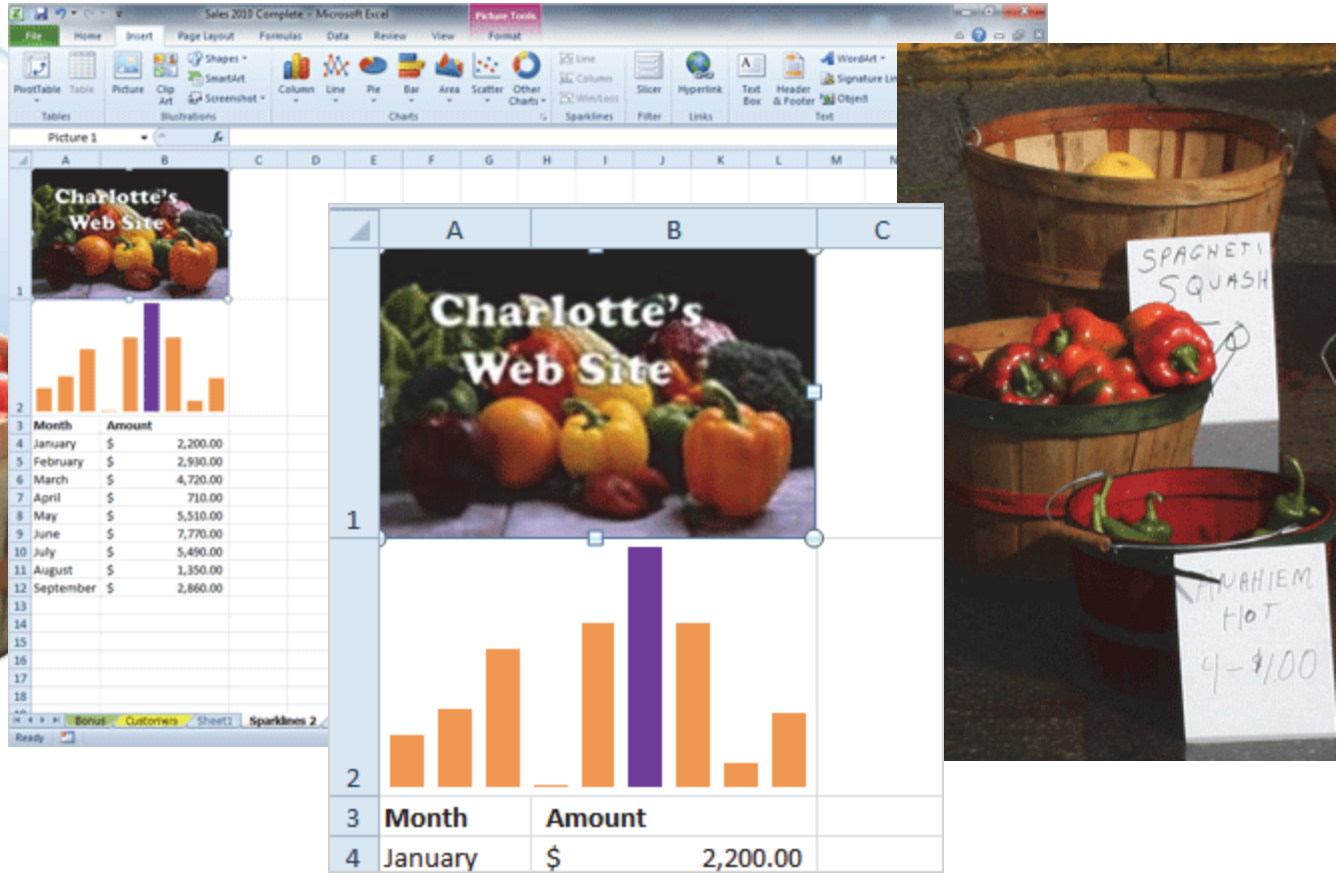
The Advanced Guide to
Microsoft Excel 2010

Microsoft Office Specialist Exam 77-888 Study Guide

another Computer Mama Guide





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.



another Computer Mama Guide

Advanced Guide to Microsoft Excel 2010

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Advanced Guide to Microsoft Excel 2010

Chapter 1: Tables and List
Take 1: Works for Me!, page 11
Objectives and Menu Map, page 12
Practice, page 45
Test Yourself, page 46

Take 2: Work Smarter, Not Harder, page 47
Objectives and Menu Map, page 48
Practice, page 81
Test Yourself, page 82

Chapter 2: Analyzing Data Visually
Take 1: What Happened? (Pivot Tables), page 83
Objectives and Menu Map, page 84
Practice, page 117
Test Yourself, page 118

Take 2: What Did You See? (Pivot Charts), page 119
Objectives and Menu Map, page 120
Practice, page 159
Test Yourself, page 160

Chapter 3: Sharing and Collaboration
Take 1: Working Overtime, page 161
Objectives and Menu Map, page 162
Practice, page 194
Test Yourself, page 194

Take 2: Prepare to Share, *page 195*
Objectives and Menu Map, page 196
No Practice Activity
Test Yourself, page 244

Take 3: Working with Macros, *page 245*
Objectives and Menu Map, page 246
Practice, page 293
Test Yourself, page 294

Advanced Excel Skill Test, page 295

Microsoft Excel 2010 Study Guide, page 7
Index, page 297



Microsoft Office Specialist Certification



What is the Microsoft Office Specialist Certification?

The Microsoft Office Specialist certification validates through the use of exams that you have obtained specific skill sets within the applicable Microsoft Office programs and other Microsoft programs included in the Microsoft Office Specialist Program. The candidate can choose which exam(s) they want to take according to which skills they want to validate.

CertiPort is the premier provider for validating technology skills.

The **Microsoft Office Specialist** tests are offered at authorized testing centers.

For more information on the MOS exam topics or to find a testing center near you please contact: **www.certiport.com**

What is the Microsoft Office Specialist Certification Program?

The **Microsoft Office Specialist (MOS) Certification Program** enables candidates to show that they have something exceptional to offer – proven expertise in Microsoft Office programs. Recognized by businesses and schools around the world, millions of certifications have been obtained in over 100 different countries. The **Microsoft Office Specialist (MOS) Certification Program** is the only Microsoft-approved certification program of its kind.

The Microsoft Office Specialist Certification Series



Core Certification: Pass any 1 test:
Word 2010 Core: Exam 77-881
Excel® 2010 Core: Exam 77-882
PowerPoint® 2010: Exam 77-883
Access® 2010: Exam 77-885
Outlook® 2010: Exam 77-884



Expert Certification: Pass either test:
Word 2010 Expert: Exam 77-887
Excel® 2010 Expert: Exam 77-888



Master: Pass 3 required and 1 elective test:
Required
Word 2010 Expert: Exam 77-887
Excel® 2010 Expert: Exam 77-888
PowerPoint® 2010: Exam 77-883

Elective
Access® 2010: Exam 77-885 or
Outlook® 2010: Exam 77-884

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The Benefits of Certification



For More Information:
www.certiport.com
www.microsoft.com

Why Get Certified?

For employers, the certification provides skill-verification tools that not only help assess a person's skills in using Microsoft Office programs but also the ability to quickly complete on-the-job tasks across multiple programs in the Microsoft Office system. (http://www.microsoft.com/learning/en/us/certification/mos.aspx). Certification proves a certain level of advanced competency with the programs in question. Employers don't have to wonder if the skills stated on the resume are honest and without exaggeration. This can lead to further employment opportunities and increased pay.

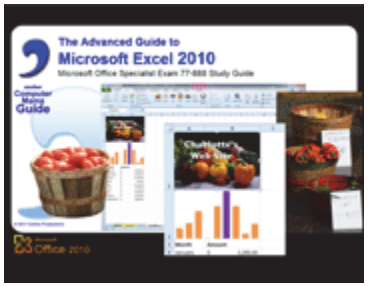
A person holding Microsoft Office Certification shows not just a level of skill, but an ability to quickly complete tasks, due to familiarity with the program and it's many time-saving features. The hard work that goes into learning Microsoft Office programs to the level of proficiency necessary for successful completion of the Certification Exams also indicates a desire on behalf of the student to learn and succeed.

The Benefits: Earn More, Find Jobs Quicker

Research indicates that employees with Microsoft Certification earn more and find jobs quicker than those employees without certification. Furthermore, employees with certification report a greater feeling of confidence. These things translate into greater job satisfaction. (http://www.microsoft.com/learning/en/us/certification/mos.aspx)

Research also shows that individuals with certification make up to 12% more than those without certification. In addition, 82% of Microsoft Office Specialists report a salary increase after receiving certification. Managers like the skills proven and the ability demonstrated by those with Microsoft Office Certifications.
http://www.certiport.com/Portal/desktopdefault.aspx?page=common/pagelibrary/mos2003.html

About Our Certification Program



Books in this Series:
Beginning Guide to Microsoft® Excel 2010

Intermediate Guide to Microsoft® Excel 2010

Advanced Guide to Microsoft® Excel 2010

Microsoft Office Specialist (MOS) Certification for Excel 2010
Overview: Our Microsoft Office Specialist certification program for Word 2010 has three levels of mastery: Beginning, Intermediate and Advanced. In general, the CORE exam topics are demonstrated in the Beginning and Intermediate Guides. EXPERT concepts are included where relevant, with the Advanced Guide only covering EXPERT concepts

Our Approach: In designing these Guides, we found that it made more sense to write the lessons based on the Ribbons and Tasks. For example, the Beginning Guide to Microsoft Excel 2010 shows all of the Picture Tools: CORE and EXPERT. The beginning of each lesson provides an overview of the Ribbons and Tasks covered.

The Beginning Guide to Microsoft Excel 2010 demonstrates the following Ribbons: **Home**, **Formula**, **Insert**, **Picture Tools, Drawing Tool, SmartArt Tools: Design**, **Chart Tools, Chart Tools: Layout: Labels** The lesson activities focus on basic data and formula entry as well as inserting and formatting graphics and charts.

The Intermediate Guide to Microsoft Excel 2010 demonstrates the following Ribbons: **Formulas, Page Layout, Insert**, **Sparkline Tools**. The lesson activities focus on additional formulas as well as page options, finishing with the use of Sparklines.

The Advanced Guide to Microsoft Excel 2010 demonstrates the following Ribbons: **Table Tools, Table Tools, Data**, **PivotTable Tools**: **Design, PivotTable Tools: Options**, **PivotChart Tools: Design**, **PivotChart Tools: Analyze**, **Review**, **Developer.** The lesson activities further explore presentation with advanced Table options as well as PivotCharts and PivotTables, finishing with sharing and form controls.

Course Prerequisites: Students who enroll in Microsoft Office Specialist (MOS) program should have basic computer skills including how to turn on the computer, how to use an Internet browser and how to select commands from a menu. Students should know how to save files and send attachments by email as well.

Microsoft Excel 2010 Study Guide: Advanced Excel

Microsoft Office Specialist (MOS): Exam 77-882 and 77-888 for Excel 2010

From the Excel 2010 CORE Exam 77-882
1. Managing the Worksheet Environment
1.1. Navigate Through a Worksheet
Keyboard: Hot keys, Pg 283

1.3. Personalize the Excel Environment by Using the Backstage
Quick Access: Add a Command, Pg 220
Backstage: Ribbons, Tabs, Groups, Pg 184
Data: Import Data to Excel, Pg 276
Data: Export Data From Excel, Pg 290
Backstage: Workbook Properties, Pg 223
Backstage: Save, Save As, Pg 71

2. Creating Cell Data
2.2. Apply AutoFill
Format Same as Above or Below, Pg 252

From the Excel 2010 CORE Exam 77-882
7.2. Manage Comments
Review: Add New Comment, Pg 215
Review: Show/Hide Comment, Pg 217
Review: Edit Comment, Pg 216
Review: Delete Comment, Pg 217

8. Analyzing and Organizing Data
8.1. Filter Data
Data Filter: Define, Pg 52
Data Filter: Apply, Pg 54
Data Filter: Clear, Pg 55
Data Filter: Search, Pg 53
Data: AutoFilter, Pg 53

8.2. Sort Data
Data: Sort Options, Pg 51

8.3. Apply Conditional Formatting
Conditional Formatting: Apply Conditional Formatting, Pg 31
Conditional Formatting: Rules Manager, Pg 38
Conditional Formatting: Apply Conditional Formatting Based on Logical Formula, Pg 31
Conditional Formatting: Icon Sets, Pg 37
Conditional Formatting: Data Bars, Pg 35
Conditional Formatting: Clear the Rules, Pg 34

From the Excel 2010 EXPERT Exam 77-888
1. Sharing and Maintaining Workbooks
Backstage: Advanced Properties, Pg 223
Data: Import and Export XML, Pg 276
Review: Protect Sheet, Pg 206
Review: Protect Workbook, Pg 207
Backstage: Protect Workbook, Pg 229
Backstage: Encrypt with a Password, Pg 232
Compare and Merge Workbooks, Pg 219
Review: Track Changes, Pg 211

Keep going. There's more...



Microsoft Excel 2010 Study Guide: Advanced Excel

Microsoft Office Specialist (MOS): Exam 77-882 and 77-888 for Excel 2010

From the Excel 2010 EXPERT Exam 77-888
2. Applying Formulas and Functions
Analyze Data: Slicers, Pg 150

3. Presenting Data Visually
3.1. Apply Advanced Chart Features
PivotTable: Edit Field Values, Pg 94
PivotTable: Analyze with Slicers, Pg 149
PivotChart: Create a PivotChart, Pg 124
PivotChart: Filter the Data, Pg 134
PivotChart: Analyze the Data, Pg 142
PivotTables: Slicer Tools, Pg 152

From the Excel 2010 EXPERT Exam 77-888
4. Working with Macros and Forms
Macros: Run a Macro, Pg 260
Macros: Run a Macro On Open, Pg 284
Macros: Click a Button to Run, Pg 261
Macros: Record an Action Macro, Pg 251
Macro: Assign a Macro to a Command Button, Pg 266
Macro: Add a Macro to the Quick Access Toolbar, Pg 268
Macro: Modify the Macro, Pg 256
Developer: Add Form Controls, Pg 186
Developer: Edit Form Controls, Pg 189





About the Authors

Microsoft Office Specialist (MOS): Exam 77-888 for Excel 2010

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Elizabeth is the Computer Mama. She developed the teaching methodology in the Complete Computer Guide series using breakthrough research in gender balanced training. Elizabeth has taught several thousand men and women from government, manufacturing, small business, and education in both online and hands-on classrooms.

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Jeanette has years of experience as an office manager, including the increasing use of computer-related tasks. Her excellent attention to detail has lead her to work as an Access database administrator and a copy editor.

All of my books

are dedicated to

Fr. Paul Cummings

who taught me

computers.

Love, eBeth

How To Use This Guide

Microsoft Office Specialist Certification Training

The Comma Method

Observation is a perceptual strategy that asks: why am I doing this and which tools would be most effective? Each lesson begins with a discussion of the purpose and the objectives.

Orientation helps students start at the right place. The screen shots in the *Complete Compute Guides* show the entire window as well as a close up of the particular button or command.

Notation There are "breadcrumbs" above each screen image. Like Hansel and Gretel, the breadcrumbs show the pathway to a button or option. Our notation uses the following convention:
Ribbon->Group->Button->Options

Menu Maps

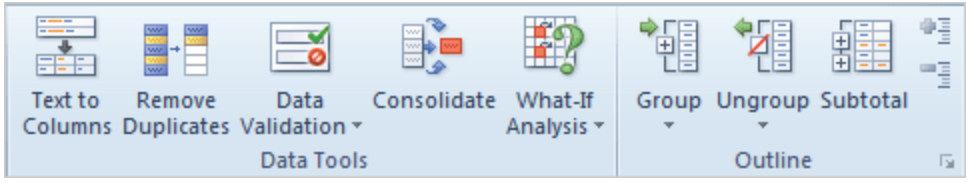
The Comma Method recognizes that there is a difference in how men and women navigate the menus. Men typically have the ability to see the map first. This method of acquiring knowledge is called *Breadth-first*. [1] Women tend to work with the details first. They learn several commands, such as copy, cut, and paste, then they put those concepts under the label, “edit.” This method of learning is called *Depth-first*.

The Comma Method uses menu mapping to assist men and women to see both the Breadth and the Depth. An example of the menu map is can be seen here.

[1] Ford, Nigel, Sherry Chen, Matching/mismatching revisited: An Empirical Study of Learning and Teaching Styles. British Journal of Educational Technology v.32 no1 (Jan. 2001)



Data-> Data Tools



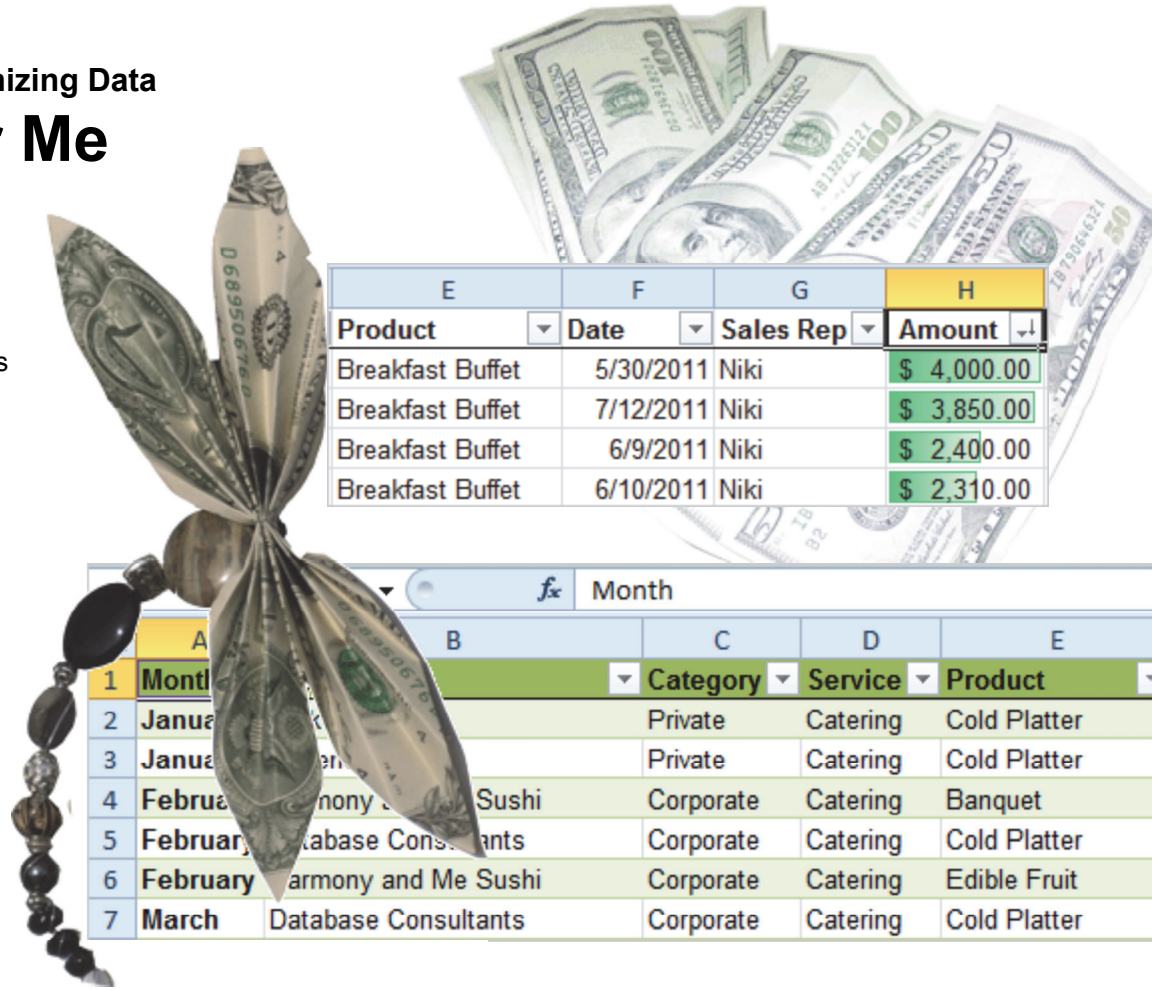
Advanced Excel: Organizing Data

It Works for Me

Advanced Excel Objectives

In this lesson, you will learn how to:

1. Create a Table
2. Identify the Header Row with the Table Tools
3. Locate the Quick Style Formats
4. Use the Table Tools to add a Total Row
5. Convert Tables to Text
6. Convert Text to Tables



E	F	G	H
Product	Date	Sales Rep	Amount
Breakfast Buffet	5/30/2011	Niki	$ 4,000.00
Breakfast Buffet	7/12/2011	Niki	$ 3,850.00
Breakfast Buffet	6/9/2011	Niki	$ 2,400.00
Breakfast Buffet	6/10/2011	Niki	$ 2,310.00

fx Month

	A	B	C	D	E
1	Month		Category	Service	Product
2	Janua		Private	Catering	Cold Platter
3	Janua		Private	Catering	Cold Platter
4	Februa	mony Sushi	Corporate	Catering	Banquet
5	Februar	abase Cons ants	Corporate	Catering	Cold Platter
6	February	armony and Me Sushi	Corporate	Catering	Edible Fruit
7	March	Database Consultants	Corporate	Catering	Cold Platter

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Lesson 1: It Works for Me

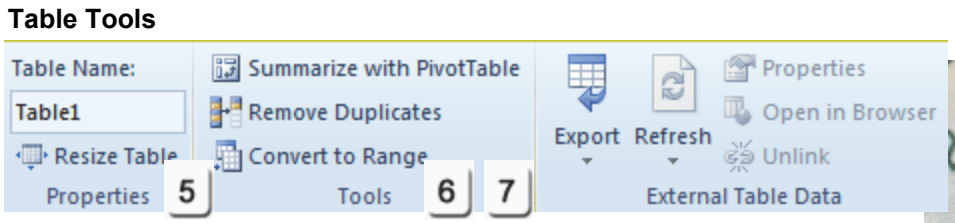
1. Readings
Read Lesson 1 in the Advanced Excel guide, page 11-44.

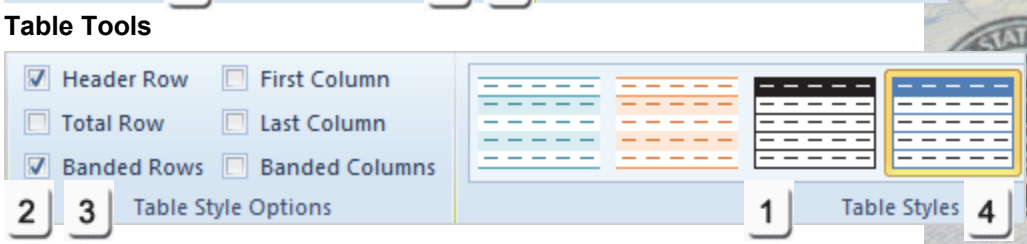
Project
A spreadsheet that works with Tables in Excel. This lesson shows how to present data visually, format data as a Table and calculate the Totals.

Downloads
Sales Data 2010.xls
Student Records.xlsx

2. Practice
Complete the Practice Activity on page 45.

3. Assessment
Review the Test questions on page 46.

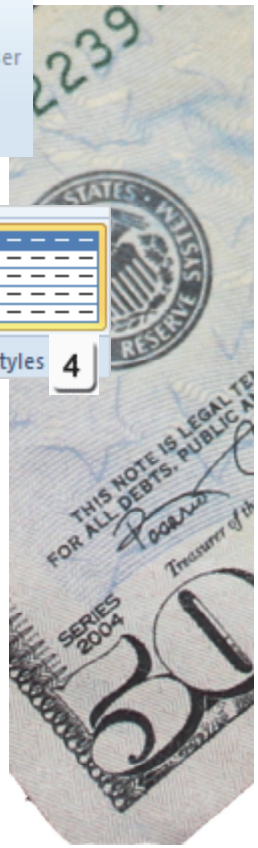




Menu Maps

This lesson demonstrates options on the **Table Tools** Ribbon.
1. Table Tools->Design ->Table Styles, page 24
2. Table Tools->Design ->Table Style Options->Header Row, page 25
3. Table Tools->Design ->Table Style Options -> Total Row, page 27
4. Table Tools-> Design ->Table Styles -> Clear, page 30
5. Table Tools-> Design ->Properties-> Resize Table, page 41
6. Table Tools-> Design ->Tools-> Remove Duplicates, page 42
7. Table Tools-> Design ->Tools-> Convert to Range, page 44

From the **Home** Ribbon
Home -> Conditional Formatting, page 31

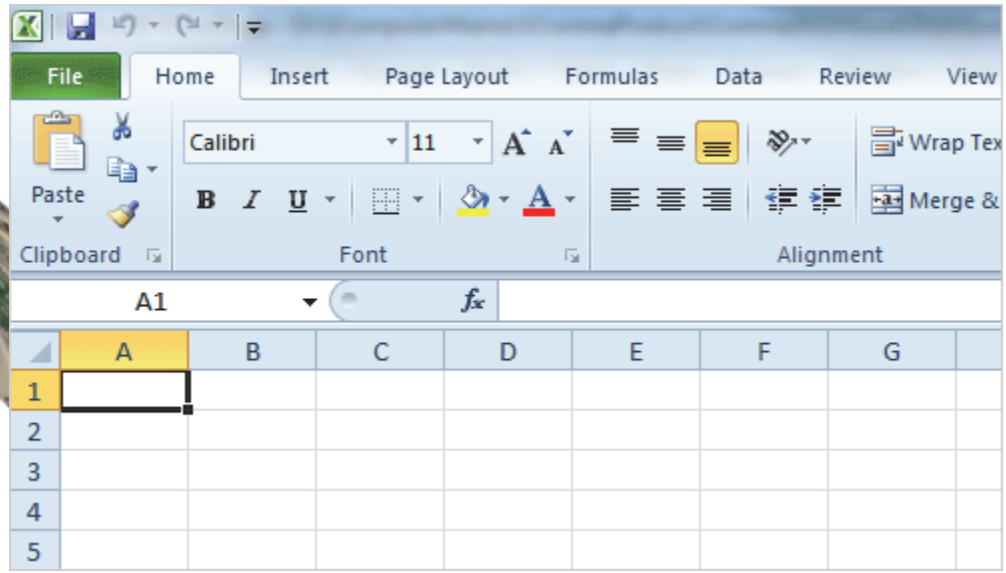




Organizing Data with Tables

One of the unique functions of a computer is to organize information into Rows and Columns. Microsoft Excel does Rows and Columns: specifically **Tables**. Tables can be little reference lists that are named and used in a formula. One good example is a Lookup table. By definition, vLookup has the data in Columns (vertical). Hlookup has the data in Rows (horizontal). The Advanced Guide to Excel begins with **Tables** and **Table Tools**.

Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010



Start Microsoft Excel

What Do You See? Is there a blue Title Bar that says Microsoft Excel? Yes.

Is there a Home Ribbon with the Clipboard, Font, Alignment and Number Groups? Yes.

If your screen looks similar to the example on this page, then you are ready to get started.

Take One

Before You Begin

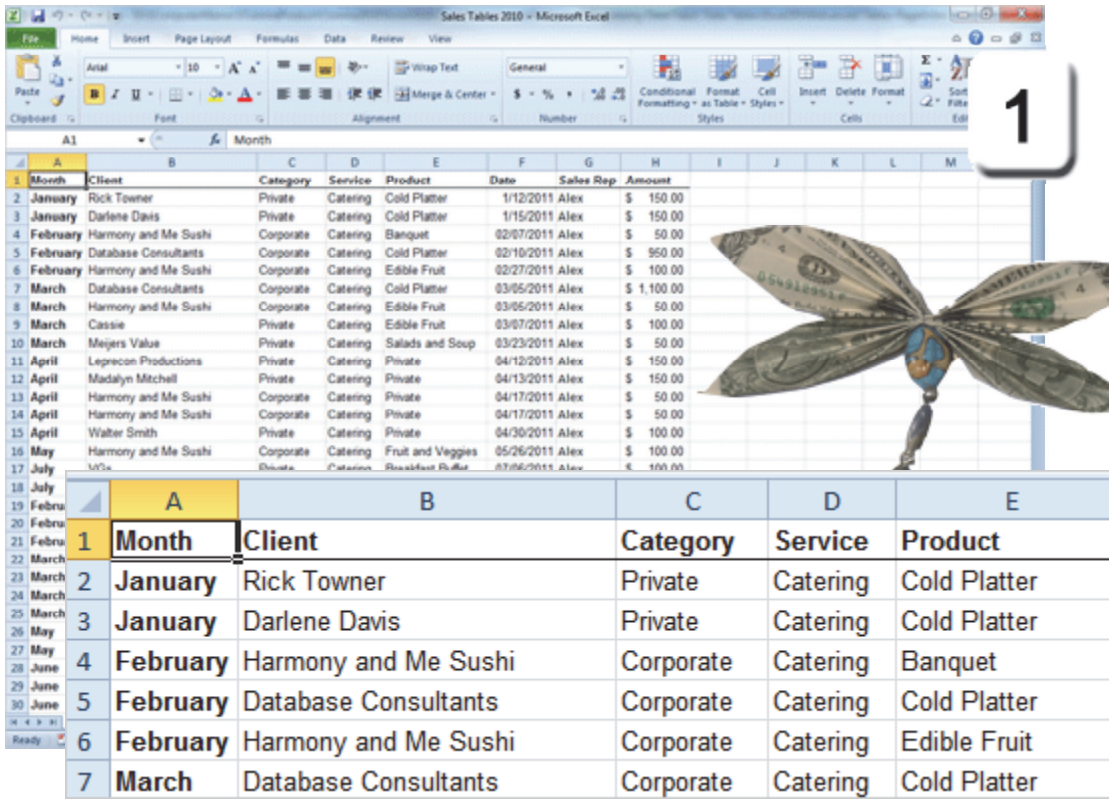
The purpose of this lesson is to investigate the **Table** Options in Microsoft Excel 2010. You can use a spreadsheet that you created or download a sample spreadsheet if you wish.

1. Try This: Open a Sample Spreadsheet
Open a sample spreadsheet: Sales2010.xlsx
Go to the **Original Data** sheet.

2. What Do You See? This sheet shows the product sales for Charlotte' Website. The first row is BOLD: it is the Header Row. There are many rows of data.

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File -> Open



	A	B	C	D	E
1	Month	Client	Category	Service	Product
2	January	Rick Towner	Private	Catering	Cold Platter
3	January	Darlene Davis	Private	Catering	Cold Platter
4	February	Harmony and Me Sushi	Corporate	Catering	Banquet
5	February	Database Consultants	Corporate	Catering	Cold Platter
6	February	Harmony and Me Sushi	Corporate	Catering	Edible Fruit
7	March	Database Consultants	Corporate	Catering	Cold Platter

Take One

Still Before You Begin

A good administrator makes a COPY of the data before manipulating it.

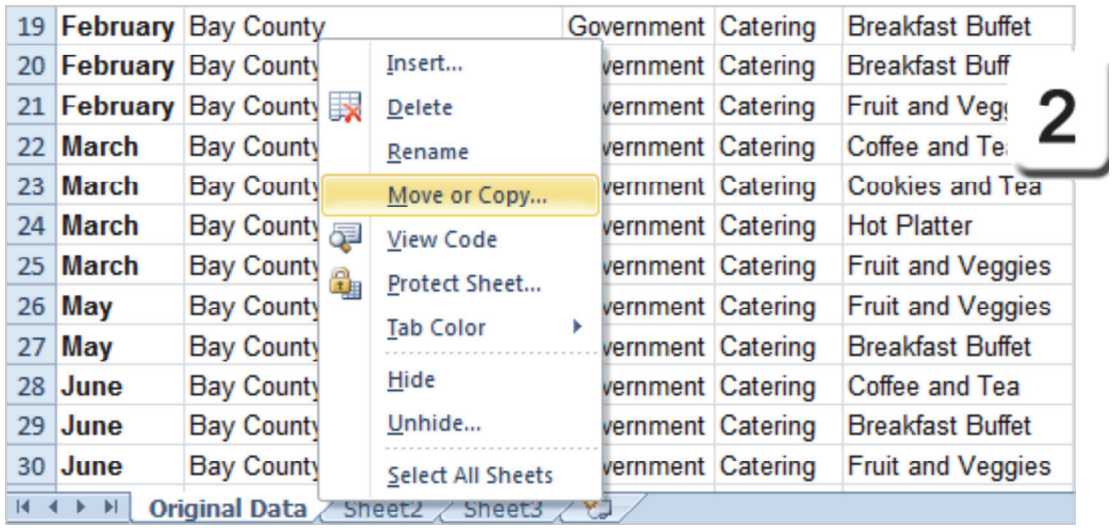
2. Try This: Copy the Spreadsheet
Go to **Home -> Cells -> Format.**
Click on **Move or Copy.**
A new sheet will be inserted.

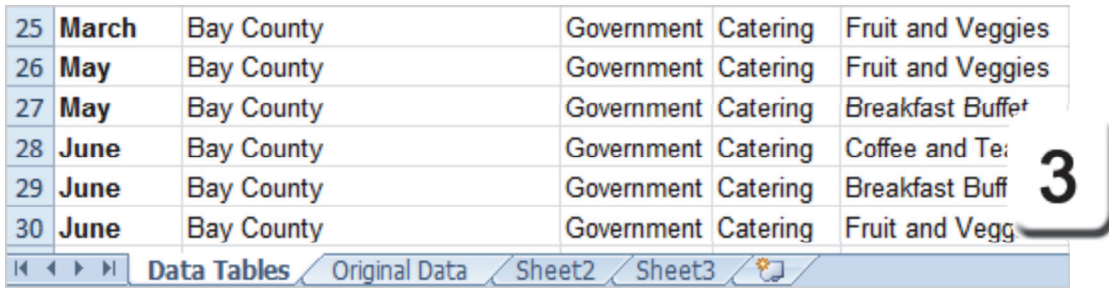
3. Try This: Rename the Worksheet
Click on the **Original Data (2)** tab.
Go to **Home -> Cells -> Format.**
Click on **Rename Sheet.**
The Name in the tab should be highlighted black. Type: Data Tables.
Click ENTER on the keyboard.

Keep going...

Memo to Self: You can achieve the same results by right-clicking the tab, as shown.

Home -> Cells->Format->Move or Copy





Exam 77-882: Microsoft Excel 2010 Core
4. Managing Worksheets and Workbooks
4.1. Create and format worksheets: Copy, Rename

Take One

Sort & Filter: A to Z

So, here is a list of clients that bought products from Charlotte's Website. The fields in the Header Row include the name, date, product and amount for the sales.

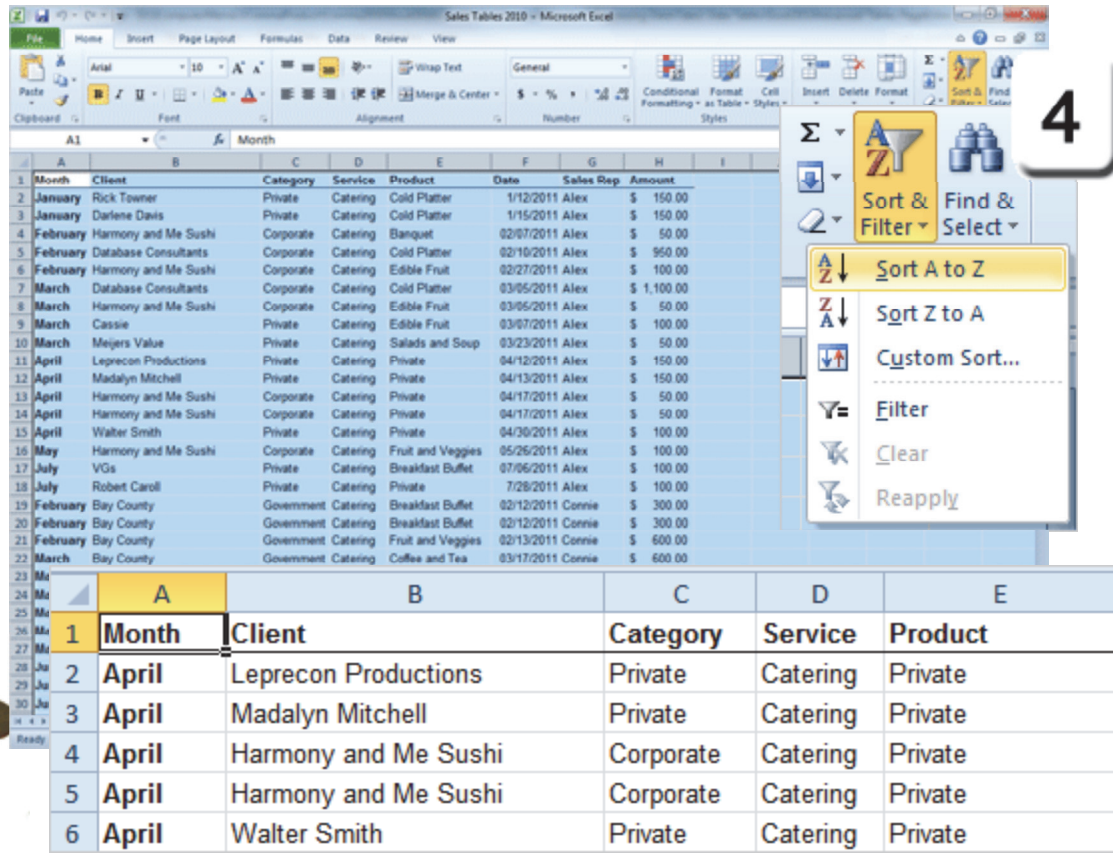
4. Try This: Sort & Filter the Data
Select the entire spreadsheet.
Go to **Home -> Editing->Sort & Filter.**
Select: **Sort A-Z**.

What Do You See? The data is sorted by the first Column. By default, the data is sorted alphabetically. So, the names of the months go from April (A) through September (S)....that's not what most people have in mind.

Try Again: **Undo** the last step and keep going.



Home -> Editing->Sort & Filter->Sort A to Z



	A	B	C	D	E
1	Month	Client	Category	Service	Product
2	April	Leprecon Productions	Private	Catering	Private
3	April	Madalyn Mitchell	Private	Catering	Private
4	April	Harmony and Me Sushi	Corporate	Catering	Private
5	April	Harmony and Me Sushi	Corporate	Catering	Private
6	April	Walter Smith	Private	Catering	Private

Take One

Data: Sort Order

There is another kind of **Sort** that can be found on the **Data** Ribbon. This Sort lets you use one or several criteria. The criteria comes from the names in the Header Row.

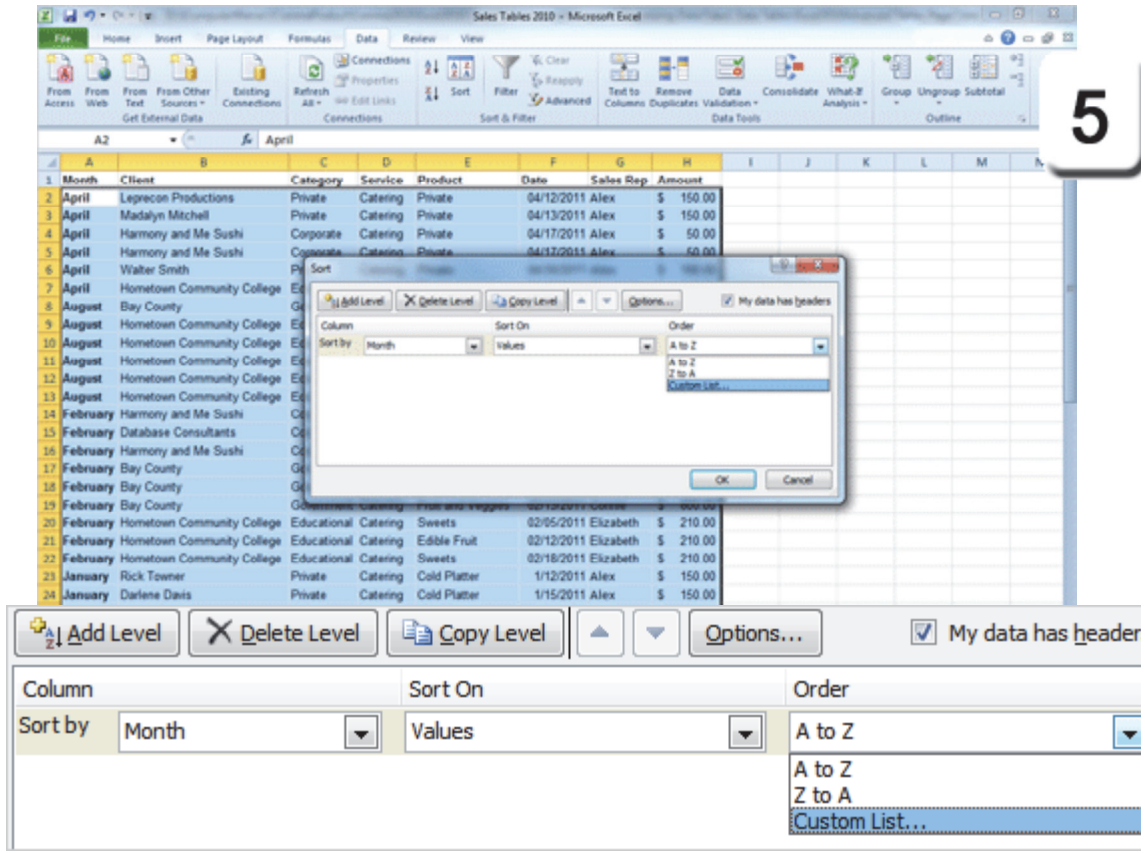
5. Try it: Data Sort
Select the whole spreadsheet.
Go to **Data -> Sort & Filter ->Sort.**



What Do You See? The options include:
Add Level
Delete Level
Copy Level
There should be a check mark for:
My data has Headers.

Try This, Too: Edit the Sort Options
Sort by: Month
Sort On: Values
Order: Custom List (Remember, A to Z didn't work for Months. Keep going...)

Data -> Sort & Filter ->Sort



Take One

Data: Custom Sort Criteria

What Do You See? Spreadsheets are used for financials and financials are recorded by date. Spreadsheets like Excel recognize that Months are sorted in calendar order, not alphabetically. Here are the steps:

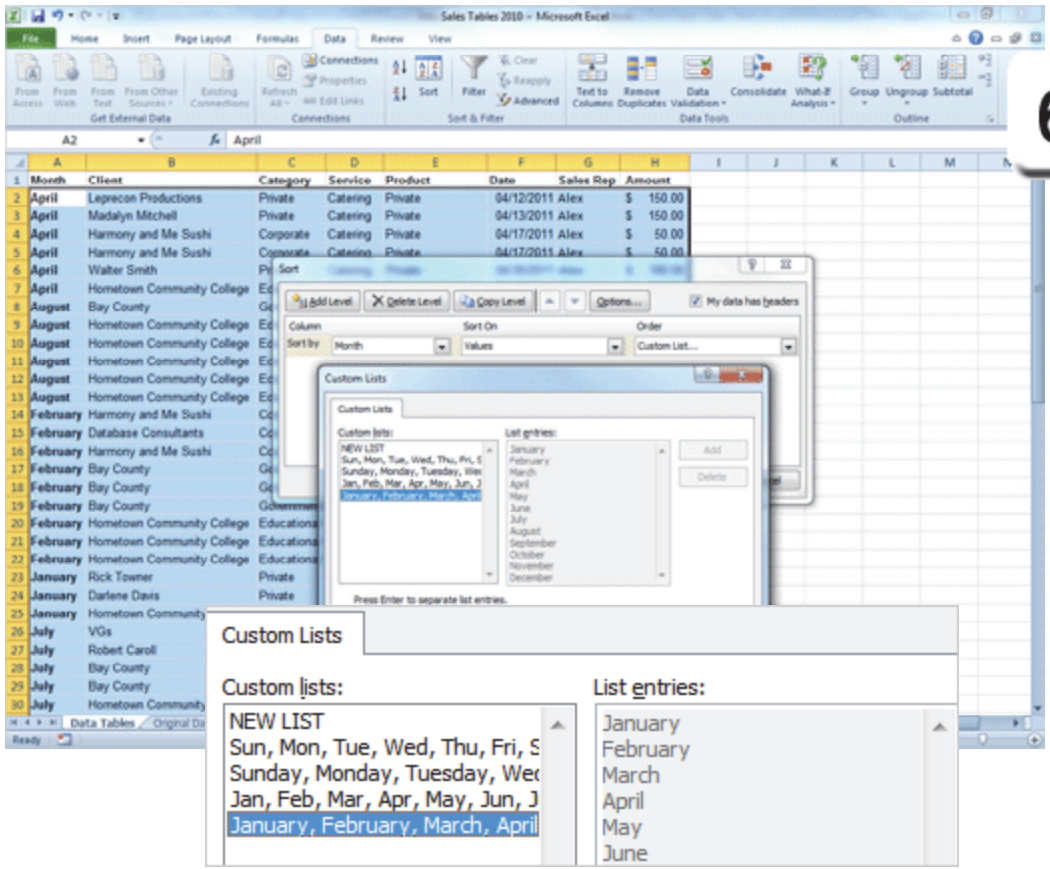
6. Try it: Choose a Custom List
Select the spreadsheet.
Go to **Data -> Sort & Filter ->Sort.**
Go to Order-> Custom List.
Select: January, February, March, April...
This is the **List** that matches our data.

Click **OK**, then **OK** again to save and close both windows. The entire list has been sorted. Not bad, huh?

Keep going....

The Computer Mama sez: In the 1980s, Fr. Paul wanted to sort 550 families on a PDP 11 computer. It took most of the night. Computers are faster now, aren't they?

Data -> Sort & Filter ->Sort-> Order-> Custom List



6

Take One

Data: Sort by Multiple Criteria

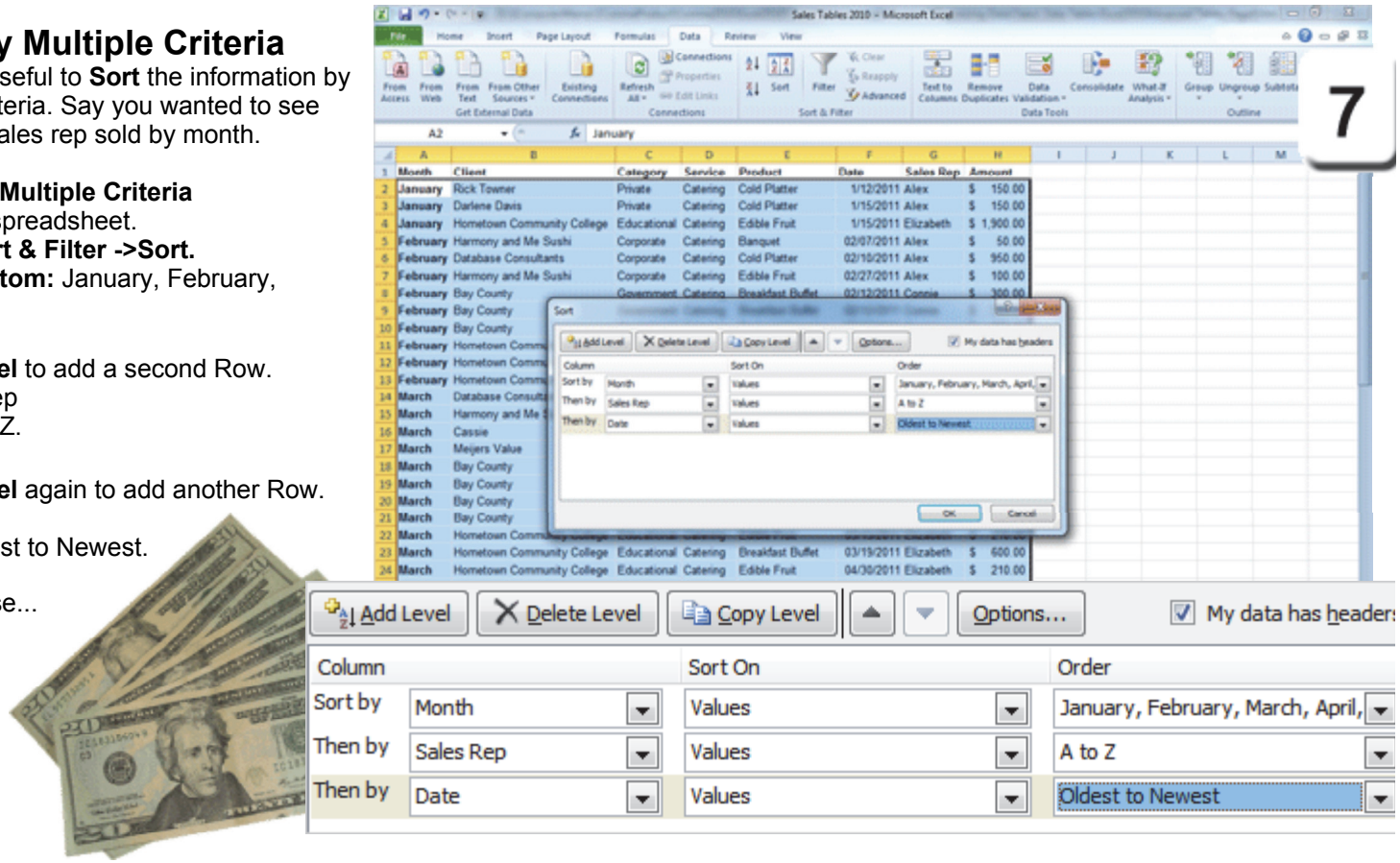
Sometimes, it is useful to **Sort** the information by more than one criteria. Say you wanted to see how much each sales rep sold by month.

