PivotTables is a powerful built-in data-analysis feature in Excel. A *PivotTable* analyzes, summarizes, and manipulates data in large lists, databases, worksheets, or other collections. It is called a PivotTable because fields can be moved within the table to create different types of summary lists, providing a "pivot." PivotTables offer flexible and intuitive analysis of data.

Although the data that appear in PivotTables look like any other worksheet data, the data in the data area of the PivotTable cannot be directly entered or changed. The PivotTable is linked to the source data; the output in the cells of the table are read-only data. The formatting (number, alignment, font, etc.) can be changed as well as a variety of computational options such as SUM, AVERAGE, MIN, and MAX.

Figure 1 shows PivotTable template after you start PivotTable tool.
■ **Row field—** Row fields have a row orientation in a PivotTable report and are displayed as row labels. These appear in the ROW area of a PivotTable report layout.
■ **Column field—** Column fields have a column orientation in a PivotTable report and are displayed as column labels. These appear in the COLUMN area of a PivotTable report layout.
■ **Data field—** Data fields from a list or table contain summary data in a PivotTable, such as numeric data (e.g., statistics, sales amounts). These are summarized in the DATA area of a PivotTable report layout.
■ **Page field—** Page fields filter out the data for other items and display one page at a time in a PivotTable report.

BUILDING A PIVOTTABLE

1. Go to my website to click on the link Excel PivotTable Exercise Data File to download Excel file **Excel PivotTable_Ex_Data.xls.**
2. Open the file. You should see something similar to the Figure 2.
3. Make sure one of the data cell is selected. Click the Insert tab, then click the PivotTable button in the Tables group.
4. The Create PivotTable dialog box opens. In the Select a table or range box, type: $A$1:$E$97 if they are not there already [This is the range of data for PivotTable analysis including column headings in row 1.] Another way to specify a data range is to place the cursor in A1 (cell) then press down "Shift" key and highlight all the data cells in the range.
5. Select New worksheet for the PivotTable. Click on OK. You should see something like Figure 1. If you do not see something like Figure 1, right click on the pivot table image and select PivotTable Options, then click on Display tab, check on Classical PivotTable Layout.
6. Using the PivotTable Field List, drag the Month button to the PAGE area. The page field operates like the row and column fields but provides a third dimension to the data. It allows another variable to be added to the PivotTable without necessarily viewing all its values at the same time.
7. Drag the Region button to the COLUMN area. The column field is another variable used for comparison.
8. Drag the Magazine button to the ROW area. A row field in a PivotTable is a variable
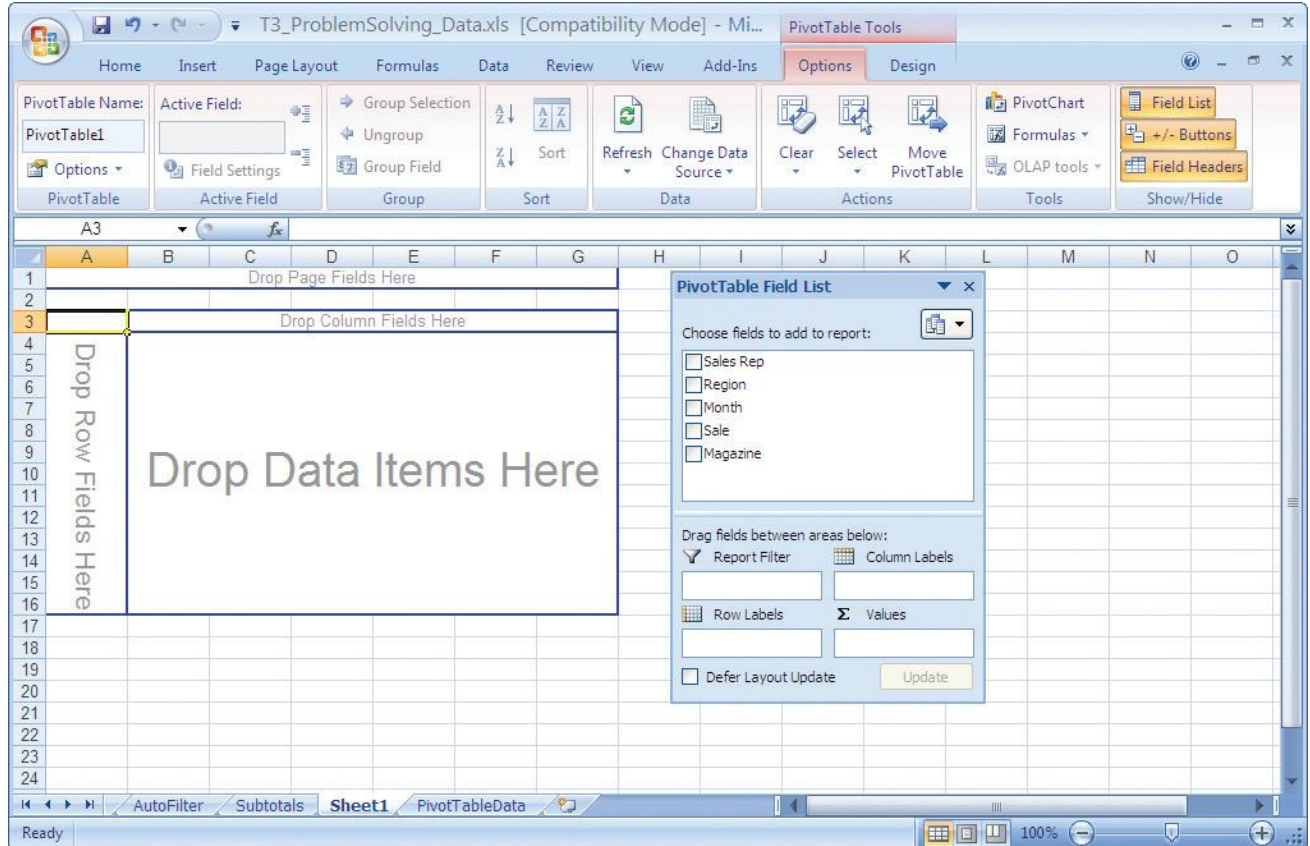
that takes on different values.

