

NCI Technologies presents:

Microsoft[®] Office Excel[®] 2007 Training

**Get started with
PivotTable[®] reports**

Course contents

- Overview: Make sense out of data
- Lesson: Make your data work for you

The lesson includes a list of suggested tasks and a set of test questions.

Overview: Make sense out of data



Your worksheet has lots of data, but do you know what those numbers mean? Does the data answer your questions?

PivotTable reports offer a fast and powerful way to analyze numerical data, look at the same data in different ways, and answer questions about it.

In this short course you'll learn how PivotTable reports work and find out how to create one in Excel 2007.

Course goal

- Use a PivotTable report to analyze and summarize your data.

Lesson

Make your data work for you

Make your data work for you

Country	Salesperson	Order Amount	Order ID
Canada	Buchanan	\$440.00	
Canada	Suyama	\$1,863.40	
USA	Peacock	\$1,552.60	7/12/2008
USA	Leverling	\$654.06	7/15/2008
USA	Peacock	\$3,597.90	7/11/2008
USA	Leverling	\$4.80	7/16/2008
Canada	Buchanan		7/23/2008
Canada	Dodsworth	\$2,440.00	
USA	Leverling	\$517.80	
USA	Peacock	\$1,119.90	
USA	Davolio	\$1,614.88	
USA	Peacock	\$109.80	
USA	Peacock	\$1,504.00	

Row Labels	Sum of Order Amount
Buchanan	68792.25
Callahan	123032.67
Davolio	182500.09
Dodsworth	75048.04
Fuller	162503.78
King	116962.99
Leverling	201196.27
Peacock	225763.68
Suyama	72527.63
Grand Total	1228327.4

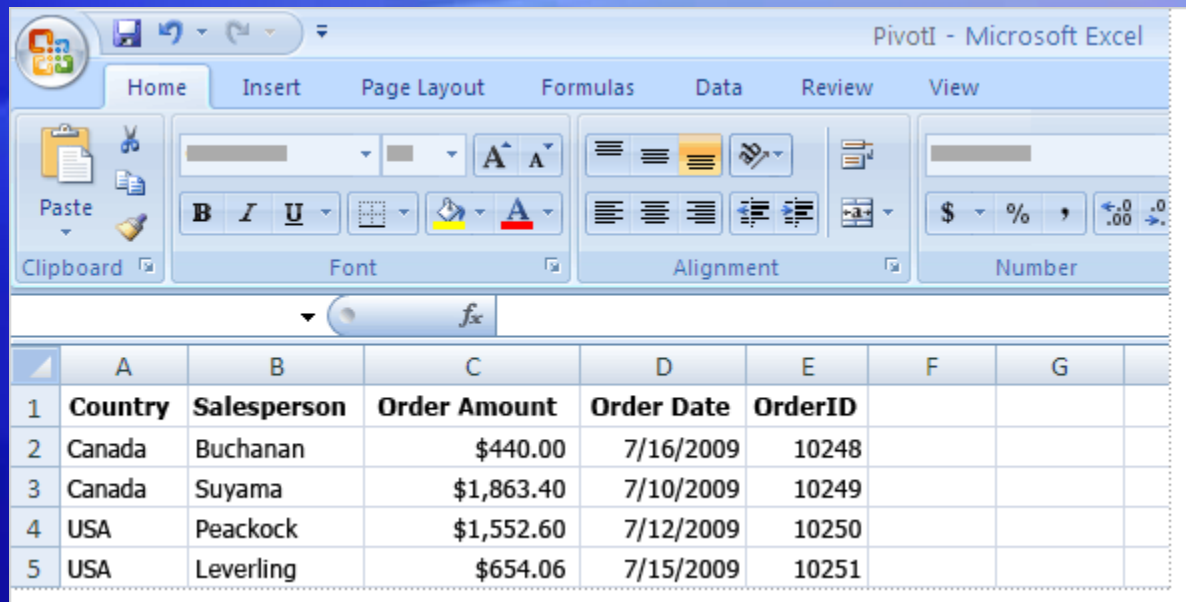
Imagine an Excel worksheet of sales figures. It lays out thousands of rows of data about salespeople in two countries along with how much they sold on individual days.

It's a lot of data to deal with—listed in row after row and divided into multiple columns. How can you get information out of the worksheet and make sense out of all of the data?

Use PivotTable reports. They turn the data into small, concise reports that tell you exactly what you need to know.