7. Try it: Sort by Multiple Criteria
Select the entire spreadsheet.
Go to **Data -> Sort & Filter ->Sort.**
The **Order** is **Custom:** January, February, March

Click on **Add Level** to add a second Row.
Choose: Sales Rep
The Order is A to Z.

Click on **Add Level** again to add another Row.
Choose: Date
The Order is Oldest to Newest.
Click **OK**.
Keep going, please...

Data -> Sort & Filter ->Sort-> Add Level



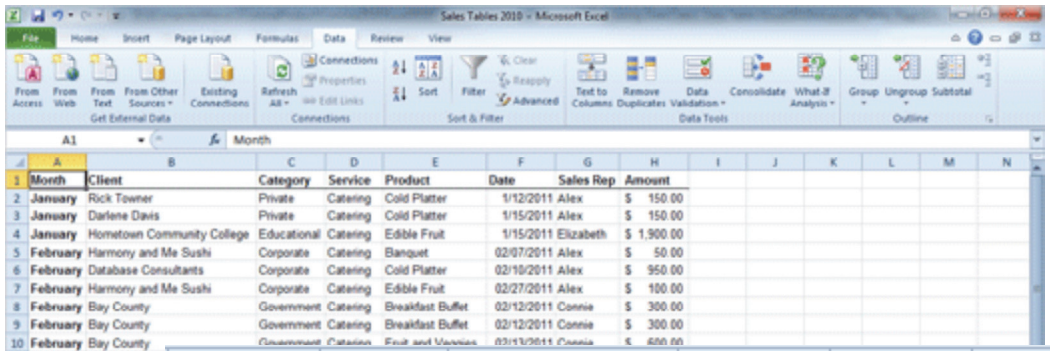
Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.2. Sort data: Sort data using single or multiple criteria

Take One

Summary of List Options

What Do You See? The information was sorted to our criteria. However, it is very difficult to read and interpret the data. It all looks the same. This looks like a list with details, details and still more details.

A **Table** is a easy to format and filter. You can also use a Table to calculate numbers in a **Total Row**. Interested? OK, start here...



Month	Client	Category	Service	Product	Date	Sales Rep	Amount
January	Rick Towner	Private	Catering	Cold Platter	1/12/2011	Alex	$ 150.00
January	Darlene Davis	Private	Catering	Cold Platter	1/15/2011	Alex	$ 150.00
January	Hometown Community College	Educational	Catering	Edible Fruit	1/15/2011	Elizabeth	$ 1,900.00
February	Harmony and Me Sushi	Corporate	Catering	Banquet	02/07/2011	Alex	$ 50.00
February	Database Consultants	Corporate	Catering	Cold Platter	02/10/2011	Alex	$ 950.00
February	Harmony and Me Sushi	Corporate	Catering	Edible Fruit	02/27/2011	Alex	$ 100.00
February	Bay County	Government	Catering	Breakfast Buffet	02/12/2011	Connie	$ 300.00
February	Bay County	Government	Catering	Breakfast Buffet	02/12/2011	Connie	$ 300.00
February	Bay County						
February	Hometown Cor						
February	Hometown Cor						
February	Hometown Cor						
March	Database Cons						
March	Harmony and M						
March	Cassie						
March	Meijers Value						
March	Bay County						
March	Bay County						
March	Bay County						
March	Bay County						



C	D	E	F	G	H
Category	Service	Product	Date	Sales Rep	Amount
Private	Catering	Cold Platter	1/12/2011	Alex	$ 150.00
Private	Catering	Cold Platter	1/15/2011	Alex	$ 150.00
Educational	Catering	Edible Fruit	1/15/2011	Elizabeth	$ 1,900.00
Corporate	Catering	Banquet	02/07/2011	Alex	$ 50.00
Corporate	Catering	Cold Platter	02/10/2011	Alex	$ 950.00
Corporate	Catering	Edible Fruit	02/27/2011	Alex	$ 100.00
Government	Catering	Breakfast Buffet	02/12/2011	Connie	$ 300.00
Government	Catering	Breakfast Buffet	02/12/2011	Connie	$ 300.00
Government	Catering	Fruit and Veggies	02/13/2011	Connie	$ 600.00
Educational	Catering	Sweets	02/05/2011	Elizabeth	$ 210.00
Educational	Catering	Edible Fruit	02/12/2011	Elizabeth	$ 210.00
Educational	Catering	Sweets	02/18/2011	Elizabeth	$ 210.00

Take One

Format as Table

Rows and Columns can be organized into a **Table**. A Table has Properties that can be formatted much more easily than a **List**. Here are the steps to convert a List into a Table.

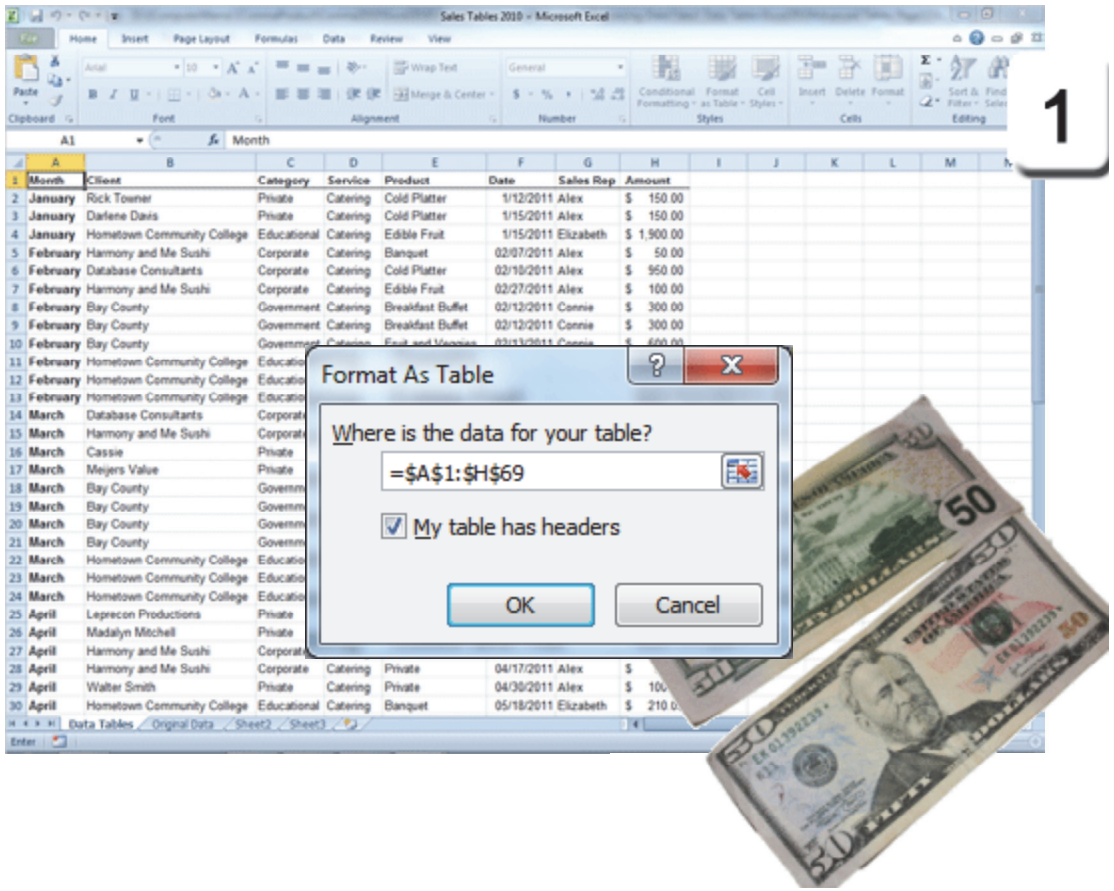
1. Try It: Format a Table
Go to **Home->Styles.**
Click on **Format as Table**.
Choose: Table Style Medium 4.

Where is the data for your table?
You will be prompted to select the **Range** for you data. In the example on this page, Excel selected all of the Cells from $A$1:$H$69. The Range is Absolute.

What Else Do You See? There should be a check mark for My table has headers.

Go to the next page, please...

Home->Styles->Format as Table



1

Take One

Hello, Table!

2. What Do You See? The data has been formatted as a Table. The Header Row is Bold and it has little filters: Drop-down option lists.

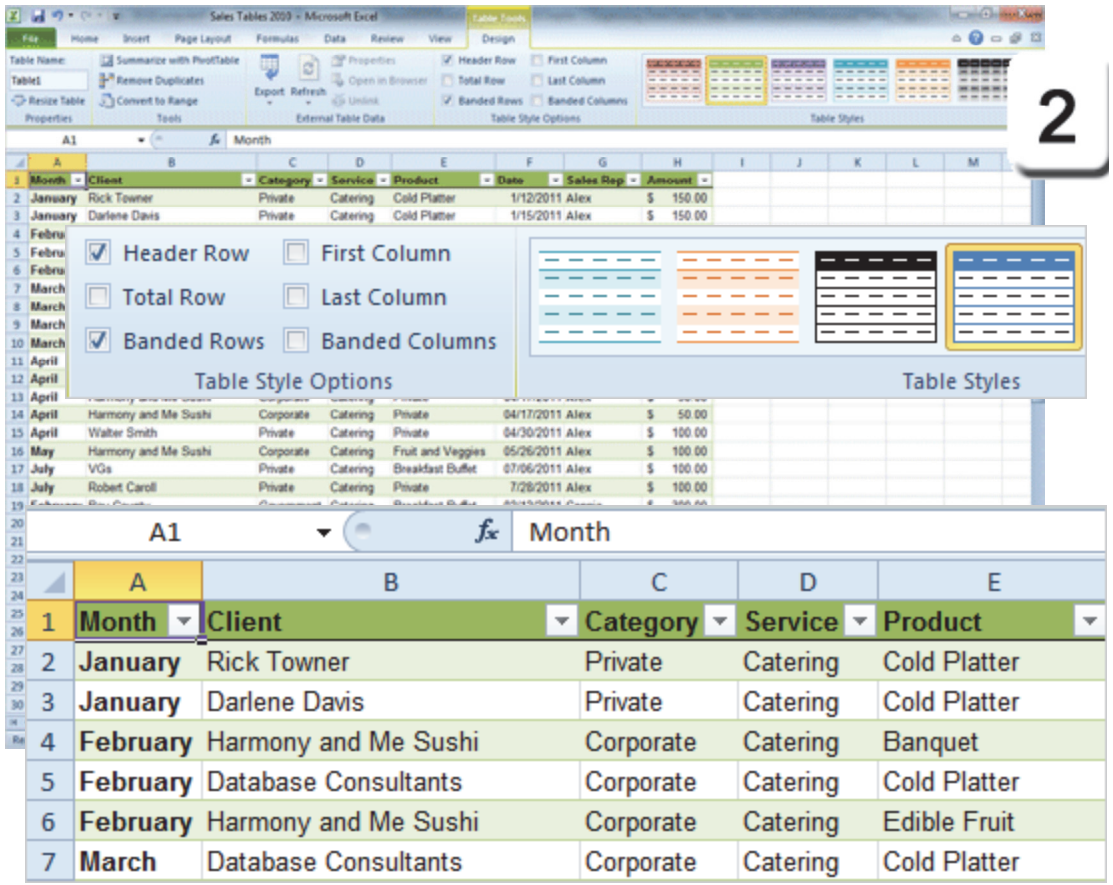
The rows of customer information have been formatted to make the data easier to read.

What Else Do You See? The **Table Tools** should be available.

Keep going...

Where Have You Seen This Before? Microsoft Word has Table Tools, as well. However, Word has two Ribbons: Design and Layout. Microsoft Excel already recognizes Rows and Columns, whereas Word has to define them with the Layout Ribbon.

Table Tools->Design



	A	B	C	D	E
1	Month	Client	Category	Service	Product
2	January	Rick Towner	Private	Catering	Cold Platter
3	January	Darlene Davis	Private	Catering	Cold Platter
4	February	Harmony and Me Sushi	Corporate	Catering	Banquet
5	February	Database Consultants	Corporate	Catering	Cold Platter
6	February	Harmony and Me Sushi	Corporate	Catering	Edible Fruit
7	March	Database Consultants	Corporate	Catering	Cold Platter

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Format data as a table

Use the Header Row

You can use the Header Row to **Sort** and **Filter** the data.

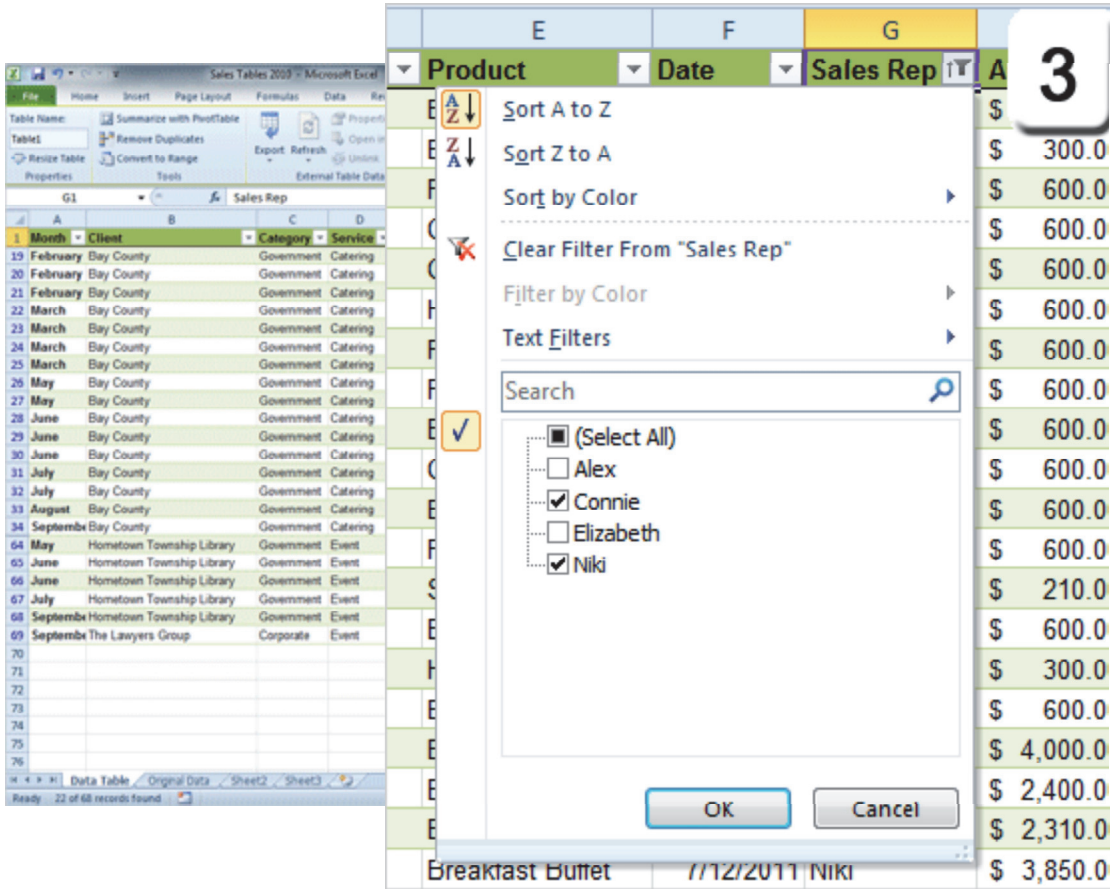
3. Try It: Use the Header Row Filters
Select the **Sales Rep** Filter.
Sort the Column A to Z.

Try This, Too: Filter the Data
Filter the Sales Reps: Connie and Niki.

What Do You See? Only the Rows where Connie or Niki are the Sales Rep are shown. The other rows are hidden.

What Else Do You See? This table has **Banded Rows**. Does the formatting update when you choose different **Filters**?

Where Have You Seen This Before? The header row is used to create Mail Merge Fields in Microsoft Word, too.



Take One

Table Styles

Formatting makes the data easier to read and understand. Microsoft Excel 2010 has a gallery of **Table Styles** templates. The Table Styles format the Headers as well as the Columns and Rows.

Before You Begin: Please click anywhere on the Table to select it. The **Table Tools** should be visible.

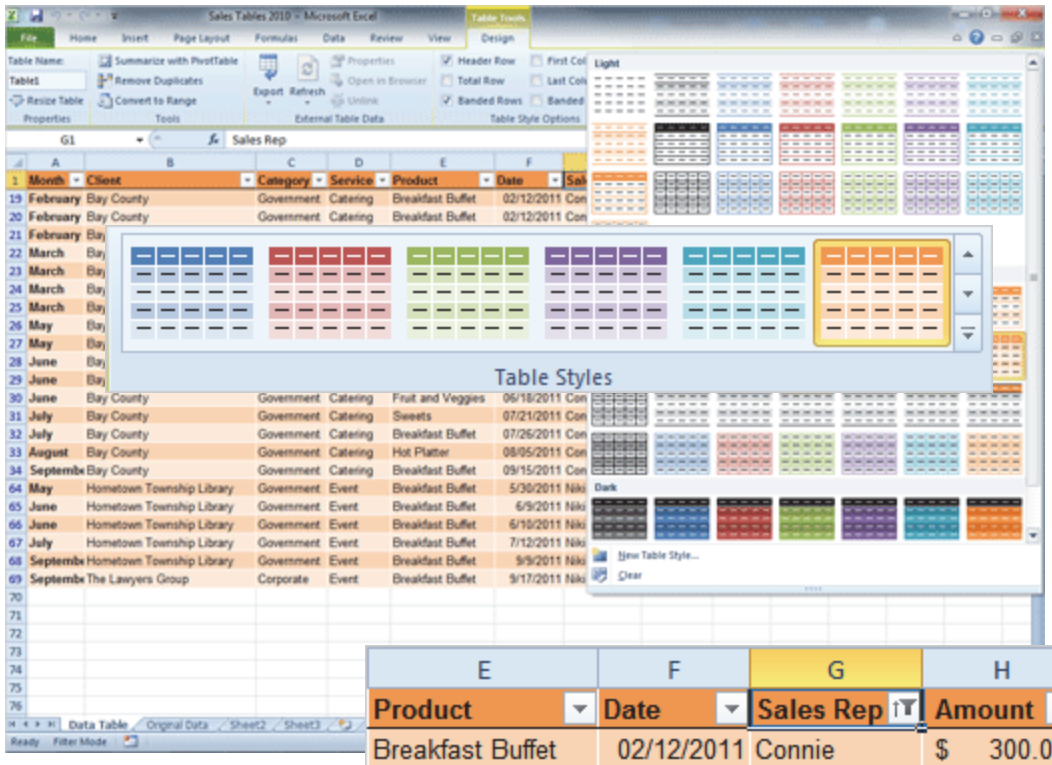
4. Try It: Apply a Table Style
Go to **Table Tools->Design**.
Go to **Table Styles**.
Select a **Quick Style** from the gallery.

What Do You See? The Table Styles are grouped by Light, Medium and Dark.

What Else Do You See? The Sales Rep data is Filtered. There is a little funnel symbol on the field.

Keep going...

Table Tools->Design ->Table Styles



E	F	G	H
Product	Date	Sales Rep	Amount
Breakfast Buffet	02/12/2011	Connie	$ 300.00
Breakfast Buffet	02/12/2011	Connie	$ 300.00
Fruit and Veggies	02/13/2011	Connie	$ 600.00
Coffee and Tea	03/17/2011	Connie	$ 600.00

Take One

Table Style Options

You can use the **Table Style Options** to display the Header Row, Total Row and formatting if you wish.

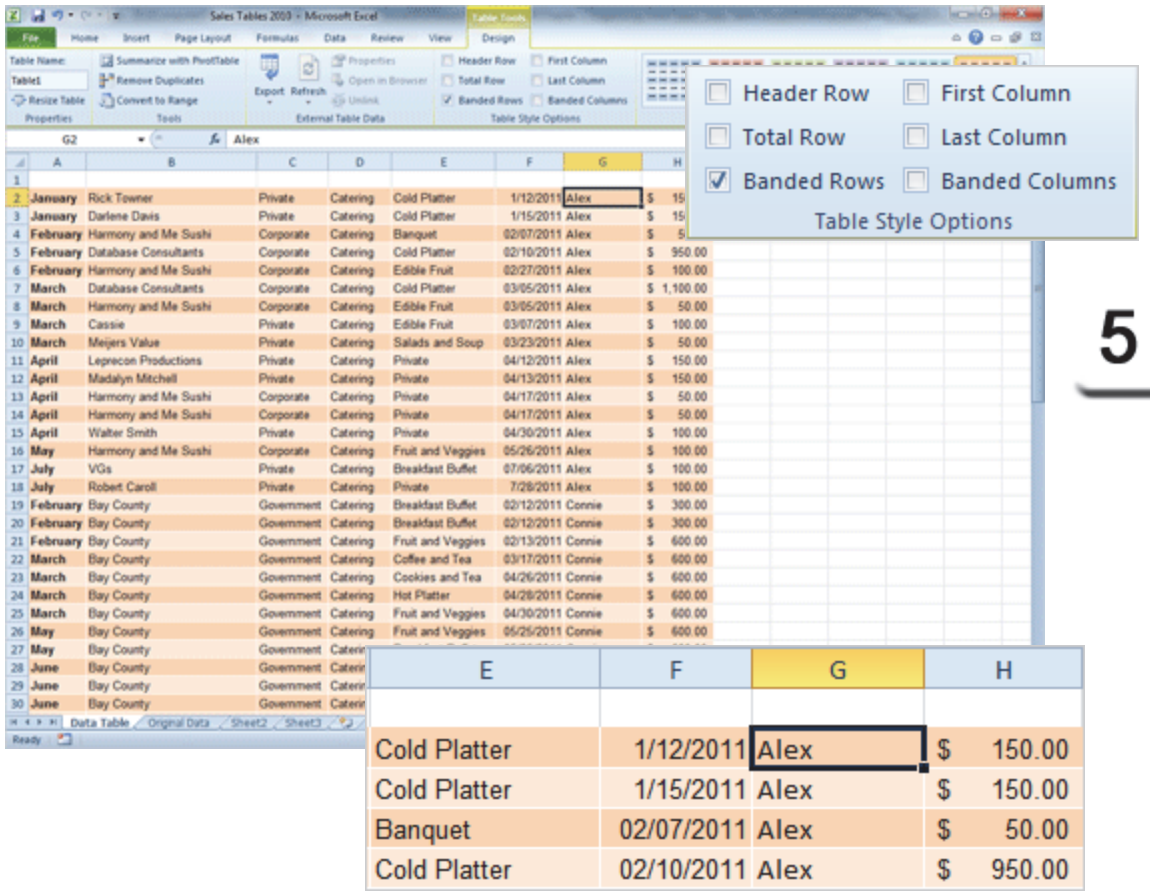
5. Try It: Add or Remove the Header
Go to **Table Tools-> Design**.
Look in the **Table Style Options**.
Uncheck the **Header Row**.

What Do You See? When you turn off the Header Row, the first row becomes blank. The Filter on Sales Rep is gone, too, so you should see all of the data.

Trust But Verify: Turn the Header Row back on, please. The Header and the Filters should be available again.

Memo to Self: The Header Row Field Names are saved in the Table Properties.

Table Tools->Design ->Table Style Options



E	F	G	H
Cold Platter	1/12/2011	Alex	$ 150.00
Cold Platter	1/15/2011	Alex	$ 150.00
Banquet	02/07/2011	Alex	$ 50.00
Cold Platter	02/10/2011	Alex	$ 950.00

5

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Format Table Style Options

Take One

Table Style Options

Color is an effective method to indicate which data should get the most attention.

Before You Begin: Please click anywhere on the Table to select it. The **Table Tools** should be available.

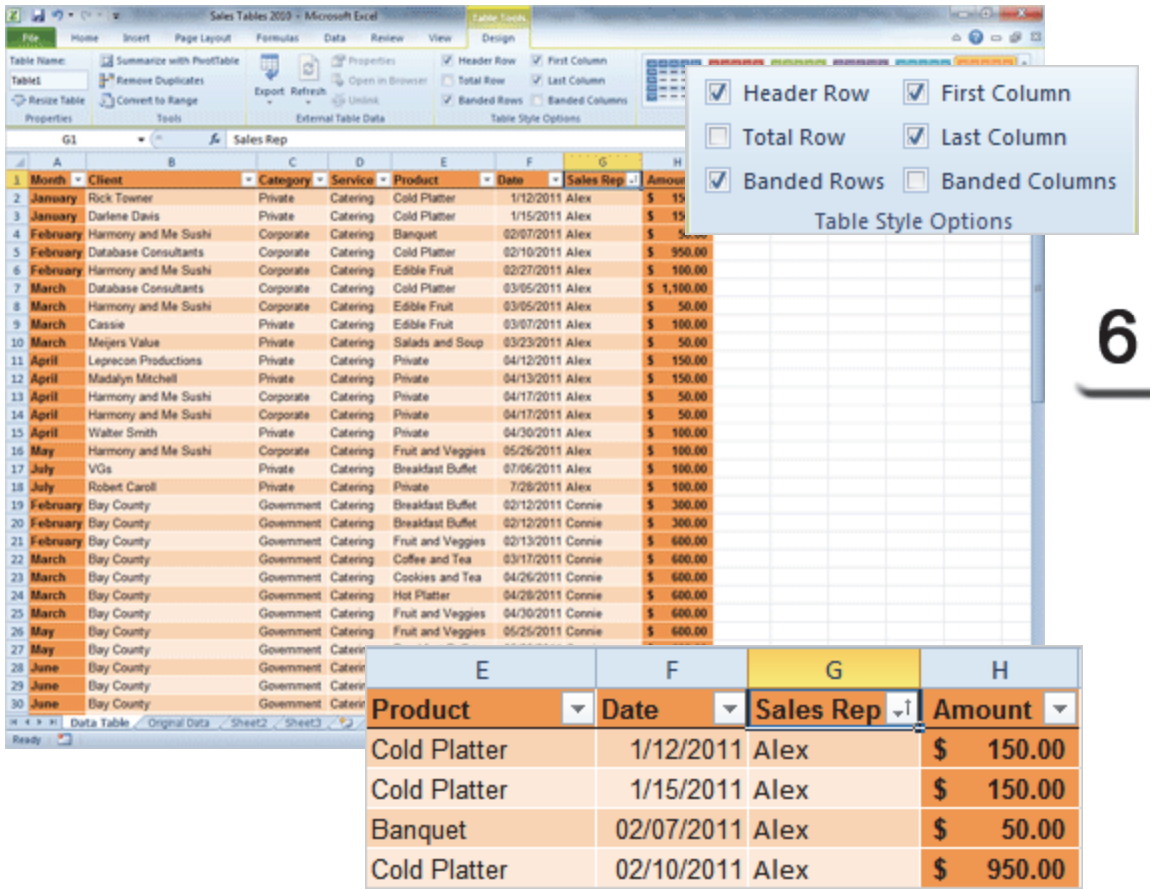
6. Try It: Edit the Table Style Options
Go to **Table Tools->Design.**
Go to **Table Style Options**.
Select: Banded Rows.
Select: First and Last Column.

What Do You See? The Table Styles emphasized the first and last columns by formatting the Cells Bold.

The **Banded Rows** make it easier to read across a Row.

You can keep going, there's more...

Table Tools->Design ->Table Style Options



E	F	G	H
Product	Date	Sales Rep	Amount
Cold Platter	1/12/2011	Alex	$ 150.00
Cold Platter	1/15/2011	Alex	$ 150.00
Banquet	02/07/2011	Alex	$ 50.00
Cold Platter	02/10/2011	Alex	$ 950.00

6

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Format Table Style Options

Take One

Calculate the Totals

Adding a **Total Row** to the Table is as simple as checking the option.

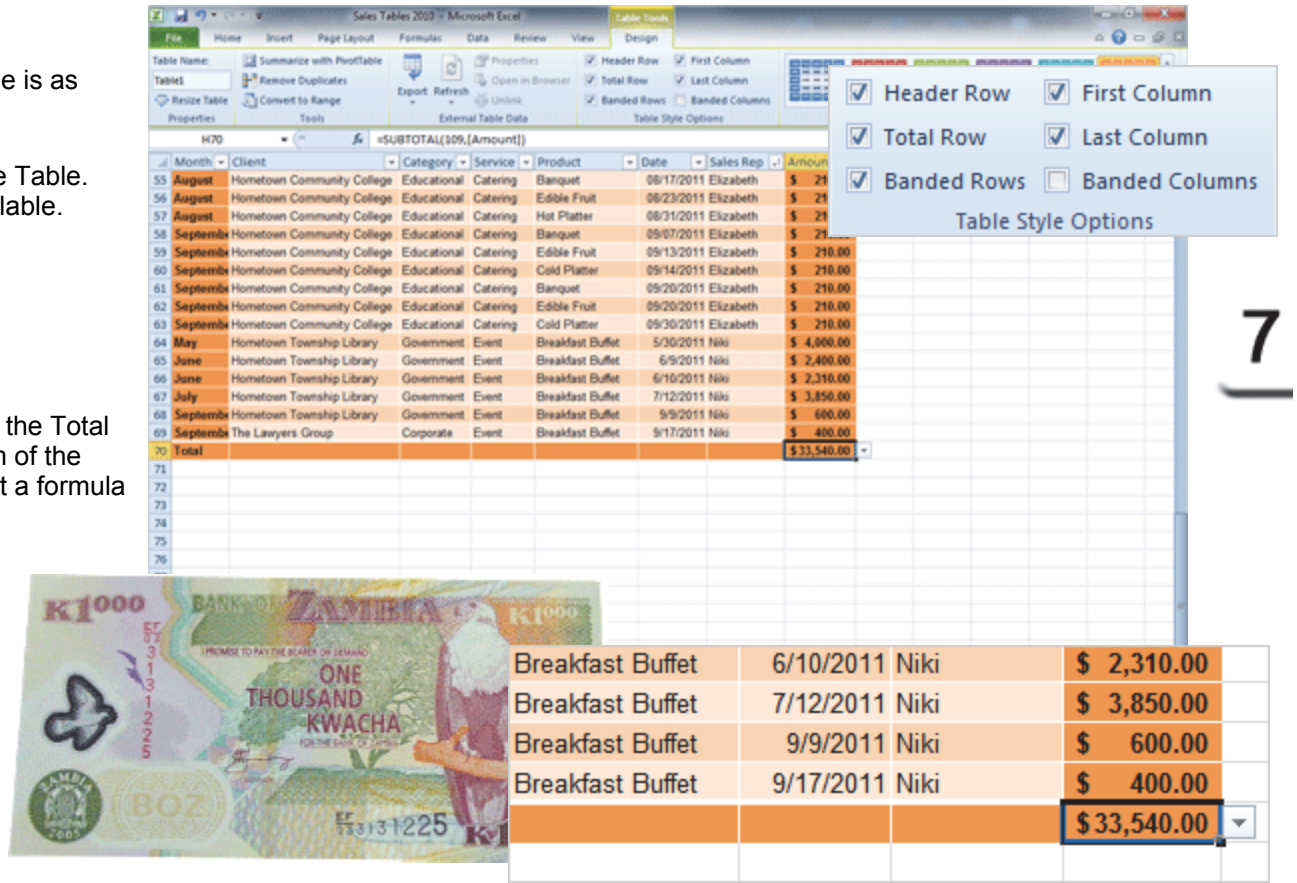
Before You Begin: Click on the Table. The Table Tools should be available.

7. Try It: Add a Total Row
Go to **Table Tools->Design.**
Go to **Table Style Options**.
Select: **Total Row**.

What Do You See? By default, the Total Row will be added to the bottom of the Table. Microsoft Excel will insert a formula for your Total: $33,540.00.

Keep going, OK?

Table Tools->Design ->Table Style Options -> Total Row



7

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Calculate data in a table

Take One

Edit the Total Row

Look at the Total Row: it has a summary function. You can change the operation from Sum to Average, Count, Max, Min or any of the options available in the extensive Excel library.

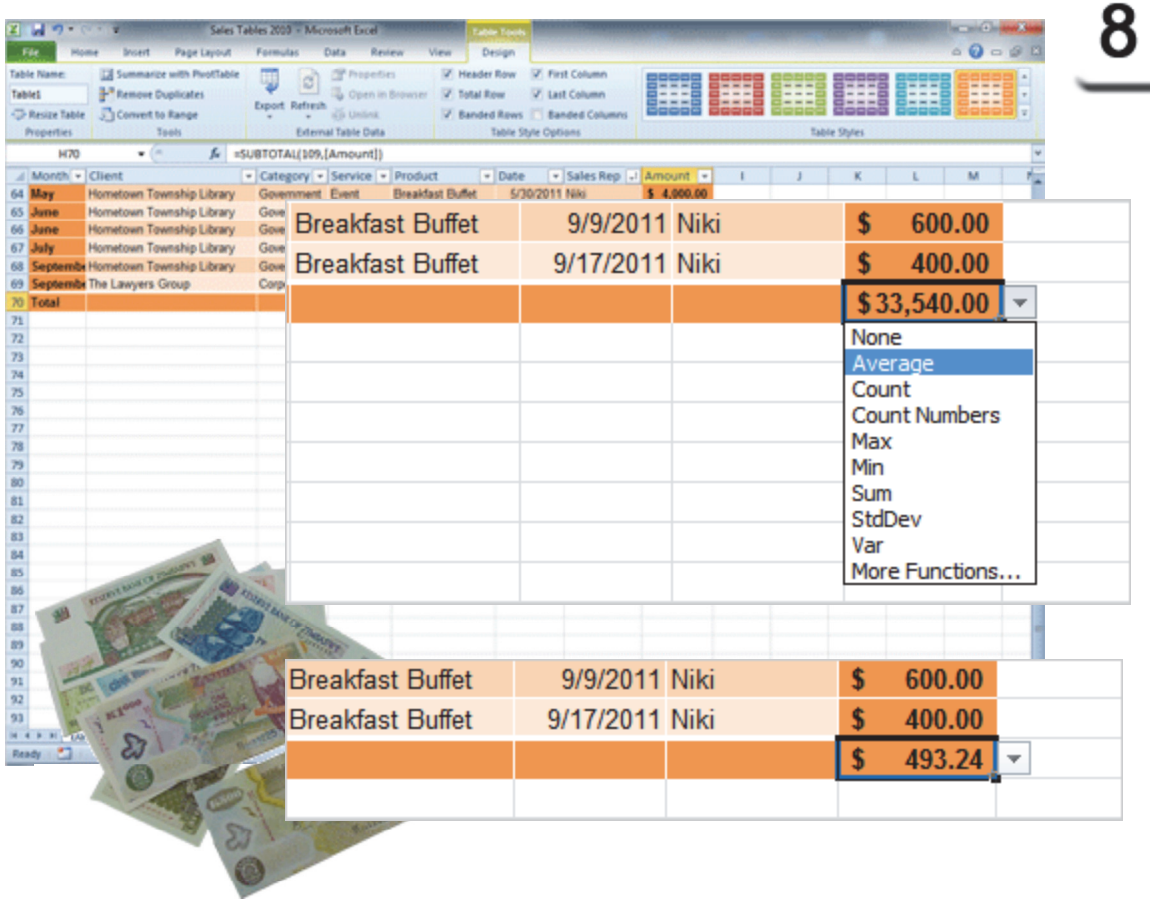
8. Try It: Edit the Total Row Function
Select: Cell H70. In this example, it is the Cell with the Total formula.

Select a Function: Average.

What Do You See? The average price will be calculated.

Memo to Self: How would someone reading your spreadsheet know that this is the Average, and not the Sum? Labels, Labels, Labels.

Table Tools->Design ->Table Style Options -> Total Row



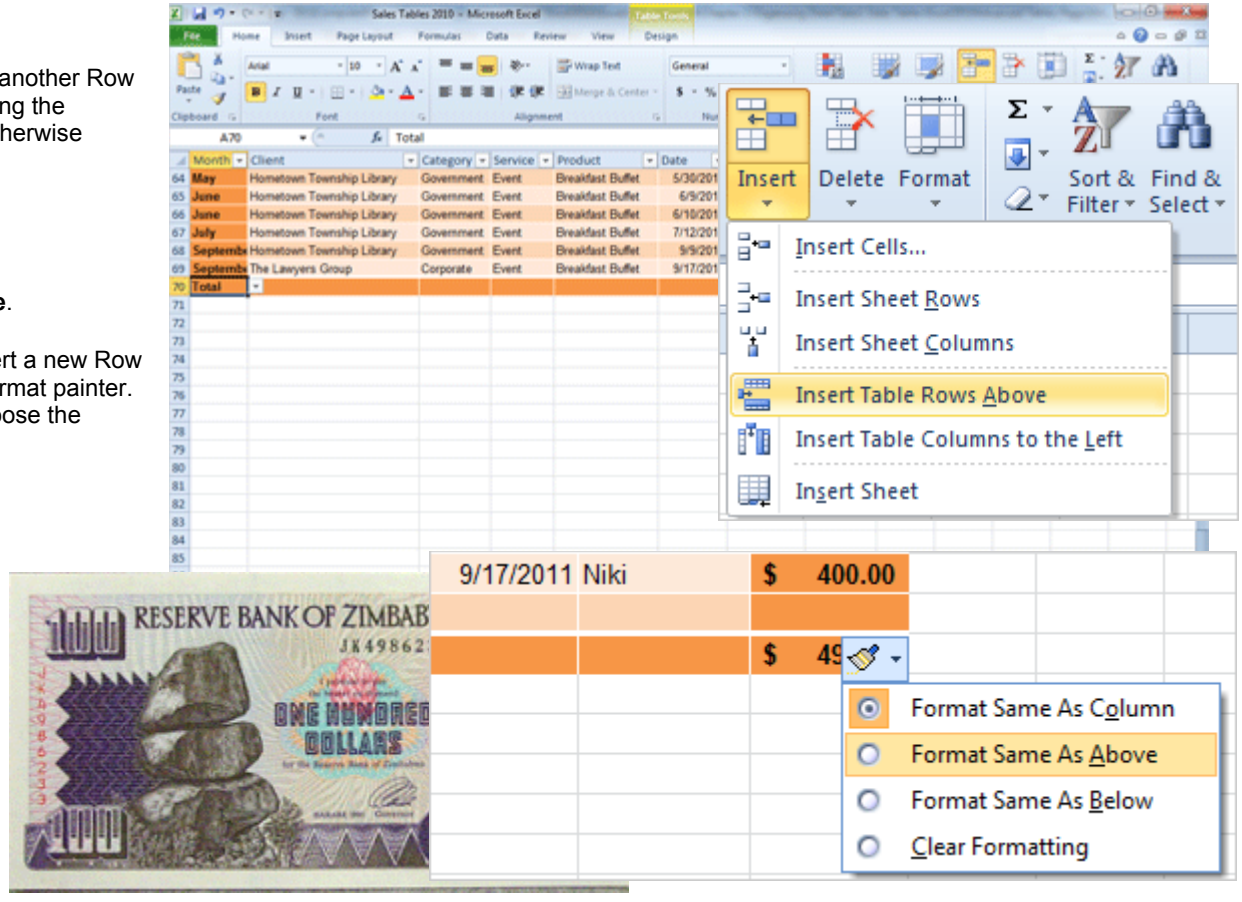
Add to the Table

Is the Table flexible? Can you add another Row or Column to the Table without losing the formatting, totals calculations, or otherwise breaking it?

Try It: Add a Row
Select any Cell in the Total Row.
Go to **Home -> Cells->Insert.**
Click on **Insert Table Rows Above**.

What Do You See? After you insert a new Row or Column, you may see a small format painter. You can click on the arrow and choose the formatting for the new Row.

Home->Cells->Insert->Insert Table Rows Above



Take One

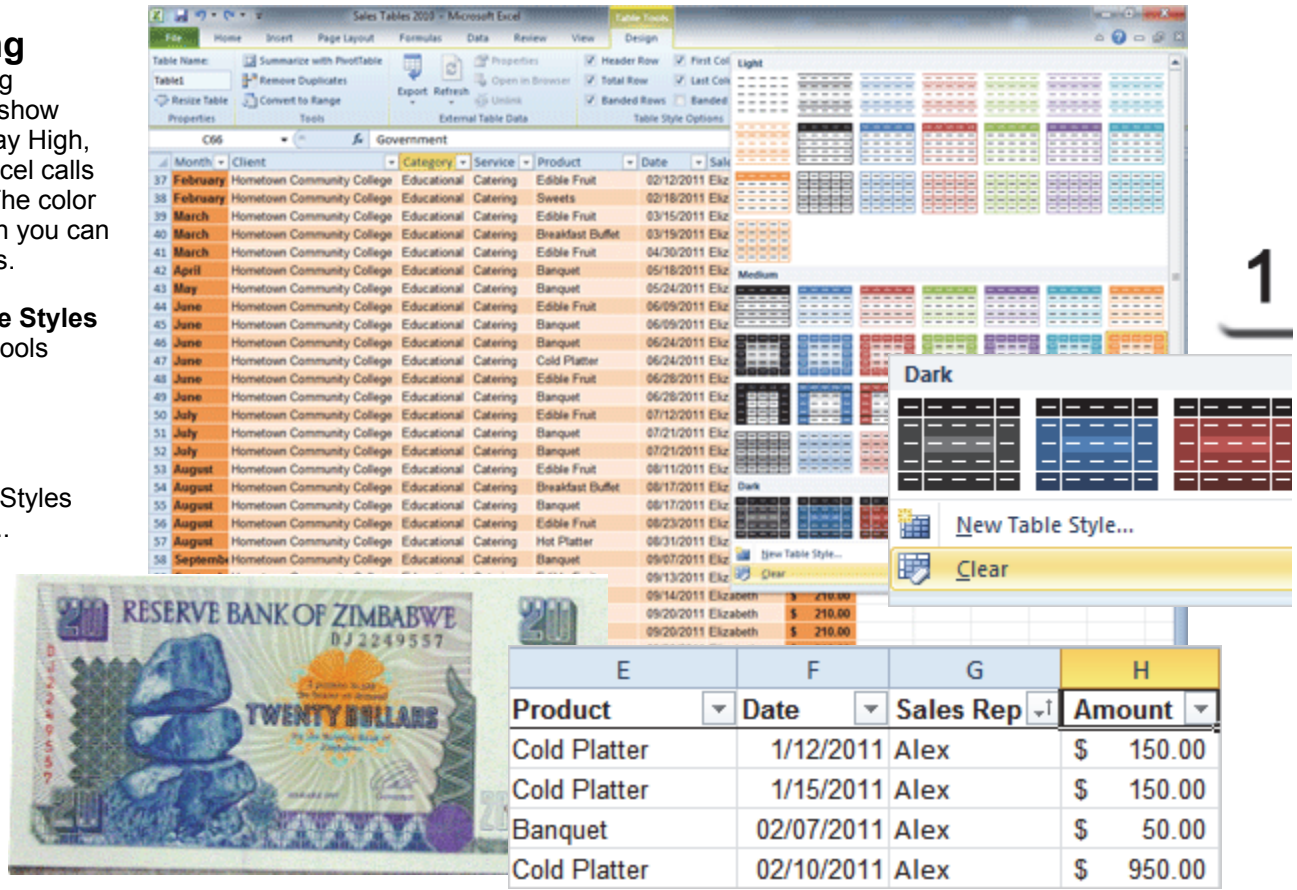
Conditional Formatting

People have a hard time reading numbers. You can use color to show trends or make comparisons, say High, Medium, and Low. Microsoft Excel calls this **Conditional Formatting**. The color depends on the condition, which you can choose. Let's look at the options.

1. Before You Begin: Clear the Styles
Click on the Table. The Table Tools should be available.
Go to T**able Tools->Design.**
Go to **Table Styles -> Clear.**

What Do You See? The Table Styles should be cleared. Keep going...

Table Tools-> Design ->Table Styles -> Clear



E	F	G	H
Product	Date	Sales Rep	Amount
Cold Platter	1/12/2011	Alex	$ 150.00
Cold Platter	1/15/2011	Alex	$ 150.00
Banquet	02/07/2011	Alex	$ 50.00
Cold Platter	02/10/2011	Alex	$ 950.00

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Clear the Table Styles

Take One

Conditional Formats

Microsoft Excel has a library of **Conditional Formatting** including Data Bars, Color Sets and Icons.

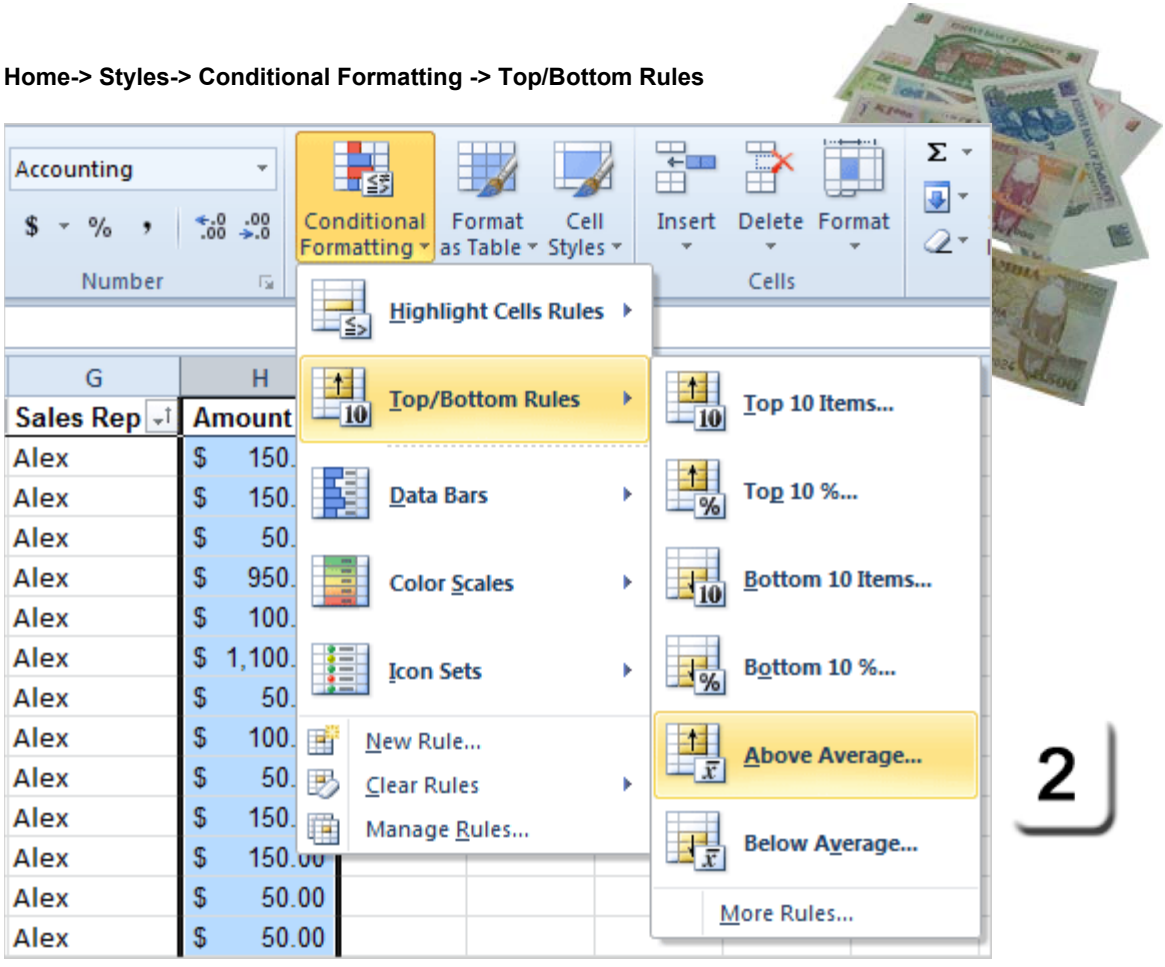
Each of these formats is based on Conditional Formulas, or **Rules**. Let's start with a simple Rule: show me any amount that is above the average.