Figure 1 PivotTable

9. Drag the Sale button to the DATA area. The data field is the variable that the Pivot Table summarizes. Your PivotTable should now look like Figure 3.

Q&A based on Figure 3:

Which magazine was the best selling magazine for all months in all regions?
 Ans: Dollars and Sense

Which magazine was the best selling magazine for Feb in all regions?
Ans: Business Times

Which region was the best selling region?
Ans: East

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PivotTable_Data.xls [Compatibility Mode]

	A	B	C	D	E	F	G	H	I
1	**Sales Rep**	**Region**	**Month**	**Sale**	**Magazine**				
2	Bucknell, Peter	West	1-Jan	$ 500	Business Times				
3	Smith, Michael	South	1-Feb	$ 900	IT Weekly				
4	Anderson, Rachel	South	1-Feb	$ 700	Value Driven Journal				
5	Fuller, Brad	North	1-Feb	$ 375	People, Places, and Machines				
6	Cushman, David	North	1-Feb	$ 450	Dollars and Sense				
7	Nell, Janet	East	1-Jan	$ 550	Value Driven Journal				
8	Peaslee, Garrett	East	1-Feb	$ 800	People, Places, and Machines				
9	Drew, Nancy	West	1-Jan	$ 700	Dollars and Sense				
10	Nell, Janet	East	1-Feb	$ 600	Business Times				
11	Smith, Michael	South	1-Feb	$ 1,250	IT Weekly				
12	Anderson, Rachel	South	1-Feb	$ 1,400	Business Times				
13	Cushman, David	North	1-Jan	$ 1,000	IT Weekly				
14	Bucknell, Peter	West	1-Feb	$ 600	Dollars and Sense				
15	Peaslee, Garrett	East	1-Jan	$ 1,000	Value Driven Journal				
16	Fuller, Brad	North	1-Feb	$ 1,200	People, Places, and Machines				
17	Drew, Nancy	West	1-Feb	$ 580	Dollars and Sense				
18	Smith, Michael	South	1-Jan	$ 400	Value Driven Journal				