Get started with PivotTable reports

Review your source data



PivotTable - Microsoft Excel

Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number

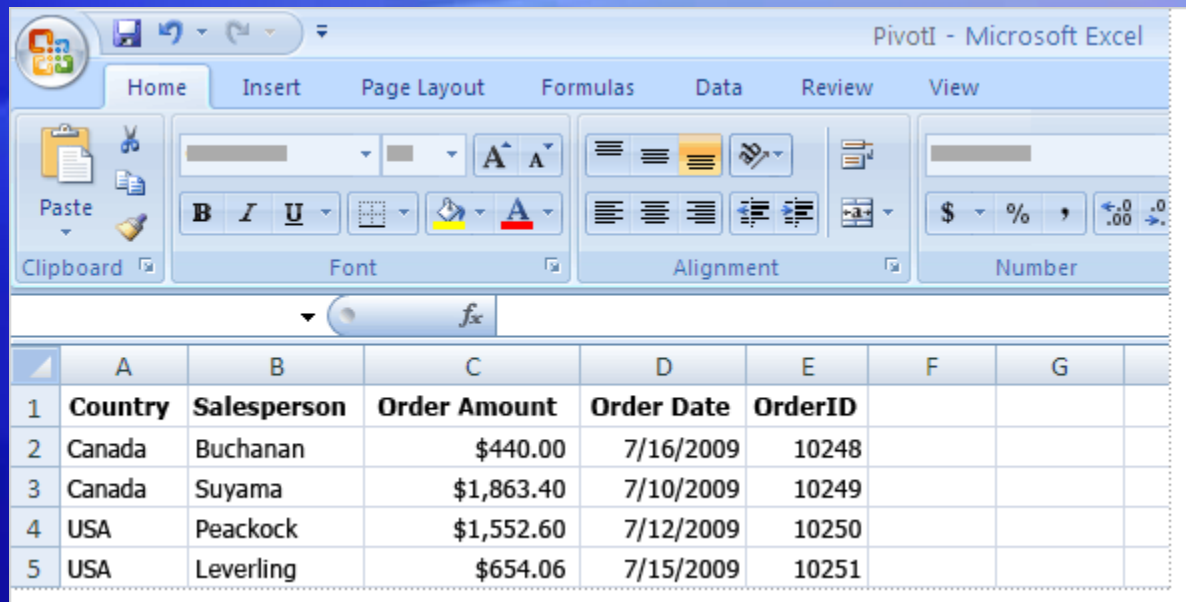
	A	B	C	D	E	F	G
1	Country	Salesperson	Order Amount	Order Date	OrderID		
2	Canada	Buchanan	\$440.00	7/16/2009	10248		
3	Canada	Suyama	\$1,863.40	7/10/2009	10249		
4	USA	Peacock	\$1,552.60	7/12/2009	10250		
5	USA	Leverling	\$654.06	7/15/2009	10251		

Before you start to work with a PivotTable report, take a look at your Excel worksheet to make sure it's well prepared for the report.

When you create a PivotTable report, each column of source data becomes a **field** that you can use in the report.

Fields summarize multiple rows of information from the source data.

Review your source data



The screenshot shows the Microsoft Excel interface with the PivotTable task pane on the right. The main worksheet displays a table with the following data:

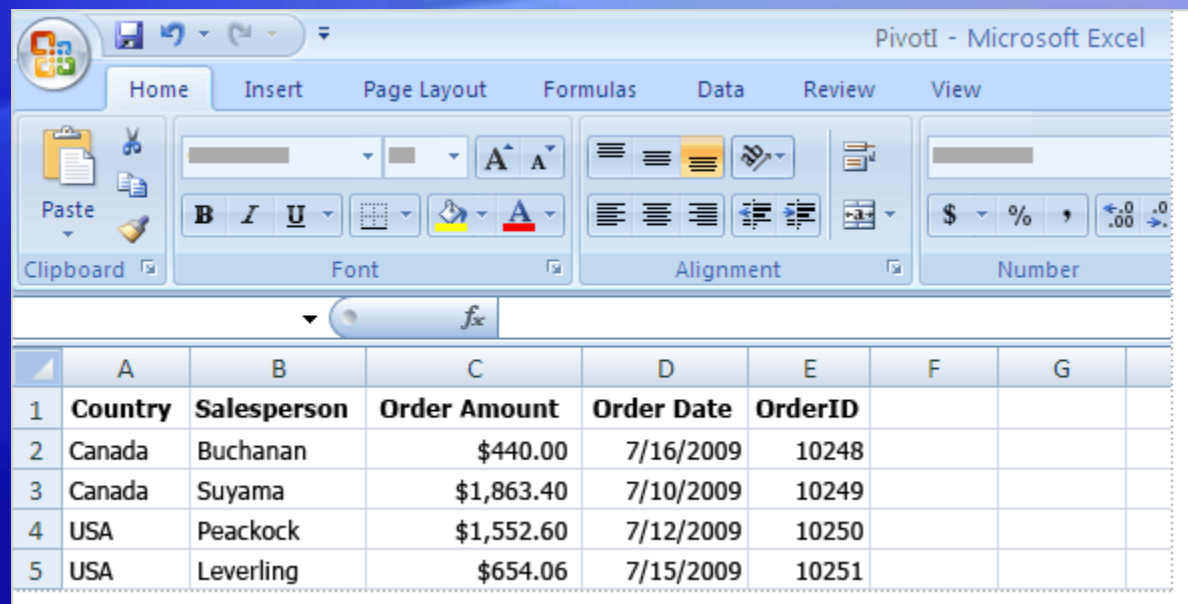
	A	B	C	D	E	F	G
1	Country	Salesperson	Order Amount	Order Date	OrderID		
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5	USA	Leverling	\$654.06	7/15/2009	10251		

The names of the fields for the report come from the column titles in your source data. So be sure you have names for each column across the first row of the worksheet in the source data.

The remaining rows below the headings should contain similar items in the same column.

For example, text should be in one column, numbers in another column, and dates in another column. In other words, a column that contains numbers should not contain text, and so on.