2. Try It: Above or Below Average?
Select Column H
In the sample spreadsheet, this is the column with the Amount.

Go to **Home ->Styles.**
Go to **Conditional Formatting**.
Go to **Top/Bottom Rules**.
Select: **Above Average.**

Keep going, you will be prompted...

Home-> Styles-> Conditional Formatting -> Top/Bottom Rules



2

Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.3. Apply conditional formatting: Top/Bottom Rules

Take One

Home-> Styles-> Conditional Formatting-> Top/Bottom Rules

Choose the Formatting

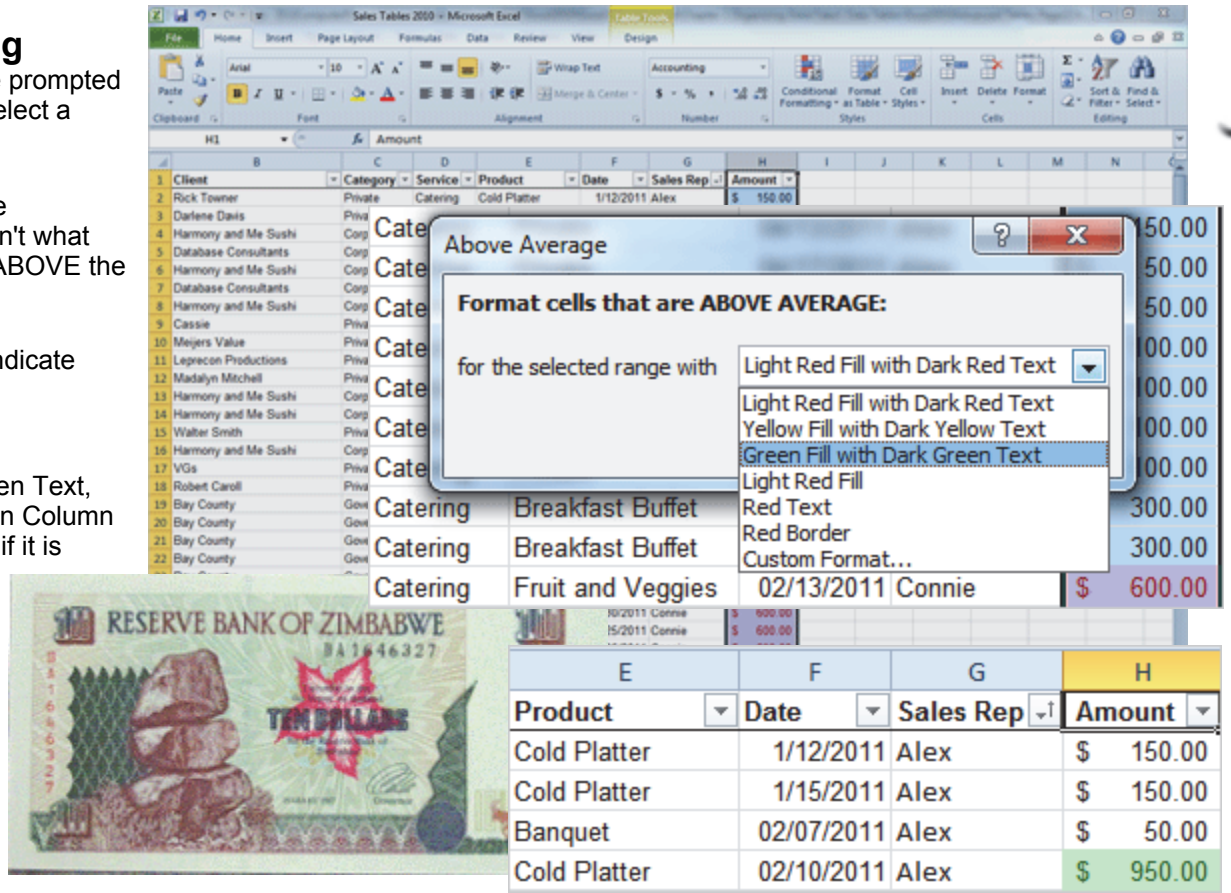
What Do You See? You will be prompted to select the colors when you select a **Top/Bottom** Rule.

In the example on this page, the suggested color is red, which isn't what people expect if the amount is ABOVE the Average.

Green means go: it is used to indicate financial success.

3. Try It: Format Cells

Select Green Fill with Dark Green Text, please. Click **OK**. The Amount in Column H will be formatted Dark Green if it is Above Average.



Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.3. Apply conditional formatting: Top/Bottom Rules

Take One

More Than One Rule

You can have more than one Conditional Rule formatting your data. In this illustration, there is one color for sales that are Above Average, and another for the sales that are Below Average.

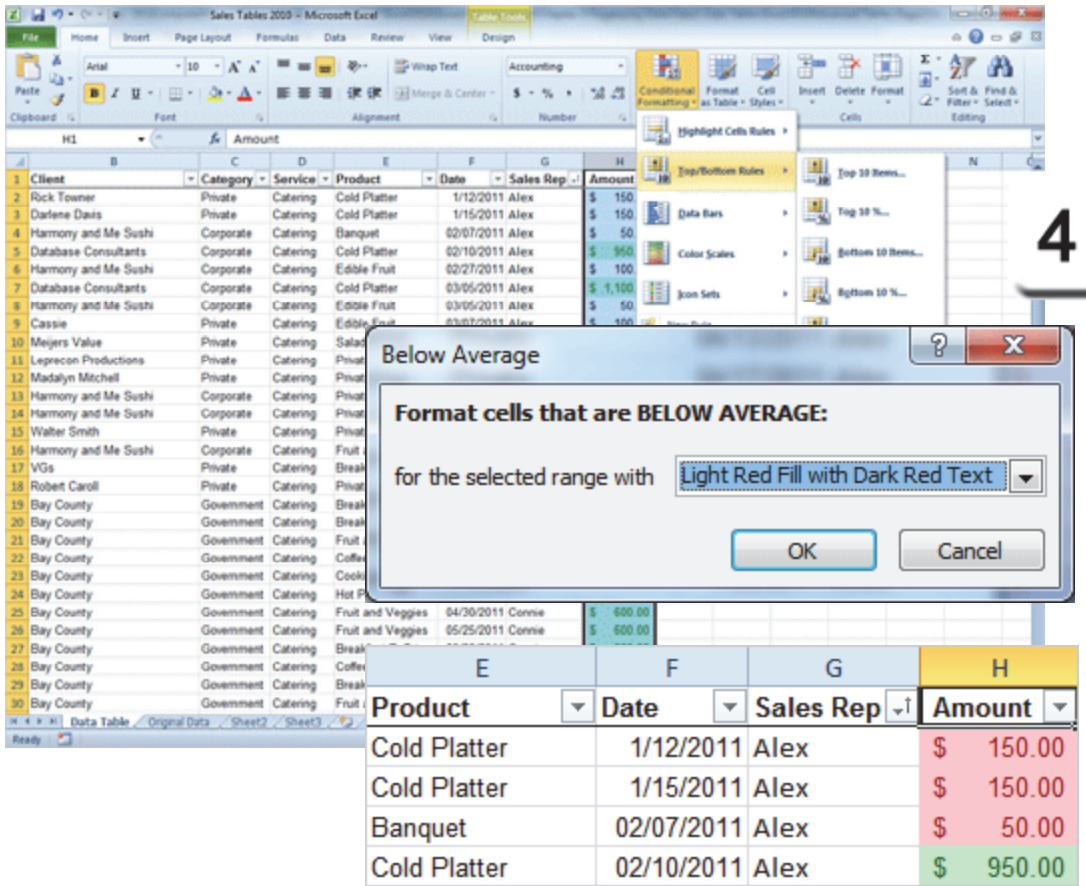
4. Try It: Add Another Rule
Select Column H.
Go to **Home -> Styles.**
Go to **Conditional Formatting**.
Go to **Top/Bottom Rules.**
Select: **Below Average.**

Format Cells: You will be prompted to select a formatting option. Select Red Fill with Dark Red Text, please.

What Do You See? Any amount less than the Average is highlighted red with red text. Any amount greater than the Average is formatted green/green.

Keep going...(this is actually fun, isn't it?)

Home-> Styles-> Conditional Formatting -> Top/Bottom Rules



Product	Date	Sales Rep	Amount
Cold Platter	1/12/2011	Alex	$ 150.00
Cold Platter	1/15/2011	Alex	$ 150.00
Banquet	02/07/2011	Alex	$ 50.00
Cold Platter	02/10/2011	Alex	$ 950.00

Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.3. Apply conditional formatting: Top/Bottom Rules



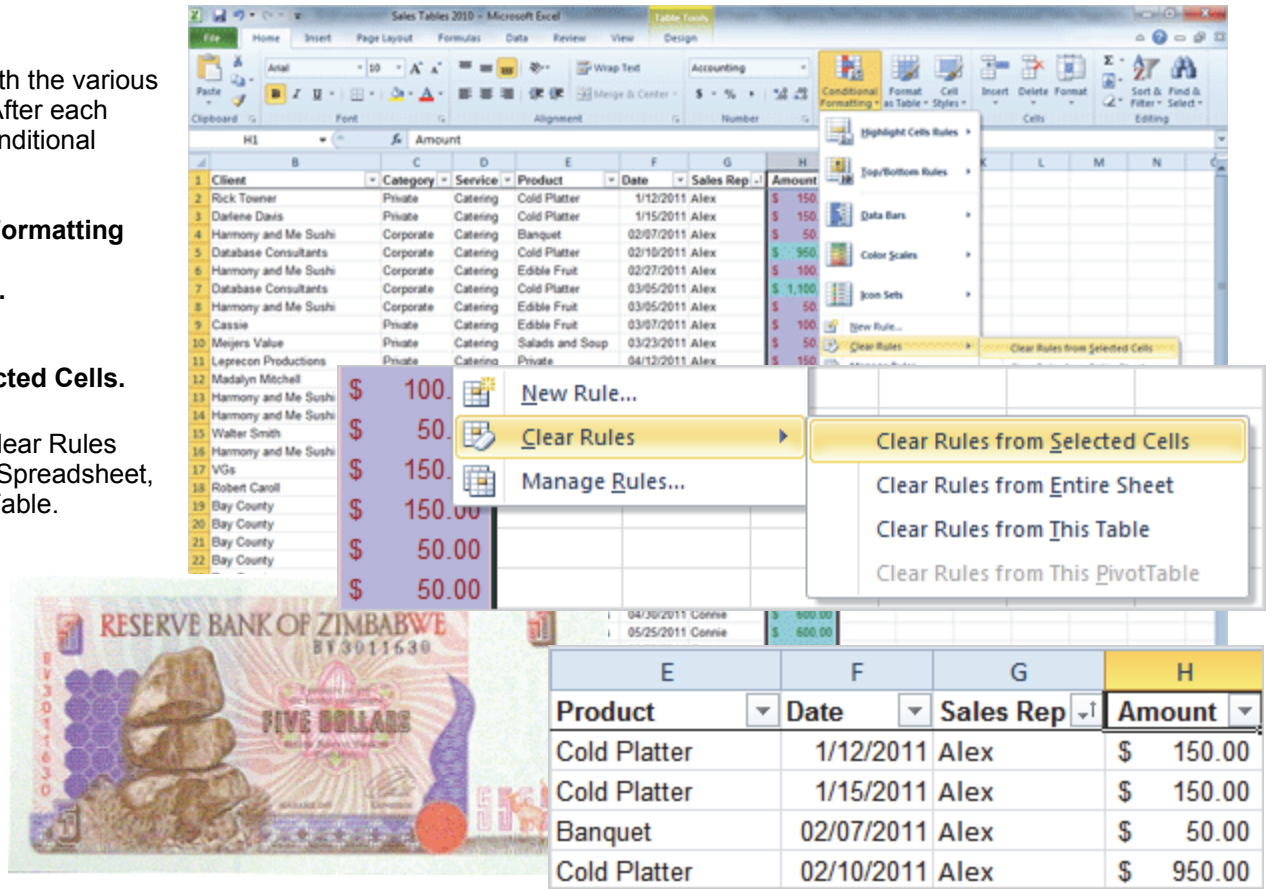
Clear the Rules

The following pages will play with the various Conditional Formatting Rules. After each example, you can **Clear** the Conditional Formatting. Here are the steps.

Try it: Clear the Conditional Formatting
Select Column H.
Go to **Home ->Home -> Styles.**
Go to **Conditional Formatting.**
Go to **Clear Rules.**
Select: **Clear Rules from Selected Cells.**

What Do You See? You can Clear Rules from Selected Cells, the Entire Spreadsheet, from this Table or from a PivotTable.

Home-> Styles-> Conditional Formatting-> Clear Rules



E	F	G	H
Product	Date	Sales Rep	Amount
Cold Platter	1/12/2011	Alex	$ 150.00
Cold Platter	1/15/2011	Alex	$ 150.00
Banquet	02/07/2011	Alex	$ 50.00
Cold Platter	02/10/2011	Alex	$ 950.00

Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.3. Apply conditional formatting: Clear Rules

Data Bars

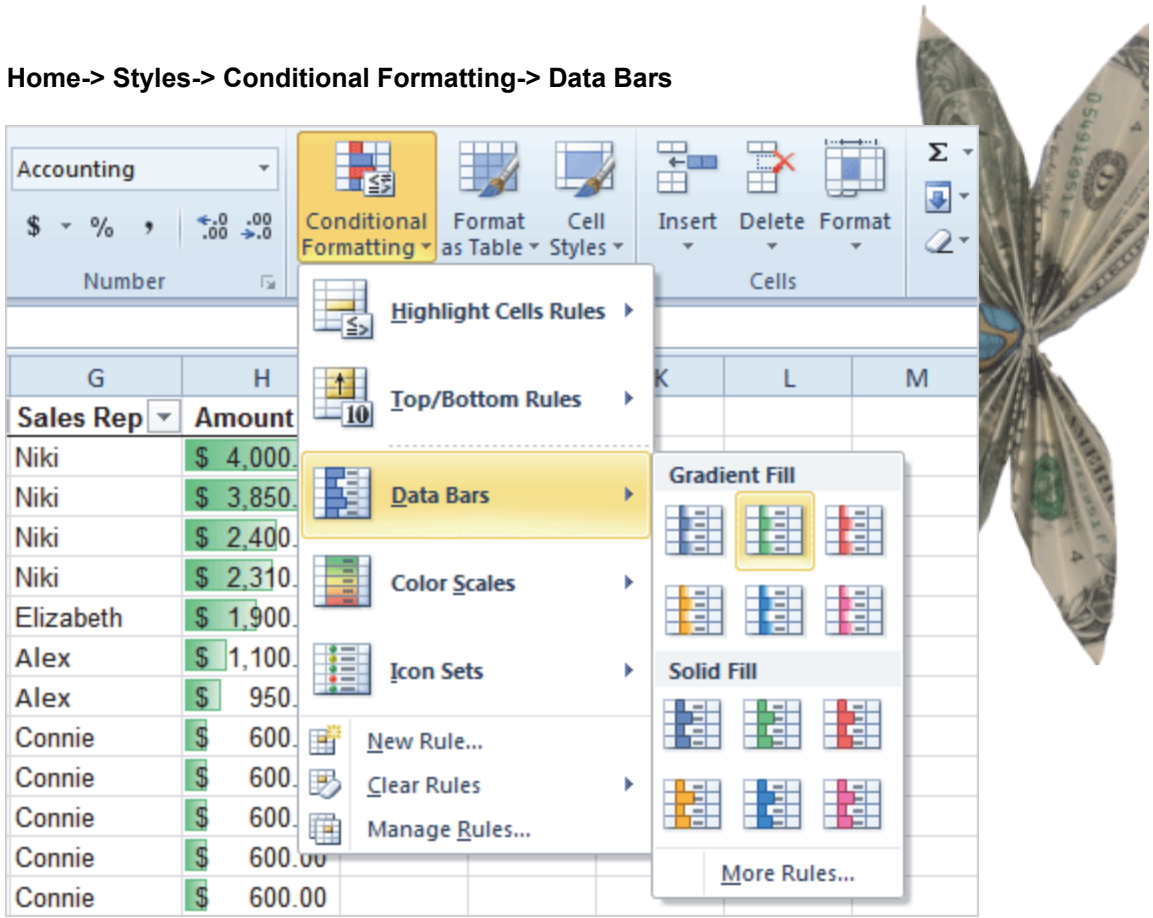
The following exercises demonstrate the various **Conditional Formatting** available in Microsoft Excel. All of these examples will be applied to the H Column, the one with sales data. The Amount has been **Sorted** Descending.

Try It: Format with Data Bars
Select Column H.
Go to **Home -> Styles.**
Go to **Conditional Formatting.**
Select: **Data Bars.**

What Do You See? The cell with the highest value is 100% filled in. The other cells are filled with less than 100%. Excel calculates the percentage.

After each trial, select the H Column.
Go to **Conditional Formatting -> Clear Rules -> From the Selected Cells.**

Home-> Styles-> Conditional Formatting-> Data Bars



Take One

Use Color Scales

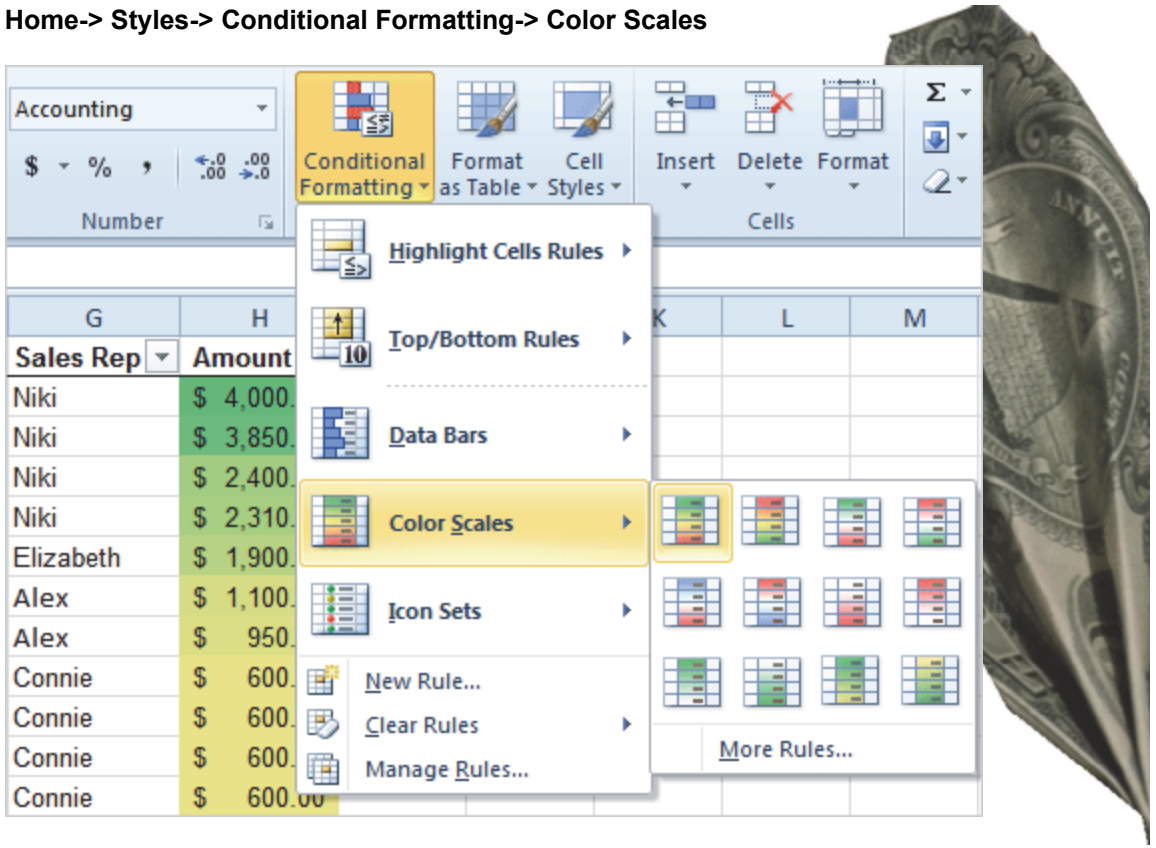
Try It: Format with Color Scales
Select Column H.
Go to **Home-> Styles.**
Go to **Conditional Formatting.**
Select **Color Scales**: you will have a short set of built-in options.

What Do You See? The Color Scales use two colors to indicate the Conditional Formatting. In this example, the highest value is red and the lowest is yellow. Microsoft Excel compares each amount and formats the cells accordingly.

Try This, Too: What does it look like if you sort the information by Date?

After each trial, select the H Column.
Go to **Conditional Formatting -> Clear Rules -> From the Selected Cells.**

Home-> Styles-> Conditional Formatting-> Color Scales



Take One

Use Icon Sets

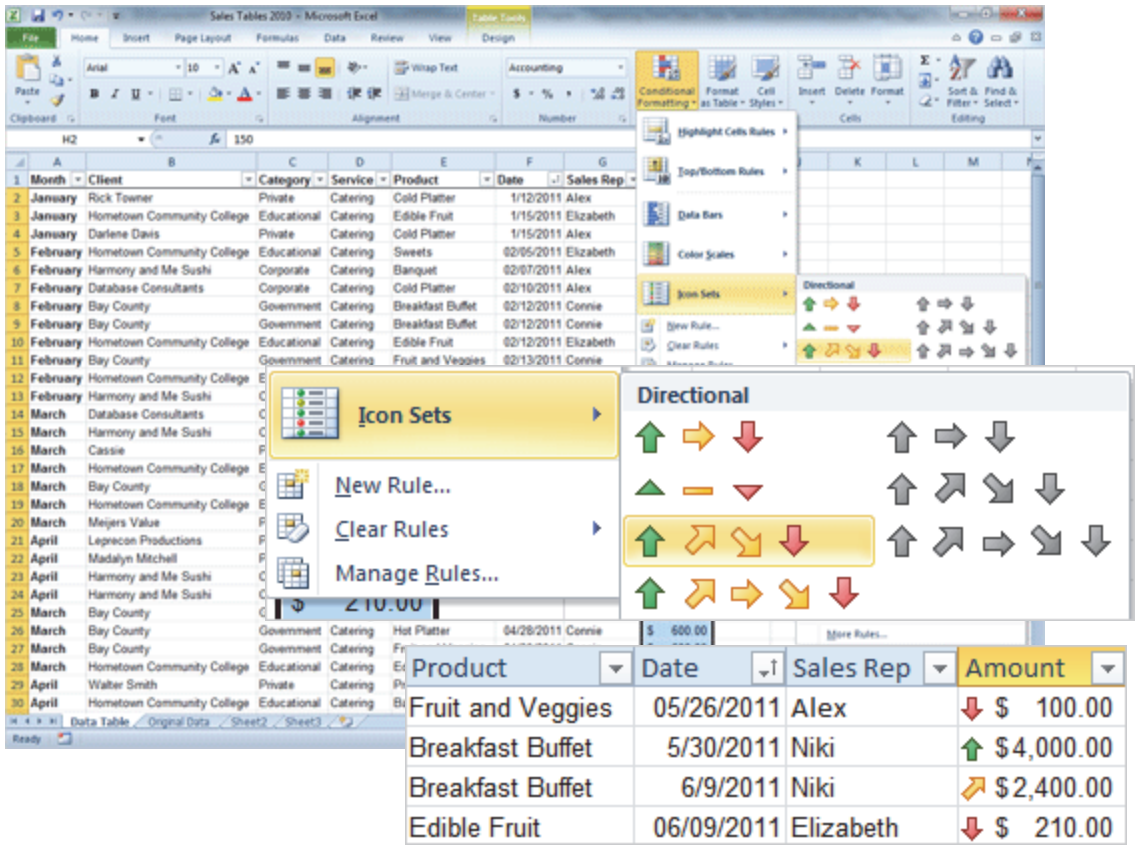
Try It: Format with Icon Sets
Select Column H.
Go to **Home -> Styles.**
Go to **Conditional Formatting.**
Select **Icon Sets:** Arrows (Colored)

What Do You See? The Icon Sets use a three, four, or five-color scale to format the data. In the example on this page, there are four Directional arrows representing the following percents:
100-75%
74-50%
49-25%
25-0%

What Else Do You See? The Conditional Formatting menu also lets you create a **New Rule** or **Manage the Rules**.

Let's investigate where Excel puts the Rules and what tools are available in the **Rules Manager**. Keep going...

Home-> Styles-> Conditional Formatting-> Icon Sets

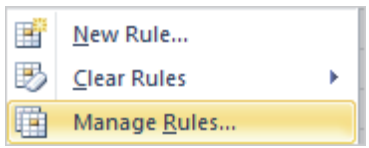


Take One

The Rules Manager

Before You Begin: In this example, Column H is the Amount, sorted Descending. Column H has the Icon Set Conditional Formatting,

1. Try It: Use the Rules Manager
Go to **Home -> Styles.**
Go to **Conditional Formatting**.
Click on **Manage Rules**.

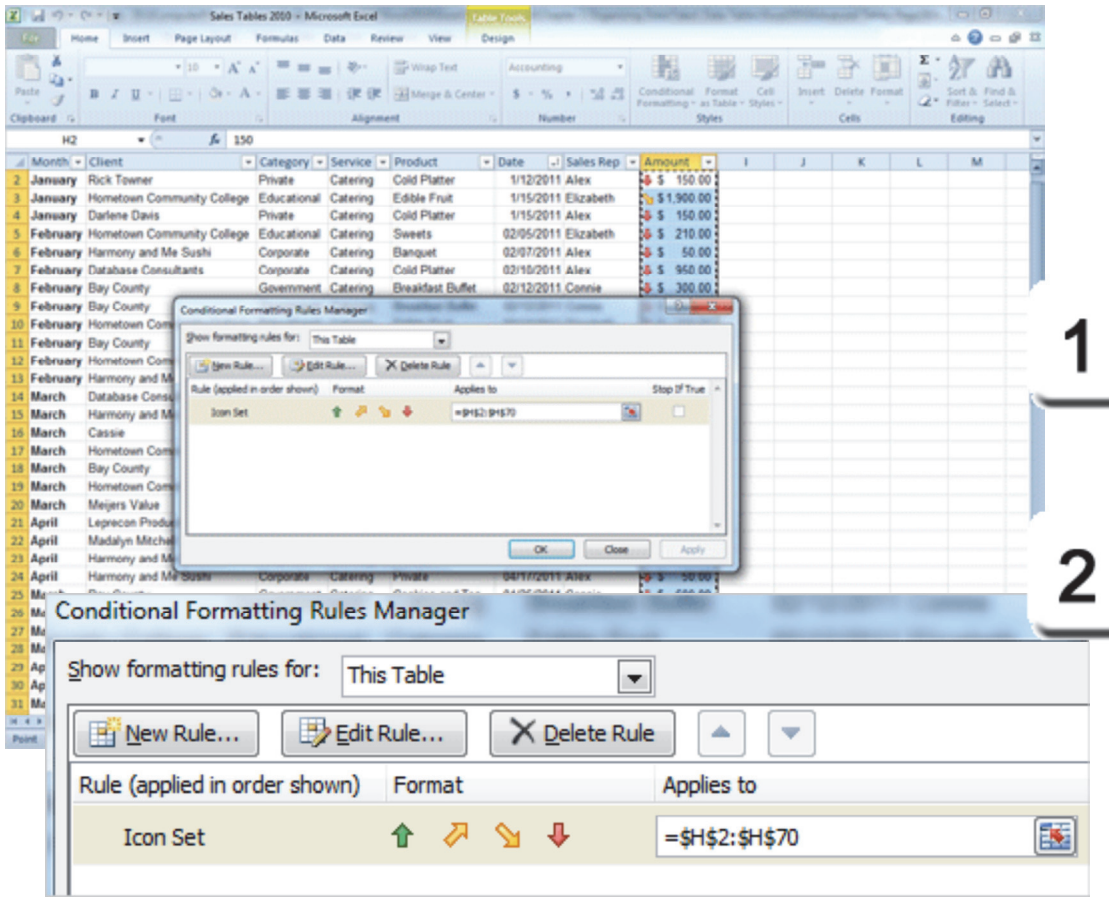


What Do You See? The **Rules Manager** should display a list of the Conditional Formatting. You can add, delete, and edit the Rules here.

2. Try This, Too: Edit the Rule
Click on **Edit Rule**...

Keep going, pleeeeeease...

Home -> Styles->Conditional Formatting -> Manage Rules



Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.3. Apply conditional formatting: Manage the Rules

Take One

Bend the Rules

3. What Do You See? The **Rule Type** is a list of options. You can use a Rule to identify a cell by the values. The values can be based on the average or the rank. You can also use a formula in a rule.

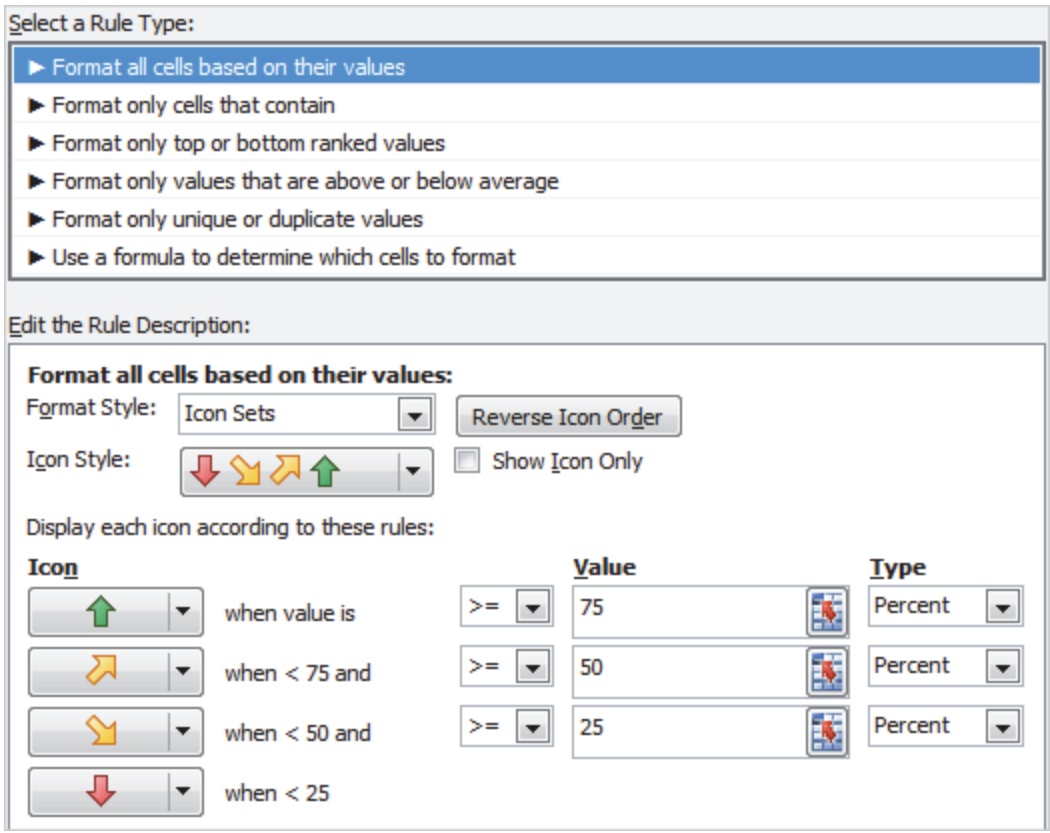
The **Rule Description** is a tool for defining the values. You can select the formatting **Style** and type in your own **Value** if you wish.

You can edit each part of the Rule Description including the Icons, the values and the colors if you wish.

It's kind of fun. Click OK to return to the Rules Manager, and OK, again, to close the Rules Manager.

Very Good!

Home -> Conditional Formatting -> Manage Rules



3

Take One

Find Special Cells

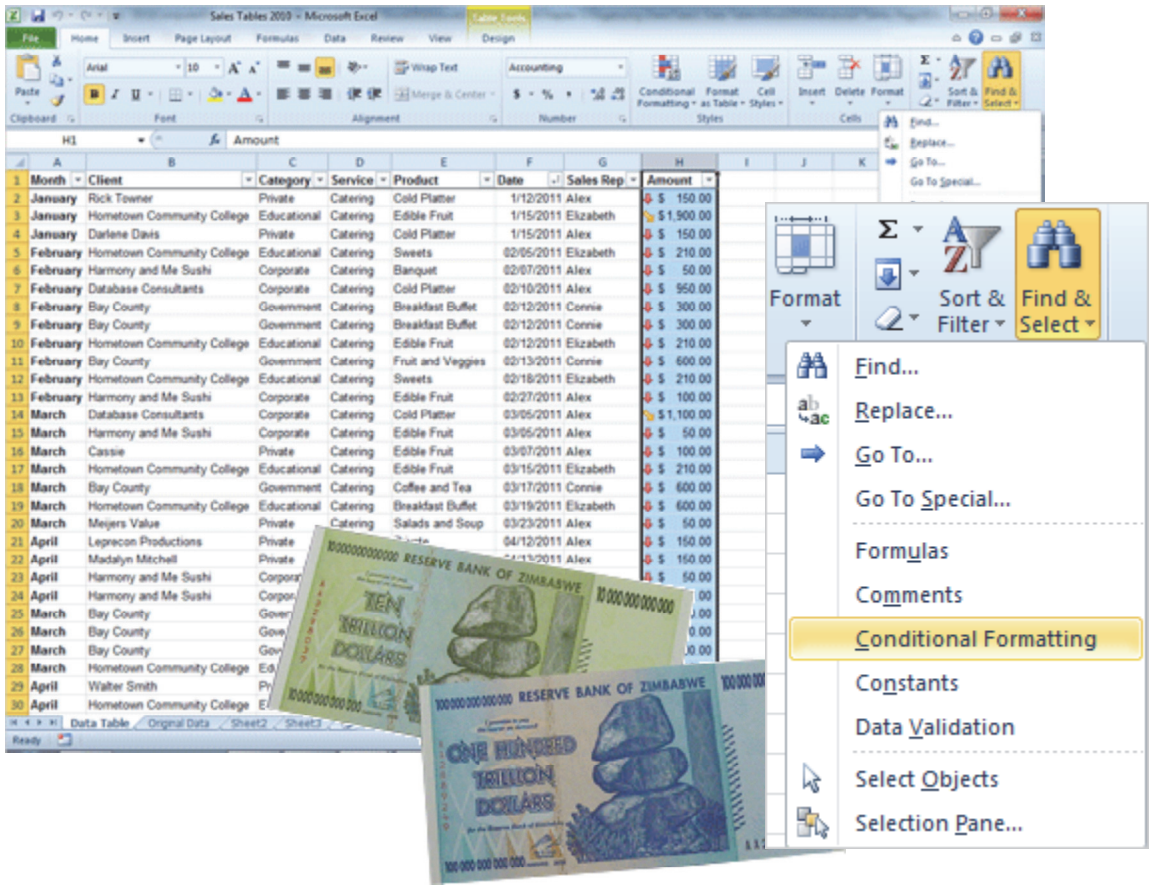
You can use the **Find & Select** option to locate cells with Conditional Formatting or Data Validation.

The Find button is in the Editing group on the Home Ribbon. The Find icon may look different in Word and Excel (big or small), but in both programs it is still on the right side of the Ribbon.

Try This: Use the Find Options
Go to **Home ->Editing.**
Select **Find and Select**.
Click on Data Validation or Conditional Formatting and test the Find options.

Microsoft Excel will highlight the Cells with Conditional Formatting in Column H.

Home -> Editing ->Find & Select



Take One

Table Properties: Resize

The Table Tools include two more groups of options: **Table Properties** and **Table Tools**.

Before You Begin: Review the Properties
The Table Properties include the Name and the Range. By default, the Table was named Table1 in this example. The Resize Table button lets you select the Range of Cells.

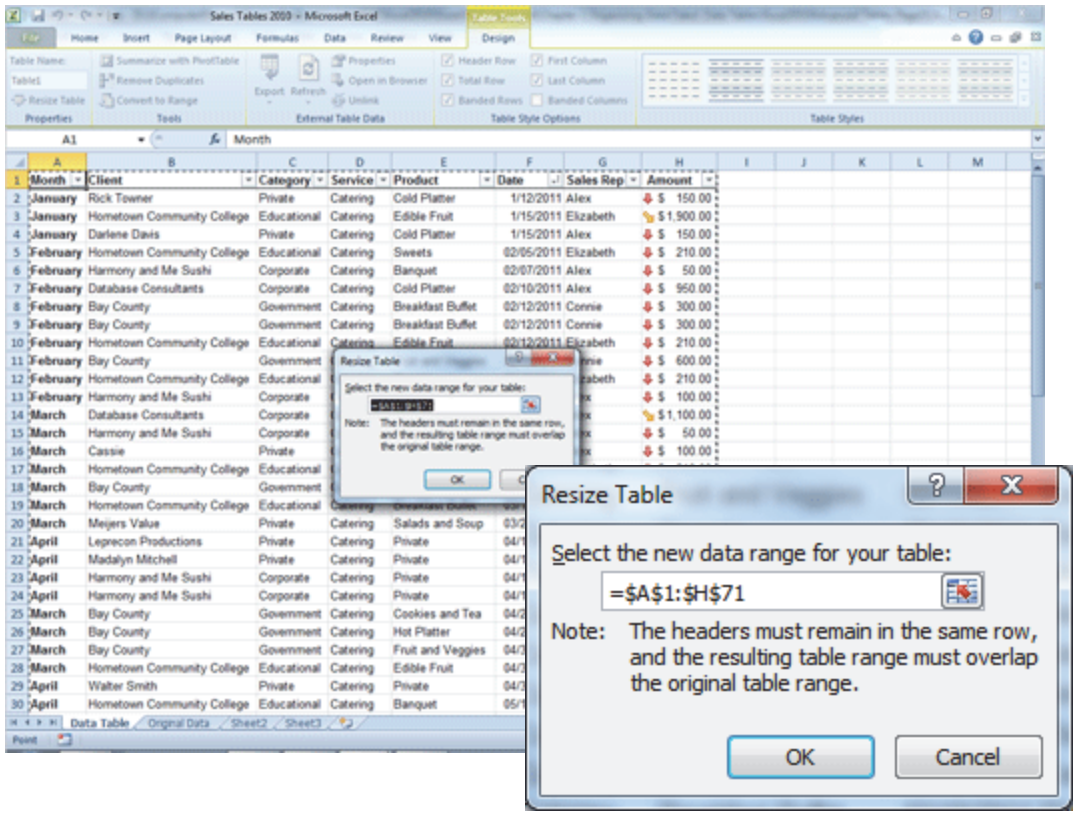
Try it: Resize the Table
Click anywhere on the Table. The Table Tools should be available.

Go to **Table Tools-> Design ->Properties**
Select **Resize Table.**

What Do You See? Microsoft Excel will outline the Range of the Table. In the example on this page, the Table is =$A$1:$H$71. The Range is in Absolute references.

If you wish, you can select a new range, but the Header must stay the same.

Table Tools-> Design ->Properties-> Resize Table



Take One

Table: Remove Duplicates

When people enter data into a table or list, it is easy to make a mistake and type a name twice. Duplicates happen. In this example, we will copy and paste a Row, then go through the steps to find the duplicate.

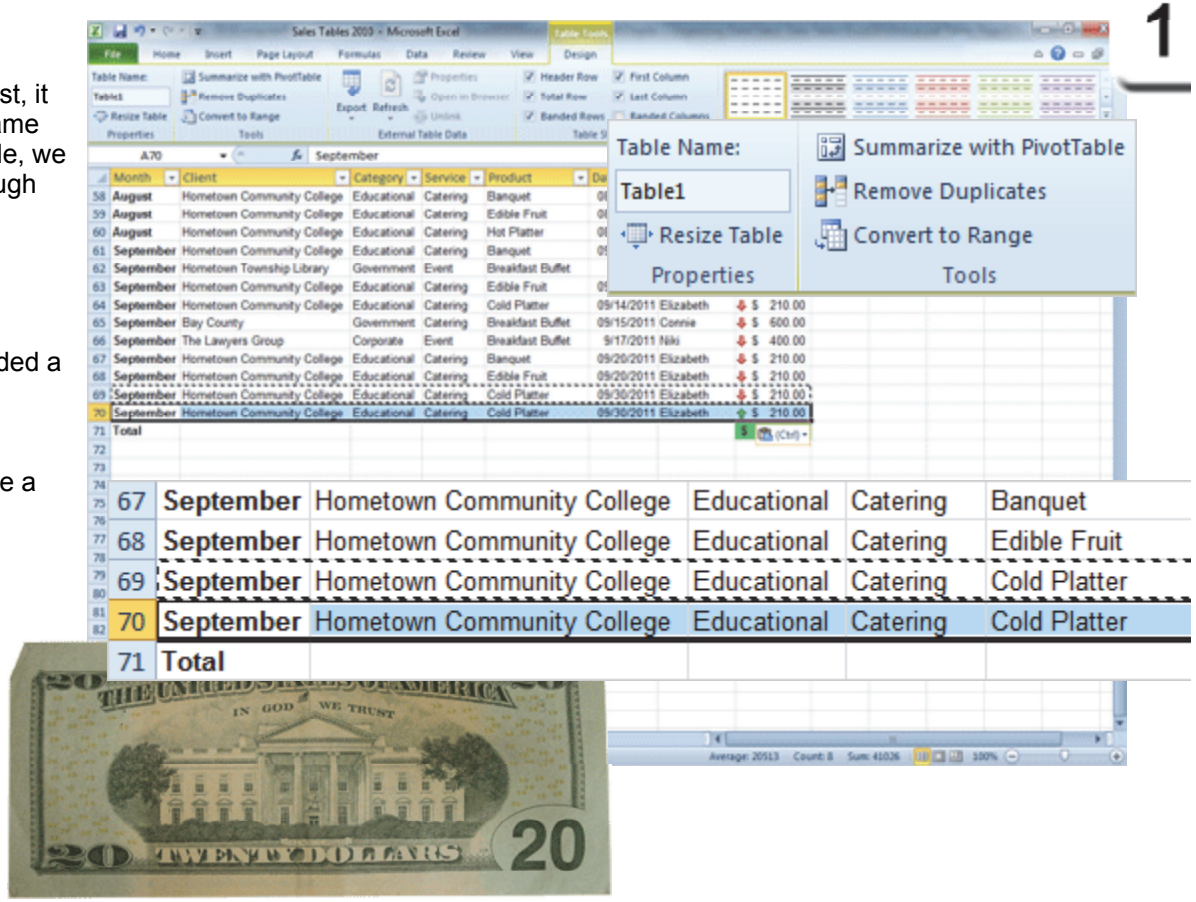
1. Try This: Create the Duplicate
Select Row 69
Go to **Home->Copy**.
Select Cell A70. (In our example, we added a new, blank Row 70 a few pages back.)
Go to **Home->Paste**.

What Do you See? The pasted Cells are a duplicate of the Row that you copied.

Keep going...

Table Tools-> Design ->Tools-> Remove Duplicates

1



Take One

Table Tools-> Design ->Tools-> Remove Duplicates

2

Table: Remove Duplicates

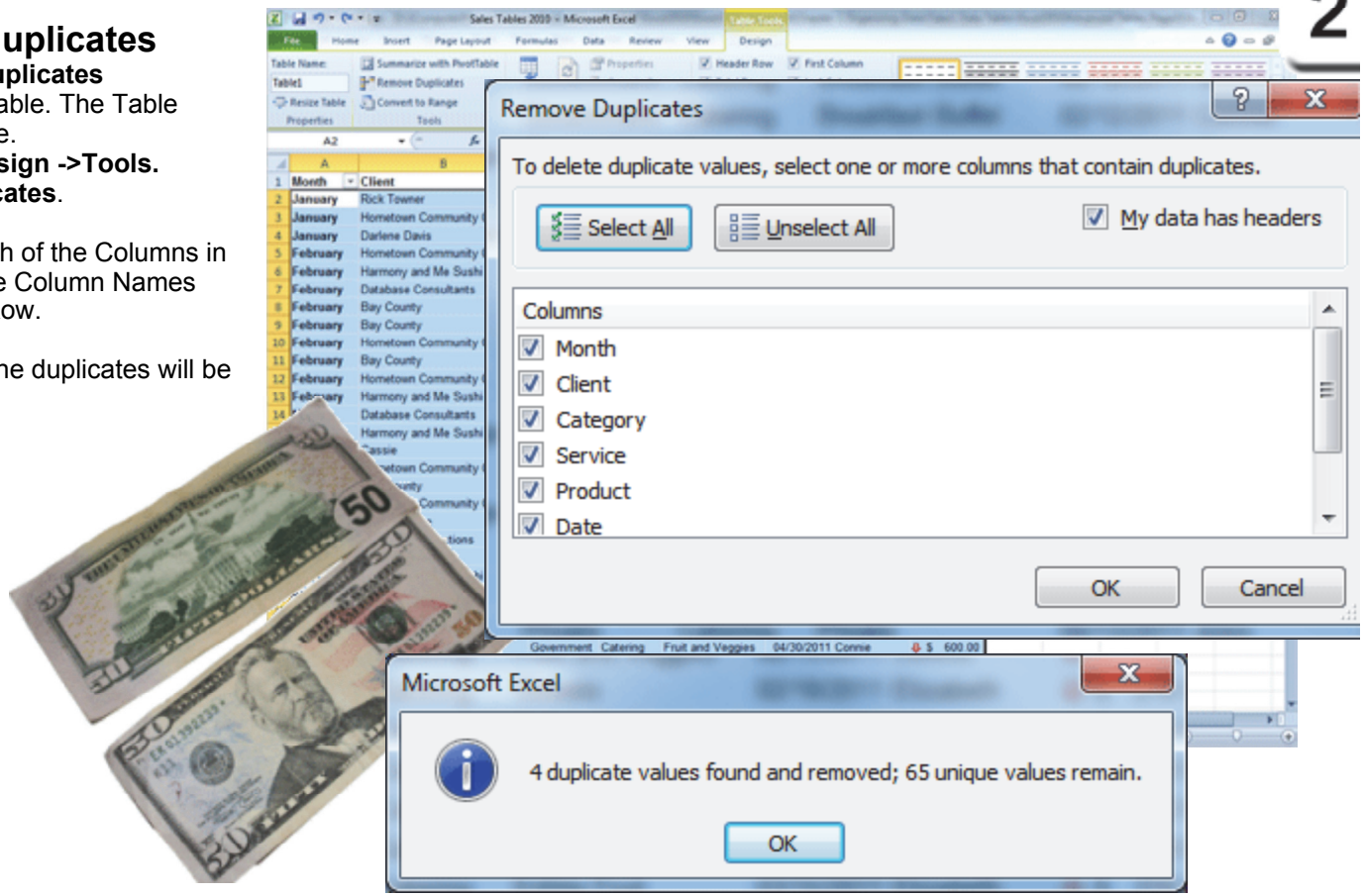
2. Try This: Remove Duplicates

Click anywhere on the Table. The Table Tools should be available.
Go to **Table Tools-> Design ->Tools.**
Click on **Remove Duplicates**.

What Do You See? Each of the Columns in our table is selected. The Column Names come from the Header Row.

When you click on **OK**, the duplicates will be found and removed.

So, that's good, too.



Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Remove duplicates in a Table

Take One

Convert to Range

This lesson began by creating a Table by selecting a Range of Cells. What if you wanted to remove the Table but keep the data? Here are the steps you can take to convert the table back to a Range, or List.