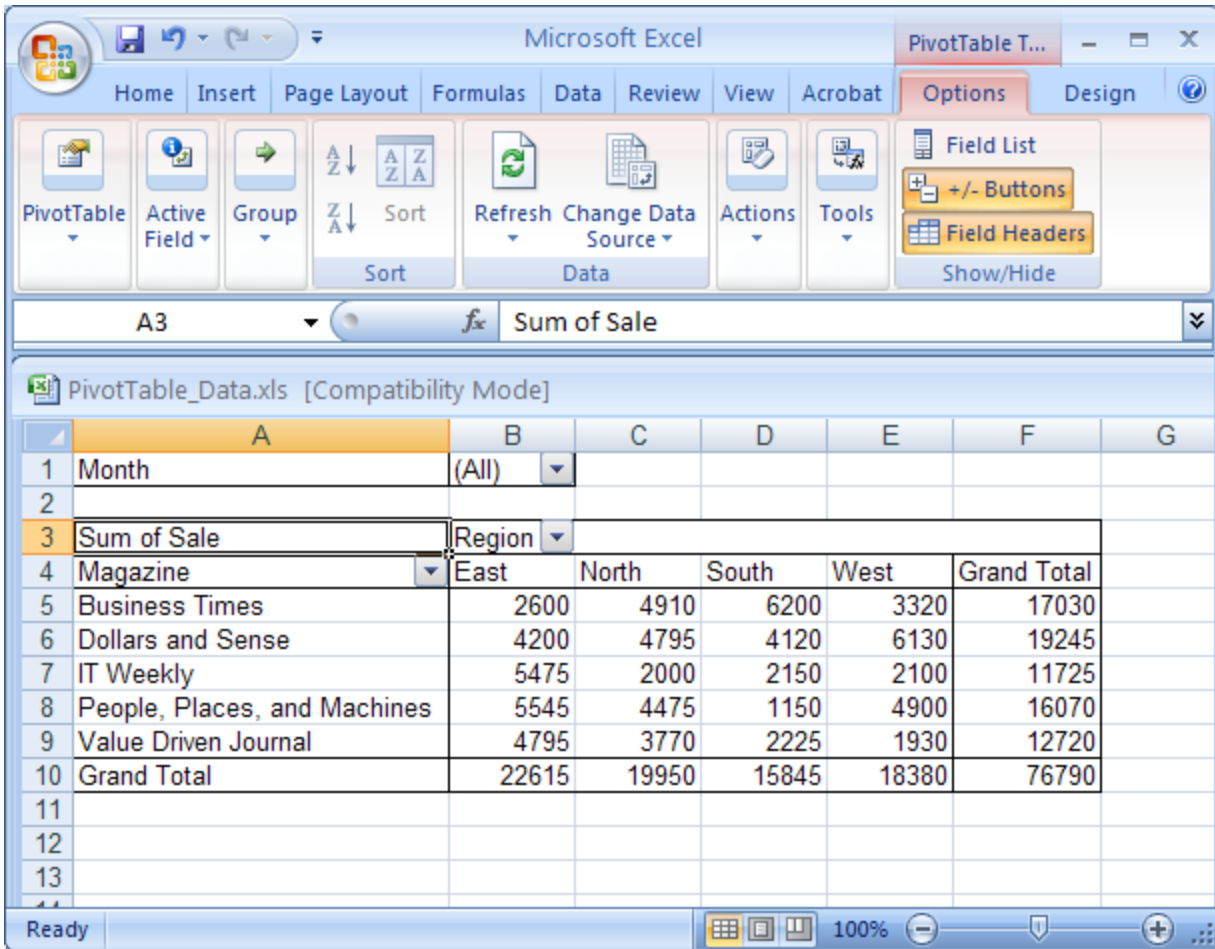Ready | 100%

Figure 2 Sample data records

Figure 3 PivotTable Exercise – Magazine Sales by Regions and Month

MODIFYING A PIVOTTABLE VIEW

After a PivotTable is built, modifications can be done at any time. For example, examining the sales for a particular region would mean that the Region field would need to be changed. Use the drop-down list to the right of the field name. Select a region and click **OK.** The grand total dollar amounts by region are at the bottom of each item, which have been recalculated according to the selected region (or regions).

To clear a PivotTable and re-create a new one,
1. Select the existing PivotTable by clicking on any part of the PivitTable
2. Make sure Options are selected on the menu bar on the top
3. click the **Clear** button on the PivotTable ribbon, click **Clear All,** then arrange the fields like this:
   (1). Magazine in the PAGE area.
   (2). Month in the COLUMN area.
   (3). Sales Rep in the ROW area.
   (4). Sale in the DATA area.

The completed PivotTable dialog box should look like the one in Figure 4.

The PivotTable now illustrates the sales by month for each salesperson, along with the total amount for the sales for each sales representative. Who was the best sales representative?
Ans: Garrett Peaslee.

