INSTRUCTOR
REFERENCE

Make Sense of Sales and Product Data

with Pivot Tables Using Excel

Solution Series: Instructor Reference

MAKE SENSE OF SALES AND PRODUCT DATA WITH PIVOT TABLES USING EXCEL

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INSTRUCTOR REFERENCE

Welcome to the Element K Content training team.

Our goal is to provide you with the best computer training available—and we know exactly what that takes. Our corporate heritage is based in training. In fact, we use our courseware every day, in classes just like yours, so you can be confident that the material has been tested and proven to be effective.

If you have any suggestions on how we can improve our products or services, please contact us.

ABOUT THIS WORKBOOK

Make Sense of Sales and Product Data with PivotTables Using Excel is a hands-on workbook that will help students use PivotTables to summarize and analyze large amounts of data.

PREREQUISITES

We designed *Make Sense of Sales and Product Data with PivotTables Using Excel* for the student who is comfortable with personal computers, educated in Excel 97 or higher, and who needs to learn how to use Excel's PivotTable functionality to summarize data. Students should take:

- *Excel 97: Worksheets*
- *Excel 2000: Worksheets*
- Or have equivalent knowledge

Students participating in this Lab should be familiar with the following skills:

- Opening, creating, and saving a worksheet.
- Navigating in a worksheet and workbook.
- Previous experience with PivotTables is not required.

OBJECTIVES

When students are done working their way through these Labs, they'll be able to:

- Create a PivotTable based on sales data and make the summary easier to read by grouping data and applying formatting.
- Use PivotTables to answer questions about sales by category and region by month and use a chart to view the summary graphically. Students will also be able to use a PivotTable to summarize the performance of sales representatives.
- Analyze the buying patterns of customers by using PivotTables and a variety of summary functions.
- Use PivotTables to summarize the results of two different kinds of business surveys.

ABOUT THE SOLUTION SERIES LAB MODEL

Element K Content's Solution Series Lab workbooks provide focused, business-oriented activities for experienced software users. Our goal is to provide students with several software tips and techniques that they might not find in a typical training manual or in an off-the-shelf reference book. Students will have the opportunity to tie together skills and theories, and transfer their knowledge to common business situations. Students can even experiment with their own data files in this learning environment.

Each workbook contains a group of Labs related to a central theme. Students will have an opportunity to apply skills and push the limits of the software application while completing business tasks. Students use techniques that let them pull together some software basics and then go beyond the basics.

The Solution Series Lab model can be used in a variety of educational settings. Whether you're using the workbooks for instructor-led training, additional practice material, self-study skills enhancement, or with a distance learning class, the Solution Series Lab model provides students and instructors plenty of flexibility.

SETUP INFORMATION

Hardware and software requirements

To run this workshop, students will need:

1. Windows 95 or Windows 98
2. Excel 97 or Excel 2000

Data Files

We've created sample data files for you to use to complete this Lab. If you would like to use your own files in addition to ours, please do. The step-by-step instructions are geared toward the files we've created, but you can apply the steps to your own files during practice time.

To use our samples from the data disk or CD-ROM, copy them to a folder (for example, C:\Student) on your hard drives. If a self-extracting data file is provided, run the self-extracting data file located on the data disk. This will place the data files in a Student folder on your hard drives.

To download the files we've created, you can also go to:
http://support.elementkcourseware.com/

A Solutions folder has been provided on the data disk. This folder contains completed files (when appropriate) to which you can compare your work.

WHAT YOU'LL FIND IN EACH WORKBOOK

- A table of contents
- An Introduction, which contains a summary of what each workbook contains
- An Overview, which provides a business case, a list of the Lab objectives, and hardware and software requirements, as well as the student prerequisites
- Labs containing introductions, objectives, setup instructions, Lab setup information, numbered steps, and conclusions
- Notes, QuickTips, and Solution Points where appropriate in each Lab
- Solution Series Review
- A QuickSteps section with procedures that correspond to each Lab

Overview

Each workbook begins with an introduction to the Labs. In this section, you'll find out about the requirements for hardware and software; student prerequisites are listed here as well.