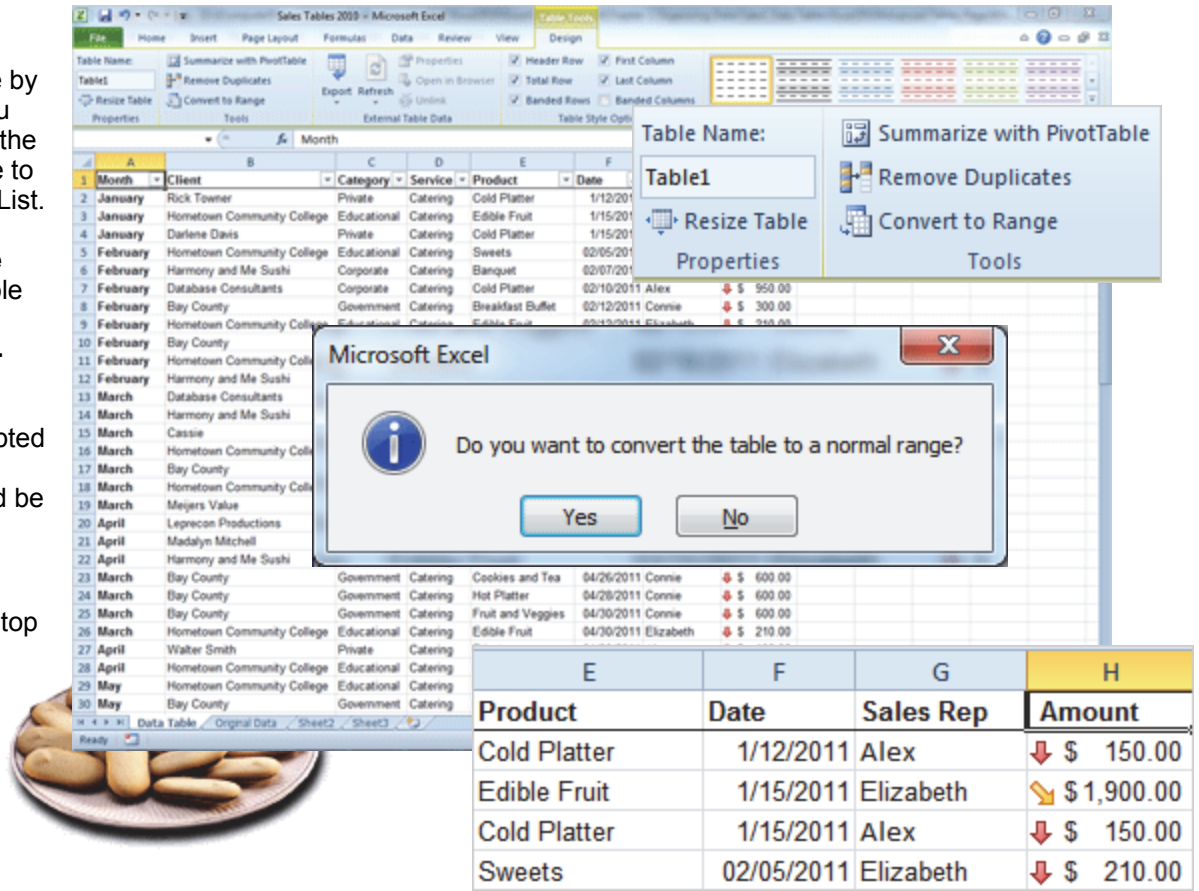
Try it: Convert the Table to a Range
Click anywhere on the Table. The Table Tools should be available.
Go to **Table Tools-> Design ->Tools.**
Click on **Convert to Range.**

What Do You See? You will be prompted that the Table will be converted to a normal range. None of the data should be lost when you convert to Range.

The data will still have the Conditional Formatting, however the Filters at the top in the Header Row will be gone.

Done and done. You get the cookie.

Table Tools-> Design ->Tools-> Convert to Range



E	F	G	H
Product	Date	Sales Rep	Amount
Cold Platter	1/12/2011	Alex	$ 150.00
Edible Fruit	1/15/2011	Elizabeth	$ 1,900.00
Cold Platter	1/15/2011	Alex	$ 150.00
Sweets	02/05/2011	Elizabeth	$ 210.00

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats: Convert a Table to a Range

Practice Activities

Lesson 1: It Works for Me!

Before You Begin: Download the sample spreadsheet: Student Records.xlsx

Try This: Do the following steps

1. Open the spreadsheet: Student Records.xlsx
2. Delete the columns for Grade and Homeroom Teacher
3. Add the following students to the bottom of the spreadsheet

Student	Percent	Class
Lauren Ball	96	2012
Brandon Ayers	45	2011
Arnold Johnston	78	2012
Brittney Evans	82	2013

4. Sort the Spreadsheet by Class
5. Format with Table Style Light 8 and select “My Table has Headers”
6. Use the Remove Duplicate Tool
7. Apply conditional formatting. Create a new rule and select 2 color scale. Pick red for the lowest value and green for the highest value.
8. Save this as YOUR NAME Works for Me Practice



Test Yourself

1. Which of the following is a way to copy a sheet in a workbook?
(Select all correct answers)
a. Home-> Cells-> Format-> Move or Copy
b. Right click the sheet and select Move or Copy
c. Save As-> Copy
Tip: Advanced Excel, page 15

2. When using the sort command on a column of Months, by default, the column is sorted alphabetically, with April first.
a. True
b. False
Tip: Advanced Excel, page 16

3. Where is the Sort command that allows for custom sorting of months?
a. Home-> Sort & Filter-> Custom Sort
b. Data-> Sort & Filter-> Sort-> Custom List
c. Data-> Sort & Filter-> Months
Tip: Advanced Excel, page 18

4. Excel can makes tables of data.
a. True
b. False
Tip: Advanced Excel, page 21

5. Which is true about a Total Row in an Excel Table?
(Select all correct answers.)
a. Created by checking Total Row on the Table Tools Ribbon
b. Includes a Summary box with a drop down list of options
c. Can only be used to calculate Sum
d. Can only be used on small tables
Tip: Advanced Excel, page 27, 28

6. Which are true about Conditional Formatting? (Select all correct answers.)
a. Colors or icons are based on rules
b. Command is Home->Styles->Conditional Formatting
c. Includes option for creating custom rules
d. Can only have one rule applied
Tip: Advanced Excel, page 31-33

7. Which commands are on the Table Tools ribbon? (Select all correct answers.)
a. Remove duplicates
b. Convert to Range
c. Insert Rows
Tip: Advanced Excel, page 44

8. The Find command can be used to find any cell(s) with Conditional Formatting applied.
a. True
b. False
Tip: Advanced Excel, page 40

9. Which is a type of Conditional Formatting?
(Select all correct answers.)
a. Icon Sets
b. Color Scales
c. Data Bars
d. Fill & Text Colors
Tip: Advanced Excel, page 31

10. An Excel Table has a gallery of Table Styles.
a. True
b. False
Tip: Advanced Excel, page 24



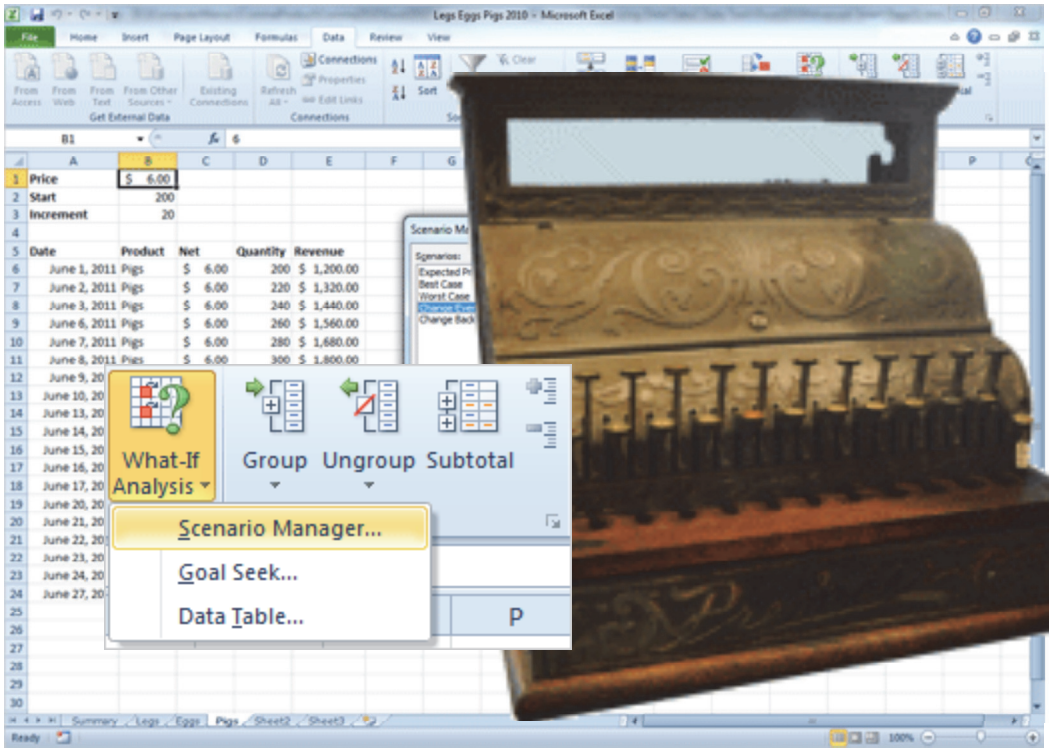
Excel 2010: Tables and Lists

Work Smarter, Not Harder

Advanced Excel Objectives

In this lesson, you will learn how to:

1. Use the Data Ribbon to Sort and Filter the data
2. Outline the data with the Outline Tools and use the Outline to Show or Hide Rows of information
3. Use the Data Tools to perform a What-If Analysis, for example use Goal Seek to define a total and see how that goal can be met
4. Use the Scenario Manage to define Best, Worst and Expected results by changing one or more cells



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Lesson 3: Work Smarter, Not Harder

1. Readings
Read Lesson 3 in the Advanced Excel guide, page 47-80.

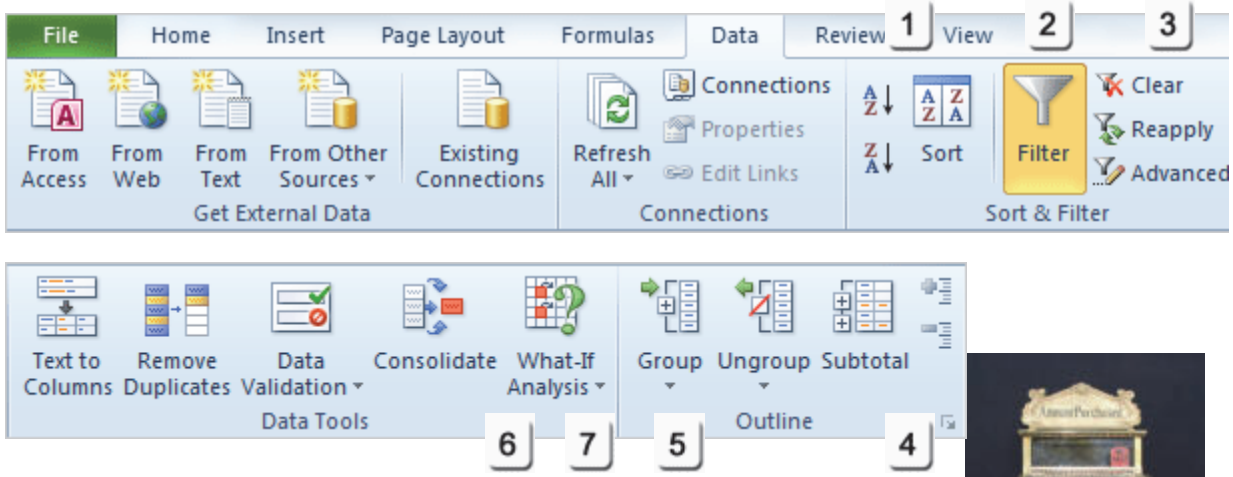
Project
A sample spreadsheet that uses Outlines and What-If Scenarios to analyze the data.

Downloads
Customer Sales 2010.xlsx
Legs Eggs Pigs 2010.xlsx
Brown Bag Lunch Sales Team.xlsx

2. Practice
Do the Practice Activity, page 81.

3. Assessment
Review the Test questions, page 82.

Data



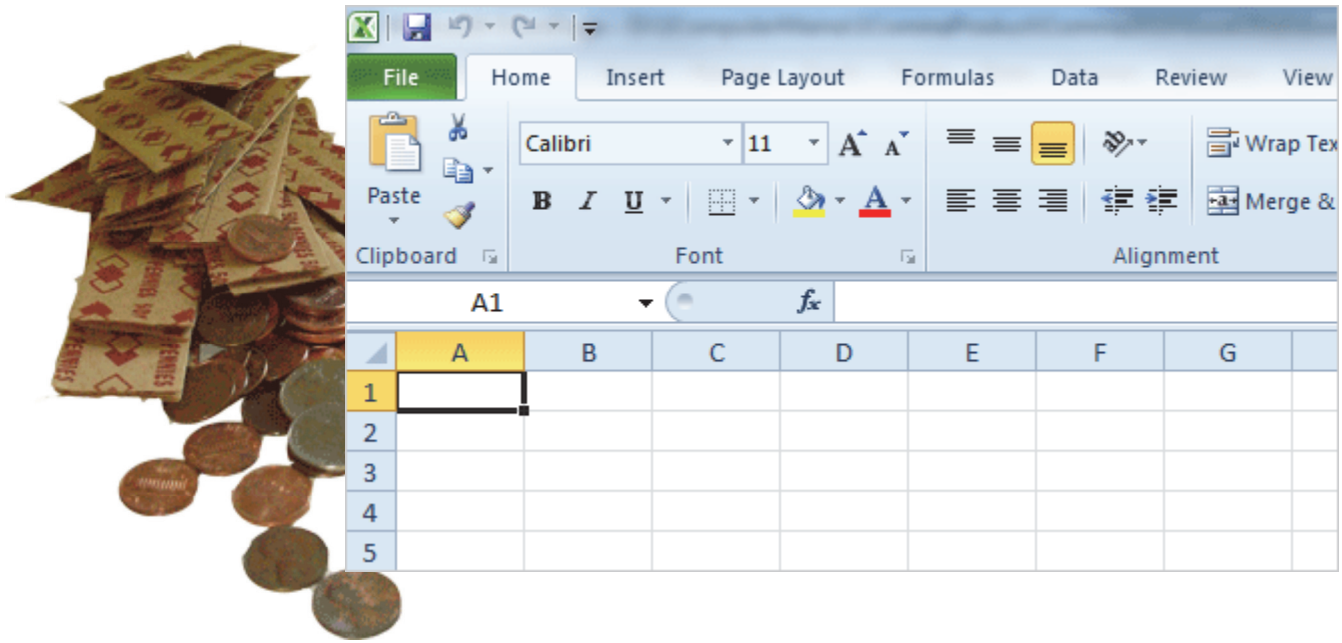


Menu Maps
This lesson shows the **Data** Ribbon.
1. Data->Sort and Filter->Sort, page 51
2. Data->Sort and Filter->Filter, page 52
3. Data -> Sort & Filter-> Clear, page 55
4. Data -> Outline-> Subtotal, page 56
5. Data -> Outline-> Subtotal->Group->Group, page 66
6. Data -> Data Tools->What-If Analysis-> Goal Seek, page 69
7. Data -> Data Tools->What-If Analysis-> Scenario Manager, page 71

Work Smarter, Not Harder

Pretend your little company recorded all of their invoices in a financial program. This software allowed you to export that information into Microsoft Excel. You have a lot of questions and Excel can help you analyze the data. Your goal is to look at the sales numbers. The invoices are sorted by month. For each record, can you see who sold what? To whom? For how much?

Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010



Start Microsoft Excel

What Do You See? Is there a Title Bar that says Microsoft Excel? Yes.

Is there a Home Ribbon with the Clipboard, Font, Alignment and Number Groups? Yes.

If your screen looks similar to the example on this page, then you are ready to get started.

Before You Begin

The purpose of this lesson is to investigate the **Data** Options in Microsoft Excel 2010. You can use a spreadsheet that you created or download a sample spreadsheet if you wish.

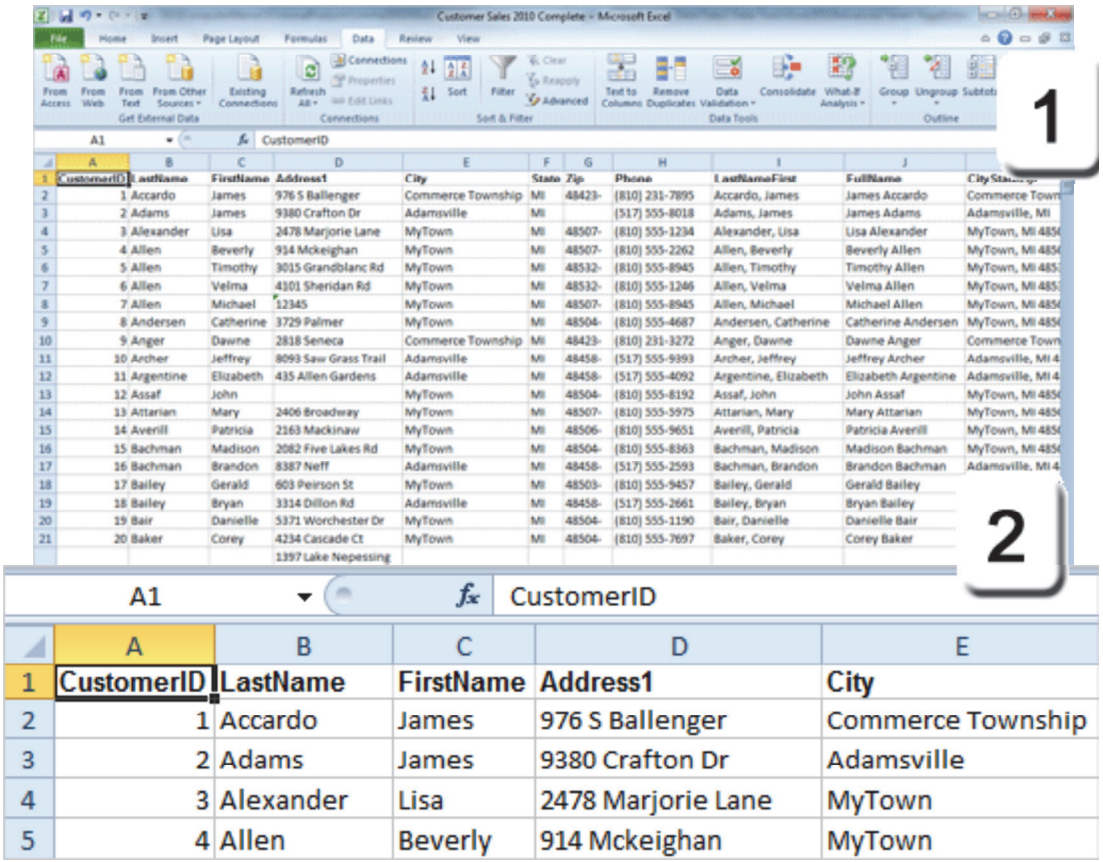
1. Try This: Open a Sample Spreadsheet
Open a sample spreadsheet:
Customer Sales 2010.xlsx
Go to the sheet called: Customer List.

2. What Do You See? This is the Customer List for Charlotte's Website. The first row is BOLD: it is the Header Row. There are many rows of data including Name, Address, Phone. This data came from a database, so Column A includes the unique CustomerID number.

Keep going...

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File->Open



	A	B	C	D	E
1	CustomerID	LastName	FirstName	Address1	City
2	1	Accardo	James	976 S Ballenger	Commerce Township
3	2	Adams	James	9380 Crafton Dr	Adamsville
4	3	Alexander	Lisa	2478 Marjorie Lane	MyTown
5	4	Allen	Beverly	914 Mckeighan	MyTown

Data: Sort

This lesson will investigate the **Data** Ribbon: Sort, Filter and Subtotal. Each **Data** command adds to your understanding of the numbers. Each option also has it's limits: it can only do "so much."

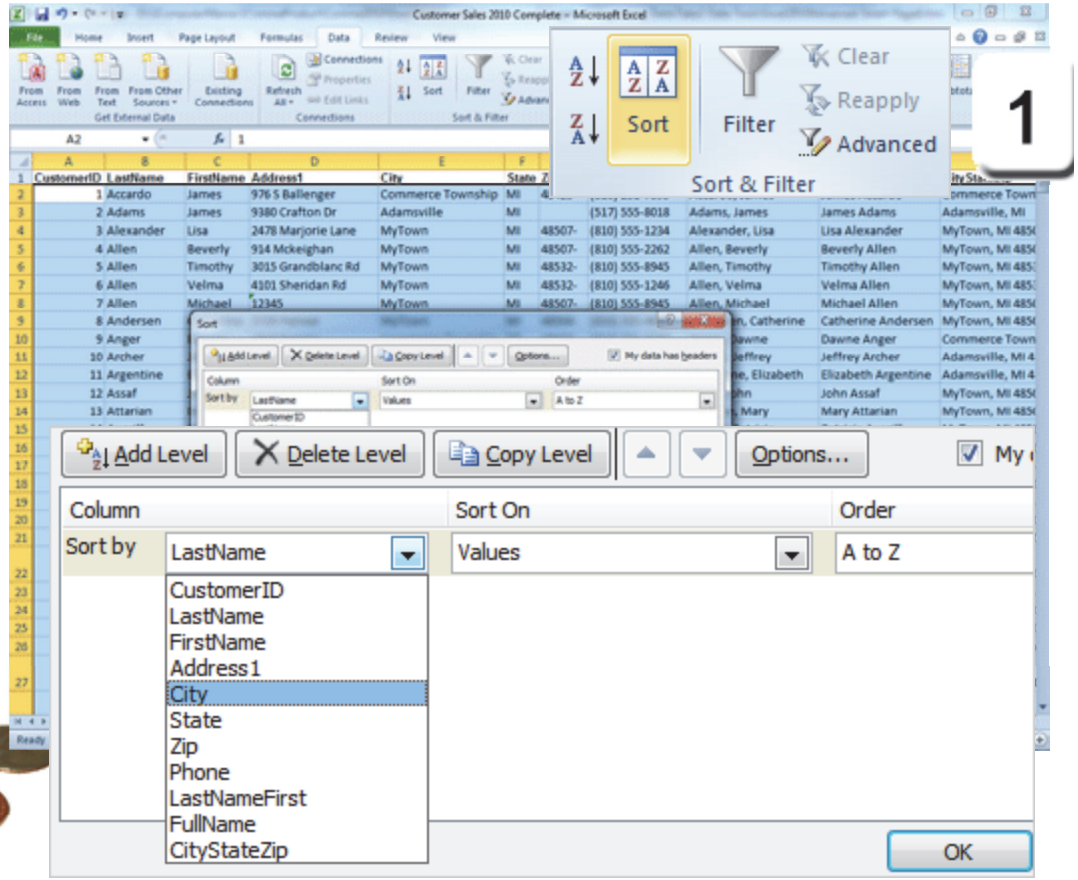
When you **Sort** the data, you can find patterns. For example, the customer information might make sense when it is sorted by City.

1. Try This: Sort the Data
Select the entire spreadsheet.
Go to **Data ->Sort and Filter.**
Click on **Sort**. When you are prompted choose:
Sort by: City
Sort On: Values.
Order: A to Z.

What Do You See? This Sort organized the customers by one criteria: City. Keep going...



Data->Sort and Filter->Sort



Data: Filter

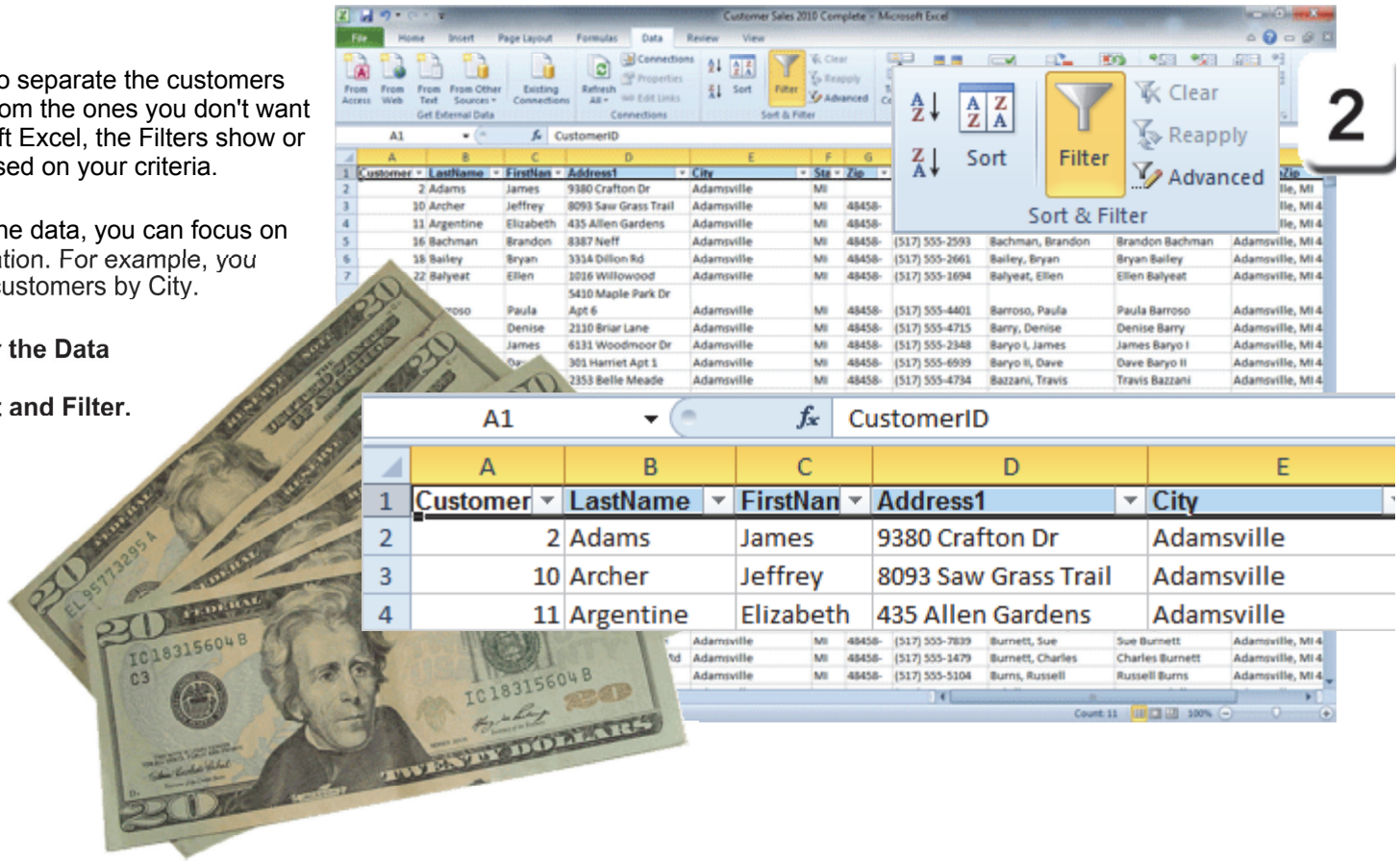
A **Filter** is a way to separate the customers you want to see from the ones you don't want to see. In Microsoft Excel, the Filters show or hide the Rows based on your criteria.

When you **Filter** the data, you can focus on part of the information. For example, you could look at the customers by City.

2. Try This: Filter the Data
Select Row 1.
Go to **Data ->Sort and Filter.**
Click on **Filter**.

Keep going...

Data->Sort and Filter->Filter





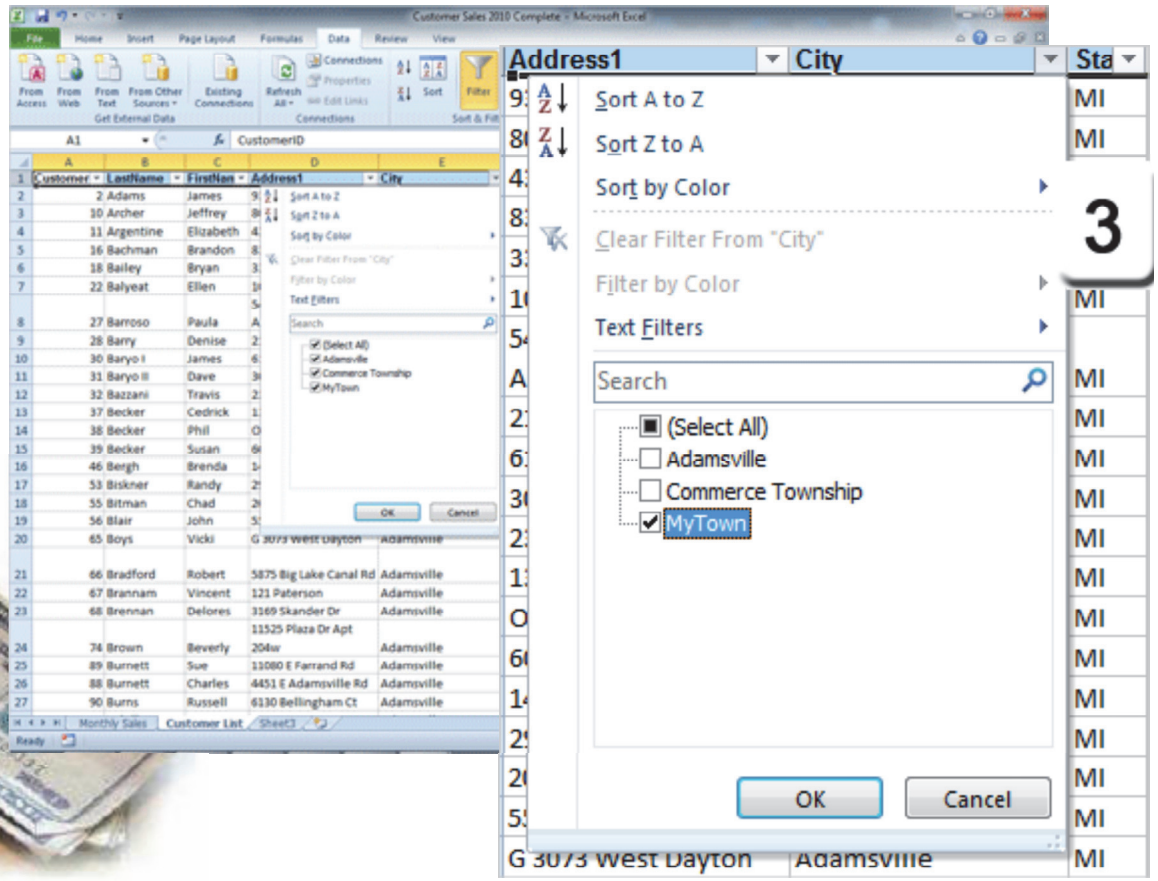
Data: Text Filters

What Do You See? Look at the first row of this spreadsheet. Each of the labels in the Header Row should have little drop-down arrows. These are the filters.

3. Try This: Use an AutoFilter
Click on the City Filter.
Select one city: MyTown.
Click OK to apply the filter.

Keep going, please...

Data -> Sort & Filter-> Filter



Take Two

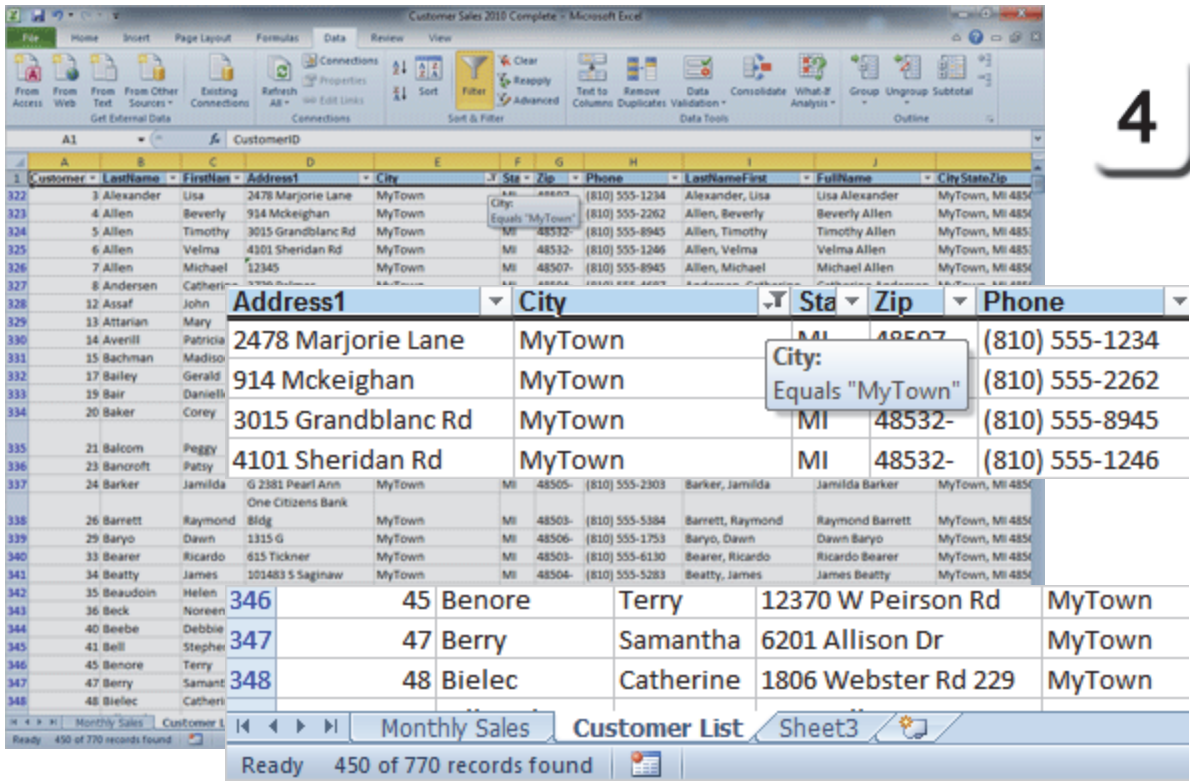
Date: Apply the Filter

4. What Do You See? Each column that has a **Filter** has a small icon. When you run your mouse over the Filter, you should see what the Filter equals.

A **Filter** is a query, or question, regarding your data. You can create Custom Filters by combining several filters on the same data.

What Else Do You See? Look at the bottom of the spreadsheet. The Status Bar in this example indicates that there are 450 customers in MyTown, out of 770 records. The Rows are blue to show that there are hidden rows.

Data -> Sort & Filter-> Filter



4

Data: Clear the Filters

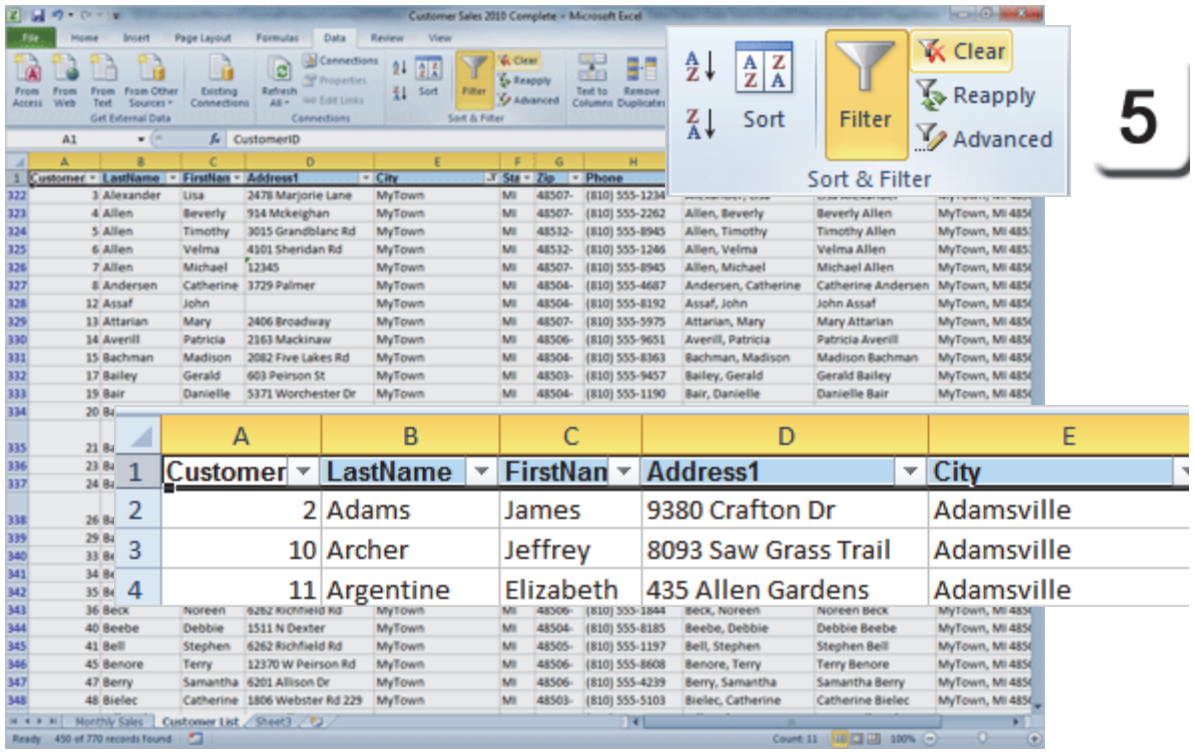
You can clear the data filters if you wish. Here are the steps.

5. Try it: Clear the Filters
Select Column E (City).
Go to **Data -> Sort & Filter.**
Click on **Clear.**

What Do You See? This option removes all of the Filters on the City field. In the example on this page, the filter for MyTown has been cleared, so you can see other cities as well.

Very good. That's a short discussion on Filters. Save your work.

Data -> Sort & Filter-> Clear



Data: Subtotals

A **Subtotal** organizes and summarizes lists of data. The Subtotal function offers more options than calculating the Total in a Table. Subtotals can include Summary Functions (SUM, AVERAGE, COUNT) as well as a Grand Total.

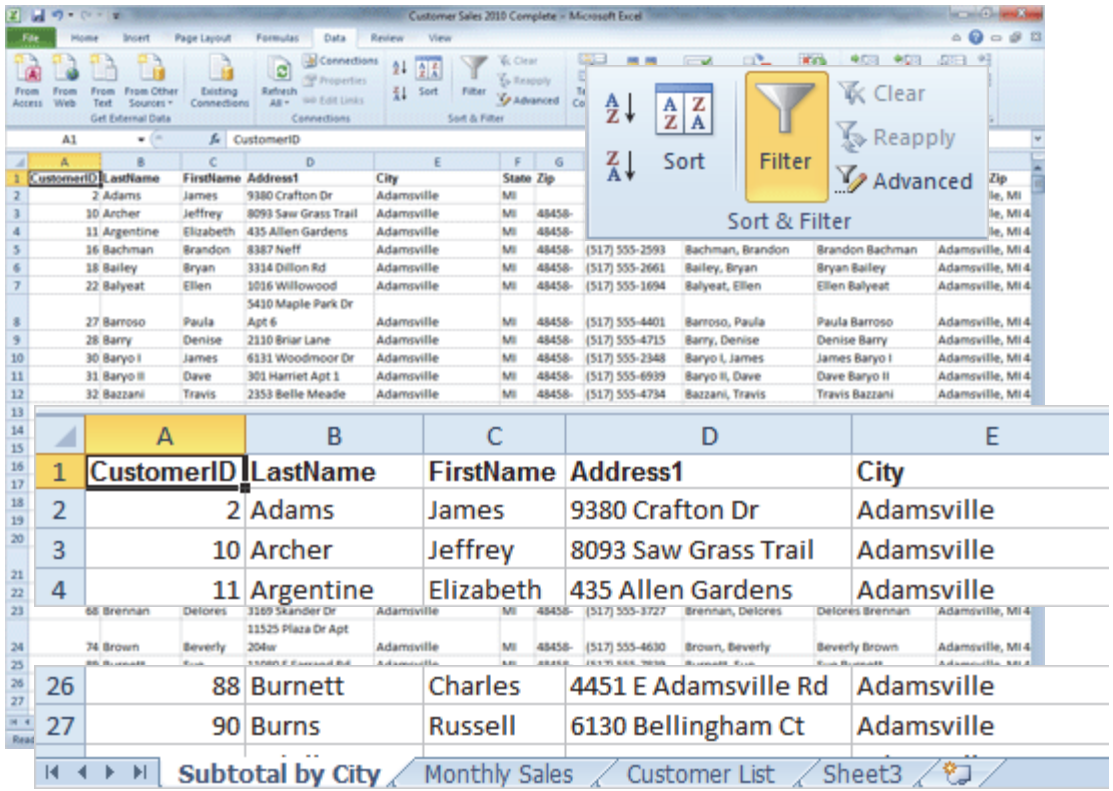
There are two steps to creating a Subtotal:
1. **Sort** by the field you want.
2. **Subtotal** by the same field.

Before You Begin: Copy the Worksheet
Right-click the Customer List tab.
Click on **Move or Copy**.
Check: **Create a Copy**.
Click **OK** to create the copy.
Rename the sheet: **Subtotal by City**.

Still Before You Begin: Clear All Filters
Go to the **Subtotal by City** sheet.
Select Row 1.
Go to **Data -> Sort & Filter-> Filter.**

All Filters should be cleared from the Header Row. Keep going, please...

Data -> Sort & Filter-> Filter



Take Two

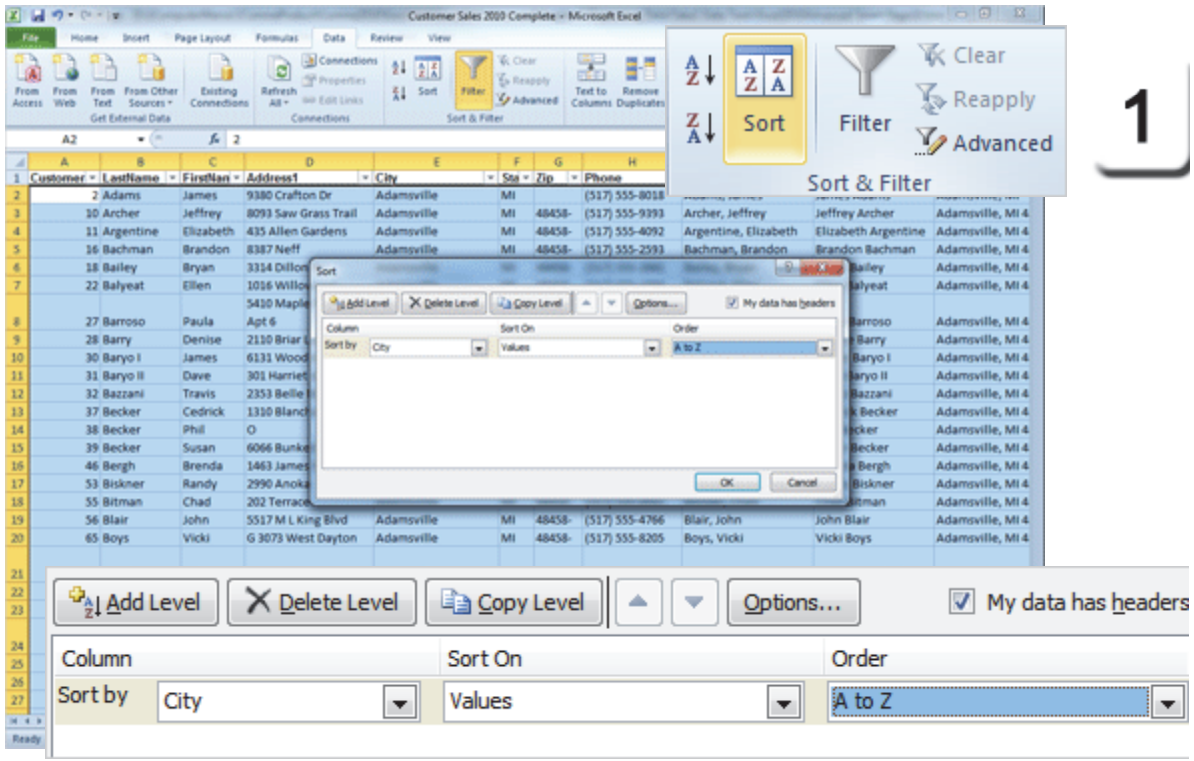
Data: Sort then Subtotal

The key to making the Subtotal function work is to match, match, match. You need to Sort and Subtotal by the same field. **Before you create a Subtotal you need to Sort the data.**

1. Try it: Sort the Data
Select the entire spreadsheet.
Go to **Data -> Sort & Filter-> Sort.**
Sort by: City.
Sort On: Values.
Order: A to Z.
Click **OK**.

Keep going...

Data -> Sort & Filter-> Sort



1

Data: Subtotal

The list has been **Sorted** by City. Now, here are the steps to **Subtotal** by City.

2. Try it: Subtotal the Data
Select Column E (City).
Go to **Data ->Outline->Subtotal.**

You will be prompted to answer the following questions for this Subtotal:

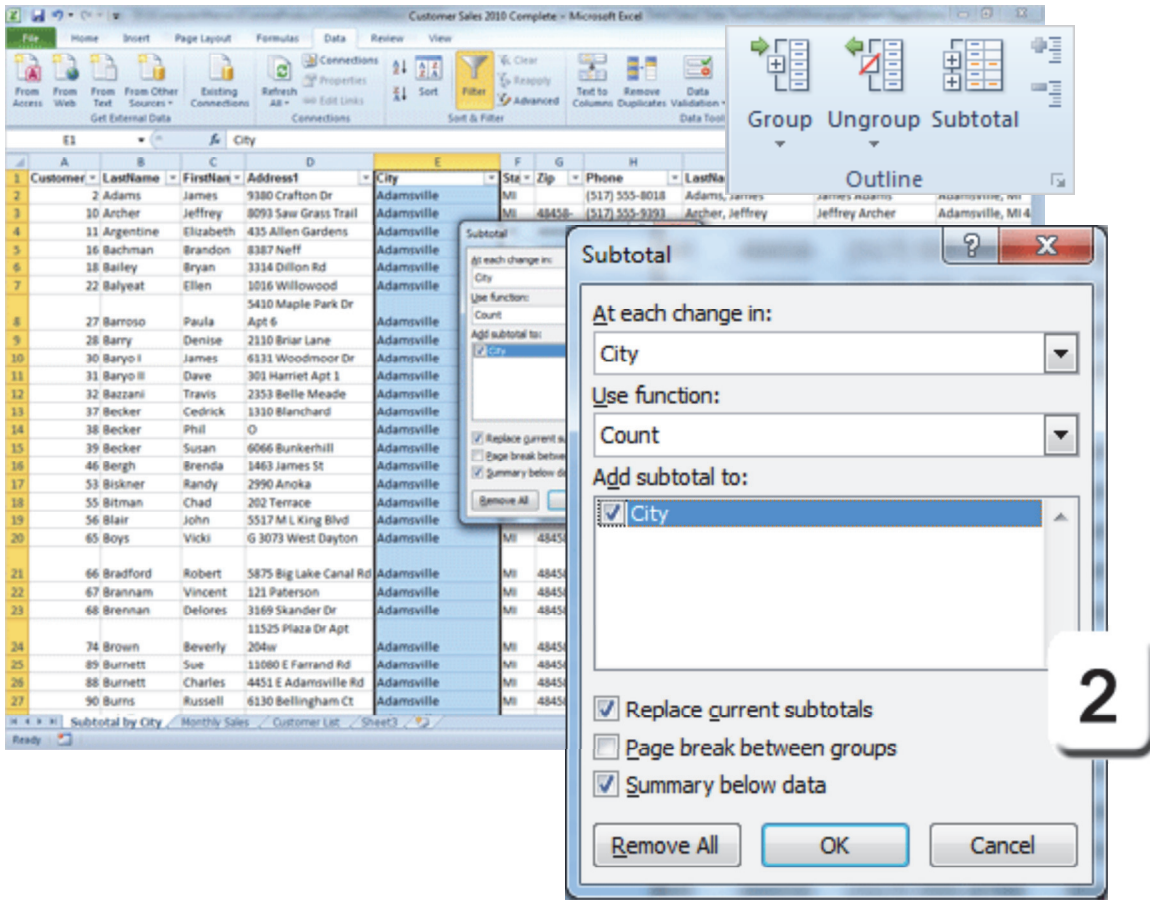
At each change: City.
You just sorted by City, select City for the Subtotal so it matches.

Use function: Count.

Add the subtotal to: City.
The Subtotal is counting the number of customers in each city. It makes sense to add the Subtotal to the City.

Click **OK**. Keep going...

Data -> Outline-> Subtotal



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Subtotal

Take Two

Hello Subtotals!