Review your source data



The screenshot shows the Microsoft Excel interface with the PivotTable task pane open on the right. The main window displays a table with the following data:

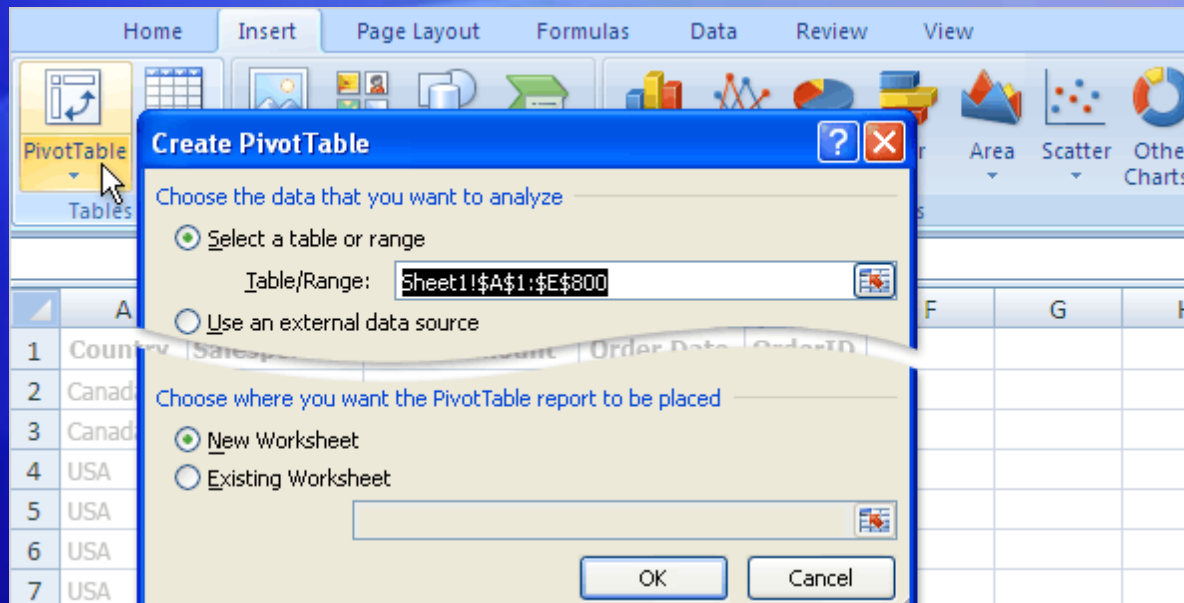
	A	B	C	D	E	F	G
1	Country	Salesperson	Order Amount	Order Date	OrderID		
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5	USA	Leverling	\$654.06	7/15/2009	10251		

Finally, there should be no empty columns within the data that you're using for the PivotTable report.

It's also best if there are no empty rows.

For example, blank rows that are used to separate one block of data from another should be removed.

Get started

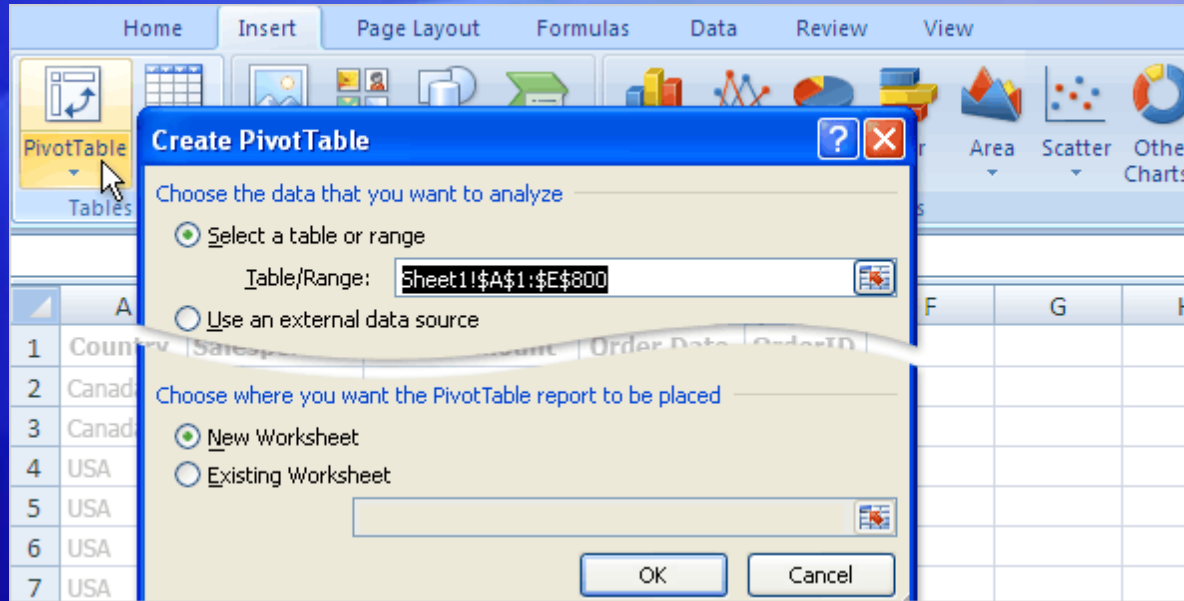


Here's how to get started with a PivotTable report.