Labs

Every workbook is broken down into Labs. Each Lab contains activities that relate to the central theme of the Lab. The main components of each Lab are as follows:

- Lab setup - At the beginning of each Lab, students will find a list detailing what they'll need to complete that particular Lab.
- Numbered steps - Students will use each Lab's detailed, numbered steps section (specific instructions) to complete the Lab.
- Solution Points - Students will find useful supporting information related to each Lab throughout the workbook. They provide helpful background or conceptual information.
- Notes - Some activities contain Notes within the numbered steps. A note signifies an important piece of information that students should be aware of while following the step-by-step instructions.
- QuickTips - QuickTips provide important reminders, tips, and shortcuts to make the tasks easier.
- Illustrations - Within each Lab, students will find illustrations that give them feedback at crucial steps.

Review

Students will find a set of review questions at the end of each workbook. These questions can be used for independent reflection, or for discussion between the students and the instructor.

QuickSteps

If students would like to complete a Lab without guided, detailed steps, they can use the procedures found in the QuickSteps section. By using this guide, they'll have an opportunity to investigate solutions, since the QuickSteps section does not contain step-by-step instructions. This is ideal for the discovery learner!

HOW TO USE THIS WORKBOOK WITH THE SOLUTION SERIES LAB MODEL

Just as you would experiment in a school laboratory, encourage students to experiment in this workshop. We recommend using the following technique when presenting Labs in the Solution Series line:

- **Introduce the workshop.** Explain how you'll run the day, and introduce the business scenario(s) that will frame the course's Labs. You may want to show final products that will be created during the Labs, so that students know where you're headed.
- **Introduce each individual Lab.** Explain the purpose of the Lab and discuss the concepts required to complete it.
- **Let students complete the Lab as they choose.** They can follow the general instructions in the QuickSteps section or the step-by-step instructions in the Lab. Students may choose to work independently or with others, depending on their learning styles.
- **Review each Lab's major components.** After students complete a Lab, review the main points with them. Ask questions to check for student understanding and then move on to set up and deliver the next Lab.

Some workbooks contain Labs that build on one another so the student creates a final product by the time they complete the last Lab. In this case, they should work through the Labs in sequence. Other workbooks simply contain Labs based on a related topic so the Labs don't need to be completed sequentially. The Teaching This Workbook section will address this point for each Lab.

TEACHING THIS WORKBOOK

Introducing the workshop

In this Excel Lab, students will use PivotTables to summarize various types of data in a number of different ways. As you prepare to run the Lab, we recommend keying the activities in advance, so that you're familiar with all of the techniques.

As you set up the day and introduce the Lab to students, you can show them the sample files they'll be working with or printouts of the completed files. As you show students the finished products, mention that they can complete the activities using either the sample data we've provided or their own data.

Sequence of Labs

The Labs in *Make Sense of Sales and Product Data with PivotTables Using Excel* build on one another, so it is suggested that students complete them in the sequence in which they are presented.

Lab 1: Make it easy to read

This activity discusses the need to be familiar with the data on which a PivotTable will be based and discusses the components of a PivotTable. Steps are provided to guide the student who has never created PivotTables before, and they can be used as a review for the student who has some familiarity with the procedure. You might encourage students who are experienced with PivotTables to try using the QuickSteps for this activity.

If your students are new to using PivotTables, they may initially have difficulty grasping the concept. Assure them that it becomes easier to understand as they use PivotTables. If you'd like to show them a finished PivotTable before they create one, you could open Complete Lone Pine Q3 Sales.xls from the Solutions folder.

In the task on grouping data, you might encourage students to explore how other types of data can be grouped. When formatting the data values, students could try different number formats to see which they prefer. When applying an AutoFormat to the PivotTable, encourage students to experiment until they find the one that most appeals to them. If your students are using Excel 2000, have them explore the use of the drop-down arrows on the Row and Column fields.