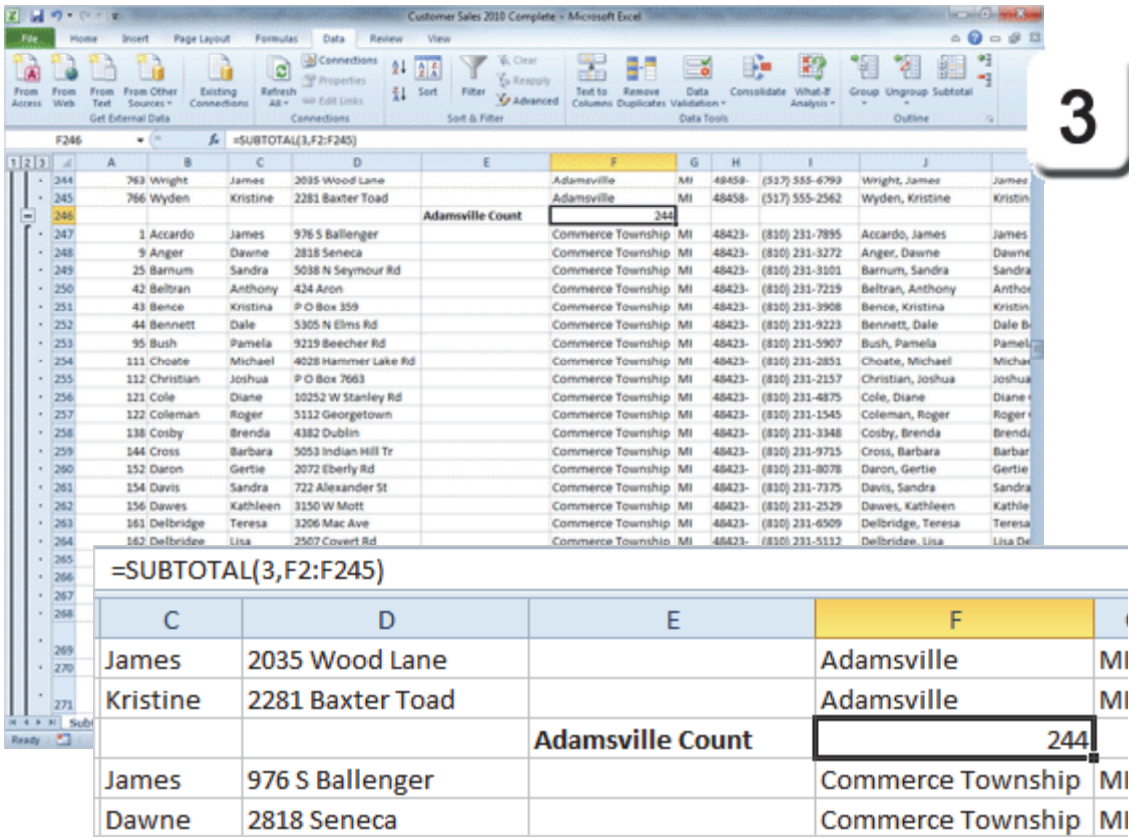
3. What Do You See? This spreadsheet now has **Subtotals** that count the number of customers in each city. There is also a **Grand Total** that adds up all of our customers in all of the cities.

What Else Do You See? Microsoft Excel created formulas for the Subtotals. Scroll down and select any Subtotal. Please review the formula. This example shows: =SUBTOTAL(3,F2:F245)

Impressive.

Keep going...

Data -> Outline-> Subtotal



3



Take Two

Viewing the Subtotals

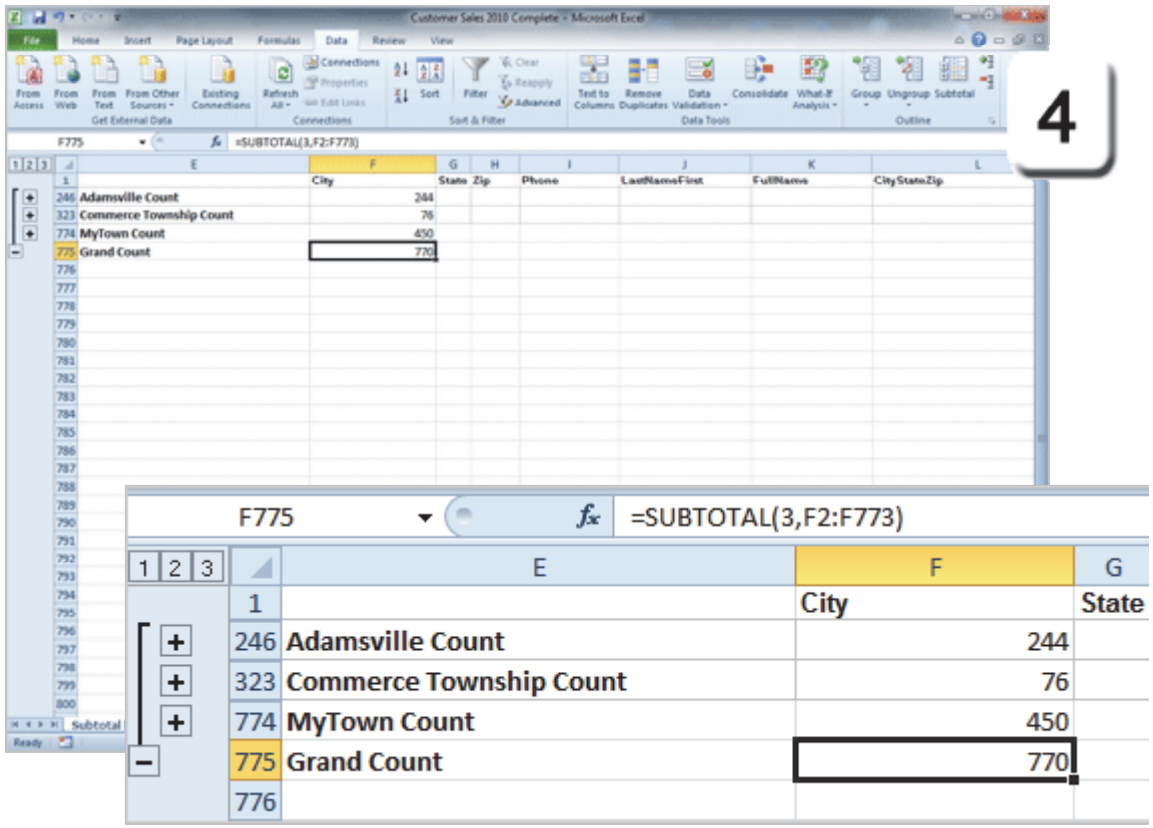
The information is **outlined** on the left hand side of the spreadsheet.

You can use the outline to show or hide the details. The + sign means there is more to see. The – sign indicates that all of the Rows are shown.

4. Try It: Use the Outline
Click on the 3. All Rows are visible.
Click on the 2: That's the Subtotals.
Click on the 1. That hides all of the Rows except the Grand Count.

Made You Look: In this image, you are looking at Column E, so that it will fit on the page, OK?

Data -> Outline-> Subtotal



A Different Subtotal

The *Intermediate Guide to Microsoft Excel 2010* demonstrated a series of formulas that calculated and formatted the sales subtotals.

This lesson demonstrates how the sales subtotals were created.

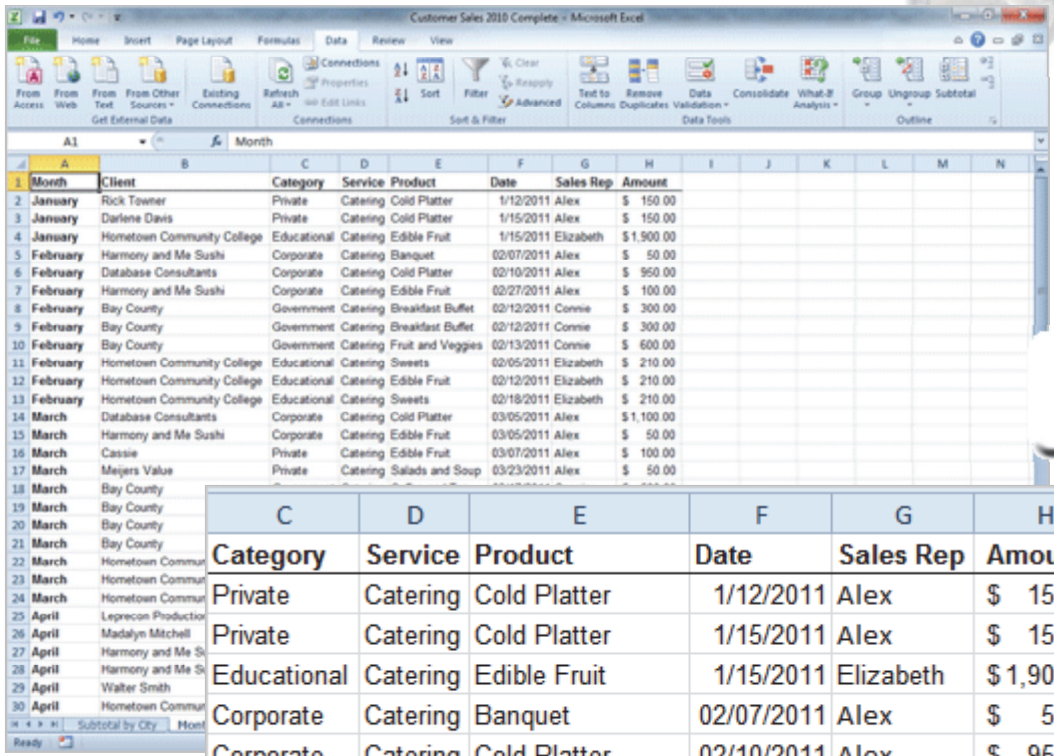
1. Try This: Open a Sample Spreadsheet
Open a sample spreadsheet:
Customer Sales 2010.xlsx
Go to the sheet called: Monthly Sales.

What Do You See? This is the Monthly Sales for Charlotte's Website. The first row is BOLD: it is the Header Row. There are many rows of data including the Category, Service, Product, Date, Sales Rep and Amount.

Keep going...

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File -> Open



C	D	E	F	G	H
Category	**Service**	**Product**	**Date**	**Sales Rep**	**Amount**
Private	Catering	Cold Platter	1/12/2011	Alex	$ 150.00
Private	Catering	Cold Platter	1/15/2011	Alex	$ 150.00
Educational	Catering	Edible Fruit	1/15/2011	Elizabeth	$ 1,900.00
Corporate	Catering	Banquet	02/07/2011	Alex	$ 50.00
Corporate	Catering	Cold Platter	02/10/2011	Alex	$ 950.00
Corporate	Catering	Edible Fruit	02/27/2011	Alex	$ 100.00
Government	Catering	Breakfast Buffet	02/12/2011	Connie	$ 300.00

Take Two

Data: Sort Then Subtotal

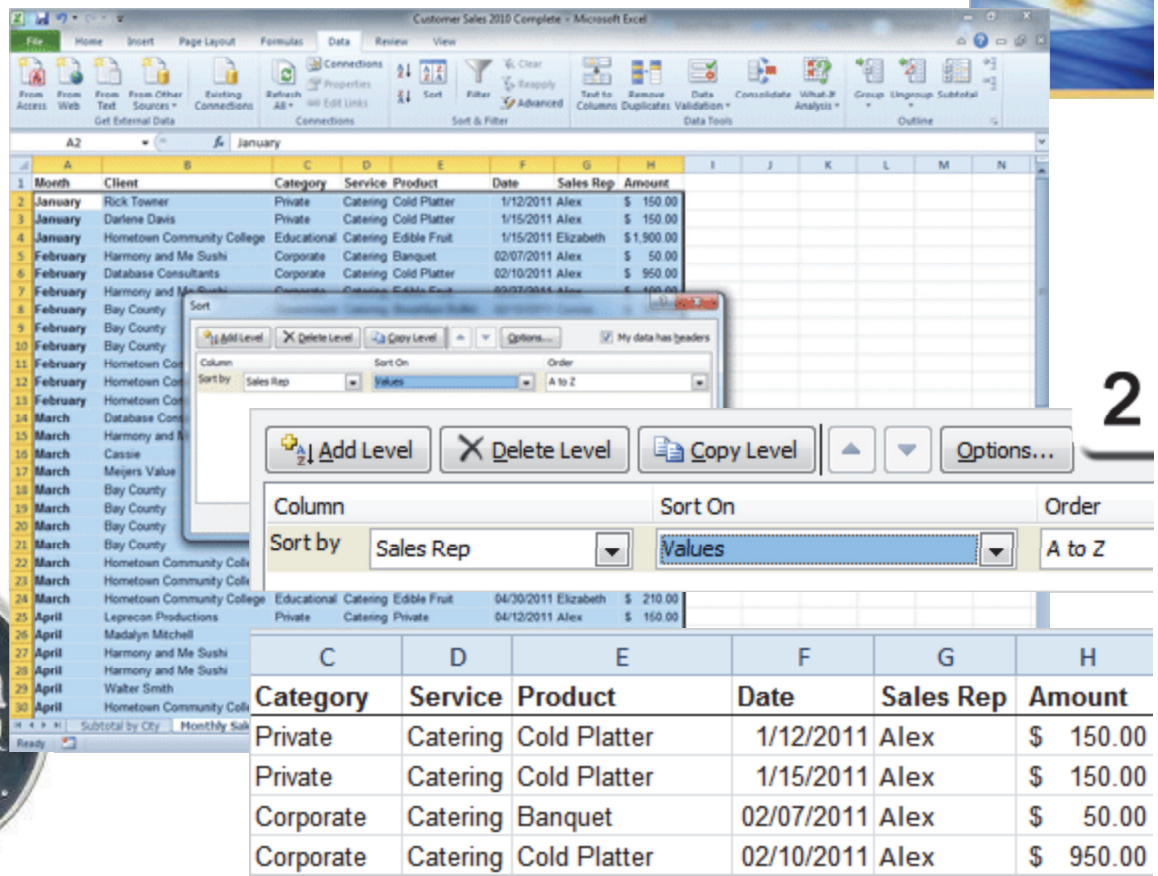
This Subtotal will calculate the sum of the amount each Sales Rep sold. So, **Sort** by Sales Rep and **Subtotal** by Sales Rep.

2. Try it: Sort the Data
Select the entire spreadsheet.
Go to **Data -> Sort & Filter-> Sort.**
Sort by: Sales Rep.
Sort on: Values
Order: A-Z.
Click **OK**.

What Do You See? The data will be sorted by the four Sales Reps: Alex, Connie, Elizabeth and Niki.

Keep going...

Data -> Sort & Filter-> Sort



C	D	E	F	G	H
Category	**Service**	**Product**	**Date**	**Sales Rep**	**Amount**
Private	Catering	Cold Platter	1/12/2011	Alex	$ 150.00
Private	Catering	Cold Platter	1/15/2011	Alex	$ 150.00
Corporate	Catering	Banquet	02/07/2011	Alex	$ 50.00
Corporate	Catering	Cold Platter	02/10/2011	Alex	$ 950.00



Exam 77-882: Microsoft Excel 2010 Core
8. Analyzing and Organizing Data
8.2. Sort data



Data: Subtotal

Sort by Sales Rep. Subtotal by Sales Rep.

3. Try it: Subtotal the Data
Select the entire spreadsheet.
Go to **Data -> Outline-> Subtotal.**

You will be prompted to answer the following questions for this Subtotal:

At each change in: Sales Rep.
You just sorted by Sales Rep, select Sales Rep for the Subtotal so it matches.

Use function: Sum.

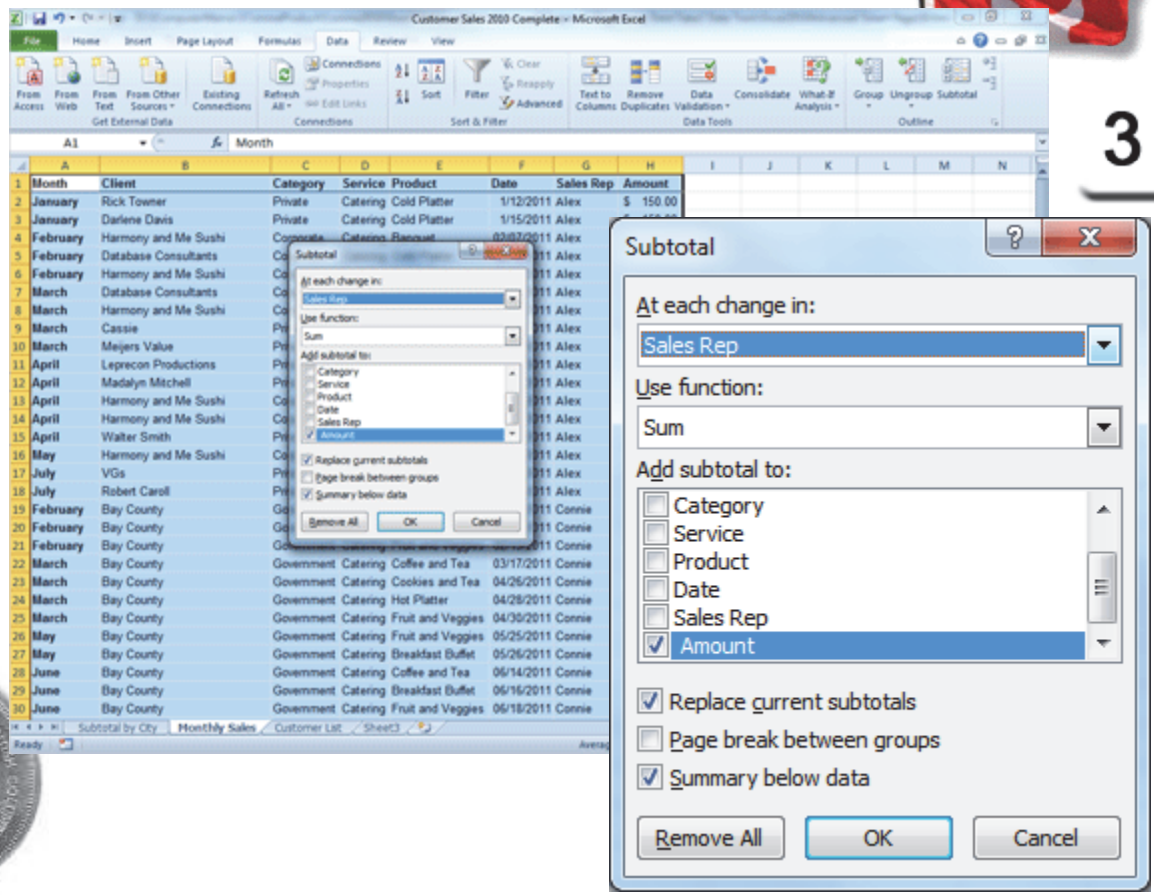
Add the subtotal to: Amount.

Click **OK**. Keep going...





Data -> Outline-> Subtotal



3

Take Two

Sales Subtotals

4. What Do You See? The screen shot on this page shows the **Subtotals** that each sales reps sold. The Subtotals are calculated and shown in Column H, Amount. There is a **Grand Total** for the entire Amount sold.

The Outline is shown as Level 2. However, the data for Niki is **expanded** so that you can see the Rows that add up to her Subtotal.

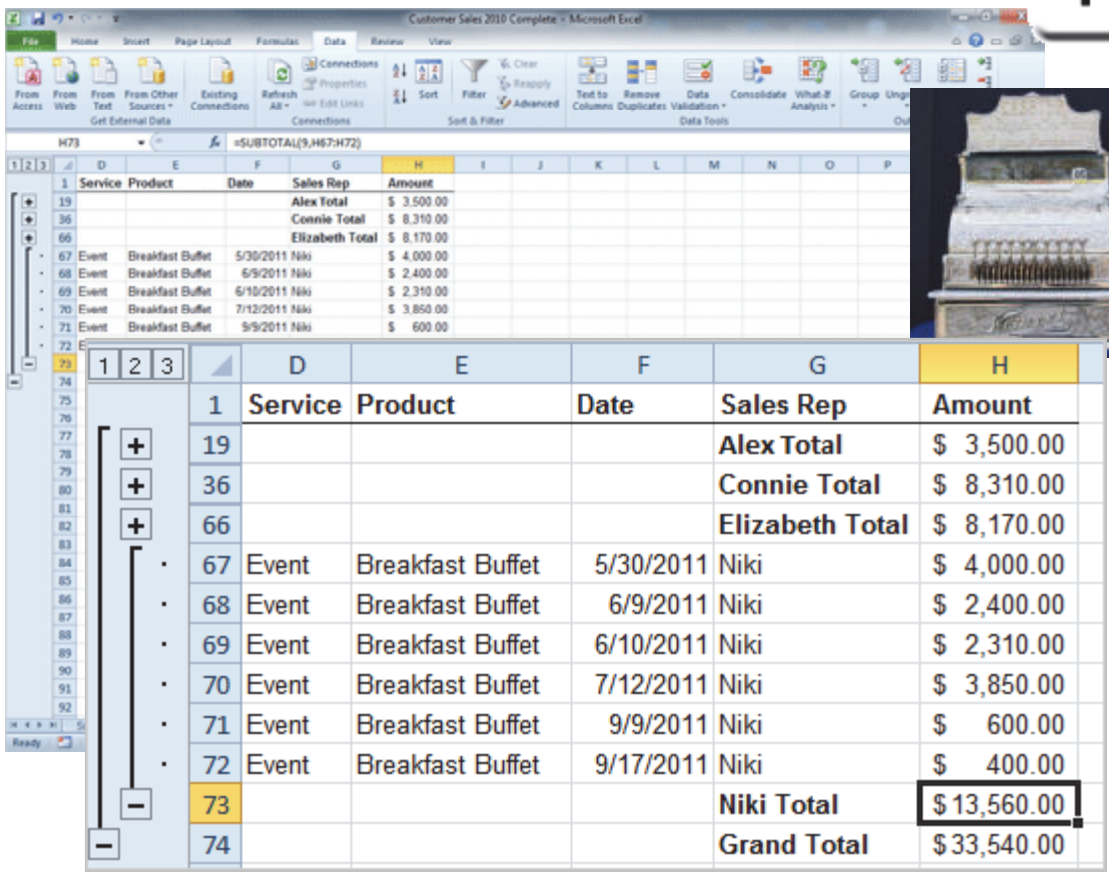
So, the Subtotal function is an interactive display. You can use the Outline buttons to expand (+) or collapse (-) the Subtotal Groups to see the data if you wish.

Do This: Save your spreadsheet
Go to **File->Save As**.
Browse for a folder to save this file.
Enter a file name: MyName Customer Sales.

Good.

Data -> Outline-> Subtotal

4



	D	E	F	G	H
1	Service	Product	Date	Sales Rep	Amount
19				Alex Total	$ 3,500.00
36				Connie Total	$ 8,310.00
66				Elizabeth Total	$ 8,170.00
67	Event	Breakfast Buffet	5/30/2011	Niki	$ 4,000.00
68	Event	Breakfast Buffet	6/9/2011	Niki	$ 2,400.00
69	Event	Breakfast Buffet	6/10/2011	Niki	$ 2,310.00
70	Event	Breakfast Buffet	7/12/2011	Niki	$ 3,850.00
71	Event	Breakfast Buffet	9/9/2011	Niki	$ 600.00
72	Event	Breakfast Buffet	9/17/2011	Niki	$ 400.00
73				Niki Total	$ 13,560.00
74				Grand Total	$ 33,540.00

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Subtotal



Data: Remove the Subtotal

The previous pages demonstrated how to create and edit Subtotals. Here are the steps you can take to **Remove** a Subtotal.

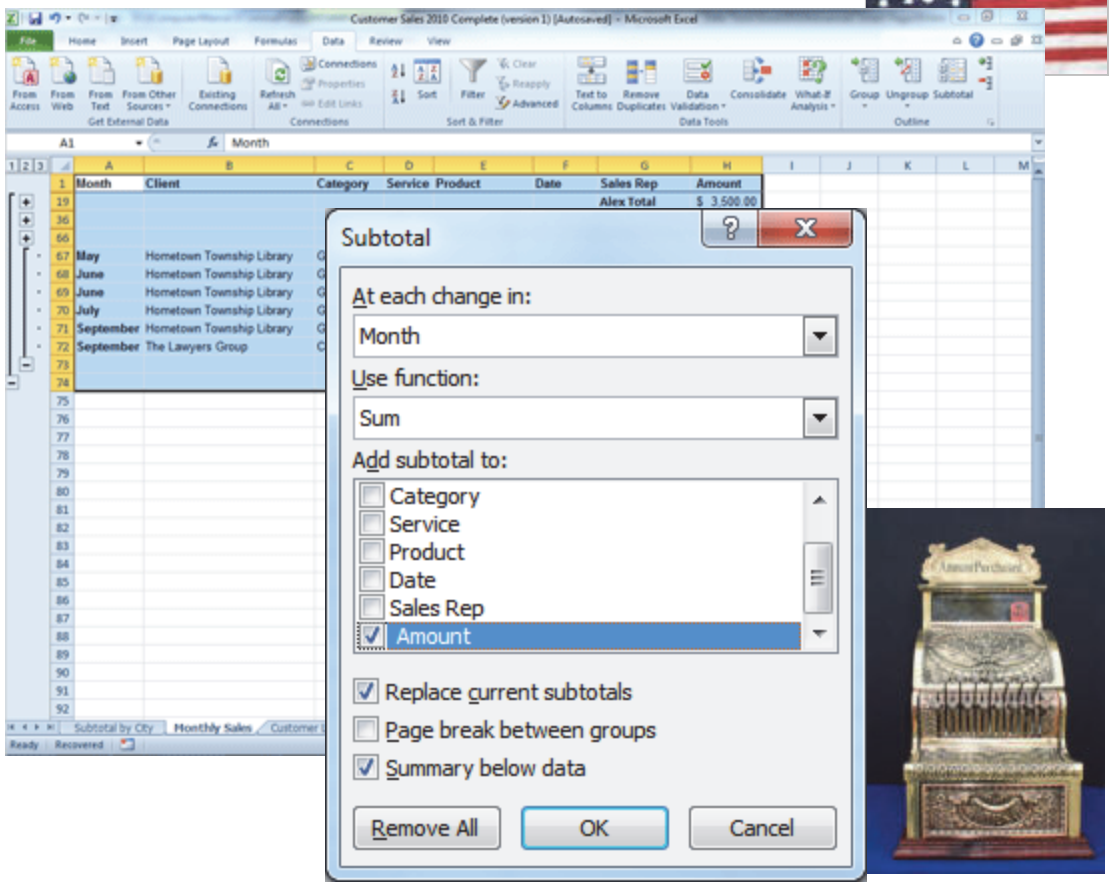
Try it: Review the Subtotals
Select the entire spreadsheet.
Go to **Data -> Outline-> Subtotal**

What Do You See? You will be prompted to fill in the blanks for the Subtotal function. Look at the bottom of the window. There is an option that you can click to remove the Subtotal.

Try This, Too: Remove the Subtotals
Select: **Remove All**.
Click **OK**.

The Subtotals should be removed. This is a simple list in Excel, again. Very good.

Data -> Outline-> Subtotal->Remove All



Data: Group and Ungroup

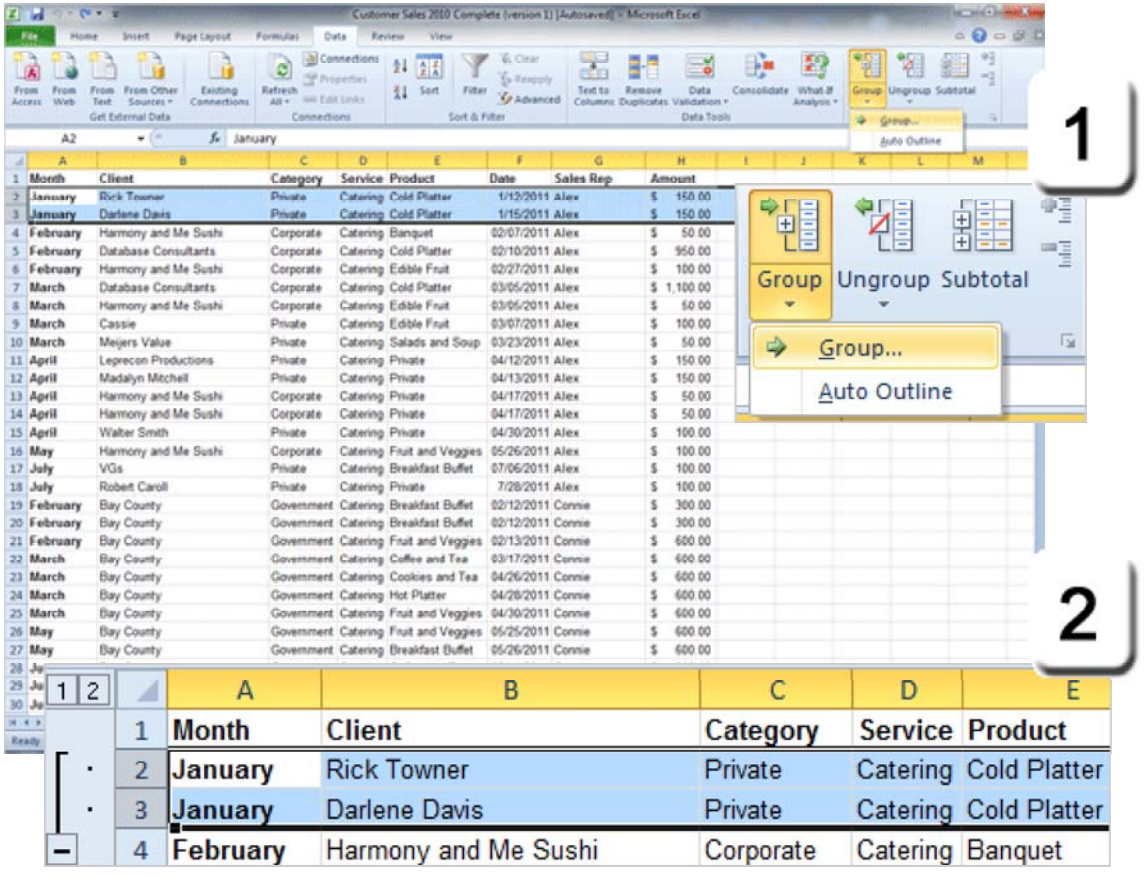
Outline Functions: Subtotal is an excellent **Outline** tool. It allows you to show or hide the data depending on what you want to see. Another Outline function you could try is **Group**. Group creates an Outline on the left side of the spreadsheet, however it does not calculate the totals.

1. Try it: Group the Rows
Go to the Monthly Sales sheet.
Select Rows 2 and 3 (The data for January).
Go to **Data -> Outline->Group.**
Click on **Group.**

2. What Do You See? The two rows will be grouped together. There should be an outline on the left side of your spreadsheet.

Done and done.

Data -> Outline->Group->Group



	A	B	C	D	E
1	Month	Client	Category	Service	Product
2	January	Rick Towner	Private	Catering	Cold Platter
3	January	Darlene Davis	Private	Catering	Cold Platter
4	February	Harmony and Me Sushi	Corporate	Catering	Banquet

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Group



Data: Data Tools

This page begins a new discussion on the **Data Tools**. **Data Tools** analyze the information: they ask questions.

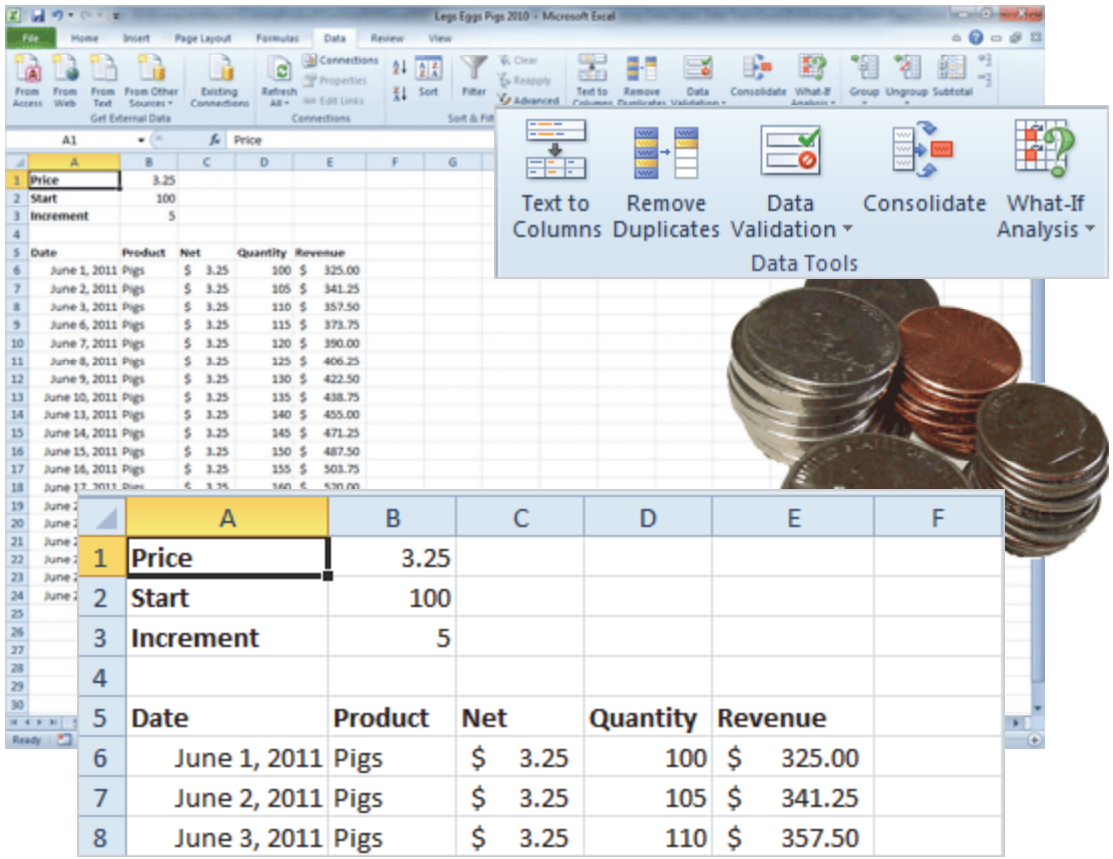
The best known **Data Tool** is the **What-if? Analysis**. Our lesson will begin with **Goal Seek**, a simple What-If.

Before You Begin: Open a Sample File
Open a sample spreadsheet:
Legs Eggs Pigs 2010.xlsx
Go to the sheet: Pig.

What Do You See? This is the Pig Sales for Charlotte's Website. There are three reference Cells for Price (B1), Start (B2) and Increment (B3). The formulas in Columns C, D, and E refers to these three reference Cells.

Keep going...

Data -> Data Tools



	A	B	C	D	E	F
1	Price	3.25				
2	Start	100				
3	Increment	5				
4						
5	Date	Product	Net	Quantity	Revenue	
6	June 1, 2011	Pigs	$ 3.25	100	$ 325.00	
7	June 2, 2011	Pigs	$ 3.25	105	$ 341.25	
8	June 3, 2011	Pigs	$ 3.25	110	$ 357.50	

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Data Tools What-If Analysis

Take Two

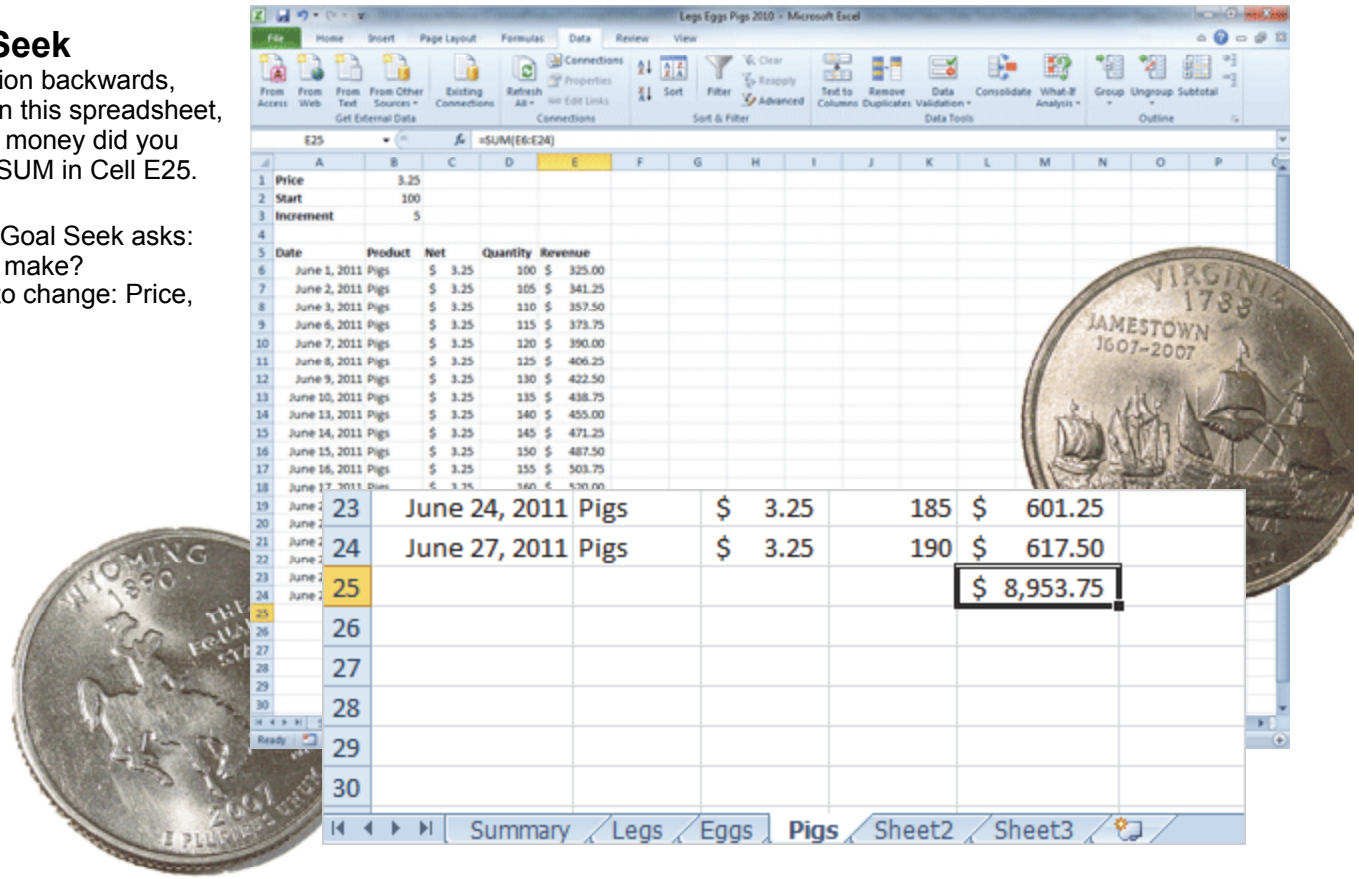
Data Tools: Goal Seek

Goal Seek asks the question backwards, starting from the answer. In this spreadsheet, the question is: how much money did you make? The answer is the SUM in Cell E25.

In this sales spreadsheet, Goal Seek asks:
How much do you want to make?
Which value do you want to change: Price, Start or Increment?

Keep going, please...

Data -> Data Tools



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Data Tools What-If Analysis



Data: What If? Goal Seek

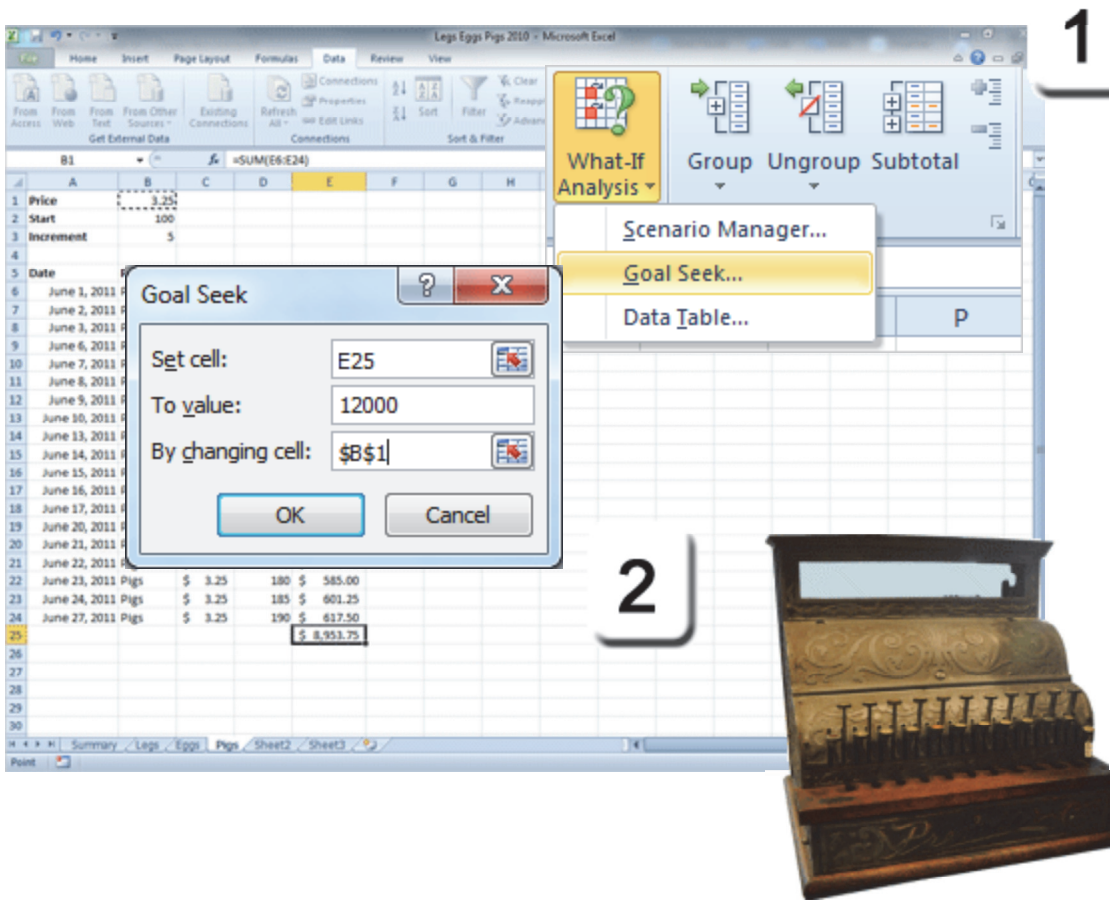
Here are the steps to try a **Goal Seek**.

1: Try It: Select the Goal
Go to the Pigs spreadsheet.
Select: Cell E25.
Go to **Data -> Data Tools->What-If Analysis.**
Click on **Goal Seek**.

2. Try This: Define the Options
You will be prompted to fill in the blanks:
Set cell: E25 (the SUM of the sales).
To value: 12000 (the Goal you want to make).
By changing cell: $B$1 (the Price)

Click **OK**...keep going.

Data -> Data Tools->What-If Analysis-> Goal Seek



Data: Goal Seek Options

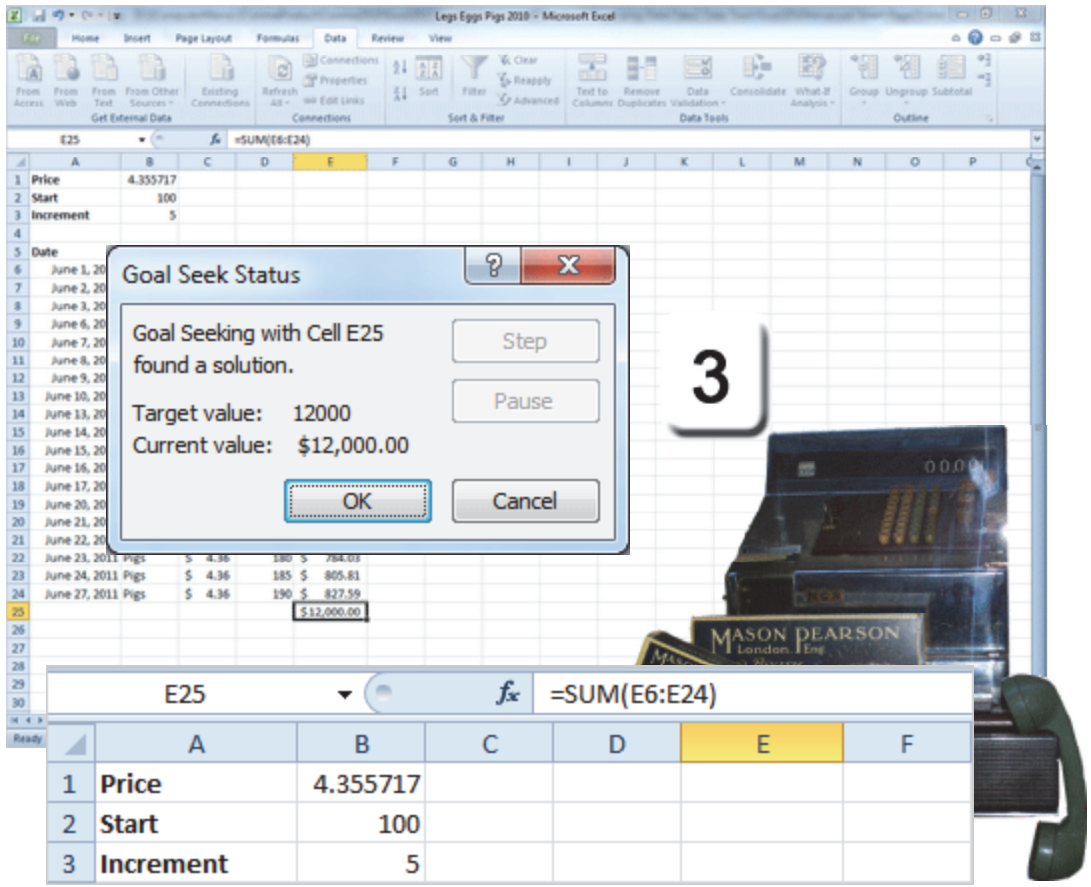
3. What Do You See? The **Goal Seek Status** shows the Target Value of 12000. The Current Value in Cell E25 is set to $12,000.

What Else Do You See? The **Price** in Cell B1 changed from $3.25 to 4.355717. This is the new Price you need to reach the goal of $12,000 in sales. If you click OK, the new Price in Cell B1 will be kept.

Do This, Please: Click **CANCEL** to undo the changes made by the Goal Seek.

Memo to Self: The Price in Cell B1 looks odd with all the decimal places. You can format Cell B1 for currency if you wish.

Data -> Data Tools->What-If Analysis-> Goal Seek



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Data Tools What-If Analysis

Data Tools: What If Scenarios

Goal Seek changes one value. It is a useful tool for playing with the numbers. Suppose you wanted to look up the best and worst cases for your sales projections. You could type in a robust initial sales number and a vigorous daily increment for the best case. Then, you could type in more conservative estimates for the worst case.