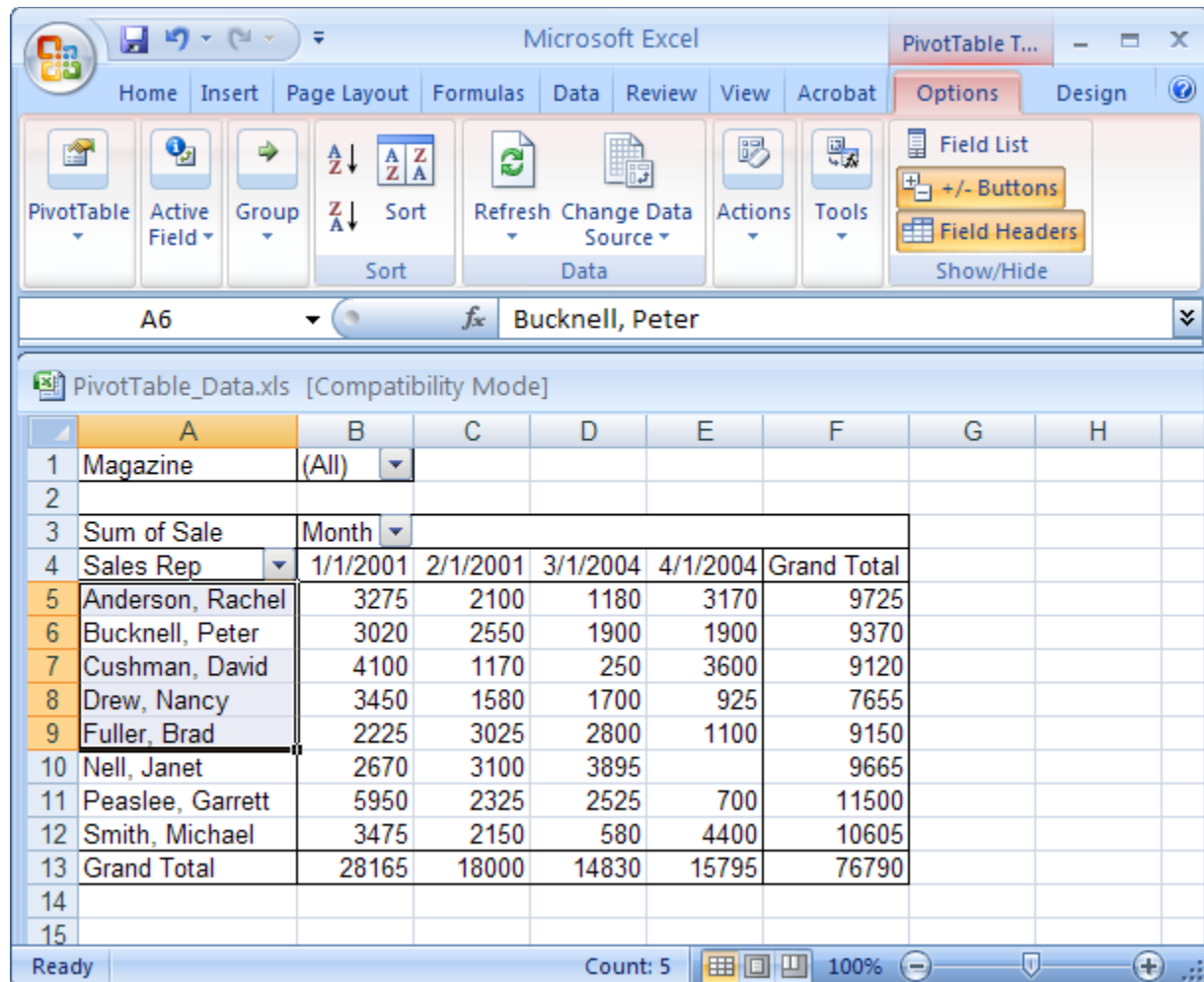|	A	B	C	D	E	F	G	H
1	Magazine	(All)						
2								
3	Sum of Sale	Month						
4	Sales Rep	1/1/2001	2/1/2001	3/1/2004	4/1/2004	Grand Total		
5	Anderson, Rachel	3275	2100	1180	3170	9725		
6	Bucknell, Peter	3020	2550	1900	1900	9370		
7	Cushman, David	4100	1170	250	3600	9120		
8	Drew, Nancy	3450	1580	1700	925	7655		
9	Fuller, Brad	2225	3025	2800	1100	9150		
10	Nell, Janet	2670	3100	3895		9665		
11	Peaslee, Garrett	5950	2325	2525	700	11500		
12	Smith, Michael	3475	2150	580	4400	10605		
13	Grand Total	28165	18000	14830	15795	76790		
14								
15								