You use the **Create PivotTable** dialogue box, shown here.

1. When the data is ready, click anywhere in the data.
2. On the **Insert** tab, in the **Tables** group, click **PivotTable**, and then click **PivotTable** again. The **Create PivotTable** dialogue box opens.

Get started

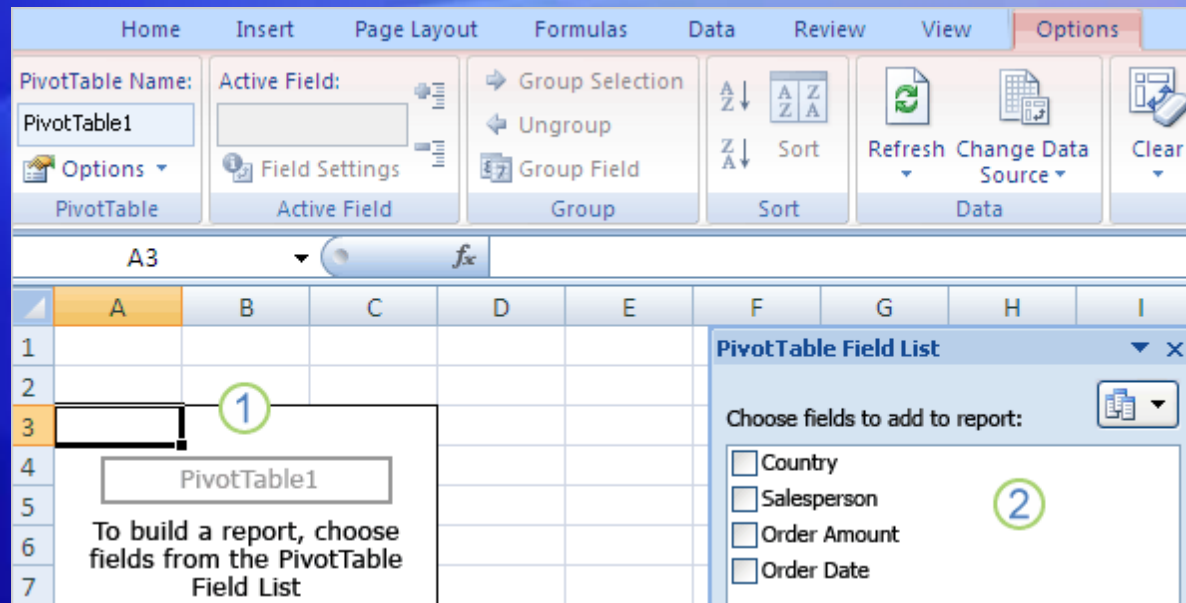


Here's how to get started with a PivotTable report.

You use the **Create PivotTable** dialogue box, shown here.

3. The **Select a table or range** option is already selected for you. The **Table/Range** box shows the range of the selected data, which you can change if you want.
4. Click **OK**.

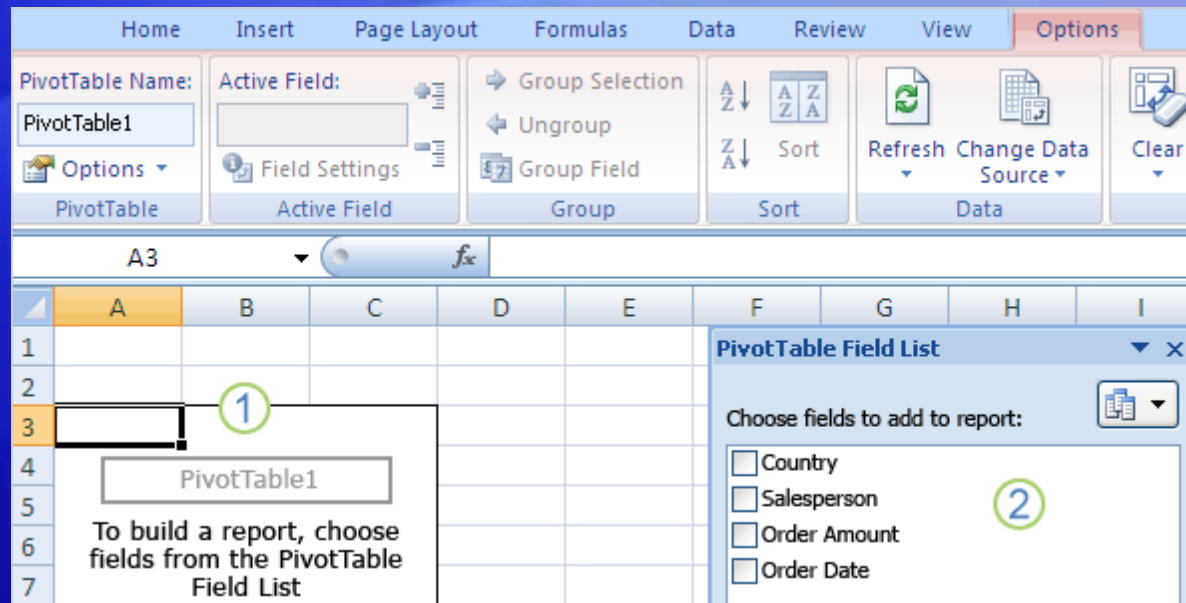
PivotTable report basics



This is what you see in the new worksheet after you close the **Create PivotTable** dialog box.