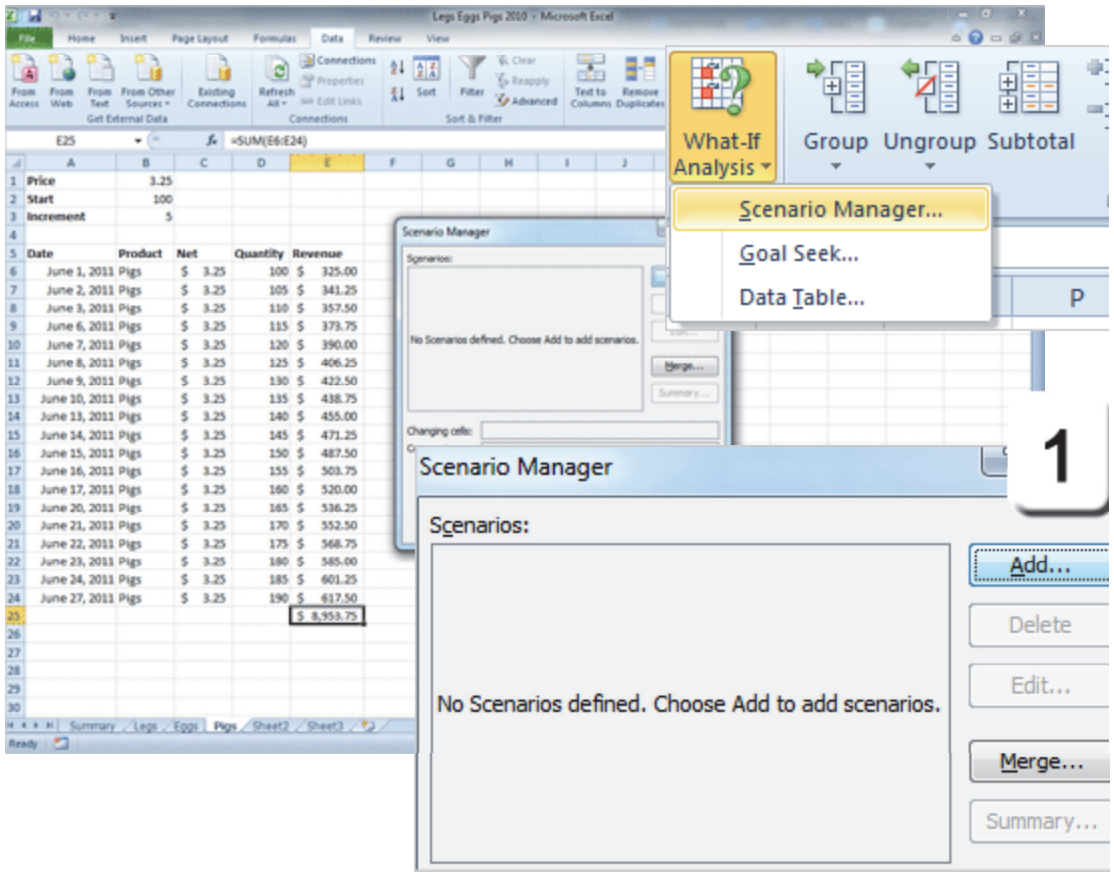
Microsoft Excel has a way to save that information: **What-If Scenarios.**

1. Try it: Open the Scenario Manager
Select Cell E25.
Go to **Data ->Data Tools->What-If Analysis.**
Select **Scenario Manager.**

What Do You See? When the Scenario Manager opens it will probably be blank: No Scenarios defined.

Try This, Too: Add a Scenario
Click on **Add**. Keep going,,,

Data -> Data Tools->What-If Analysis-> Scenario Manager



Take Two

Add: Edit the Scenario

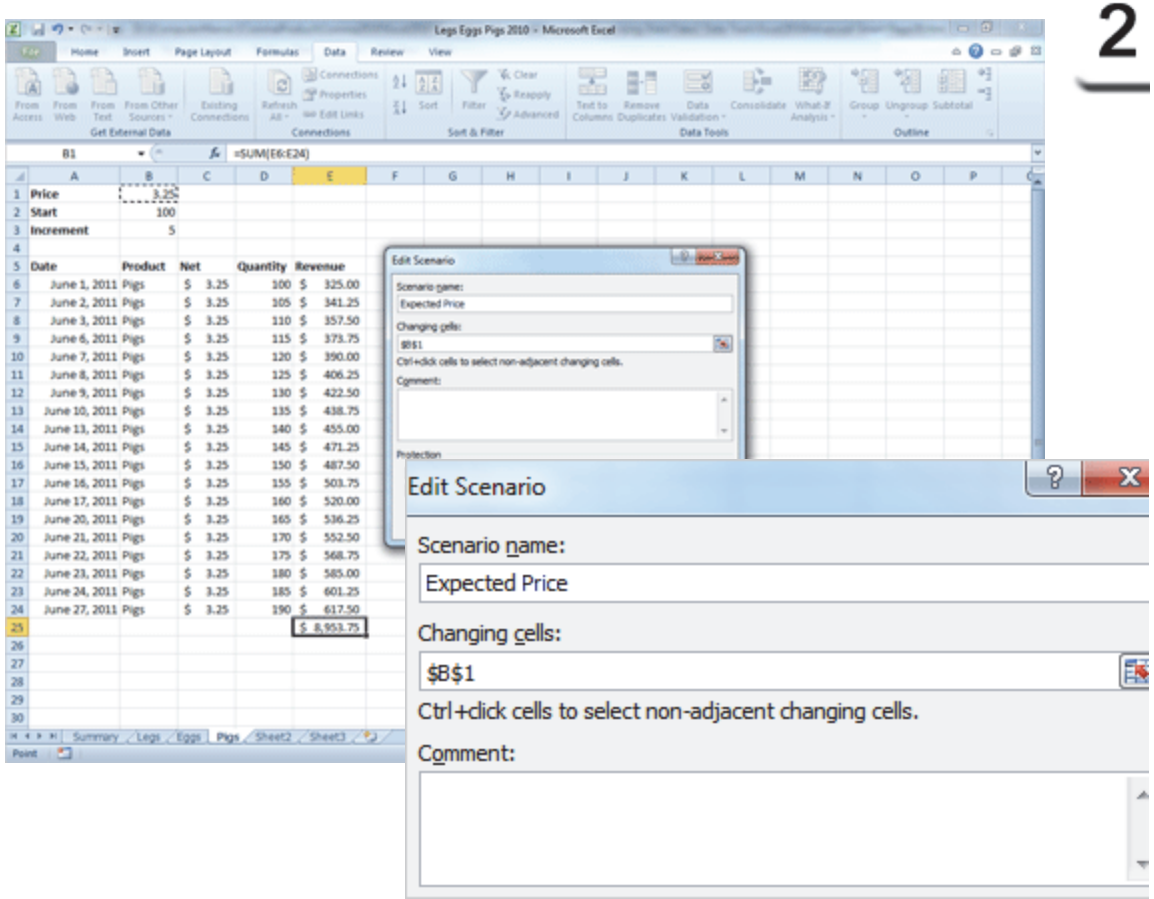
2. What Do You See? You will be prompted to Edit the Scenario.

Please enter the following:
Scenario Name: Expected Price
Changing Cells: $B$1
You can click on Cell B1, the Price, or type the reference if you wish. This is an Absolute Reference.

Click **OK**. Keep going...



Data -> Data Tools->What-If Analysis-> Scenario Manager



Enter the Values

3. Try This: Enter the Values

When you are done editing the Scenario and click **OK**, you will be prompted to Enter a value. Please type in 3.25.

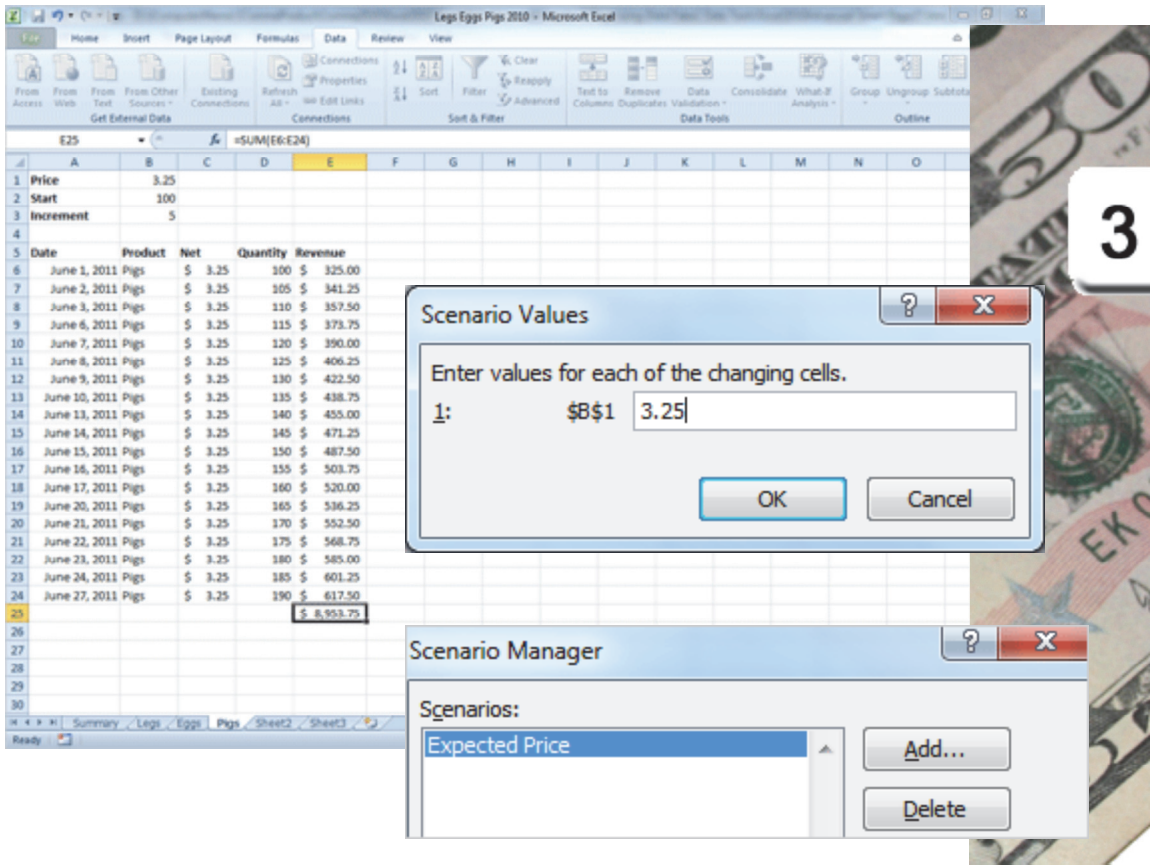
Click **OK**, again and you will return to the Scenario Manager.

This step makes a benchmark: It records the spreadsheet the way we started The Price is $3.25. In the next pages, we will **Add** a Scenario for Worst Case and on for the Best Case Scenario.

Each of these examples will change one Reference Cell-the Price in Cell B1. At the end of this lesson, we see how to create a Scenario with more than one reference Cell.

So, keep going.

Data -> Data Tools->What-If Analysis-> Scenario Manager



Take Two

Add Another Scenario

At this point, the Scenario Manager has one Scenario: the Expected Price. Here are the steps to Add another Scenario.

4. Try This: Add Another Scenario
The Scenario Manager is open.
Click on: **Add**

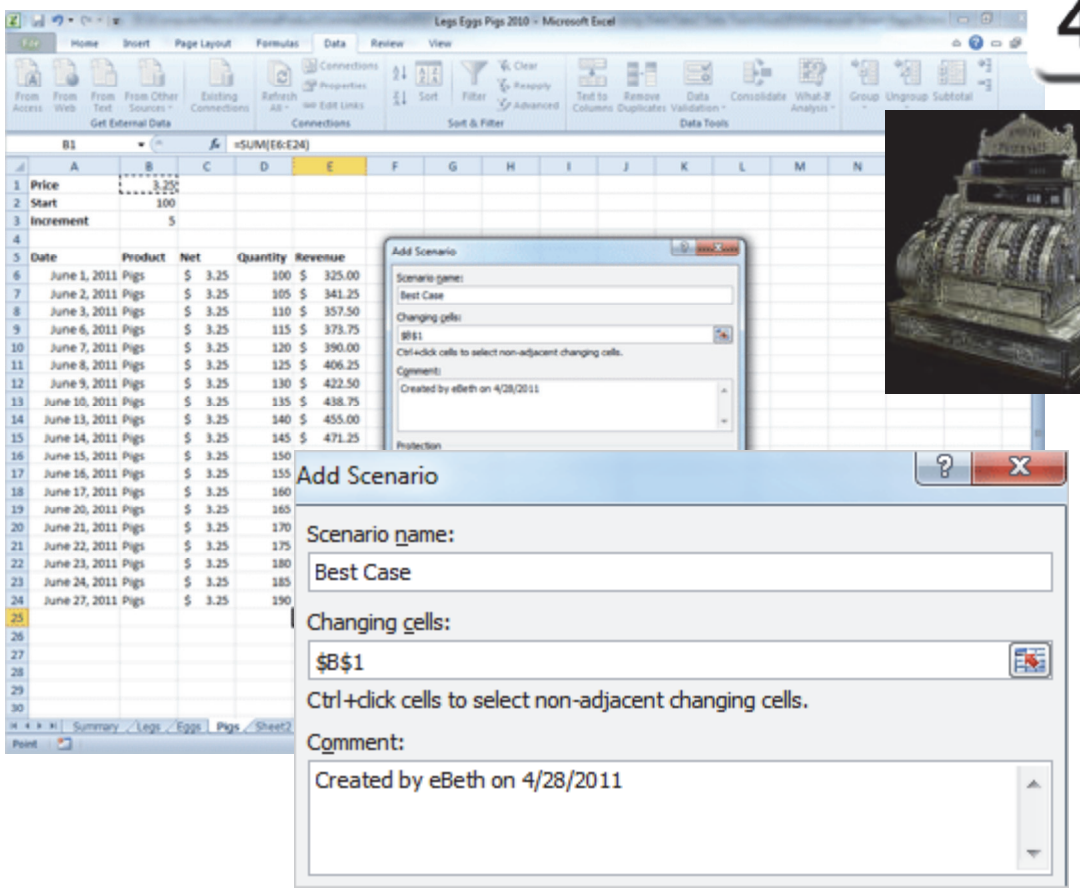
You will be prompted to fill in the blanks:
Scenario Name: Best Case
Changing Cells: $B$1
You can click on Cell B1, the Price, or type the reference. This is an Absolute Reference.

Click **OK**. When you click on OK, the **Scenario Manager** will prompt you to enter a new **value** for each reference cell.

Try This, Too: Enter the Scenario Value
Scenario Value for $B$1: 5.00

Keep going...

Data -> Data Tools ->What-If Analysis -> Scenario Manager



4



Add Yet Another Scenario

Now there are two Scenarios: Expected Price and Best Case. Here are the steps to Add the Worst Case Scenario. When all 3 Scenarios are done, you'll see how it works... and it really does work well.

5. Try This: Add Yet Another Scenario
The Scenario Manager is open.
Click on: **Add**

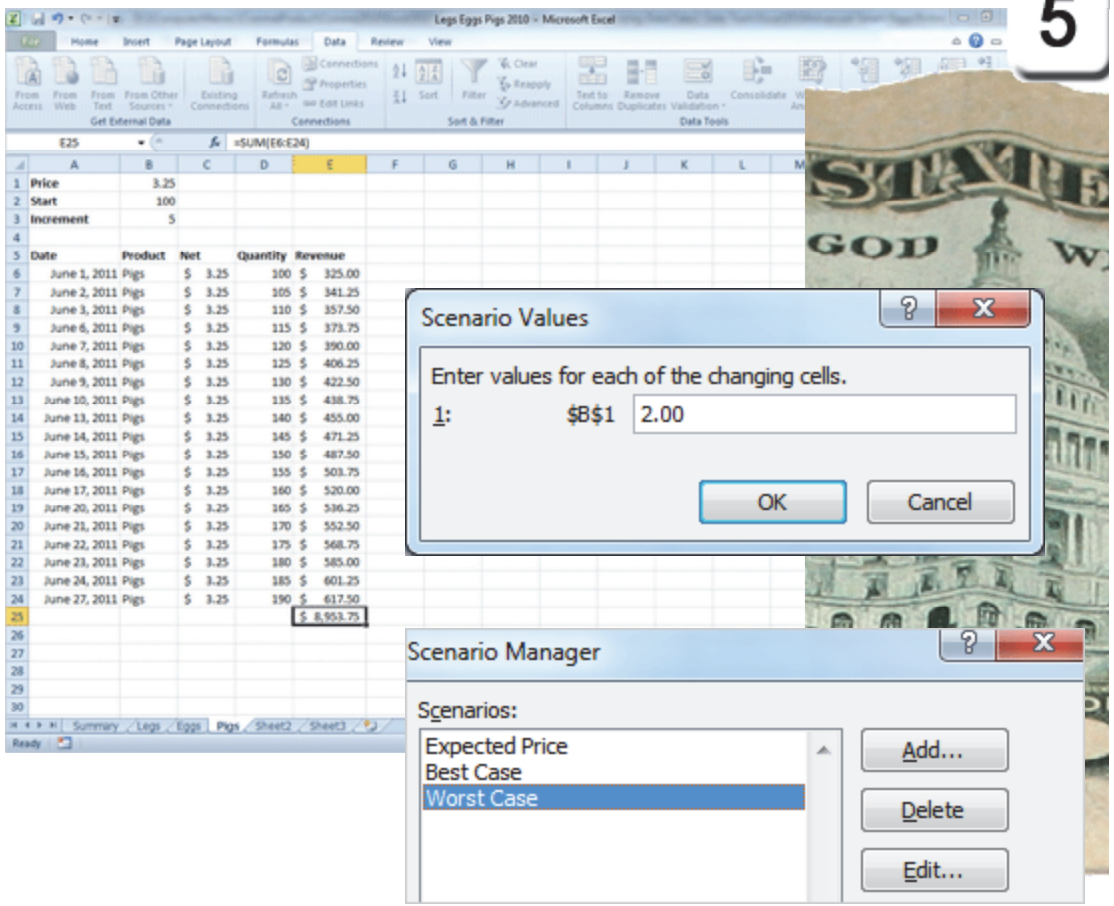
You will be prompted to fill in the blanks:
Scenario Name: Worst Case
Changing Cells: $B$1
You can click on Cell B1, the Price, or type the reference. This is an Absolute Reference.

Click **OK**. When you click on OK, the Scenario Manager will prompt you to enter a new value for each reference cell.

Try This, Too: Enter the Scenario Value
Scenario Value for $B$1: 2.00

Keeeeeeep going...

Data -> Data Tools ->What-If Analysis -> Scenario Manager



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Data Tools What-If Analysis

Show the Scenario

The Scenario Manager has three different Scenarios: Best, Worst and Expected. How does it work? Say you wanted to show off the Best Case Scenario. Here are the steps.

6. Try it: Show the Scenarios
Select a Scenario: Best Case
Click on **Show**.

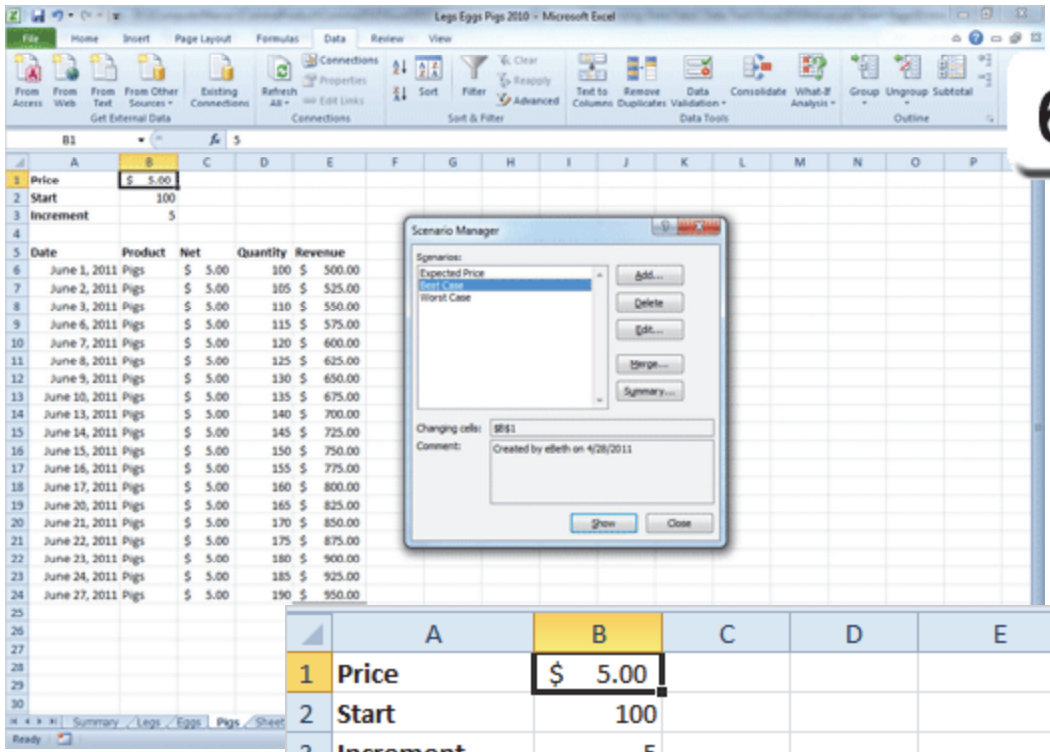


The Price in Cell B1 changed from $3.25 to $5.00. All of the formulas in Column E updated and used the new Price to calculate the Revenue. Yeah!

Try This, Too: Show Another Scenario
Select a Scenario: Worst Case
Click on **Show.**
The Price in Cell B1 changed from $5.00 to $2.00. Boo Hoo.

And Try This: Show A Different Scenario
Select a Scenario: Expected Price.
Click on **Show....**Very Good.

Data -> Data Tools ->What-If Analysis -> Scenario Manager



	A	B	C	D	E
1	Price	$ 5.00			
2	Start	100			
3	Increment	5			
4					
5	Date	Product	Net	Quantity	Revenue
6	June 1, 2011	Pigs	$ 5.00	100	$ 500.00

6

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.2. Apply data analysis: Data Tools What-If Analysis

Take Two

A Different Scenario

Say you wanted to create a Scenario that changed everything: the Price, the Start and the Increment. The next couple of pages show how to add more than one reference cell.

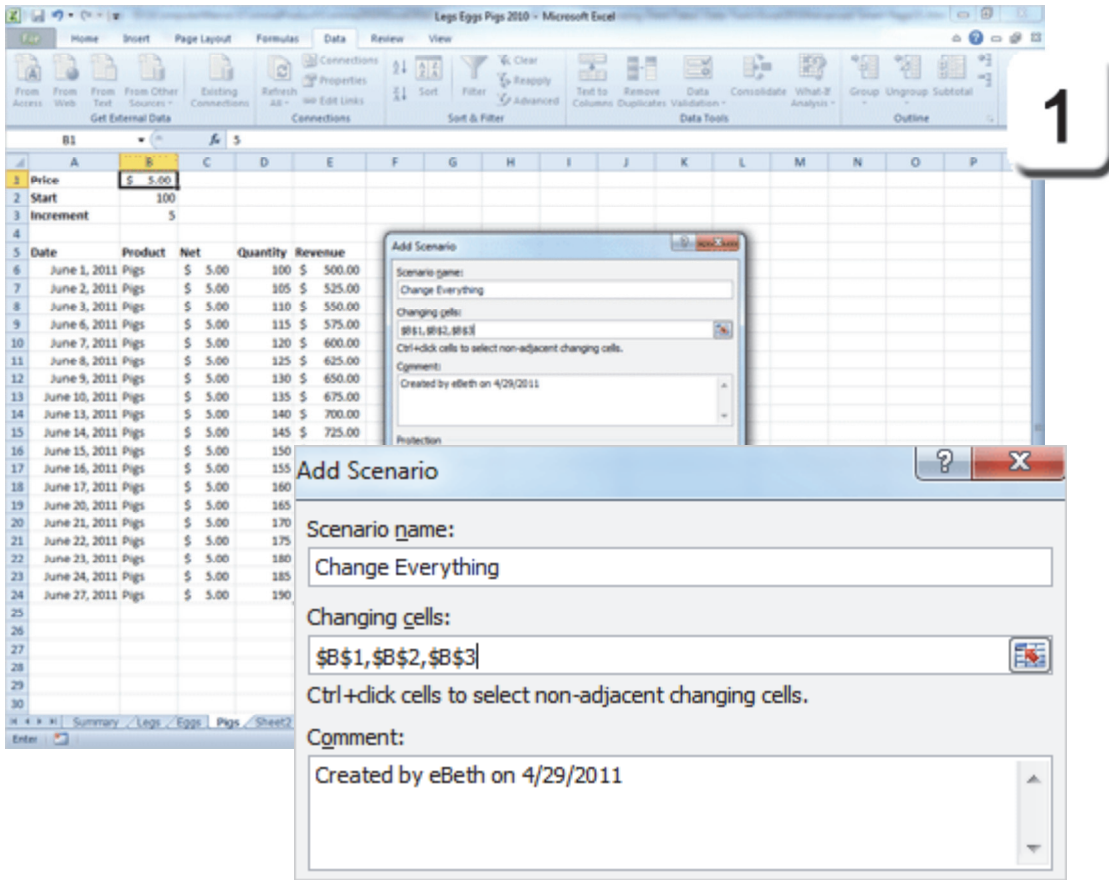
1. Try it: Create a Different Scenario
The Scenario Manager is open.
Click on: **Add**

You will be prompted to fill in the blanks:
Scenario Name: Change Everything
Changing Cells: $B$1
You can click on Cell B1, the Price, or type the reference. This is an Absolute Reference.

Add More Cells to the Scenario:
With your cursor next to $B$1,
Type a comma (,) and add $B$2, the Start
Type a comma (,) and add $B$3, Increment

Click **OK.** Keep going...

Data -> Data Tools ->What-If Analysis -> Scenario Manager



More Than One Value

When you click on OK, the Scenario Manager will prompt you to enter a new value for each reference cell.

2. Try it: Edit the Values
Scenario Value for $B$1: 6.00
Scenario Value for $B$1: 200
Scenario Value for $B$1: 20

Click **OK** to return to the Scenario Manager.

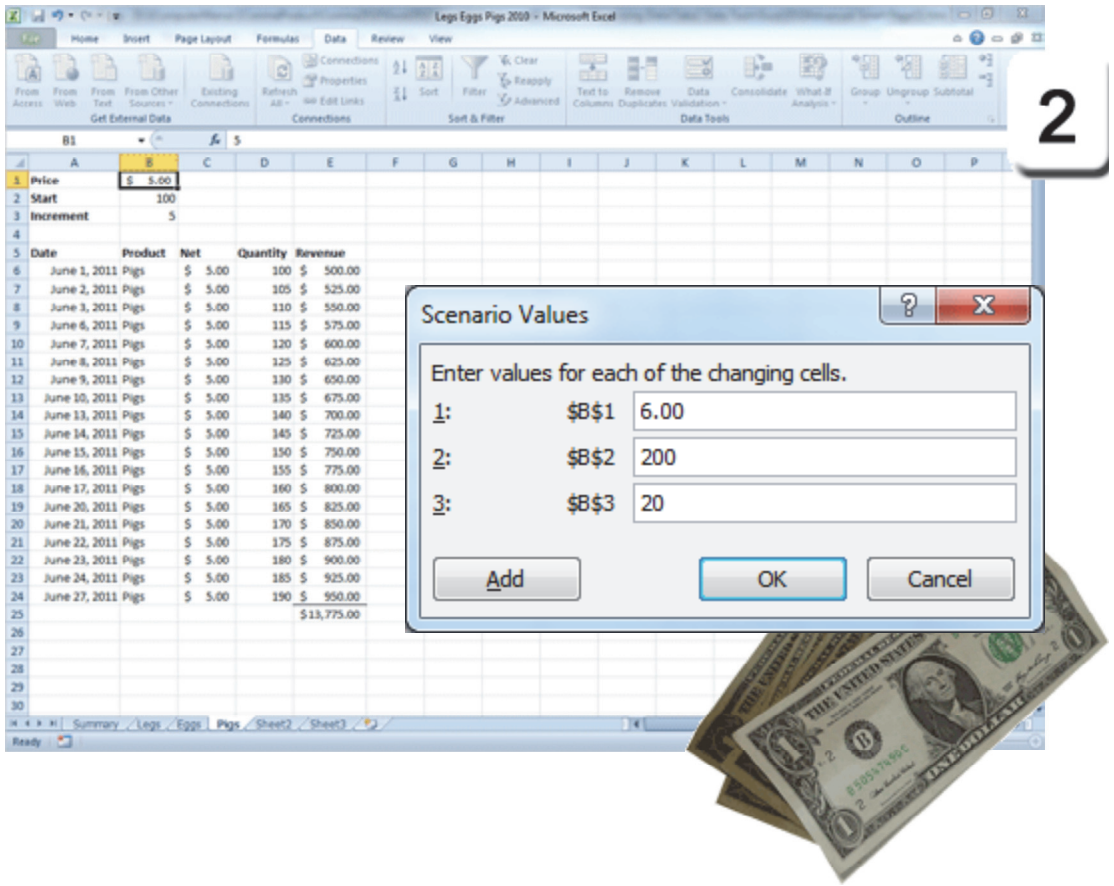
Try This, Too: Add One More Scenario
Click on: **Add**

You will be prompted to fill in the blanks:
Scenario Name: Change Back
Changing Cells: $B$1, $B$2, $B$3

Now, Try it: Edit the Values
Scenario Value for $B$1: 5.00
Scenario Value for $B$1: 100
Scenario Value for $B$1: 5

Keep going...

Data -> Data Tools ->What-If Analysis -> Scenario Manager



Show and Tell

3. Try it: Show the New Scenarios
Select a Scenario: Change Everything
Click on **Show.**

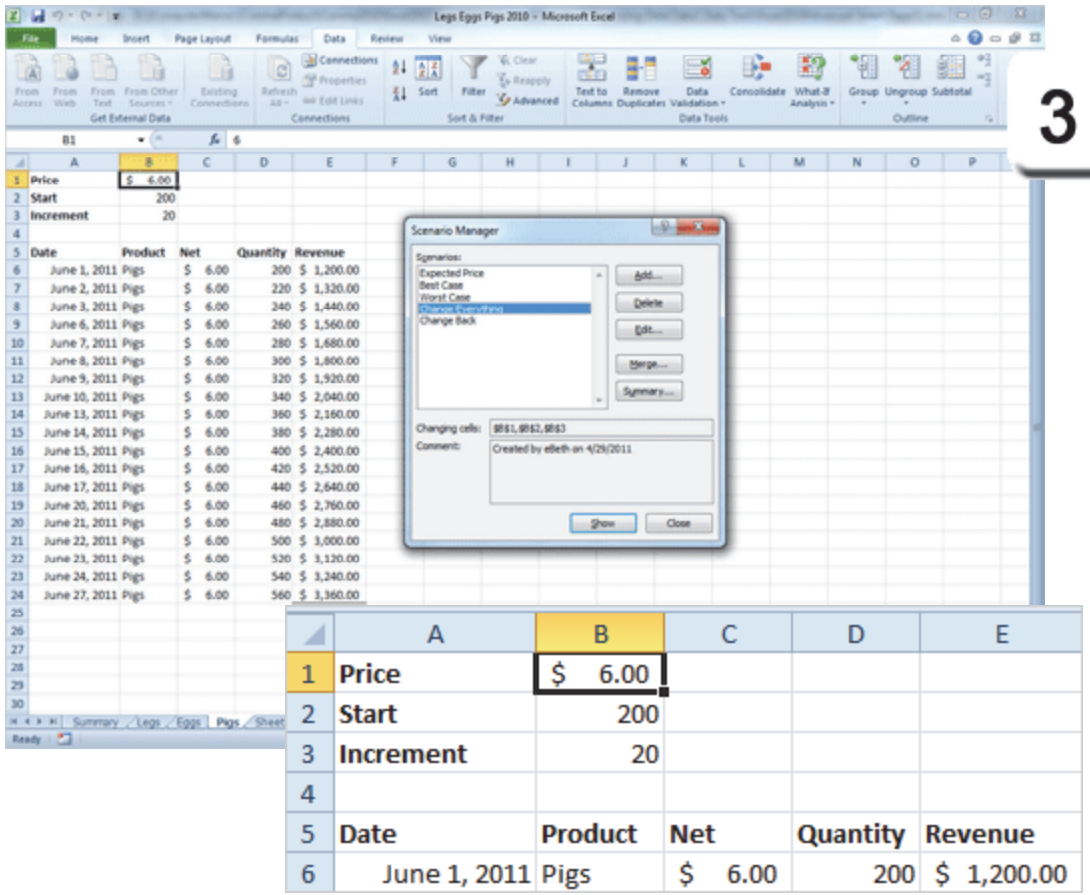


The numbers in Cells B1, B2 and B3 changed. All of the formulas in Column E updated and used the new data to calculate the Revenue.

Try This, Too: Show Another Scenario
Select a Scenario: Change Back
Click on **Show**.
The numbers in Cells B1, B2 and B3 changed back. All of the formulas in Column E updated and recalculated the Revenue.

That's Scenarios: a useful tool for analyzing your data. You can save your spreadsheet.

Data -> Data Tools ->What-If Analysis -> Scenario Manager



	A	B	C	D	E
1	Price	$ 6.00			
2	Start	200			
3	Increment	20			
4					
5	Date	Product	Net	Quantity	Revenue
6	June 1, 2011	Pigs	$ 6.00	200	$ 1,200.00

Summary

This lesson began with a discussion of the simple **Outline Tools**: Group, Outline and Subtotal. The purpose of these tools is to organize and visualize the data.

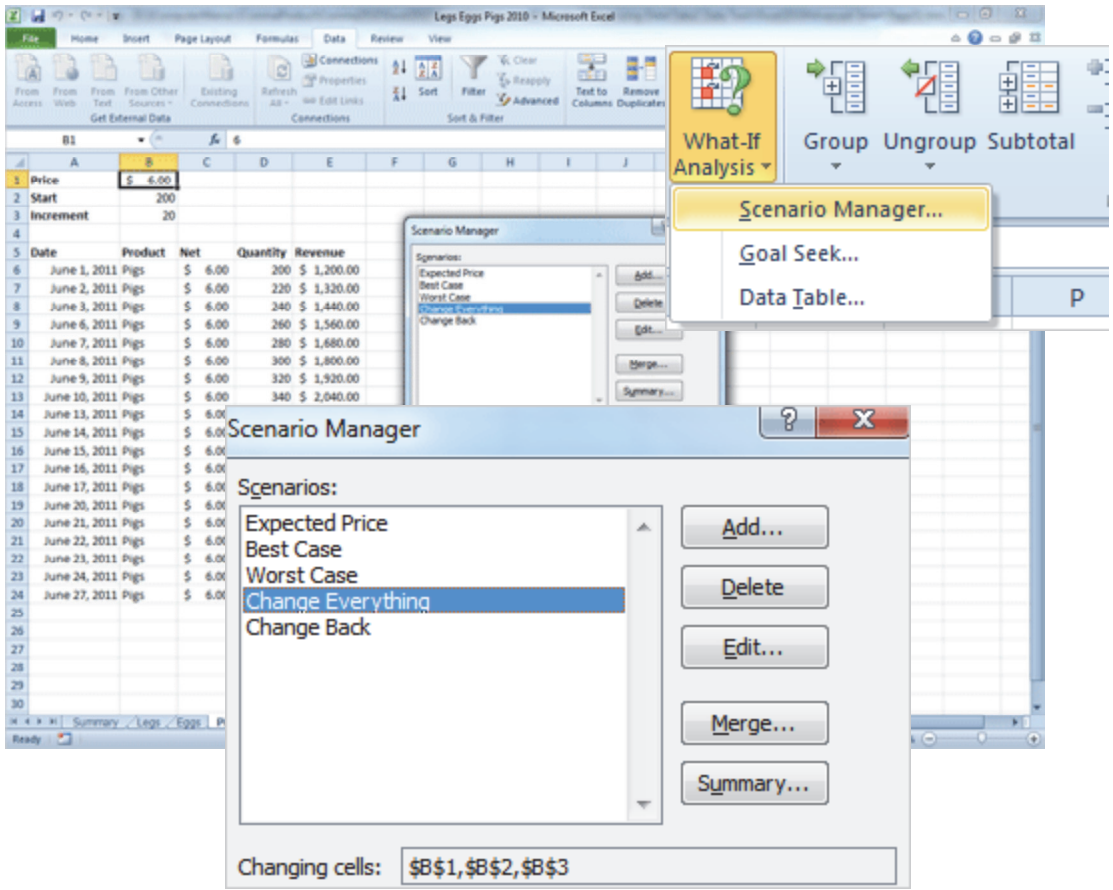
The lesson continued with the **Data Tools**. Our What-If Analysis included Goal Seek, for when you already have an answer in mind.

The other analytical tool is the Scenario Manager. We walked through several different Scenarios that changed the Reference Cells.

Well, you done good.
Go get two cookies.



Data



Practice Activities

Lesson 2: Work Smarter, Not Harder

Before You Begin: Download the sample spreadsheet: Brown Bag Lunch Sales Team.xlsx

Try This: Do the following steps

1. Open the Spreadsheet: Brown Bag Lunch Sales Team.xlsx
2. Sort the spreadsheet by Product in ascending order
3. Create a Group with the Detroit Agents
4. Hide the Detroit Agents.
5. Filter Products so only Coffee & Donuts are visible.
6. Use the Goal Seek function on John Cook (Northern Michigan Market).
   Set the value in column F to be $65,000 by changing the project income (Column E).
   Click OK to accept the Goal Seek.
7. Save this file as YOUR NAME Works Smarter Practice



Test Yourself

1. Which of the following is true? (Select all correct answers.)
a. Sort helps find patterns
b. Filter focuses on just part of the information
Tip: Advanced Excel page 51, 52

2. When the filter command is applied, the header row contains drop down filter options.
a. True
b. False
Tip: Advanced Excel, page 53

3. The status bar displays how many filtered records there are.
a. True
b. False
Tip: Advanced Excel, page 54

4. The Group command creates an outline in the side of the spreadsheet, but does NOT calculate totals.
a. True
b. False
Tip: Advanced Excel, page 66

5. Which of the following are true about Subtotals? (Select all correct answers.)
a. To use the subtotal, data must be sorted first
b. The command is Data-> Outline-> Subtotal
c. The subtotal function creates totals for each group in the column
Tip: Advanced Excel, page 58

6. In the Outline a + indicates what? (Select all correct answers.)
a. There is more data to see
b. All data is displayed
c. The outline can be expanded
d. The outline can be condensed
Tip: Advanced Excel, page 64

7. Which of the following are Outline functions? (Select all correct answers.)
a. Subtotal
b. Group
c. Sort
Tip: Advanced Excel, page 66

8. Which of the following is true about the Goal-Seek command? (Select all correct answers.)
a. OK keeps the changes
b. Cancel rejects (or undoes) the changes
c. Apply keeps the changes
Tip: Advanced Excel, page 70

9. To enter multiple values for a What-if scenario, which is the best tool?
a. Goal-Seek
b. Scenario Manager
Tip: Advanced Excel, page 71

10. A What if Scenario can only change one (1) reference cell.
a. True
b. False
Tip: Advanced Excel, page 77



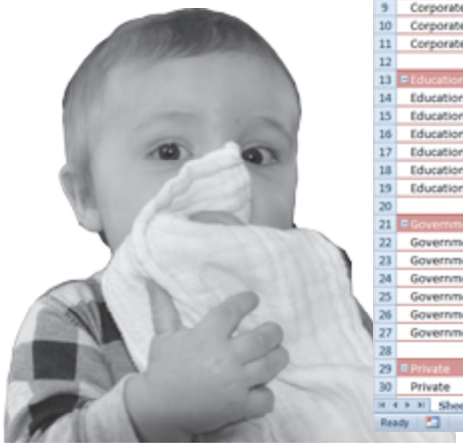
Analyzing Data Visually

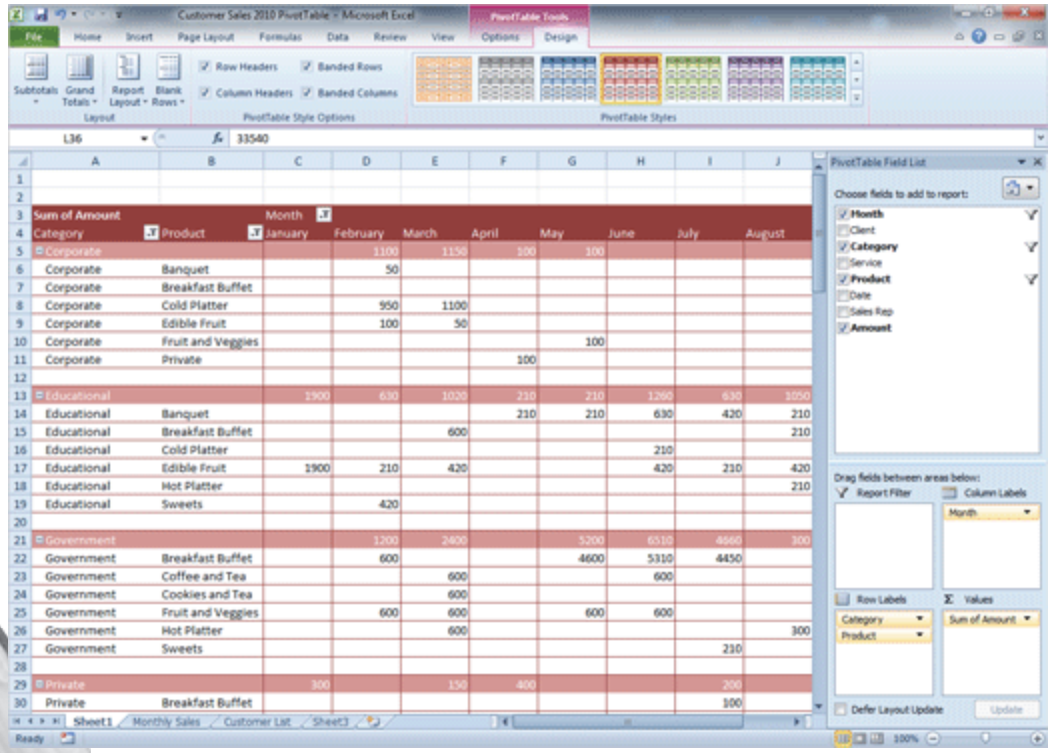
PivotTables: What Happened?

Advanced Excel Objectives

In this lesson, you will learn how to:

1. Identify the steps needed to create a PivotTable
2. Use Row Labels to filter the data
3. Use the Field Settings to Count Values
4. Pivot the Table!
5. Format the PivotTable and Pivot Table Reports





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Lesson 3: Pivot Tables: What Happened?

1. Readings
Read Lesson 3 in the Advanced Excel guide, page 83-116.

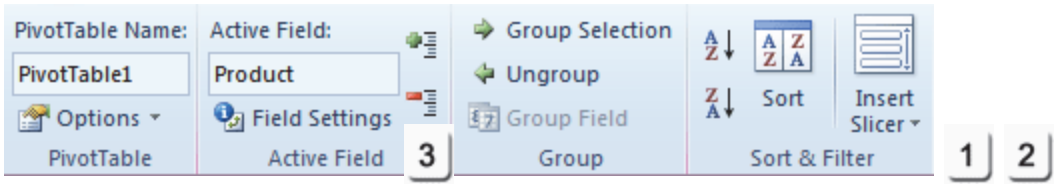
Project
A spreadsheet that works with PivotTables in Excel. This lesson shows how to present data visually, format data as a PivotTable and display the Totals.

Downloads
Sales Data 2010.xls
Brown Bag Lunch Sales Team.xlsx

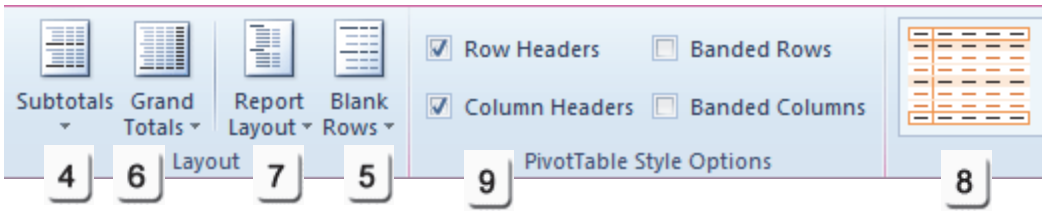
2. Practice
Complete the Practice Activity on page 117.

3. Assessment
Review the Test questions on page 118.

PivotTable Tools->Options



PivotTable Tools->Design



Menu Maps

This lesson demonstrates the **Pivot Table Tools Design** and **Options** Ribbons.

1. PivotTable Tools ->Options-> Show-> Field List, page 90
2. PivotTable Tools ->Options-> Show> Field Headers, page 93
3. PivotTable Tools ->Options-> Active Field-> Field Settings, page 96
4. PivotTable Tools ->Design-> Layout-> Subtotals, page 104
5. PivotTable Tools ->Design-> Layout->Blank Rows, page 105
6. PivotTable Tools ->Design-> Layout-> Grand Totals, page 106
7. PivotTable Tools ->Design-> Layout->Report Layout, page 110
8. PivotTable Tools ->Design-> PivotTable Styles->Style, page 111
9. PivotTable Tools ->Design-> PivotTable Style Options, page 112

From the **Insert** Ribbon
Insert->Tables->Pivot Table, page 87





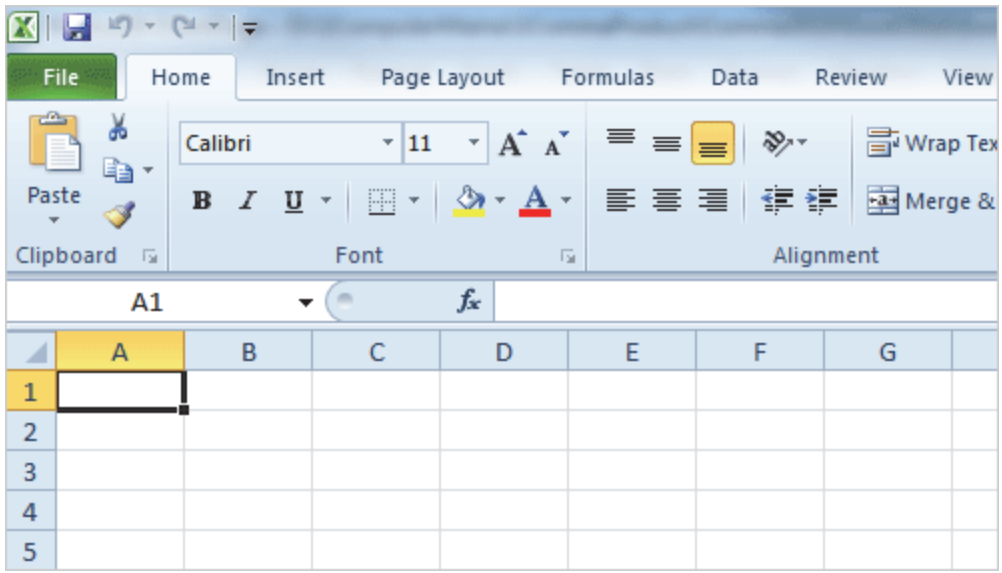




The Right Tool for the Task

The Data Tools are: Sort, Filter, Group and Subtotal. A **PivotTable** combines all of the best Data Tools together. A PivotTable presents the data in a visual, interactive format. PivotTables summarize, sort, compare and filter the data. For some reason, most people teach PivotTables as an advanced topic. In this lesson, "advanced" doesn't mean difficult: just more steps. The Computer Mama sez formulas can be difficult. This is actually fun. Try it.

Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010



Start Microsoft Excel

What Do You See? Is there a Title Bar that says Microsoft Excel? Yes.

Is there a Home Ribbon with the Clipboard, Font, Alignment and Number Groups? Yes.

If your screen looks simila to the example on this page, then you are ready to get started.

Take One

Before You Begin

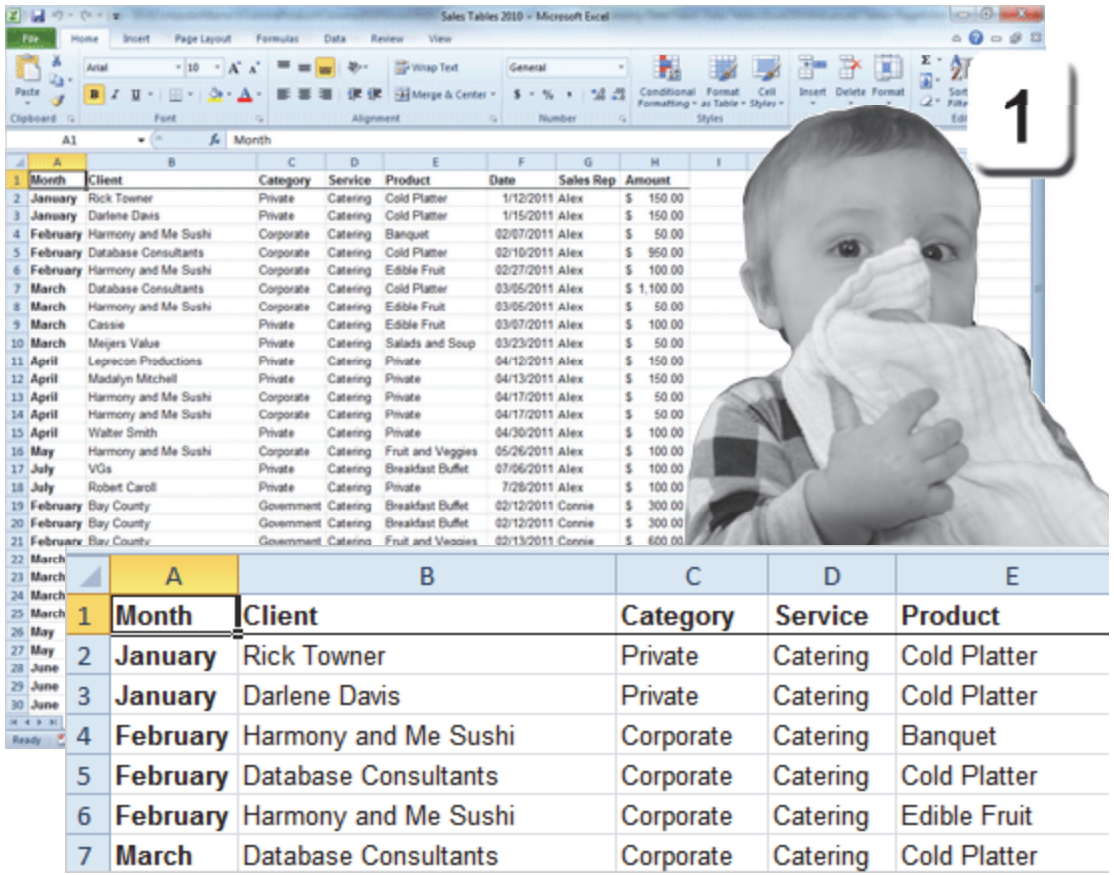
The purpose of this lesson is to investigate the **PivotTable** Options in Microsoft Excel 2010. You can use a spreadsheet that you created or download a sample spreadsheet if you wish.

