

Excel Pivot Tables

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Overview of PivotTable and PivotChart reports

Use a PivotTable report to summarize, analyze, explore, and present summary data. Use a PivotChart report to visualize that summary data in a PivotTable report, and to easily see comparisons, patterns, and trends. Both a PivotTable report and a PivotChart report enable you to make informed decisions about critical data in your enterprise. The following sections provide an overview of PivotTable reports and PivotChart reports.

About PivotTable reports

A PivotTable report is an interactive way to quickly summarize large amounts of data. Use a PivotTable report to analyze numerical data in detail and to answer unanticipated questions about your data. A PivotTable report is especially designed for:

- Querying large amounts of data in many user-friendly ways.
- Subtotaling and aggregating numeric data, summarizing data by categories and subcategories, and creating custom calculations and formulas.
- Expanding and collapsing levels of data to focus your results, and drilling down to details from the summary data for areas of interest to you.
- Moving rows to columns or columns to rows (or "pivoting") to see different summaries of the source data.
- Filtering, sorting, grouping, and conditionally formatting the most useful and interesting subset of data to enable you to focus on the information that you want.
- Presenting concise, attractive, and annotated online or printed reports.

You often use a PivotTable report when you want to analyze related totals, especially when you have a long list of figures to sum and you want to compare several facts about each figure. In the PivotTable report illustrated below, you can easily see how the third-quarter golf sales in cell F3 compare to sales for another sport, or quarter, or to the total sales.

	A	B	C
1	Sport	Quarter	Sales
2	Golf	Qtr3	\$1,500
3	Golf	Qtr4	\$2,000
4	Tennis	Qtr3	\$600
5	Tennis	Qtr4	\$1,500
6	Tennis	Qtr3	\$4,070
7	Tennis	Qtr4	\$5,000
8	Golf	Qtr3	\$6,430

- 1 Source data, in this case, from a worksheet
- 2 The source values for Qtr3 Golf summary in the PivotTable report
- 3 The entire PivotTable report
- 4 The summary of the source values in C2 and C8 from the source data

	E	F	G
	Sum of Sales	Quarter	
	Sport	Qtr3	Qtr4
	Golf	\$7,930	\$2,000
	Tennis	\$4,670	\$6,500
	Grand Total	\$12,600	\$8,500

In a PivotTable report, each column or field in your source data becomes a PivotTable field that summarizes multiple rows of information. In the preceding example, the Sport column becomes the Sport field, and each record for Golf is summarized in a single Golf item.

A value field, such as Sum of Sales, provides the values to be summarized. Cell F3 in the preceding report contains the sum of the Sales value from every row in the source data for which the Sport column contains Golf and the Quarter column contains Qtr3. By default, data in the Values area summarize the underlying source data in the PivotTable report in the following way: numeric values use the SUM function, and text values use the COUNT function.

To create a PivotTable report, you must define its source data, specify a location in the workbook, and lay out the fields.

Ways to work with a PivotTable report

After you create the initial PivotTable report by defining the data source, arranging fields in the PivotTable field List, and choosing an initial layout, you can perform the following tasks as you work with a PivotTable report:

Explore the data by doing the following:

- Expand and collapse data, and show the underlying details that pertain to the values.
- Sort, filter, and group fields and items.
- Change summary functions, and add custom calculations and formulas.

Change the form layout and field arrangement by doing the following:

- Change the PivotTable report form: compact, outline, or tabular.
- Add, rearrange, and remove fields.
- Change the order of fields or items.

Change the layout of columns, rows, and subtotals by doing the following:

- Turn column and row field headers on or off, or display or hide blank lines.
- Display subtotals above or below their rows.
- Adjust column widths on refresh.
- Move a column field to the row area or a row field to the column area.

- Merge or unmerge cells for outer row and column items.

Change the display of blanks and errors by doing the following:

- Change how errors and empty cells are displayed.
- Change how items and labels without data are shown.
- Display or hide blank lines

Change the format by doing the following:

- Manually and conditionally format cells and ranges.
- Change the overall PivotTable format style.
- Change the number format for fields.
- Include OLAP Server formatting.

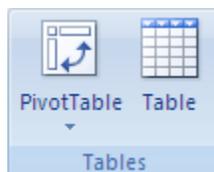
Create or delete a PivotTable or PivotChart report

To analyze numerical data in depth and to answer unanticipated questions about your data, use a PivotTable or PivotChart report.

Create a PivotTable or PivotChart report

To create a PivotTable or PivotChart report, you must connect to a data source and enter the report's location.

1. Select a cell in a range of cells, or put the insertion point inside of a Microsoft Office Excel table. Make sure that the range of cells has column headings.
2. Select the type of report to generate by doing one of the following:
 - To create a PivotTable report, on the **Insert** tab, in the **Tables** group, click **PivotTable**, and then click **PivotTable**.



Excel displays the **Create PivotTable** dialog box.

- To create a PivotTable and PivotChart report, on the **Insert** tab, in the **Tables** group, click **PivotTable**, and then click **PivotChart**.

Excel displays the Create PivotTable with PivotChart dialog box.

3. Select a data source by doing one of the following:
 - **Choose the data that you want to analyze**
 1. Click Select a table or range.
 2. Type the range of cells or table name reference, such as =QuarterlyProfits, in the Table/Range box.

If you selected a cell in a range of cells or if the insertion point was in a table before you started the wizard, Excel displays the range of cells or table name reference in the **Table/Range** box.

Alternatively, to select a range of cells or table, click **Collapse Dialog**  to temporarily hide the dialog box, select the range on the worksheet, and then press **Expand Dialog** .

Consider using a table name reference instead of a range of cells, because rows added to a table are automatically included in the PivotTable report when you refresh the data.

If the range is in another worksheet in the same workbook or another workbook, type the workbook and worksheet name by using the following syntax:
([workbookname]sheetname!range).

- **Use external data**

1. Click Use an external data source.
2. Click Choose Connection.
Excel displays the Existing Connections dialog box.
3. In the Show drop-down list box at the top of the dialog box, select the category of connections for which you want to choose a connection or select All Existing Connections (which is the default).
4. Select a connection from the Select a Connection list box, and then click Open.

If you choose a connection from the **Connections in this Workbook** category, you will be reusing or sharing an existing connection. If you choose a connection from the **Connection files on the network** or **Connection files on this computer** categories, Excel copies the connection file into the workbook as a new workbook connection, and then uses that file as the new connection for the PivotTable report.

4. Specify a location by doing one of the following:
 - To place the PivotTable report in a new worksheet starting at cell A1, click **New Worksheet**.
 - To place the PivotTable report in an existing worksheet, select **Existing Worksheet**, and then specify the first cell in the range of cells where you want to position the PivotTable report.

Alternatively, click **Collapse Dialog**  to temporarily hide the dialog box, select the beginning cell on the worksheet, and then press **Expand Dialog** .

5. Click **OK**.

Excel adds an empty PivotTable report to the specified location and displays the PivotTable Field List so that you can add fields, create a layout, and customize the PivotTable report.

If you create a PivotChart report, Excel creates an **associated PivotTable report** directly beneath the PivotChart report. A PivotChart report and its associated PivotTable report must always be in the same workbook.