- ① On one side is the **layout area** ready for the PivotTable report.
- ② On the other side is the **PivotTable Field List**. This list shows the column titles from the source data. As mentioned earlier, each title is a **field**: Country, Salesperson, and so on.

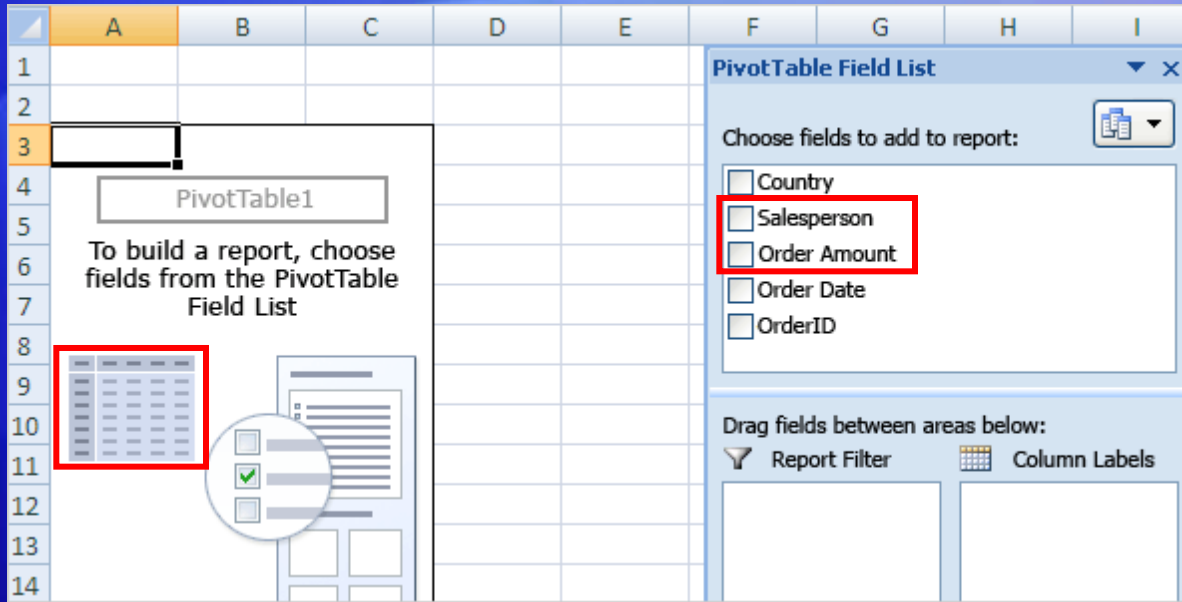
PivotTable report basics



You create the PivotTable report by moving any of the fields shown in the **PivotTable Field List** to the layout area.

To do this, either select the check box next to the field name, or right-click a field name and then select a location to move the field to.

Build a PivotTable report



The screenshot shows an Excel spreadsheet with a PivotTable named 'PivotTable1' in cell A3. The PivotTable is currently empty. To the right, the 'PivotTable Field List' task pane is open, showing a list of fields to be added to the report: Country, Salesperson, Order Amount, Order Date, and OrderID. The 'Salesperson' and 'Order Amount' fields are highlighted with a red box, indicating they are selected. Below the list, there are two sections for dragging fields: 'Report Filter' and 'Column Labels'. The 'Report Filter' section has a checkmark icon, and the 'Column Labels' section has a grid icon.

To build a report, choose fields from the PivotTable Field List

PivotTable1

PivotTable Field List

Choose fields to add to report:

- Country
- Salesperson
- Order Amount
- Order Date
- OrderID

Drag fields between areas below:

Report Filter Column Labels

Now you're ready to build the PivotTable report. The fields you select for the report depend on what you want to know.

To start: How much has each person sold?

To get the answer, you need data about the salespeople and their sales numbers.

So in the **PivotTable Field List**, you'll select the check boxes next to the **Salesperson** and **Order Amount** fields. Excel then places each field in a default area of the layout.

Build a PivotTable report

The screenshot shows an Excel spreadsheet with a PivotTable named 'PivotTable1' in the range A3:D14. The PivotTable is currently empty. To the right, the 'PivotTable Field List' task pane is open, showing a list of fields to be added to the report: Country, Salesperson, Order Amount, Order Date, and OrderID. Below this list, there are two areas for dragging fields: 'Report Filter' (with a funnel icon) and 'Column Labels' (with a grid icon). A red box highlights the PivotTable, and a circular callout shows a magnified view of the PivotTable's structure, indicating that the 'Salesperson' field is being used as the row labels and the 'Order Amount' field is being used as the column labels.