1. Try This: Open a Sample Spreadsheet
Open a sample spreadsheet: Sales2010.xlsx
Go to the **Original Data** sheet.

What Do You See? This sheet shows the product sales for Charlotte' Website. The first row is BOLD: it is the Header Row. There are many rows of data.

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File -> Open



	A	B	C	D	E
1	Month	Client	Category	Service	Product
2	January	Rick Towner	Private	Catering	Cold Platter
3	January	Darlene Davis	Private	Catering	Cold Platter
4	February	Harmony and Me Sushi	Corporate	Catering	Banquet
5	February	Database Consultants	Corporate	Catering	Cold Platter
6	February	Harmony and Me Sushi	Corporate	Catering	Edible Fruit
7	March	Database Consultants	Corporate	Catering	Cold Platter

Take One

Insert a Pivot Table

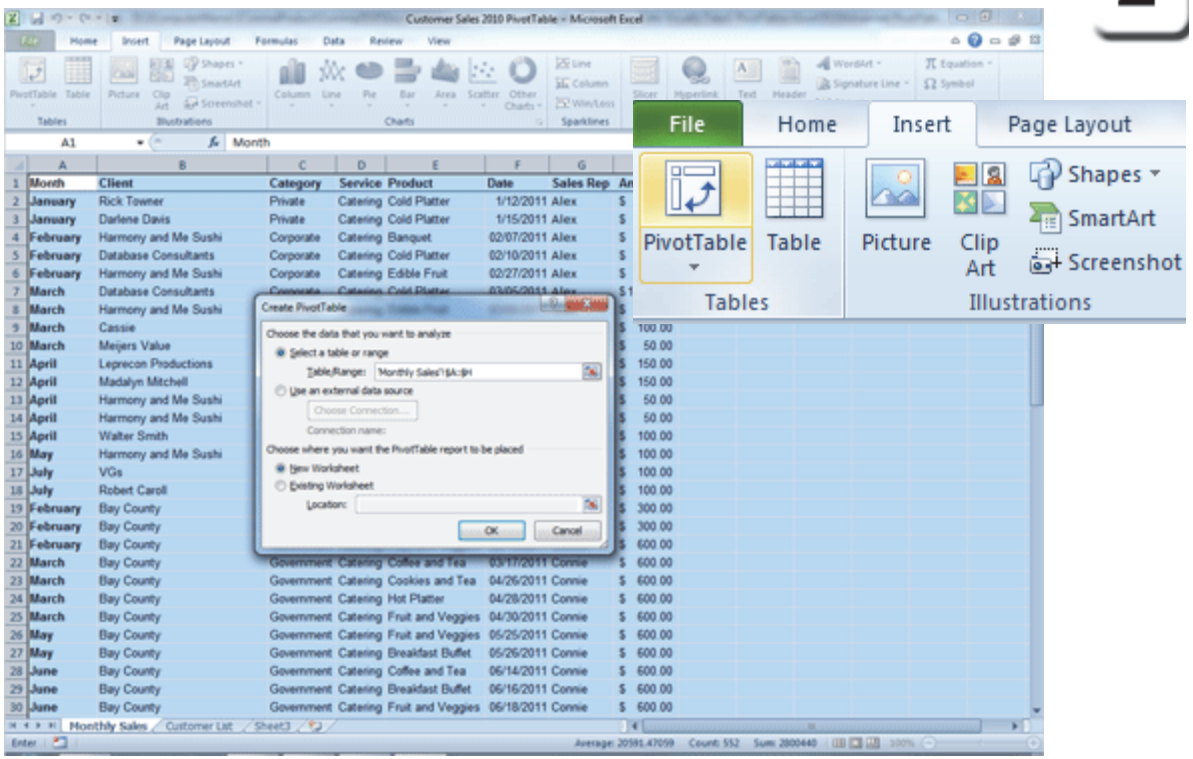
A PivotTable summarizes data and displays the results. It is a reporting tool that works very well. Here is how you start.

2: Try This: Insert a PivotTable
Go to the Monthly Sales spreadsheet.
Select all.
Go to I**nsert ->Tables**.
Click on **PivotTable**.

Keep going...



Insert ->Tables-> PivotTable



2

Take One

Create a PivotTable

3. Try This: Choose the data

If you selected the entire Monthly Sales sheet, Excel will display the Table or Range: 'Monthly Sales'!$A:$H

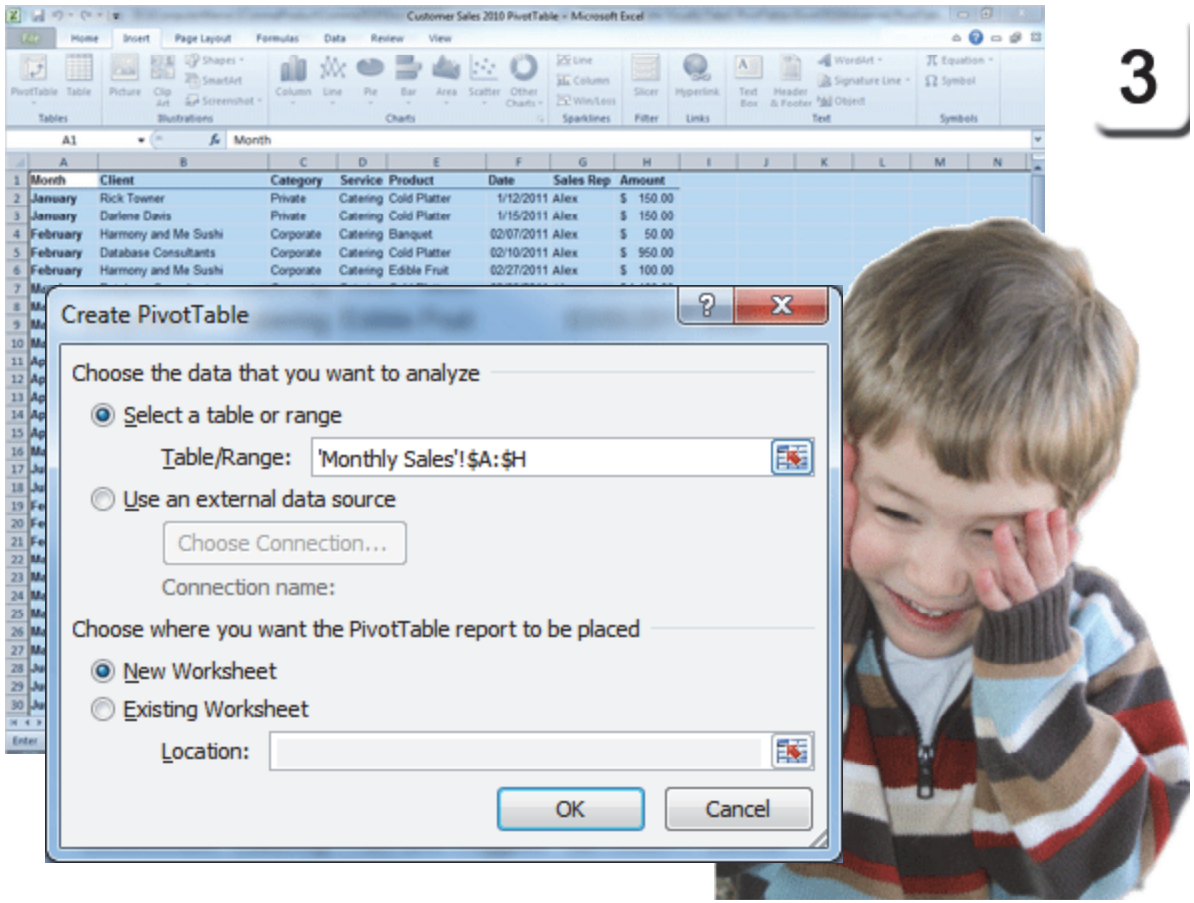
In words, that means "name of your spreadsheet" ! "all of the data in Column A through Column H."

Try This, Too: Where do you want to place the new PivotTable report? The choices are create a new PivotTable in a new worksheet or place it on an existing worksheet.

Select: **New Worksheet**.
Click **OK**.

Keep going...

Insert ->PivotTable



3

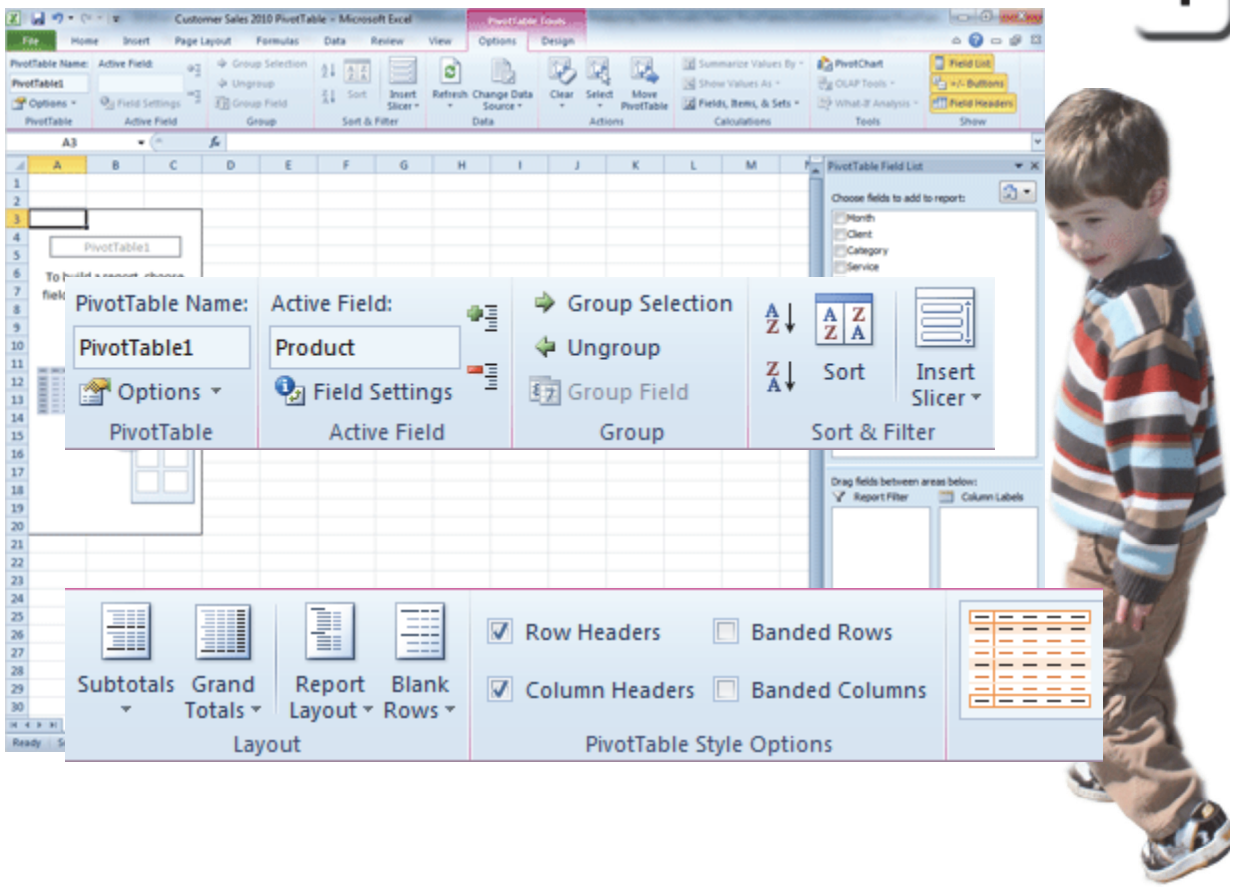
Take One

Insert ->Tables->PivotTable

4

Hello, PivotTable

4. What Do You See? When you click on OK, Microsoft Excel will create a new, blank PivotTable in a new worksheet. The **Pivot Table Tools** should be available. There are two PivotTable Ribbons: **Options** and **Design**.



The Options Ribbon includes:

PivotTable
Active Field
Group
Sort and Filter
Data
Actions
Calculations
Tools
Show/Hide

The Design Ribbon includes:

Layout
PivotTable Style Options
PivotTable Styles

Keep going, please...

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables

Take One

PivotTable Fields

5. What Else Do You See? There are three parts to a spreadsheet: Labels, Data, and Formulas. In this example the labels includes Category, Service, Product, Date, Sales Rep and Amount. These **labels** will become the **fields** in the PivotTable.

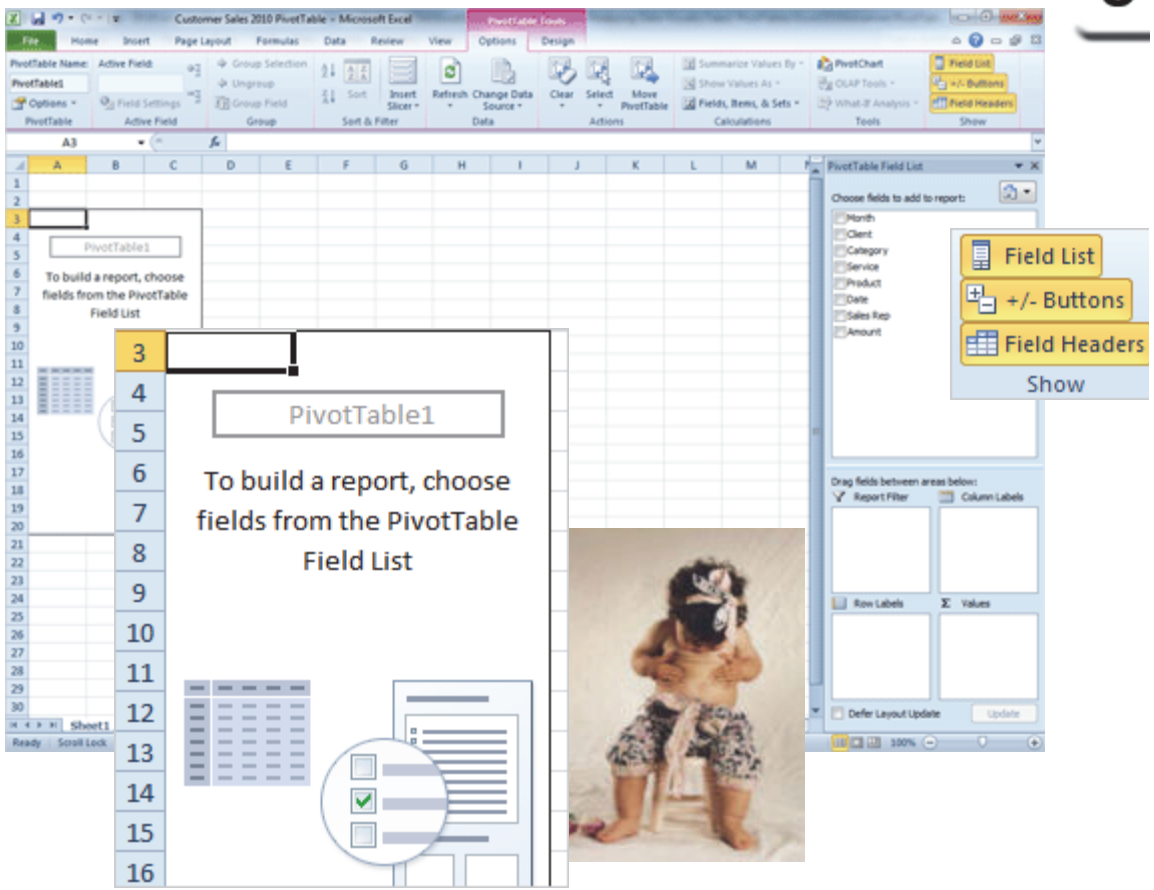
PivotTables use **fields** to organize and calculate the rows and columns. These fields come from the labels in the first row (the header) in the spreadsheet.

Look for the **PivotTable Field List** on the right side of your screen. How do the fields compare to your labels?

Keep going...

What If You Don't See It? The Field List can be turned on or off with the PivotTable Tools. If you don't see the Field List:
Go to **PivotTable Tools ->Options.**
Go to **Show-> Field List.**

PivotTable Tools ->Options-> Show-> Field List



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Show the Field List

Take One

PivotTable: Add Fields

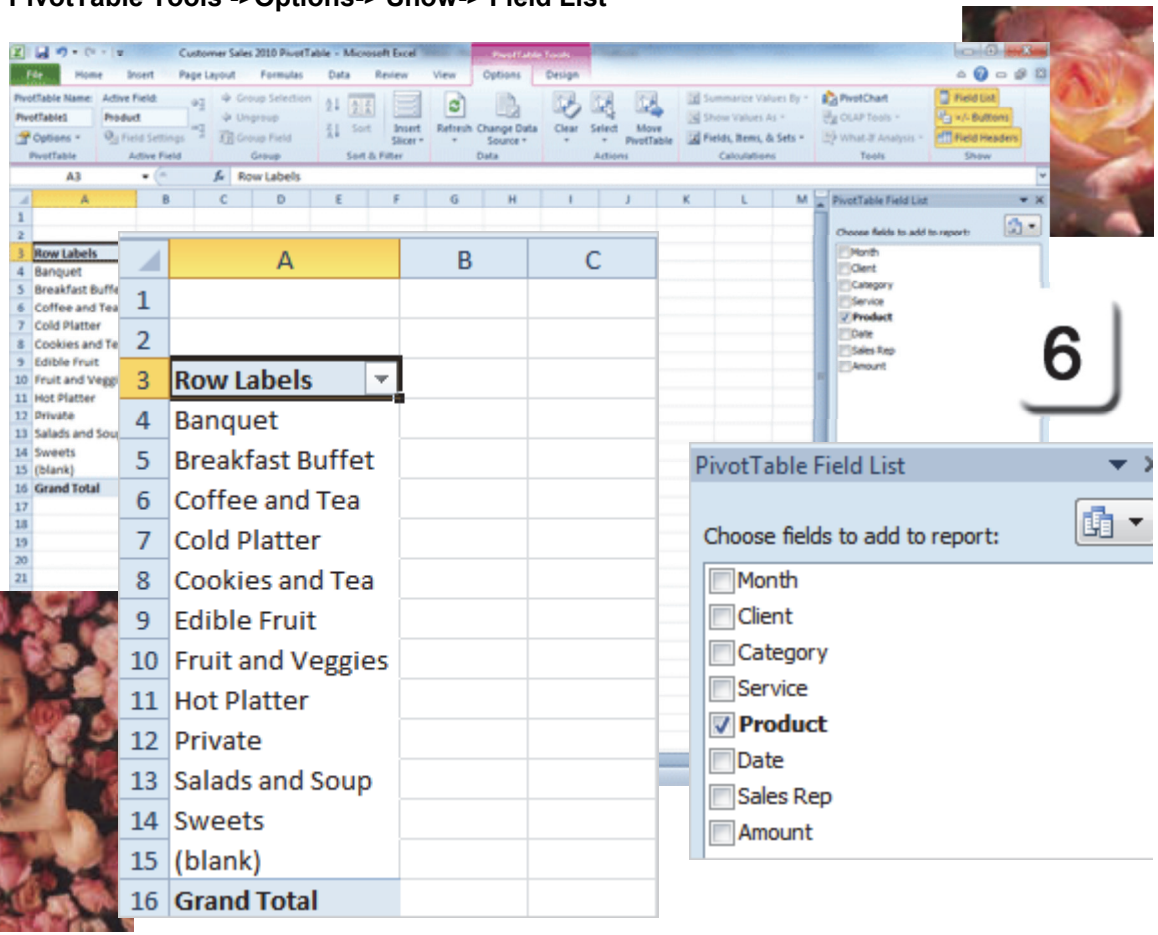
Creating a PivotTable begins by adding fields to the table. Every table calculates something: SUM, COUNT, AVERAGE, etc. In this example, we'll answer the question: what did you sell?

6. Add Fields to the PivotTable
Go to the **PivotTable Field List.**
Select: Product.

What Do You See? Look at the new PivotTable on the left side of the spreadsheet. The Products should be displayed in the PivotTable.

Keep going...

PivotTable Tools ->Options-> Show-> Field List



Take One

PivotTable: Row Labels

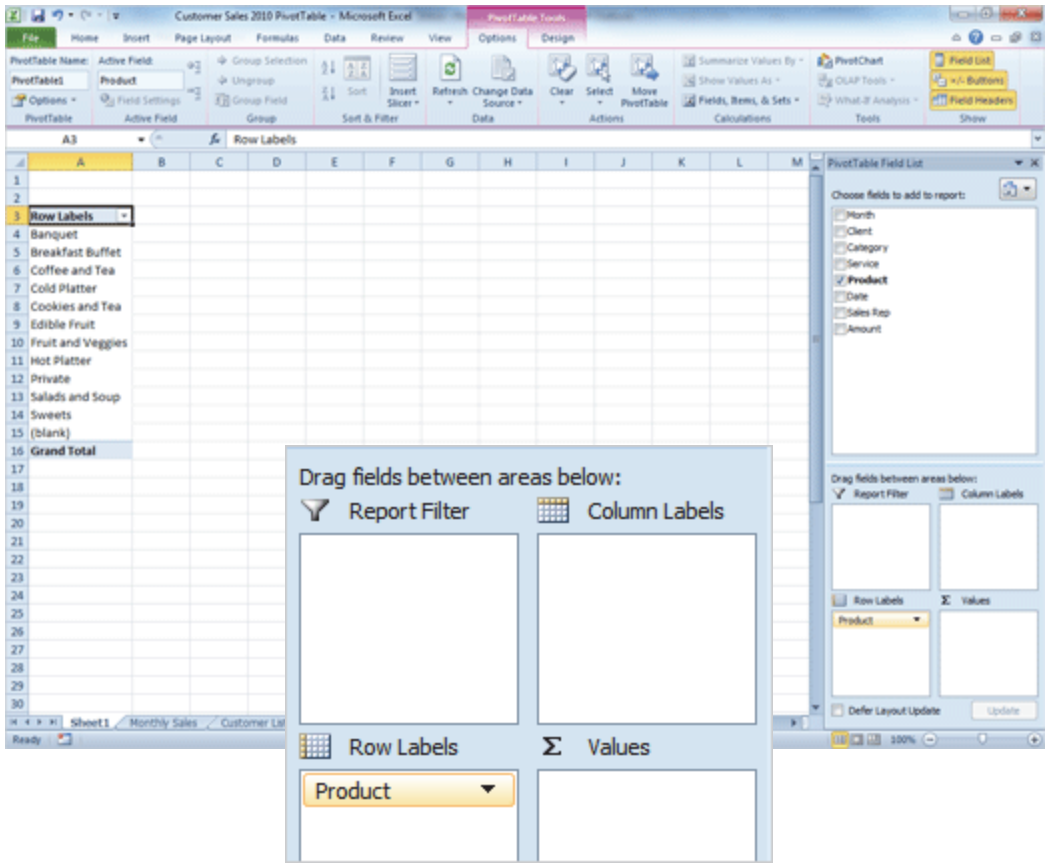
7. What Else Do You See? Please look at the bottom of the Field List.

The Product field was added to the **Row Labels**.

Keep going...



PivotTable Tools ->Options-> Show-> Field List



7

PivotTable: Field Headers

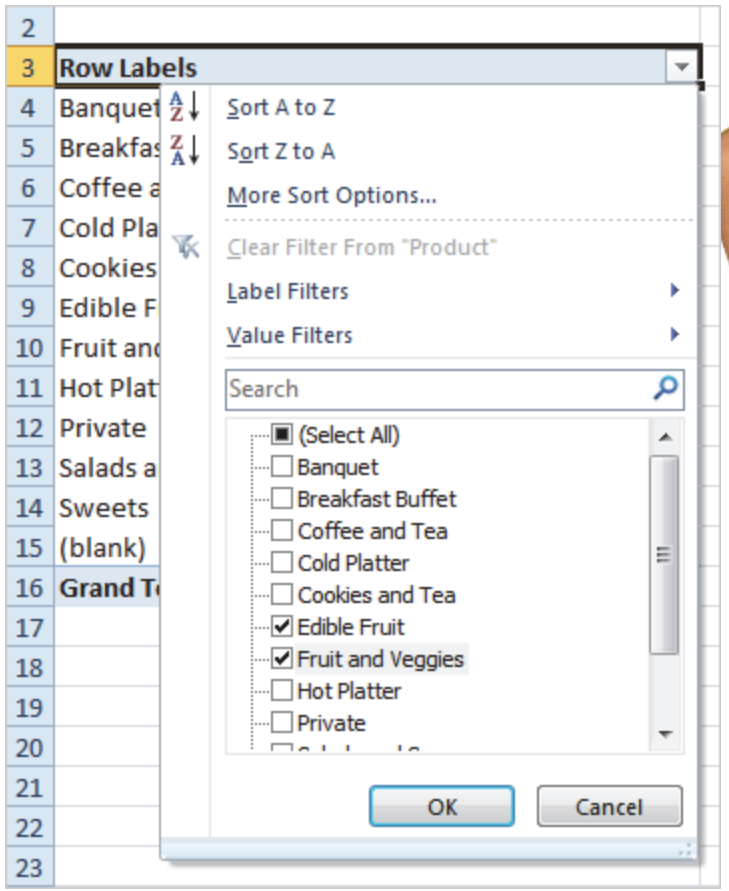
Row Labels are Filters. The top row of the PivotTable is the Row Label: this is the **Field Header**. You can use the **Field Header** to display all of the products in the PivotTable or just a few if you wish.

8. Try This: Filter the Data
Click on the **Row Labels**.
Select: Edible Fruit
Select: Fruit and Veggies.
When you click **OK**, the PivotTable will display those two products.

Try This, Too: Show All of the Data
Click on the Row Label:
Select: **(Select All)**
Click **OK**. Keep going...

What If You Don't See It? The **Field Headers** can be turned on or off with the PivotTable Tools. If you don't see the Field List please try this:
Go to **PivotTable Tools ->Options.**
Go to **Show-> Field Headers.**

PivotTable Tools ->Options-> Show> Field Headers





	A	B
1		
2		
3	Row Labels	
4	Edible Fruit	
5	Fruit and Veggies	
6	Grand Total	
7		

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Field Headers

Take One

PivotTable: Field Values

PivotTables need data. When you add **Values**, you can do calculations. The following pages will focus on the options at the bottom of the Field List.

Before You Begin: When you review the data in the sample spreadsheet, there are a couple of fields that make sense to use to COUNT or SUM the Values.

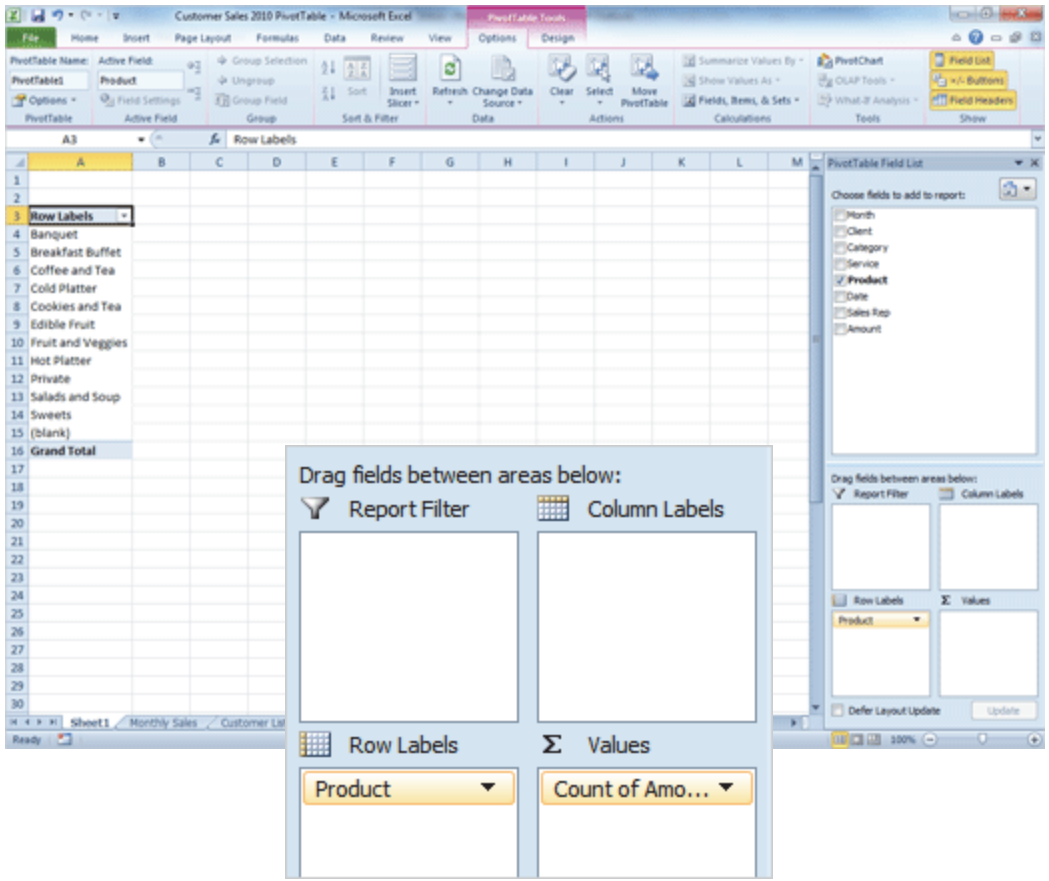
There are many Products in each Category. This is a many-to-many relationship.

There is one Amount for each sale. This a one-to-one relationship.

1. Try This: Add a Value
Go to the **Field List**
Drag and Drop Amount to the **Values.**

(Yes, it may say Count of Amount. Keep going...)

PivotTable Tools ->Options-> Show> Field List



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Values

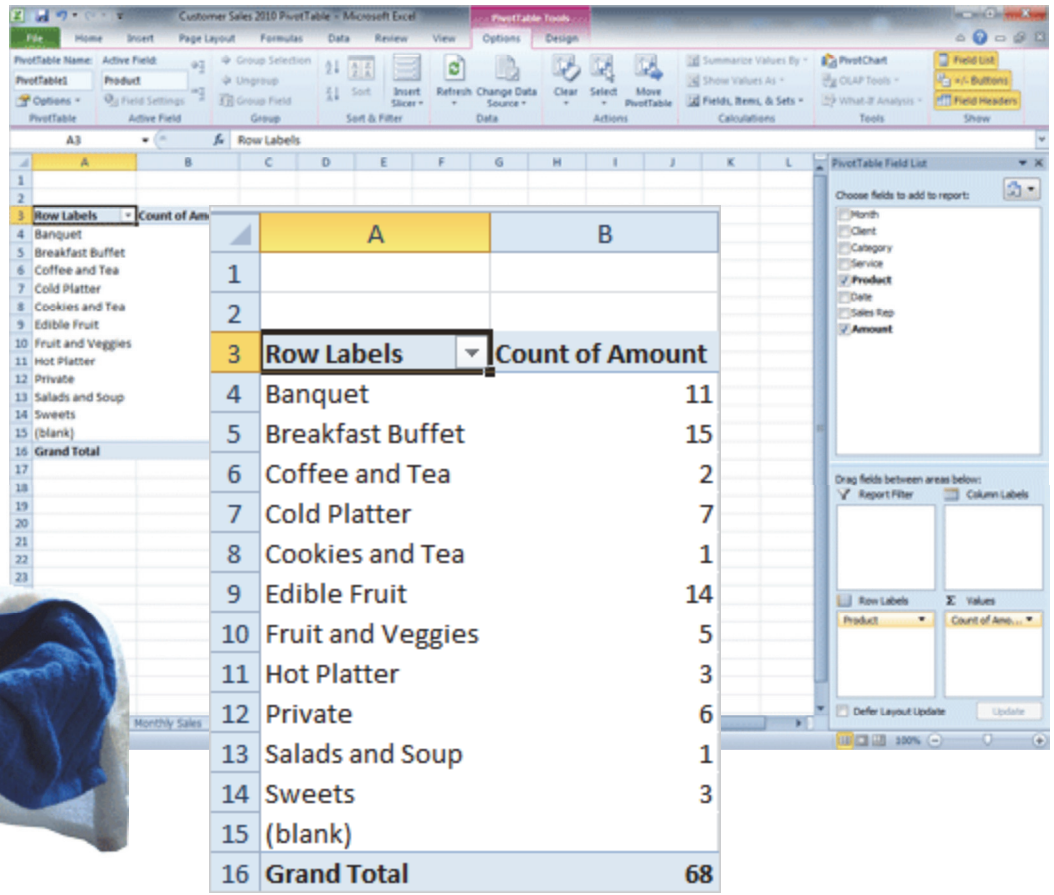
Take One

PivotTable: Values

2. What Do You See? When you add the Value, the PivotTable will automatically count the records for each row. There is a Grand Total for all of the Products, too.

Count is the default field value. What are the other options? Keep going...

PivotTable Tools ->Options-> Show> Field List



	A	B
1		
2		
3	Row Labels	Count of Amount
4	Banquet	11
5	Breakfast Buffet	15
6	Coffee and Tea	2
7	Cold Platter	7
8	Cookies and Tea	1
9	Edible Fruit	14
10	Fruit and Veggies	5
11	Hot Platter	3
12	Private	6
13	Salads and Soup	1
14	Sweets	3
15	(blank)	
16	Grand Total	68

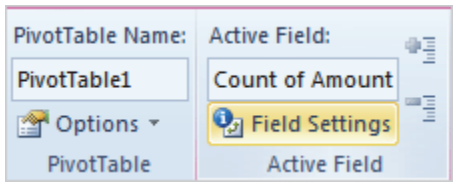


Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Values

Take One

Edit the Field Settings

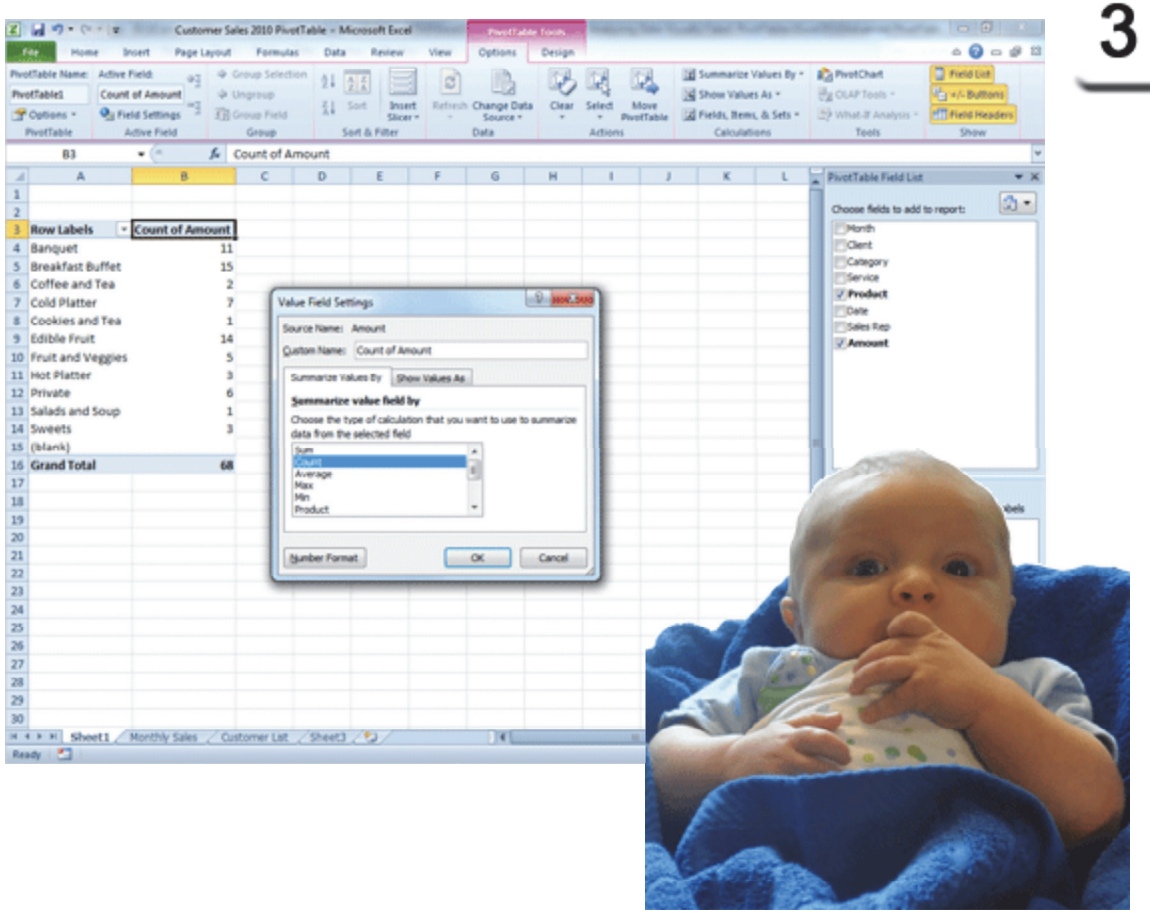
3. Try This. Change the Field Settings
Select Cell B3: Count of Amount.
Go to **PivotTable Tools ->Options.**
Go to the **Active Field** group**.**
Select: **Field Settings**.



Keep going...

Memo to Self: In this example, the easy way to open the Field Settings is to double-click the **Count Of Amount** Field Header on the PivotTable.

PivotTable Tools ->Options-> Active Field-> Field Settings



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Field Settings

Take One

Value Field Settings

A PivotTable can use these functions:
Sum
Average
Max
Min
Product
Count Numbers
StvDev
StDevp
Var and Varp

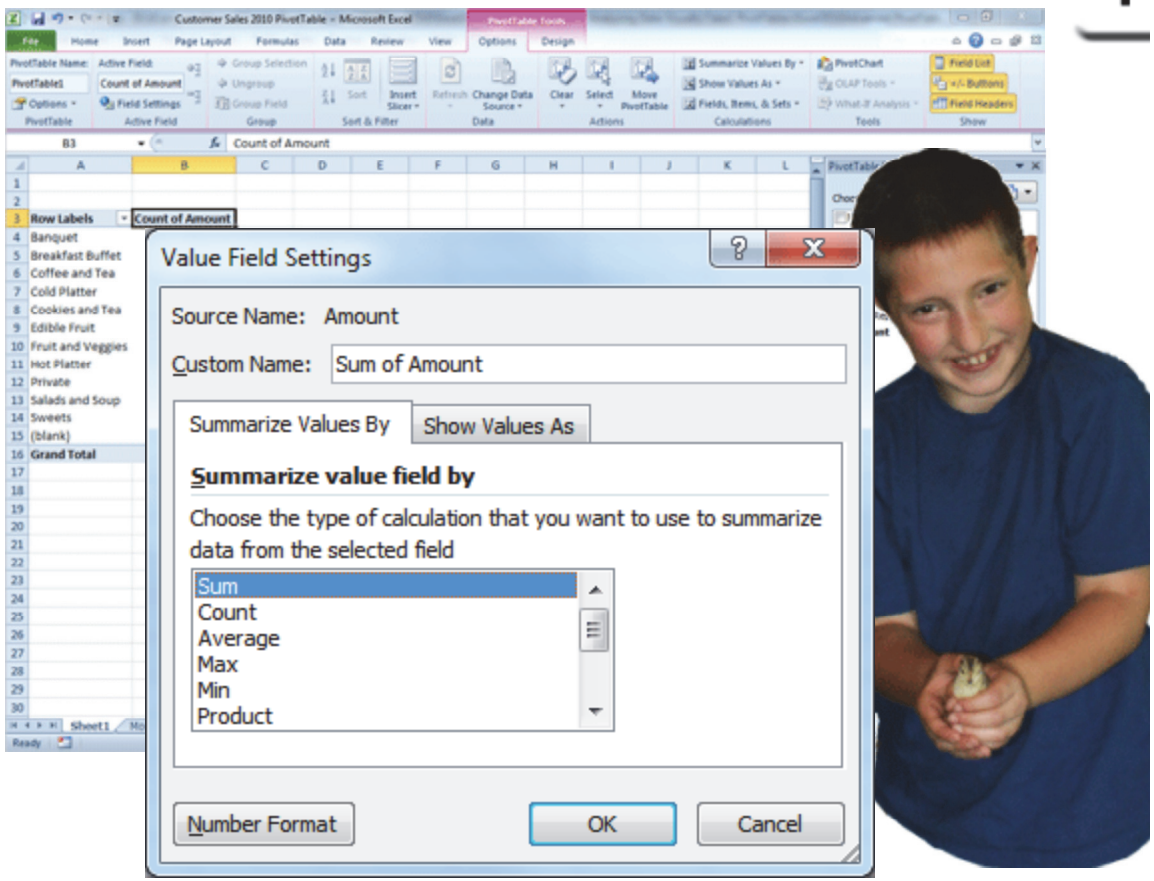
4. Try This: Choose the Calculation

Select **Sum** from the options.
The **Custom Name** should update to Sum of Amount.

Click **OK** and keep going...

Memo to Self: You can summarize the values as a percent of the row, column, group or total. You can also display the values as the difference, % of difference or running total if you wish.

PivotTable Tools ->Options-> Active Field-> Field Settings



Take One

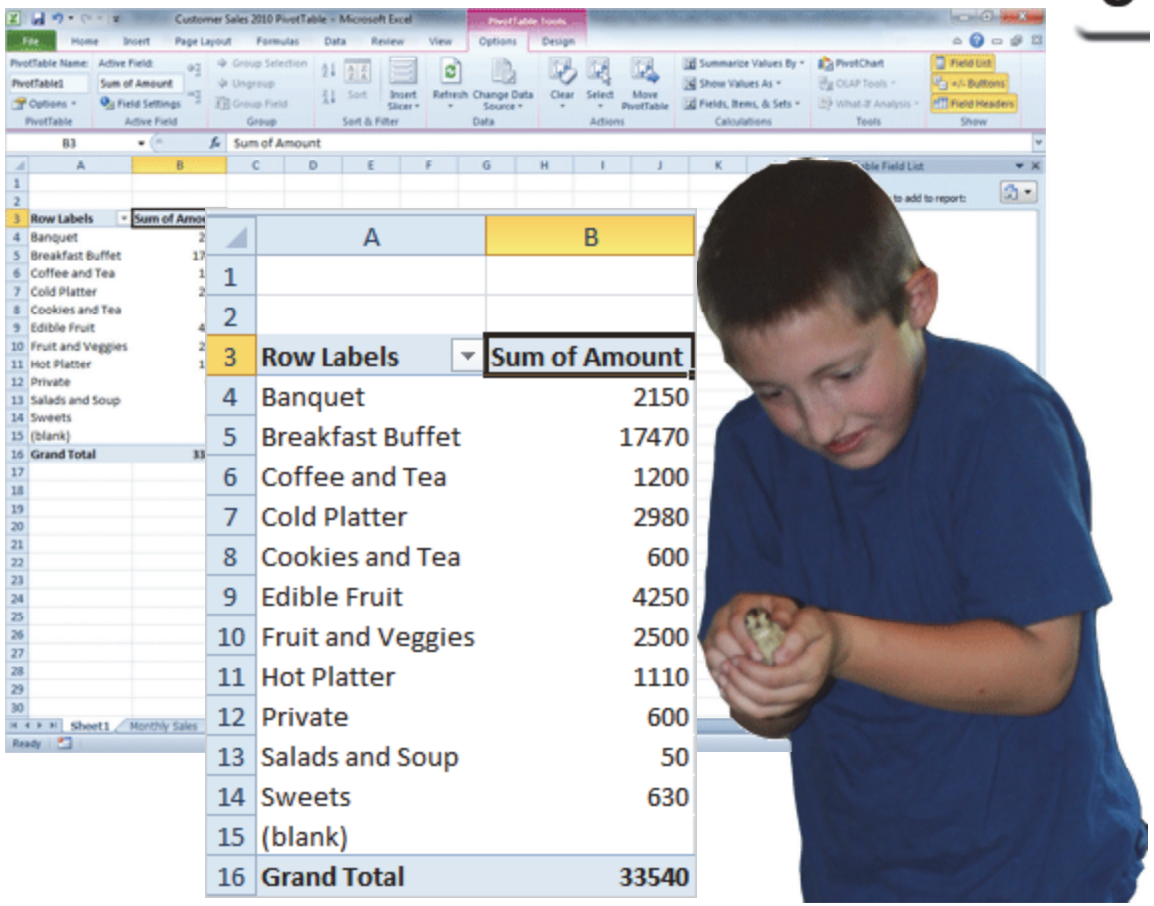
Sum of Amount

5. What Do You See? When you change the Field Settings from Count to Sum the PivotTable will update the calculations.

The example on this page shows the sales amounts, although the numbers may look odd because the amounts are not formatted for currency.

Do This: Save Your Spreadsheet
Go to **File-> Save**.
Browse to your documents folder.
File Name: My Name Customer Sales.
Click **OK** to save the file.

PivotTable Tools ->Options-> Active Field-> Field Settings



	A	B
1		
2		
3	Row Labels	Sum of Amount
4	Banquet	2150
5	Breakfast Buffet	17470
6	Coffee and Tea	1200
7	Cold Platter	2980
8	Cookies and Tea	600
9	Edible Fruit	4250
10	Fruit and Veggies	2500
11	Hot Platter	1110
12	Private	600
13	Salads and Soup	50
14	Sweets	630
15	(blank)	
16	Grand Total	33540

Take One

PivotTable: Column Header

We began this PivotTable to answer the question: what did you sell? The next question would be: Who bought what?

In this spreadsheet, the clients are tagged as Corporate, Education, Government and Private in the Category field. So, how many Breakfast Buffets were served to our corporate clients? Who bought what?

