blue Ridge	5
Brunswick	5
Clarkesville	5
Macon	10
Valdosta	5
<b>Grand Total</b>	<b>50</b>

# Drill Down

**Step 1:** Double-click on any number to see the underlying detail.

**Step 2:** A new worksheet displays the underlying records from the source data.

**Step 3:** Design tab in the Table Style Options task pane.

**Step 4:** Optional: Add a total row.

**Step 5:** The last column is either totaled or counted.

**Step 6:** A new total appears.

**Step 7:** Sum of Cases Sold.

**Step 8:** A new total appears.

Product	Cases Sold	Total Sales
Mixed Berry	8993	89930
Bananas	9842	98420
Kiwi	9967	99670
Apples	1565	21910
Oranges	7818	93816
<b>Total</b>	<b>38185</b>	<b>403746</b>

# Convert Pivot Table to Values

**1** Select any cell within the pivot table.

**5** Choose the Copy command on Excel's Home menu or press Ctrl-C.

**2** PivotTable Tools  
Analyze Design Tell me what you want to do

**3** Filter Refresh Change Data Clear Select

**Alternative: Press Ctrl-A in lieu of steps 2-4.**

**4** Entire PivotTable

**6** Right-click a blank cell.

**7** Options: Paste Special... Smart Lookup

**Excel 2007: Choose Paste Special and then Values.**

**8** The pivot table data is now simply values within worksheet cells.

Row Labels	Cases Sold
Mid GA	
Macon	
Bananas	
Kiwi	
Mixed Berries	
Oranges	
Middle Georgia Fruit Total	

Row Labels	Cases Sold
Mid GA	
Macon	
Middle Georgia Fruit	
Apples	1126
Bananas	1473
Kiwi	3064
Mixed Ber	4406
Oranges	5469
Middle C	15538

14	Kiwi	6850
15	Mixed Ber	7404
16	Oranges	9983
17	Whistlest	40550
18	Macon Tot	56088
19	Mid GA To	56088
20	North GA	
21	Atlanta	
22	Bob's Fruit	

# Forcing Pivot Tables to Recalculate

**1** Zero out the Cases Sold column for any vendor.

**2** Unlike worksheet formulas that generally recalculate automatically, pivot tables remain frozen in time until you refresh.

**3** Analyze

**4** Refresh

**5** The pivot table has been updated.

**6** Reset the Cases Sold column for Middle Georgia Fruit to show the original data.

**Pivot Table Data:**

Row Labels	Sum of Cases Sold
Bob's Fruit	38185
Fruit Direct	25322
Fruit R Us	0
Fruitju	27487
Middle Georgia Fruit	15538
Mountain Fruit	6415
Orange U Glad	6551
Oranges 'n Onions	18030
Whistlestop Fruit Stand	40550
<b>Grand Total</b>	<b>240418</b>

**Pivot Table Tools - Analyze Tab:**

- Filter Sections
- Refresh
- Change Data Source
- Clear
- Select
- Move PivotTable

**Pivot Table:** Fruit Sales

**Pivot Table:** Fruit Sales

**Pivot tables are a snapshot of your data in time. Changes to the underlying data won't be reflected in a pivot table until you refresh it.**

# Refreshing All Pivot Tables

**1** PivotTable Tools

**2** Refresh

**3** Data

**4** Refresh All

**5** You can also right-click any cell within a pivot table.

**6** Refresh

**The first PivotTable Tools menu Refresh button only refreshes one pivot table at a time unless you extend the menu down and choose Refresh All.**

**The Data menu has a Refresh All button that refreshes all pivot tables at once in a workbook.**

**This refresh only refreshes a single pivot table.**

	A	B
1		
2		
3	Row	
4	Wh	
5	Bob's Fruit	38185
6	Mountain Fruit	29015
7	Fruitju	7487
8	Fruit R Us	7169
9	Orange UG	1111
10	Fruit D	3222
11	Navel Orar	1180
12	Orar	290
13	Mid	8
14	Gr	7
15		
16		
17		
18		
19		
20		
21		
22		

**Sum of Cases Sold**

40550

38185

29015

27487

27169

26111

25322

20180

18030

15538

**267587**

**Pivot Table** Fruit Sales

# Auditing Pivot Tables

**Step 1:** Select any cell within the pivot table.

**Step 2:** Analyze

**Step 3:** Change Data Source

**Step 4:** Make sure that range matches the cell coordinates of the list, or update to include all rows.

**Step 5:** OK

Row Labels	Sum of Cases Sold
Mid GA	56088
North GA	173289
South GA	0
Valdosta	7

Row Labels	Sum of Cases Sold
North GA	51012
Mid GA	71097
Mid GA	15764
Mid GA	45960
Mid GA	14730
Mid GA	48466
Mid GA	49745
Mid GA	08147
Mid GA	68500
Mid GA	87934
Mid GA	81444
Mid GA	61501
Mid GA	17772
Mid GA	64669
South GA	23415
South GA	68016
South GA	52400
South GA	61464
South GA	11682
South GA	80145
South GA	8350

# Recommended Pivot Tables (Excel 2013/later)

**1** Select any cell within the list.

**2** Click the **Insert** tab.

**3** Click the **Recommended PivotTables** button in the **PivotTables** group.

**4** Suggestions for pivot tables appear in this column. You can use any of these as a starting point and add/remove fields as needed.

**5** Click **OK**.

**Recommended PivotTables**

Sum of Cases Sold by Re...

Row Labels	Sum of Cases Sold
Mid GA	56088
North GA	173289
South GA	38210
<b>Grand Total</b>	<b>267587</b>

Count of Total Sales by...

Row Labels	Count of Total Sales
Mid GA	10
North GA	30
South GA	10
<b>Grand Total</b>	<b>50</b>

Count of Total Sales, S...

Row Labels	Count of Total Sales	Sum of Cases S
Apples	10	48
Bananas	10	63
Kiwi	10	53
Mixed Berries	10	43
Oranges	10	58
<b>Grand Total</b>	<b>50</b>	<b>267</b>

Sum of Total Sales by R...

Row Labels	Sum of Total Sales
Mid GA	56088
North GA	173289
South GA	38210
<b>Grand Total</b>	<b>267587</b>

Blank PivotTable | [Change Source Data...](#)

**OK** | **Cancel**

# XLS Files

**1** Pivot tables based on Excel 97-2003 .xls workbooks work in the same fashion as Excel 2007-2016 .xlsx workbooks, but have cosmetic differences.

**2** When you create a Pivot Table using an .xls file, they look out dated, plus certain Excel features such as Slicers, Timelines, as well as PivotCharts may be disabled or behave differently.

Product	Total
Apples	602735
Bananas	686525
Kiwi	566337
Mixed Berries	451168
Oranges	651078
<b>Grand Total</b>	<b>2957843</b>

# Convert XLS Workbooks

1. File

2. Info

The Convert command only appears when Compatibility Mode appears at the top of the screen.

Compatibility Mode

Some new features are disabled to prevent problems when working with previous versions of Office. Converting this file will enable these features, but may result in layout changes.

Convert

3. Microsoft Excel

This action converts the workbook to the current file format, which allows you to use all of the new features of Excel, and it reduces the file size. The original workbook will be deleted and cannot be restored after this conversion.

☒ Do not ask me again about converting workbooks.

4. OK

5. Yes

Microsoft Excel

The workbook conversion to the current file format completed successfully. To use the new and enhanced features of the current file format, you must close and reopen the workbook. Do you want to close and reopen the workbook now?

# Thank you for attending!

I'm happy to hear from you (*e-mail is best*):

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