PivotTable1

To build a report, choose fields from the PivotTable Field List

PivotTable Field List

Choose fields to add to report:

- Country
- Salesperson
- Order Amount
- Order Date
- OrderID

Drag fields between areas below:

Report Filter Column Labels

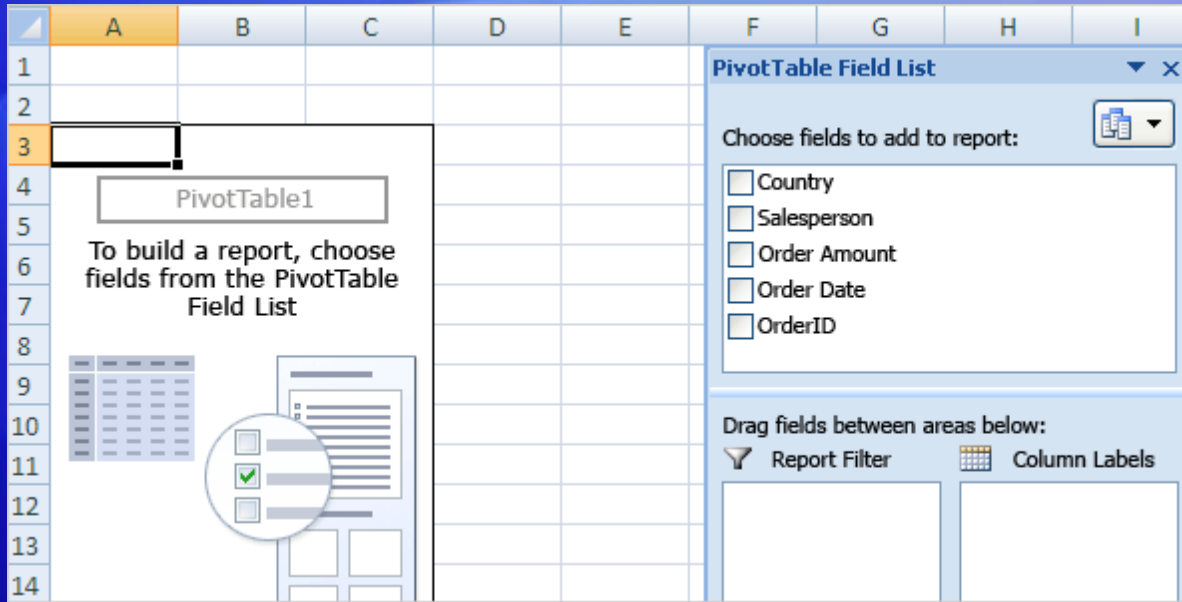
The grey table at the illustration's far left provides a conceptual view of how the report will automatically appear based on the fields you select.

Here are details.

The data in the **Salesperson** field (the salespeople's names), which doesn't contain numbers, is displayed as rows on the left side of the report.

The data in the **Order Amount** field, which does contain numbers, correctly shows up in an area to the right.

Build a PivotTable report

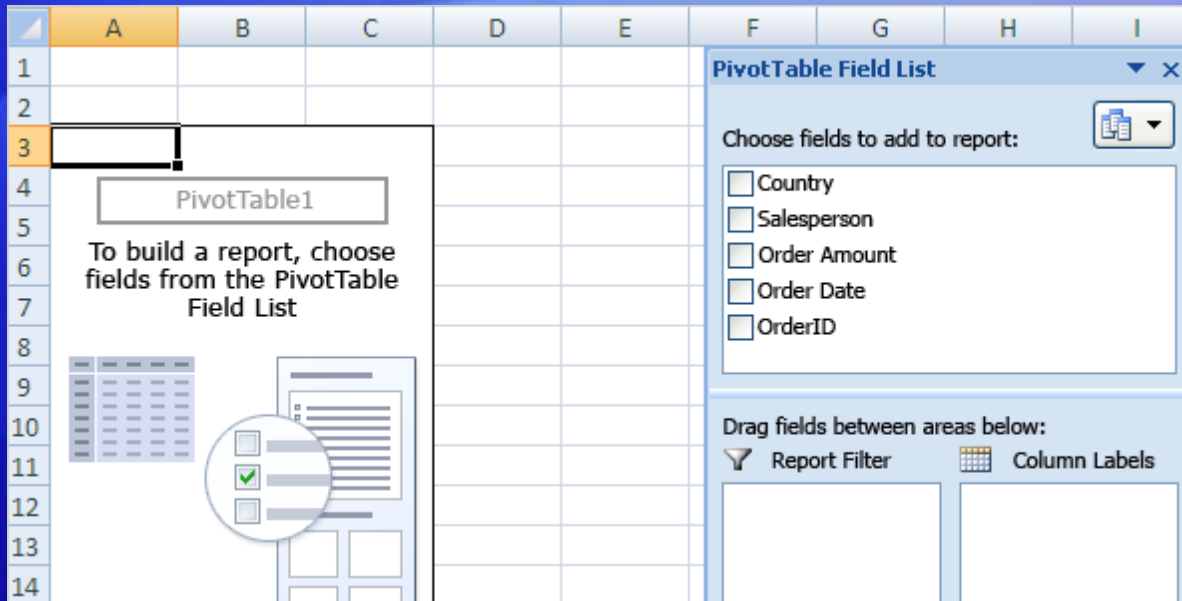


The screenshot shows an Excel spreadsheet with a PivotTable named 'PivotTable1' in the range A3:D14. The PivotTable is currently empty. To the right, the 'PivotTable Field List' task pane is open, showing a list of fields to be added to the report: Country, Salesperson, Order Amount, Order Date, and OrderID. The 'Order Amount' field is selected with a checkmark. Below the list, there are two areas for dragging fields: 'Report Filter' and 'Column Labels'. The 'Report Filter' area contains the 'Order Amount' field, and the 'Column Labels' area is empty. A callout box points to the 'Order Amount' field in the list, indicating that it is the field being selected.