Figure 4 PivotTable – Sales by Sales Representatives

BUILDING A PIVOTCHART
A *PivotChart* is a column chart (by default) that is based on the data in a PivotTable.
The chart type can be changed if desired. To build a PivotChart:
1. Make sure PivotTable is selected and Options is selected. If not, click on any part of the PivitTable and click on the Options.
2. Click the PivotChart icon
3. Select type of chart you want to use. Then click on OK
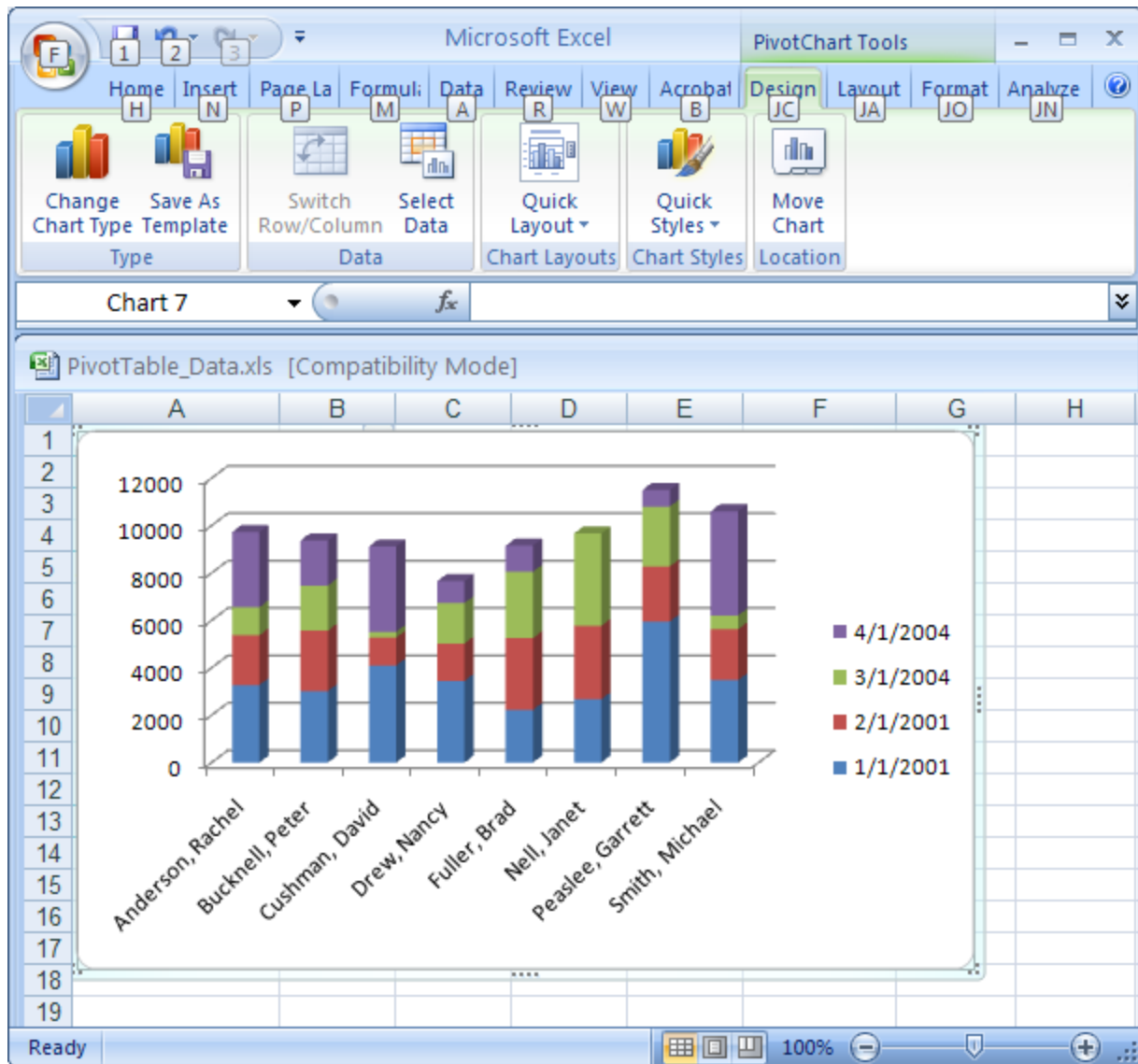4. The PivotChart should look like Figure 5.

Figure 5 PivotChart

You should explore other features of PivotTable before you start the assignment.