Lab 2: See sales trends

The titles of the tasks in this and subsequent Labs are focused on common business questions the student can answer by summarizing and analyzing data in PivotTables. A new element or skill is introduced in each task.

If students are using the sample files provided with the workbook, encourage them to actually put themselves in the place of the owner of Lone Pine Outfitters who has to make critical business decisions. You could consider keeping a running list of the decisions made by the students based on the data summaries they create. In all tasks, you might challenge students to interpret the data themselves before discussing the material provided in the workbook.

On the way to answering the question "What were sales by category by month?", students see how to format values as thousands of dollars and to change the name of the data field.

In "What were the trends?", students learn how to create a chart from the data in a PivotTable. There are separate directions provided for Excel 97 and Excel 2000 users. If you have time, you might first let students experiment with PivotTable selection techniques. This task is a good opportunity for students to see how different types of charts would display the same data. Again, encourage students to discuss what the chart tells them about the business.

"How did sales vary by region?" also has separate directions for Excel 97 and Excel 2000. Students see how to modify an existing PivotTable and how to see that their chart is modified as well. Ask them what trends or patterns they see in this new view of the data and whether they prefer looking at the numbers or the chart.

In the next task, "What products are doing well?", students drag a field off the PivotTable, add a new field, and add more detail. The additional detail should give them more information about sales patterns.

Finally, students look at the performance of sales reps by product category and change the summary function used to get another measurement of sales performance. You might ask what sales rep(s) they would reward (or maybe fire) based on this information and why.

Lab 3: Spot market patterns

Students first create a new PivotTable to summarize the spending of each customer by product category. Encourage them to speculate on the reasons for the patterns they see. Students view the supporting detail behind a summary value by double-clicking on the value.

In working on the question "Who were our biggest customers?", students sort a column in the PivotTable and then use advanced options to limit the view to the top 3 customers. They then add two more summary functions to get more information on the buying patterns of these customers.

In “What products do best in each region?”, students completely modify the PivotTable to look at the pattern of sales of product category in each sales region. They use the % Of Total summary function. They then create a second PivotTable on the same sheet to look at the same data summarized as an Index. This function may be new to many students, so you might want to spend some time discussing the calculation behind it.

Lab 4: Analyze product surveys

Two different types of business surveys are used in this activity—one that employs a rating scale and another with Yes/No/Neutral answers.

The first sample survey is a customer satisfaction survey about a particular product. You might ask students what types of surveys with a rating scale they have administered or replied to. Students use the Count function and display the result as % Of Row. Students may be seeing the PivotTable Options dialog box for the first time when they turn off the grand totals for the columns, so you may want to spend a little time discussing the options available. If there is time, you could have students create a chart of the survey results. Ask them what the ratings for each question tell them about the product and what they would do as a result.

The second sample survey asks for replies of Yes, No, or Neutral to questions about product features. Ask students what surveys of this type they’ve seen. In this task, students see how to create a custom list to sort the data so the PivotTable items will be in the order they want. Ask students what can they conclude from the results.

Your Notes:

REVIEW

Make Sense of Sales and Product Data

with Pivot Tables Using Excel

Students have completed a series of activities where they used PivotTables to answer a number of common business questions.

The students used the questions below to review what they have learned. The answers to the questions can be used to spark discussions with your students.

Review Questions

1. **What are the three required parts of a PivotTable?**

   The Row, Column, and Data fields.

2. **How can you add additional detail to a PivotTable?**

   Add an additional Row or Column field.

3. **What is one technique you can use to view all the detail behind a summary value in a PivotTable?**

   Double-click on the data value.

4. **How can you sort the items in a PivotTable in a custom order?**

   Create a custom list by choosing Tools, Options, and selecting the Custom Lists tab.

Additional Resources

1. ***http://www.elementkjournal.com***
2. ***http://support.microsoft.com/support/excel/content/faq/ default8***
3. ***http://support.microsoft.com/support/excel/faq/xl2k/ default.asp***.

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