It doesn't matter whether you select the check box next to the **Salesperson** field before or after the **Order Amount** field. Excel automatically puts them in the right place every time.

Fields without numbers will land on the left, and fields with numbers will land on the right, regardless of the order in which you select them.

Build a PivotTable report



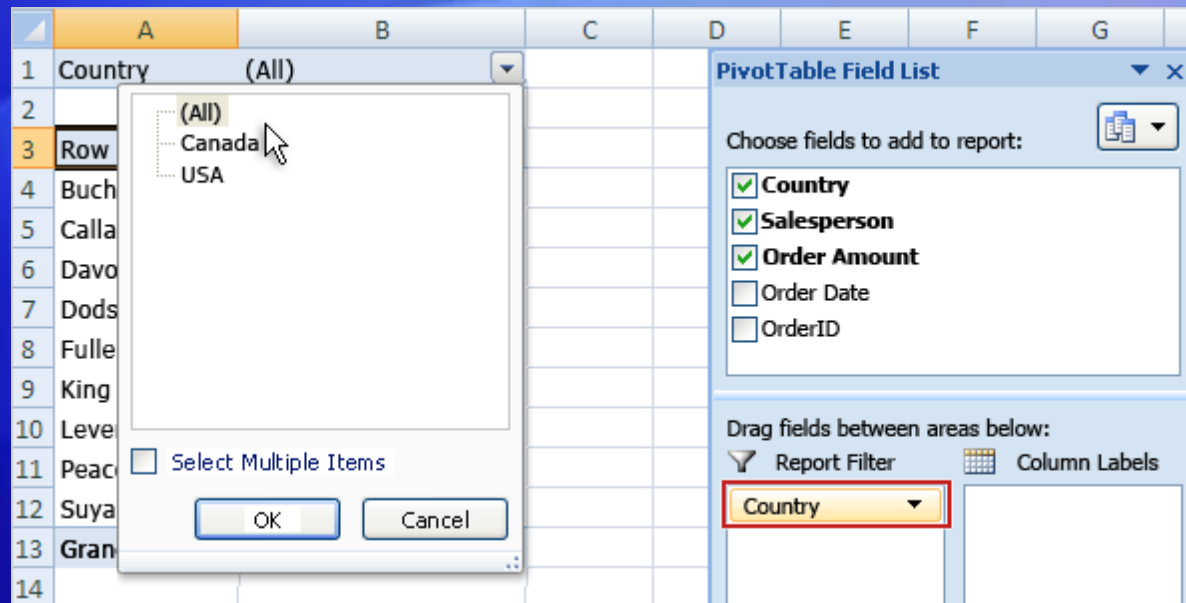
That's it. With just two mouse clicks, you can see at a glance how much each salesperson sold.

And here are a couple of parting tips on the topic.

First, it's fine to stop with just one or two questions answered; the report doesn't have to be complex to be useful. PivotTable reports can offer a fast way to get a simple answer.

Next, don't worry about building a report incorrectly. Excel makes it easy to try things out and see how data looks in different areas of the report.

See sales by country



Now you know how much each salesperson sold. But the source data lays out data about salespeople in two countries, Canada and the United States.

So another question you might ask is: What are the sales amounts for each salesperson by country?

To get the answer, you can add the **Country** field to the PivotTable report as a **report filter**. You use a report filter to focus on a subset of data in the report, often a product line, a time span, or a geographic region.

See sales by country

The screenshot shows an Excel spreadsheet with a PivotTable in column A. The PivotTable is filtered by 'Country'. The PivotTable Field List task pane is open on the right, showing the following fields:

- Country
- Salesperson
- Order Amount
- Order Date
- OrderID

The 'Country' field is currently in the 'Report Filter' area. A context menu is open over the 'Country' field in the PivotTable, showing the following options:

- (All)
- Canada
- USA

The 'Country' field in the Report Filter area of the PivotTable Field List is highlighted with a red box.

By using the **Country** field as a report filter, you can see a separate report for Canada or the United States, or you can see sales for both countries together.

To do this, right-click the **Country** field in the **PivotTable Field List**, click **Add to Report Filter**, and then take it from there.

See sales by date

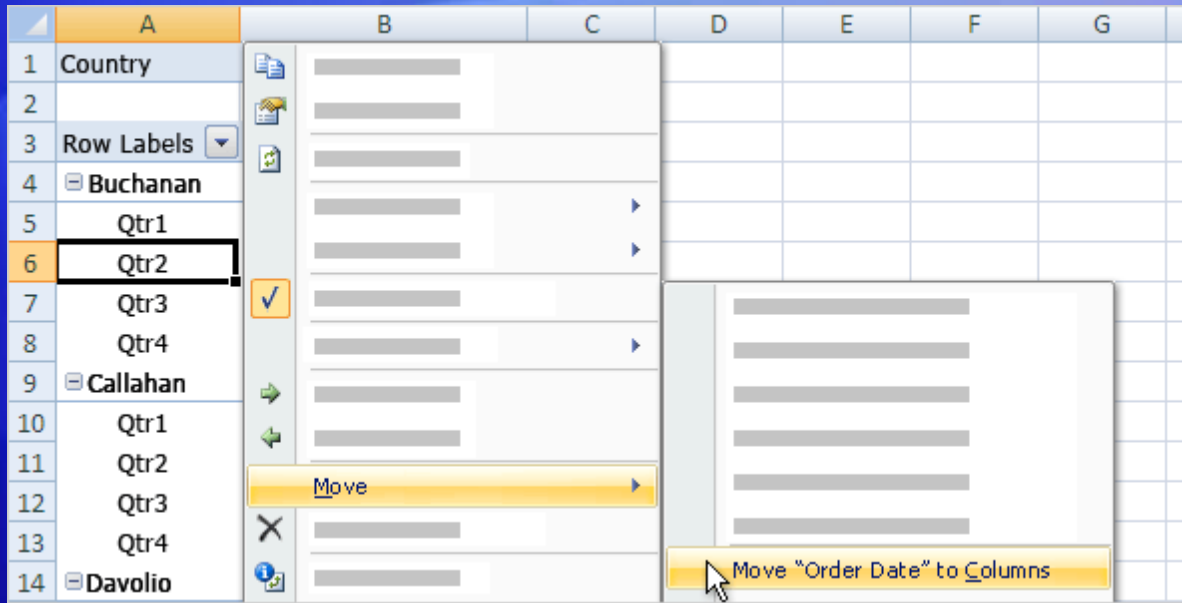
The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable has 'Country' as the Row Labels and 'Salesperson', 'Order Amount', and 'Order Date' as columns. The 'Order Date' column is highlighted. The 'Grouping' dialog box is open, showing the 'Auto' section with 'Starting at: 7/10/2009' and 'Ending at: 5/2/2011'. The 'By:' section has a list of time intervals: Seconds, Minutes, Hours, Days, Months, Quarters, and Years. 'Quarters' is selected. The 'Number of days:' is set to 1. The 'PivotTable Field List' task pane is also visible, showing the fields 'Country', 'Salesperson', 'Order Amount', 'Order Date', and 'OrderID' with checkboxes. 'Country', 'Salesperson', 'Order Amount', and 'Order Date' are checked, while 'OrderID' is unchecked. The 'Report Filter' and 'Column Labels' sections are also visible.

The original source data has a column of Order Date information, so there is an **Order Date** field on the **PivotTable Field List**.

This means you can find the sales by date for each salesperson.

To find out, you'll add the **Order Date** field to your report and then use the **Grouping** dialog box to group the date data and create a more manageable view.

Pivot the report



Though the PivotTable report has answered your questions, it takes a little work to read the entire report—you have to scroll down the page to see all the data.

So you can pivot the report to get a different view that's easier to read.

When you pivot a report, you transpose the vertical or horizontal view of a field, moving rows to the column area or moving columns to the row area. It's easy to do.

Where did drag-and-drop go?

The image shows an Excel spreadsheet on the left and the PivotTable Field List task pane on the right. The spreadsheet has a PivotTable with 'Row Labels' in column 3 and 'Grand Total' in row 13. The names listed are Buchanan, Callahan, Davolio, Dodsworth, Fuller, King, Leverling, Peacock, and Suyama. The PivotTable Field List task pane is open, showing the 'Choose fields to add to report:' section with 'Salesperson' checked. Below, the 'Drag fields between areas below:' section shows four boxes: 'Report Filter', 'Column Labels', 'Row Labels', and 'Values'. The 'Order Amount' field is being dragged from the 'Column Labels' box to the 'Values' box, as indicated by a red arrow.

If you prefer to build a PivotTable report by using the drag-and-drop method, as you could in previous versions of Excel, there's still a way to do that.

There are four boxes at the bottom of the **PivotTable Field List: Report Filter, Row Labels, Column Labels, and Values**. You can drag fields to these boxes to designate how the fields are used in the report.

The picture shows how you can drag the **Order Amount** field from the **Column Labels** to the **Values** box to add that field to the Values area of the report.

Suggestions for practice

1. Create the PivotTable report layout area.
2. Create a PivotTable report.
3. Change a heading name.
4. Sort the report.
5. Add a field to the report.
6. Add a report filter.
7. Pivot the report.
8. Add currency formatting to the report.

Test question 1

After you build a PivotTable report, you can't change the layout. (Pick one answer.)

1. True.
2. False.

Test question 1: Answer

False.

You can make changes as you go, or just start over.

Test question 2

What are PivotTable fields? (Pick one answer.)

1. Columns from the source data.
2. The area where you pivot data.
3. The PivotTable report layout area.

Test question 2: Answer

Columns from the source data.

Column headings from the source data become the names of the fields that you can use to build the PivotTable report. Each field summarises multiple rows of information from the source data.

Test question 3

In the PivotTable Field List, you can tell which fields are already displayed on the report. (Pick one answer.)

1. True.
2. False.

Test question 3: Answer

True.

Fields used on the report have a check mark beside them, and the names are in bold type.