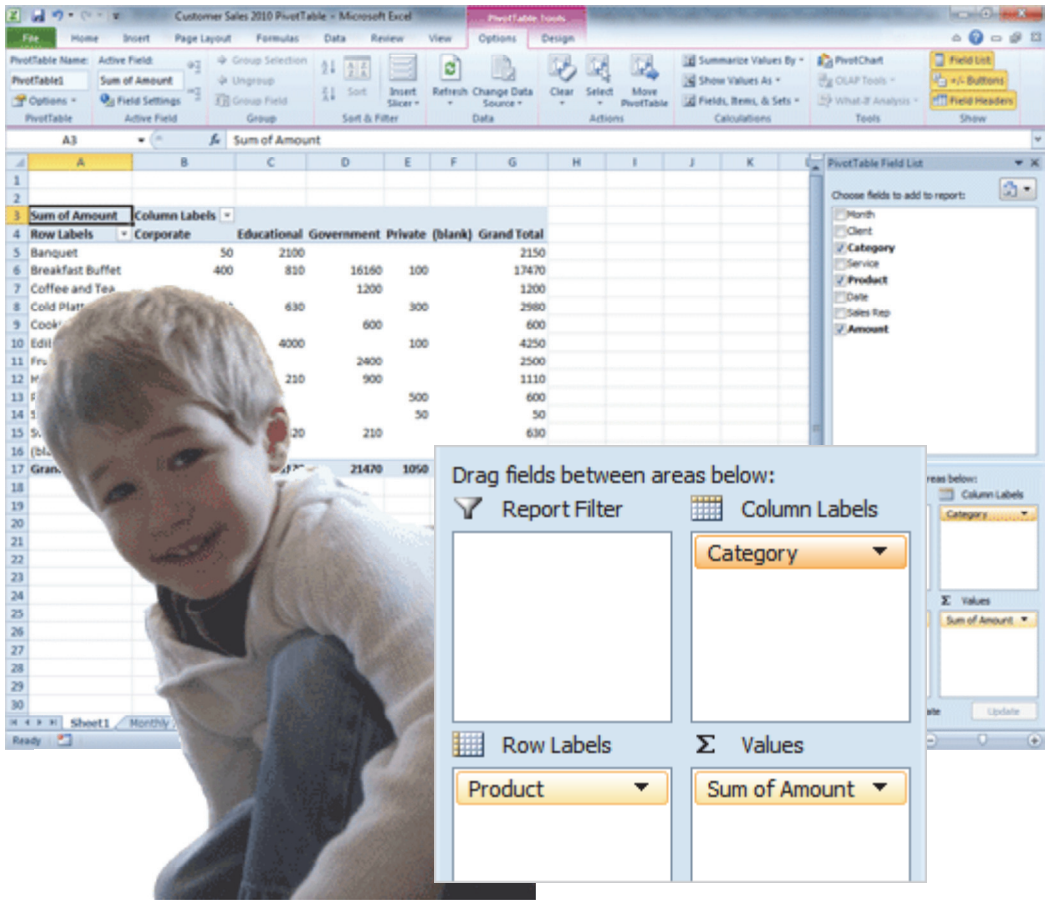
The Category field will be added to the **Column Header**. Here are the steps.

Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

1. Try it: Add Another Field
Go to the **PivotTable Field List**.
Drag the Category to the **Column Label**.

Keep going, please...

PivotTable Tools ->Options-> Show> Field List



1

Take One

PivotTable Tools ->Options-> Show> Field List

2

Column Headers

2. What Do You See? This PivotTable now has a **Column Header** that shows the Categories in Columns. There is a Subtotal for each category: Corporate, Educational, Government, Private. These are the **Column Labels**.

What Else Do You See? Cell B3 is the **Filter** for the **Column Labels**.

Keep going...

Memo to Self: These numbers may look odd because they are not formatted for currency.

	A	B	C	D	E	F	G
1							
2							
3	Sum of Amount	Column Labels					
4	Row Labels	Corporate	Educational	Government	Private	(blank)	Grand Total
5	Banquet	50	2100				2150
6	Breakfast Buffet	400	810	16160	100		17470
7	Coffee and Tea			1200			1200
8	Cold Platter	2050	630		300		2980
9	Cookies and Tea			600			600
10	Edible Fruit	150	4000		100		4250
11	Fruit and Veggies	100		2400			2500
12	Hot Platter		210	900			1110
13	Private	100			500		600
14	Salads and Soup				50		50
15	Sweets		420	210			630
16	(blank)						
17	**Grand Total**	**2850**	**8170**	**21470**	**1050**		**33540**

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Column Header

Take One

Pivot the Table

What is a PivotTable, anyways? To Pivot means to move the data from the Rows into the Columns. This is cool.

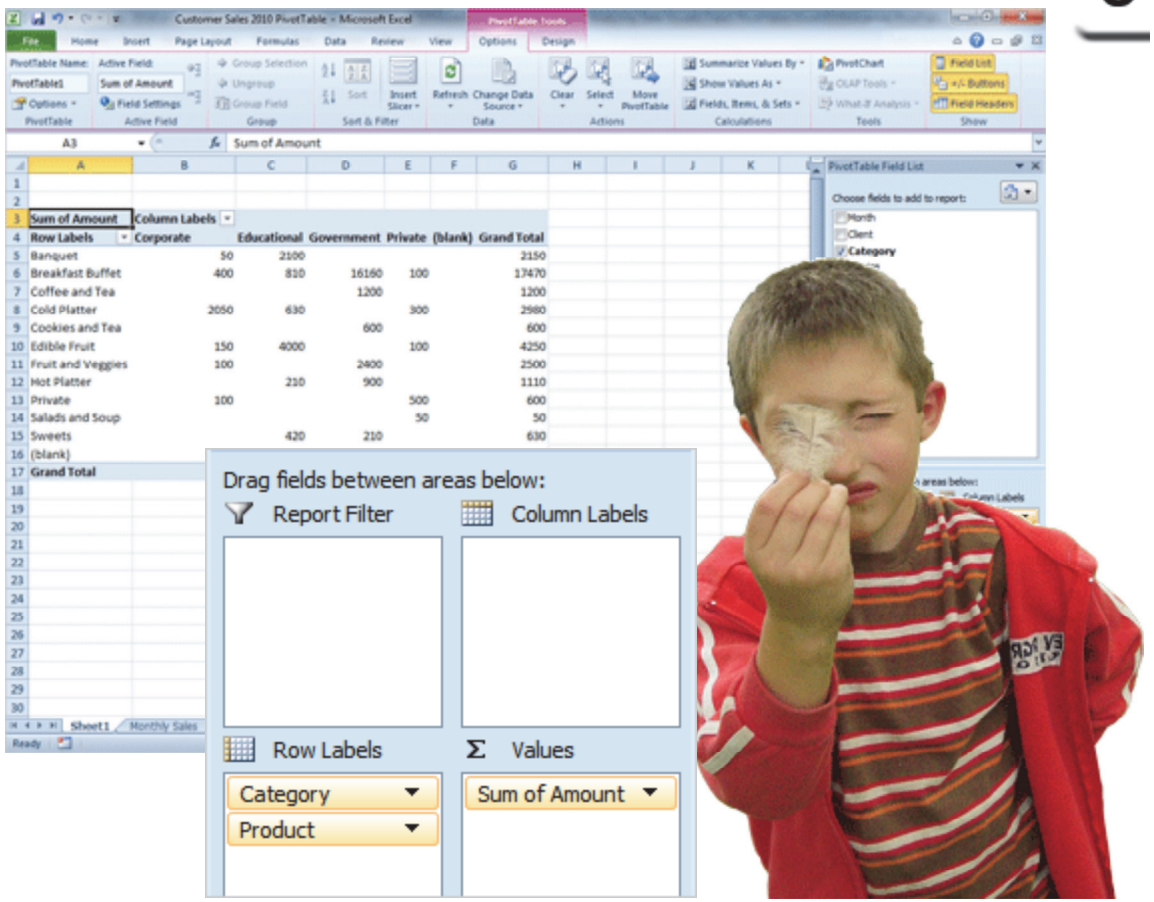
Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

3. You Gotta Try This: Pivot the Table!
Go to the **Field List**
Drag and Drop the Category Field from the Column Labels to the Row Labels.

Make sure the Category is ABOVE the Product field.

Really, keep going...

PivotTable Tools ->Options



Take One

PivotTable: Display

4. What Do You See? There are four Categories. Each Category has a Subtotal. The names and the sum of the amounts for each Product sold is listed in alphabetical order in the client categories.

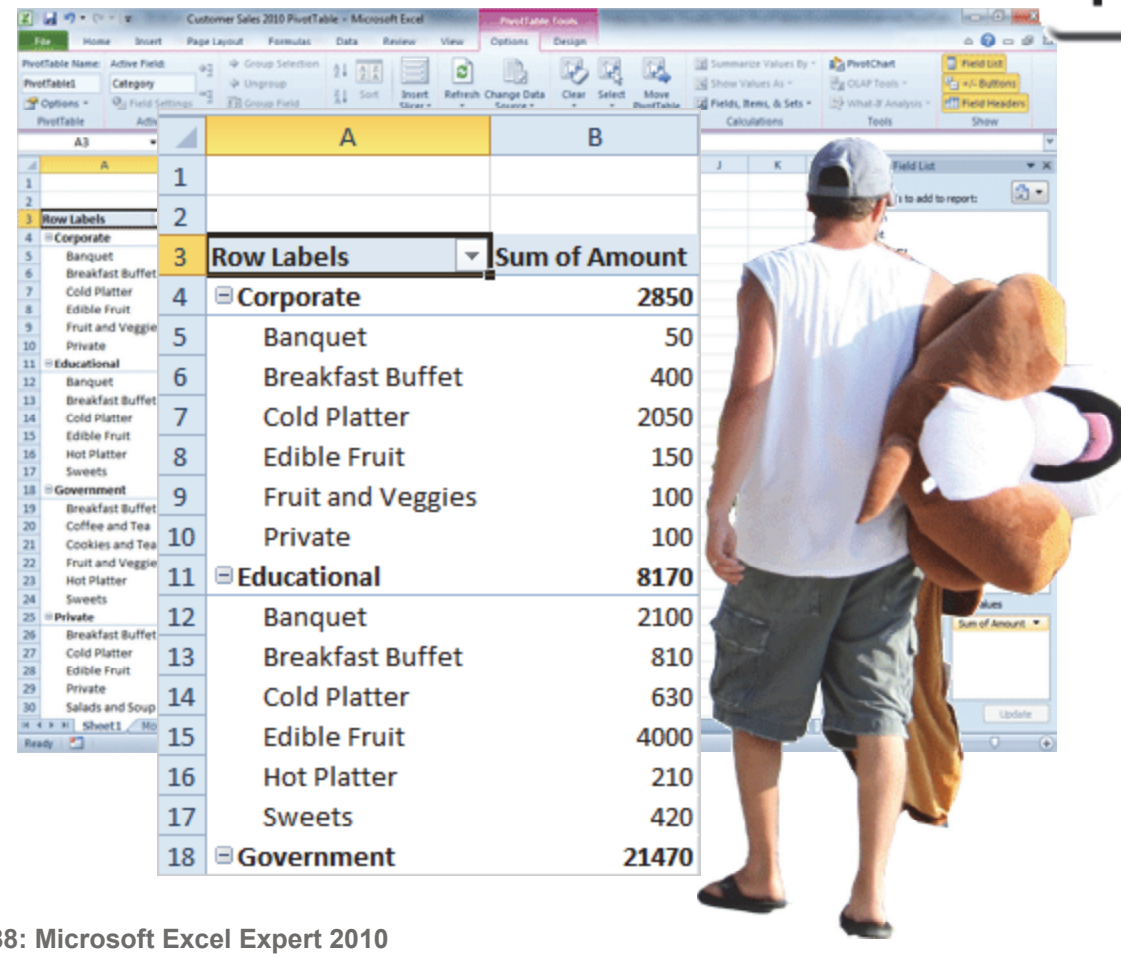
What Else Do You See? The Row Labels in Cell A3 have Filters. You can use the filter to show some or all of the Categories.

This is a good place to pause and try that again. Try switching the fields from the Row Labels to the Column Labels. Look at the PivotTable and see which way is easiest to read, which way makes more sense.

Then, **Save**.

Memo to Self: These numbers may look odd because they are not formatted for currency.

PivotTable Tools ->Options



	A	B
1		
2		
3	Row Labels	Sum of Amount
4	Corporate	2850
5	Banquet	50
6	Breakfast Buffet	400
7	Cold Platter	2050
8	Edible Fruit	150
9	Fruit and Veggies	100
10	Private	100
11	Educational	8170
12	Banquet	2100
13	Breakfast Buffet	810
14	Cold Platter	630
15	Edible Fruit	4000
16	Hot Platter	210
17	Sweets	420
18	Government	21470

Take One

PivotTable Design

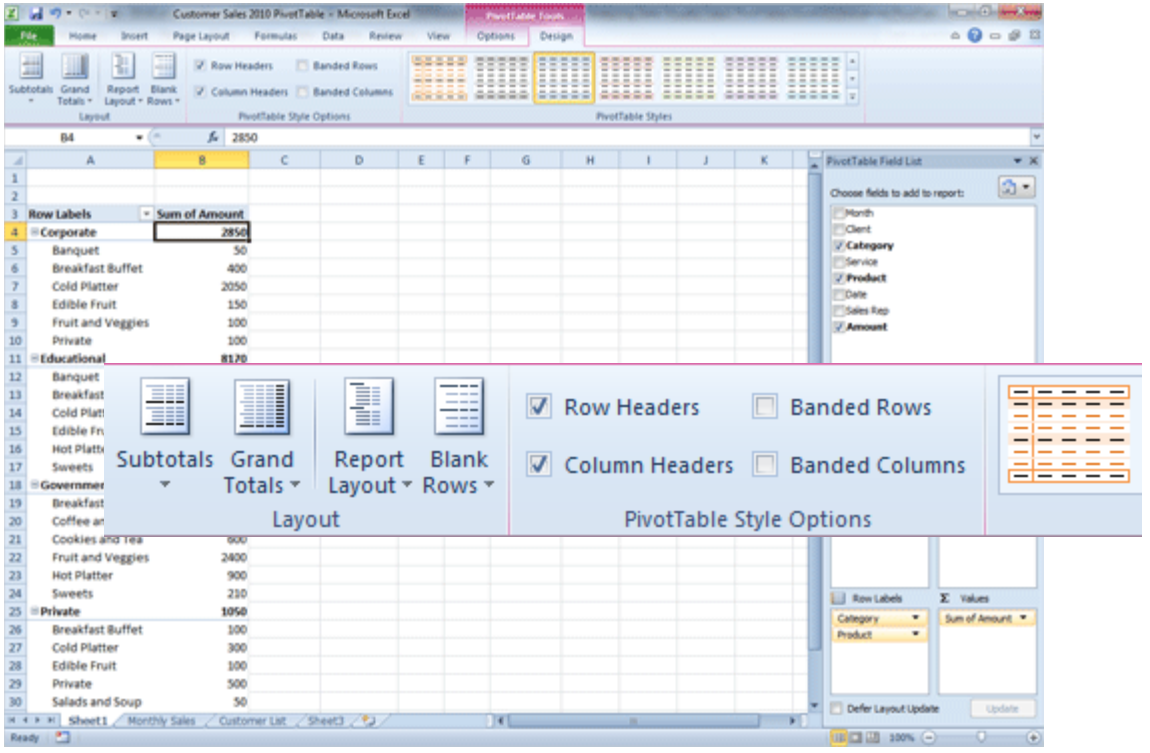
There are two sets of PivotTable Tools. The following pages will walk through the **PivotTable Tools Design** Ribbon.

Review the Design Ribbon
The **Layout** Group lets you format the:
Subtotals
Grand Totals
Report Layout
Blank Rows

The **PivotTable Style Options** are:
Row Headers
Column Headers
Banded Rows
Banded Columns

Keep going...

PivotTable Tools ->Design-> Layout



Take One

Design Layout: Subtotals

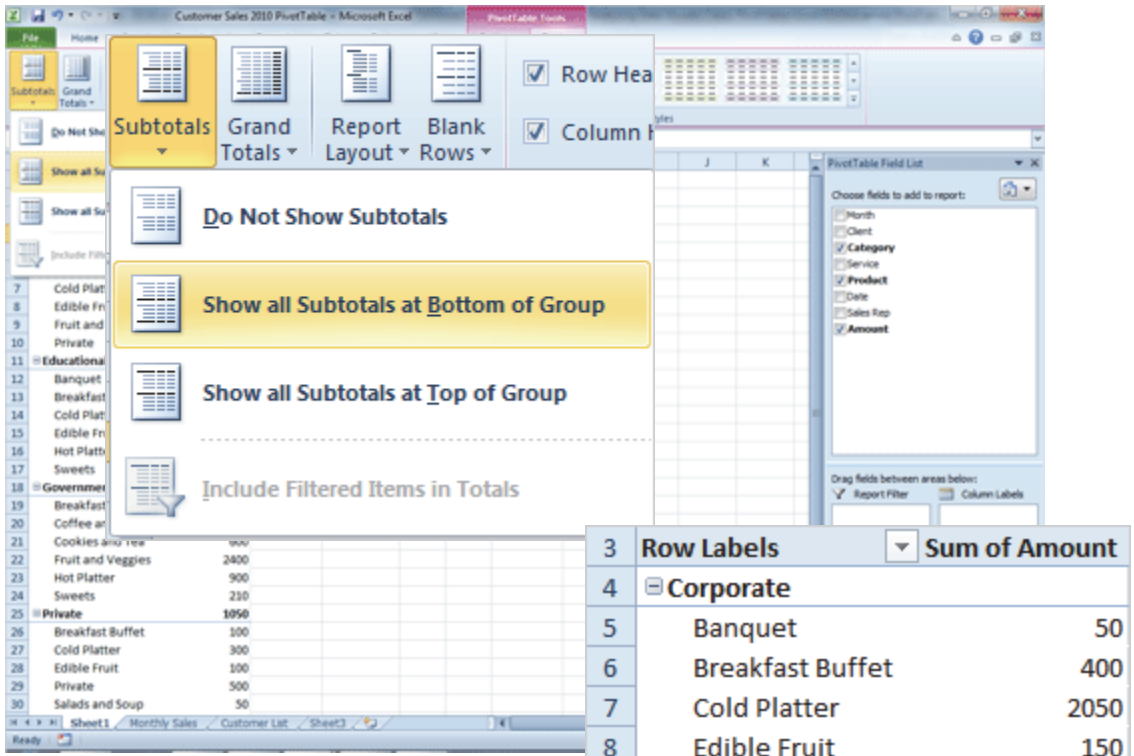
By default, a PivotTable displays the Subtotals at the top of a Group. You can change the Layout with the PivotTable Design Ribbon. Here are the steps:

Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

Try it: Change The Subtotal Layout
Go to **PivotTable Tools ->Design.**
Go to **Layout-> Subtotals.**
Select: **Show all Subtotals at Bottom of Group.**

What Do You See: The Subtotal options include the following:
Do Not Show Subtotals
Show all Subtotals at Bottom of Group
Show all Subtotals at Top of Group
Include Filtered Items in Totals

PivotTable Tools ->Design-> Layout-> Subtotals



	Row Labels	Sum of Amount
4	Corporate	
5	Banquet	50
6	Breakfast Buffet	400
7	Cold Platter	2050
8	Edible Fruit	150
9	Fruit and Veggies	100
10	Private	100
11	Corporate Total	2850

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Design Layout Subtotals

Take One

Layout: Blank Rows

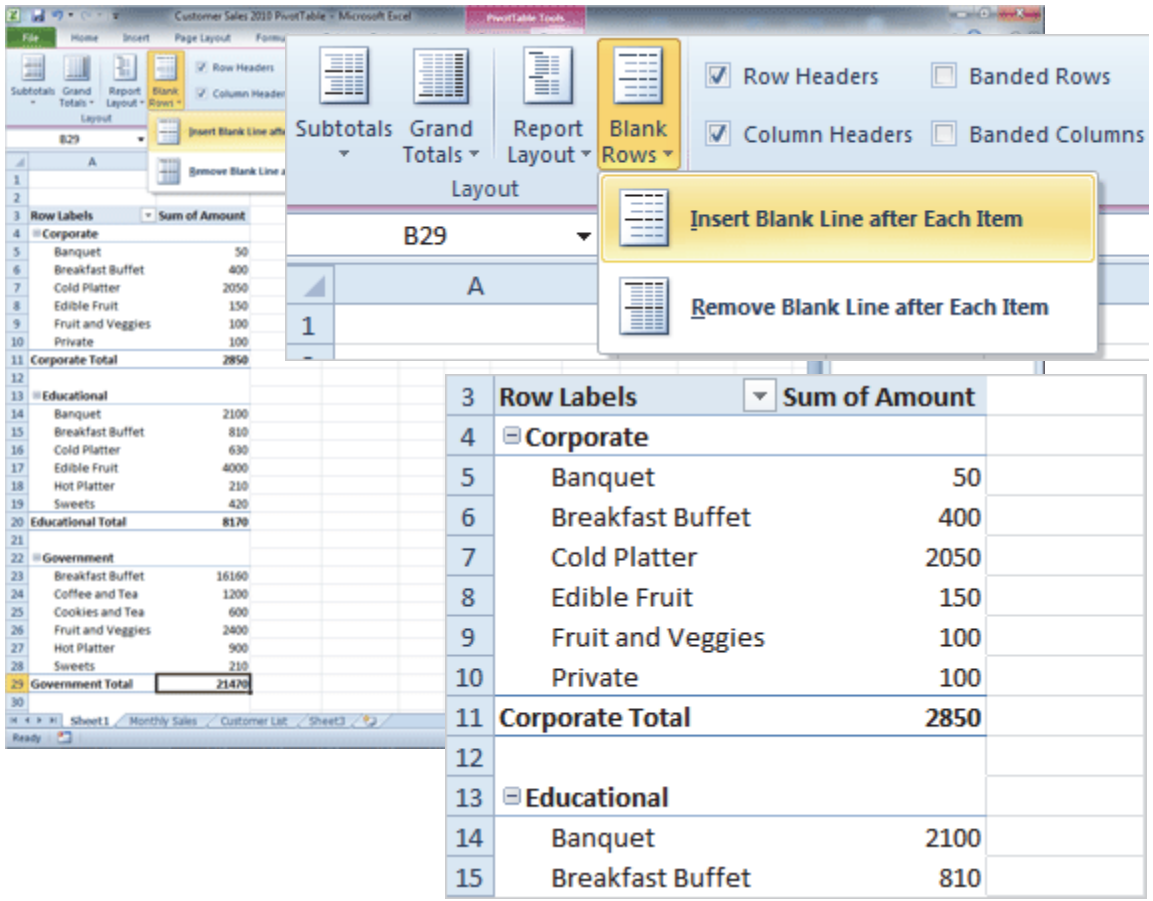
This PivotTable is an Outline with a couple of groups: Category and Products. You can add **Blank Rows** between the groups to make the PivotTable easier to read.

Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

Try it: Insert Blank Rows

Go to **PivotTable Tools ->Design.**
Go to **Layout-> Blank Rows.**
Select: Insert Blank Line after Each Item
What Do You See? The options for the Blank Rows include the following:
Insert Blank Line after Each Item
Remove Blank Line after Each Item

PivotTable Tools ->Design-> Layout->Blank Rows



Take One

Layout: Grand Totals

The **Grand Totals** can be added to the Rows, the Columns, both or neither.

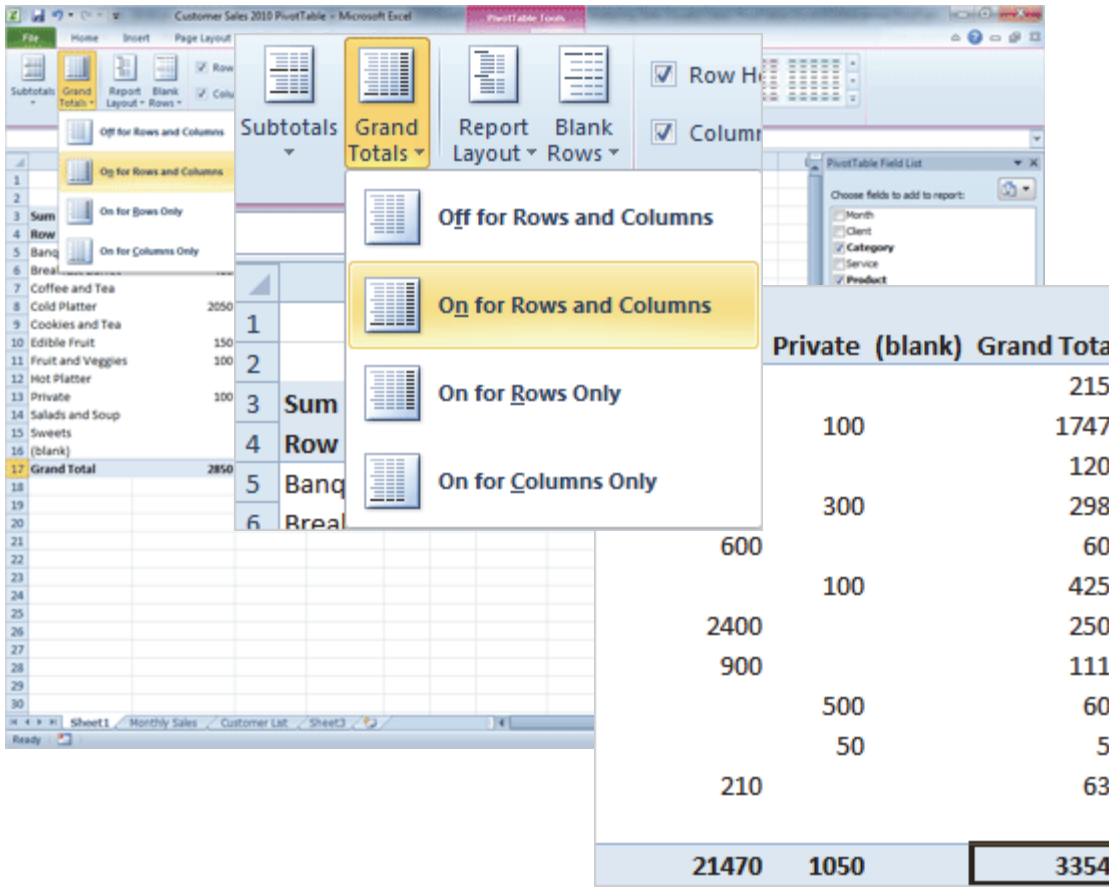
Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

Edit the Field List, please.
Row Labels: Products
Column Labels: Category
Values: Sum of Amount

Try it: Change The Grand Totals Layout
Go to **PivotTable Tools ->Design**.
Go to **Layout-> Grand Totals.**
Select: **On for Rows and Columns**.

What Do You See? The options for the Grand Totals include the following:
Off for Rows and Columns
On for Rows and Columns
On for Rows Only
On for Columns Only

PivotTable Tools ->Design-> Layout-> Grand Totals



Layout: Filter the Blanks

Well, you have been patiently waiting for this lesson for pages and pages. How do you hide the blank lines? Here are the steps to Filter the Blanks, at last.

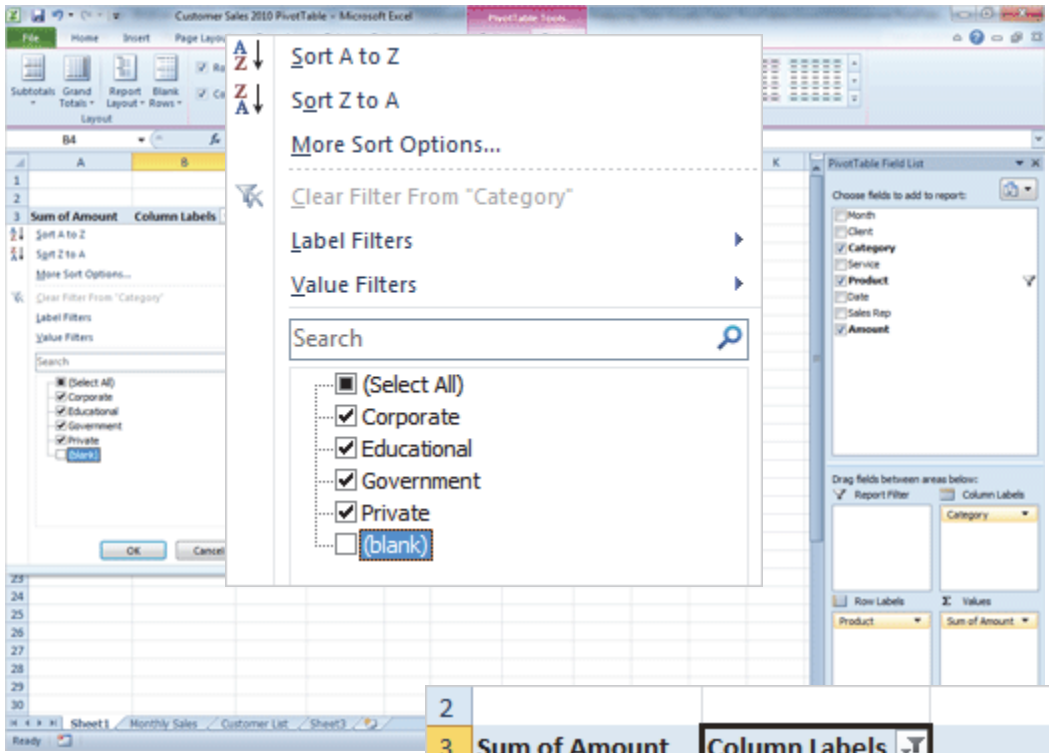
Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

Try it: Filter the Blanks

Click on the Row Labels in the PivotTable.
Unselect: (Blank)
Click on the Columns Labels, too.
Unselect: (Blank)
You should see **Filters** on the Column and Row Labels in the PivotTable.

So far so good.

PivotTable Tools ->Design



2			
3	Sum of Amount	Column Labels	
4	Row Labels	Corporate	Educational
5	Banquet	50	2100
6	Breakfast Buffet	400	810

Take One

PivotTable: Report Layout

There are several **Report Layouts** that you should consider. The goal of any PivotTable is to display the data. Depending on the data, some of the layouts make sense while others seem confusing.

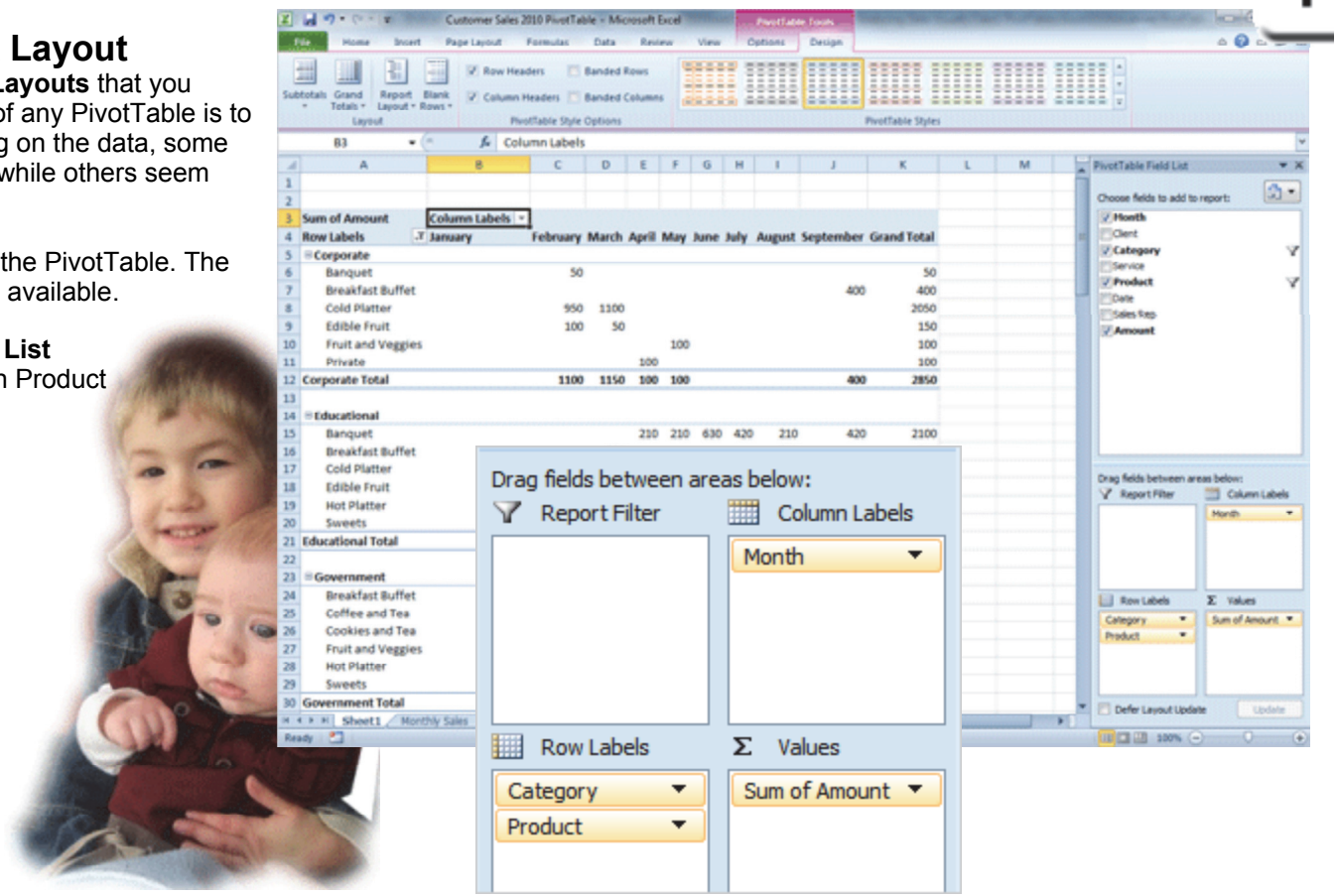
Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

1. Try This: Edit the Field List
Row Labels: Category, then Product
Column Labels: Month
Values: Sum of Amount

Keep going, please...

PivotTable Tools ->Design-> Layout

1



Take One

PivotTable: Report Layout

2. What Do You See? The PivotTable now has subgroups for each Category. The monthly sales numbers are calculated and displayed in the Columns.

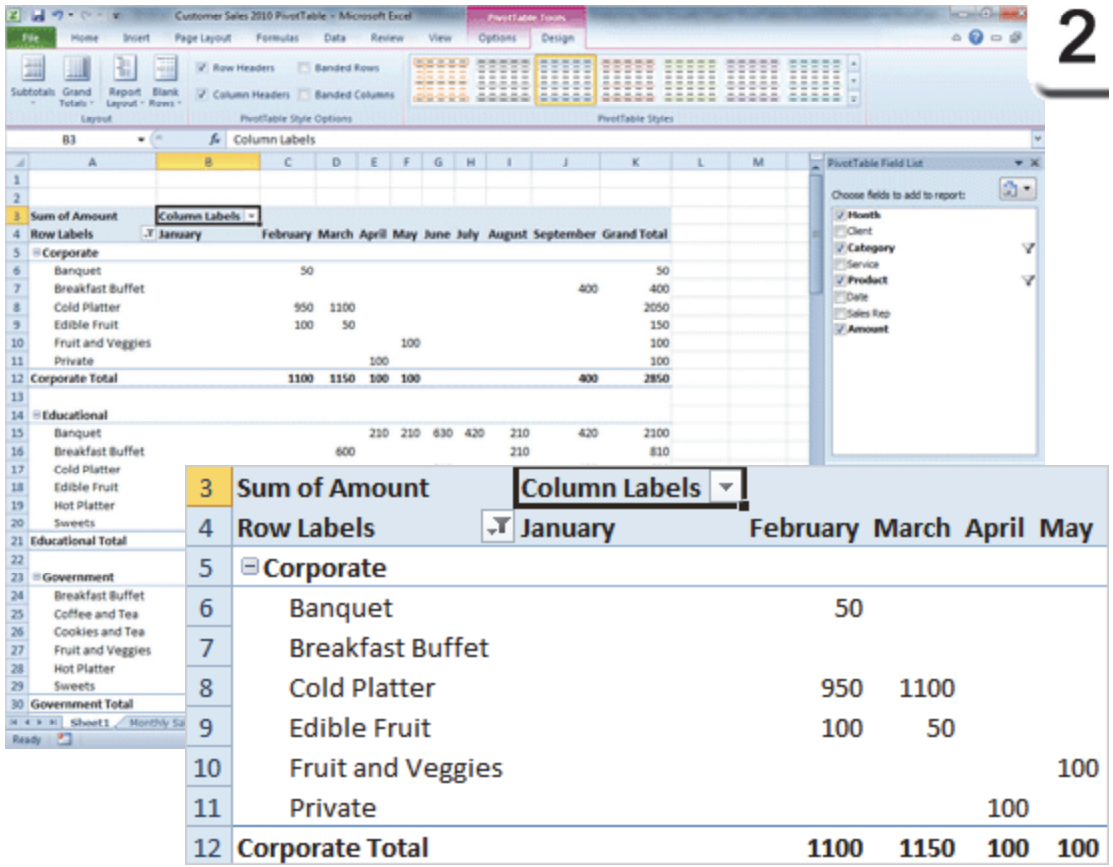
What Else Do You See? The Column and Row Labels have Filters. The (blank) data has been filtered.

OK, that's the setup for this PivotTable. Let's investigate a few of the Report Layouts. Keep going, please...

Memo to Self: These numbers may look odd because they are not formatted for currency.

PivotTable Tools ->Design-> Layout->Report Layout

2



3	Sum of Amount	Column Labels			
4	Row Labels	January	February	March	April	May
5	Corporate					
6	Banquet		50			
7	Breakfast Buffet					
8	Cold Platter		950	1100		
9	Edible Fruit		100	50		
10	Fruit and Veggies					100
11	Private				100	
12	Corporate Total		1100	1150	100	100

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Report Layout

Take One

Report Layout Options

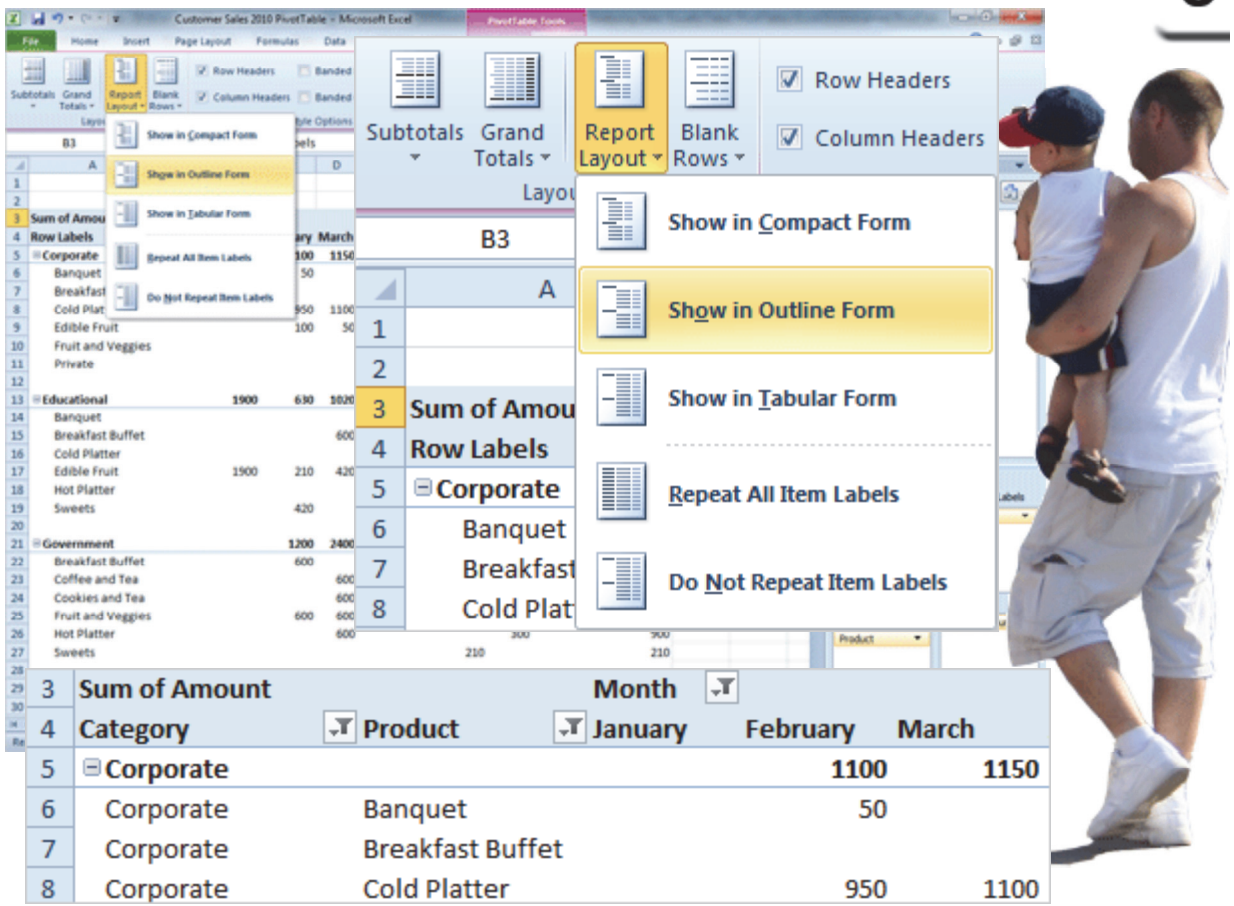
3. Try it: Change the Report Layout

Go to **PivotTable Tools ->Design.**
Go to **Layout-> Report Layout.**
Select: **Show in Outline Form.**

What Do You See? The Report Layout options include the following:
Show in Compact Form
Show in Outline Form
Show in Tabular Form
Repeat All Item Labels
Do Not Repeat Item Labels

Keep going...

PivotTable Tools ->Design-> Layout->Report Layout



Take One

PivotTable: Styles

A PivotTable can be formatted with Styles.

Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

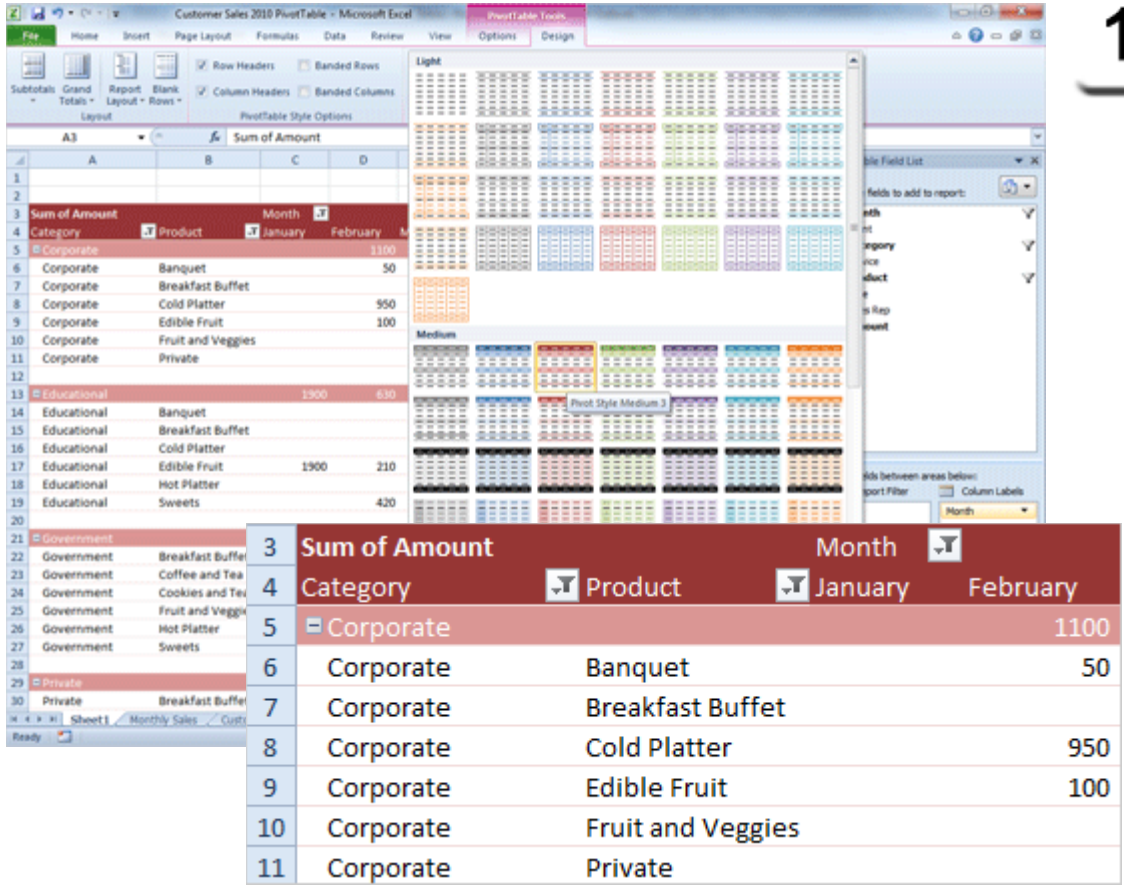
1. Try it: Format the PivotTable Style
Go to **PivotTable Tools ->Design.**
Go to **PivotTable Styles.**
Select: **Pivot Style Medium 3.**

What Do You See? The PivotTable Styles formatted the **Column Headers** (Sum of Amount, Category, Product) as well as the **Row Headers** (Corporate, Educational, etc.)

Keep going...

PivotTable Tools ->Design-> PivotTable Styles->Style

1



3	Sum of Amount		Month	
4	Category	Product	January	February
5	Corporate			1100
6	Corporate	Banquet		50
7	Corporate	Breakfast Buffet		
8	Corporate	Cold Platter		950
9	Corporate	Edible Fruit		100
10	Corporate	Fruit and Veggies		
11	Corporate	Private		

Take One

PivotTable Style Options

The **PivotTable Style Options** offer quick formatting choices. Here are the steps.

2. Try it: Edit the PivotTable Style Options
Select the PivotTable.
Go to **PivotTable Tools ->Design.**
Go to **PivotTable Style Options.**
Select: **Banded Rows.**

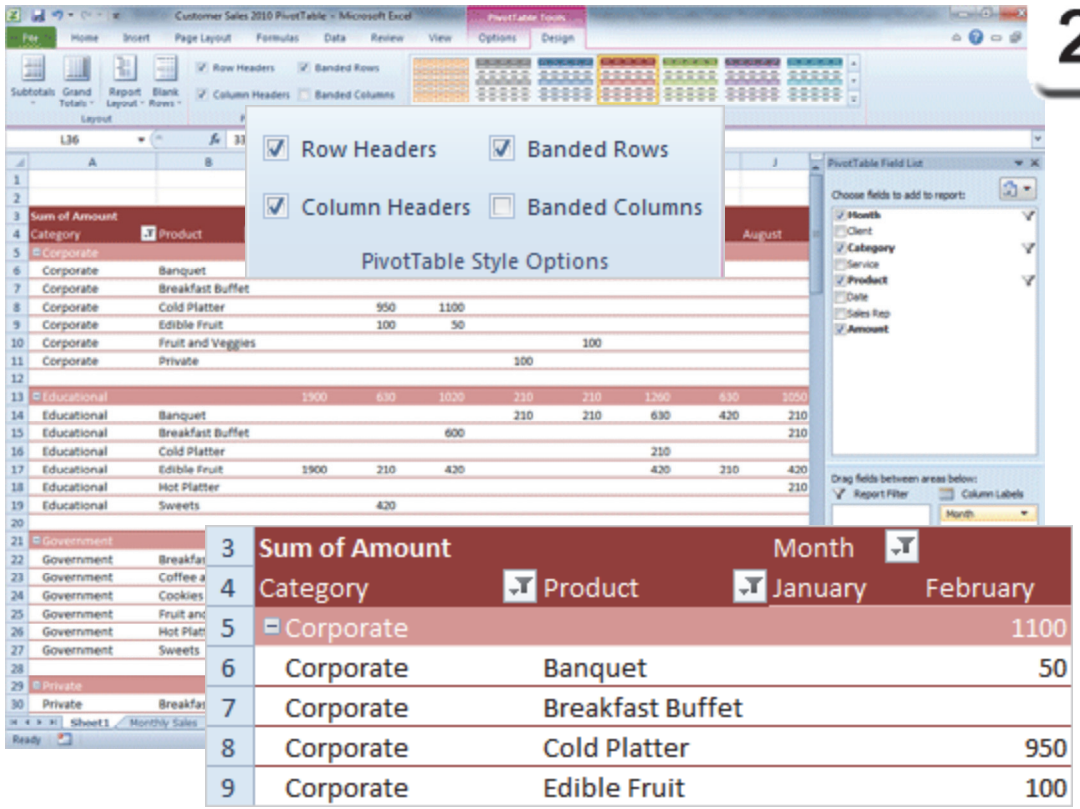
What Do You See? In the example on this page, the Rows have been formatted with a bottom border.

OK, that about does the discussion on PivotTable Design Ribbon.

Memo to Self: If you select Banded Columns, the Columns will be outlined with vertical borders as well.

PivotTable Tools ->Design-> PivotTable Style Options->Style

2



Take One

PivotTable: Sort & Filter

A long time ago, in the previous lesson, we reviewed the Data Ribbon: Sort, Filter and Group. This lesson will finish up with the same simple options for a PivotTable: Sort & Filter and Group.

Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

1. Try it: Sort & Filter the PivotTable
Select Cell L5.
This is the Subtotal for the Header Row.
Go to **PivotTable Tools ->Options.**
Go to **Sort & Filter.**
Click on **Sort.**



Keep going...

PivotTable Tools ->Options-> Sort & Filter



Take One

PivotTable: Sort & Filter

2. What Do You See? You will be prompted to choose the Sort Options. By default, the Values are sorted as follows:
Smallest to Largest
Top to Bottom

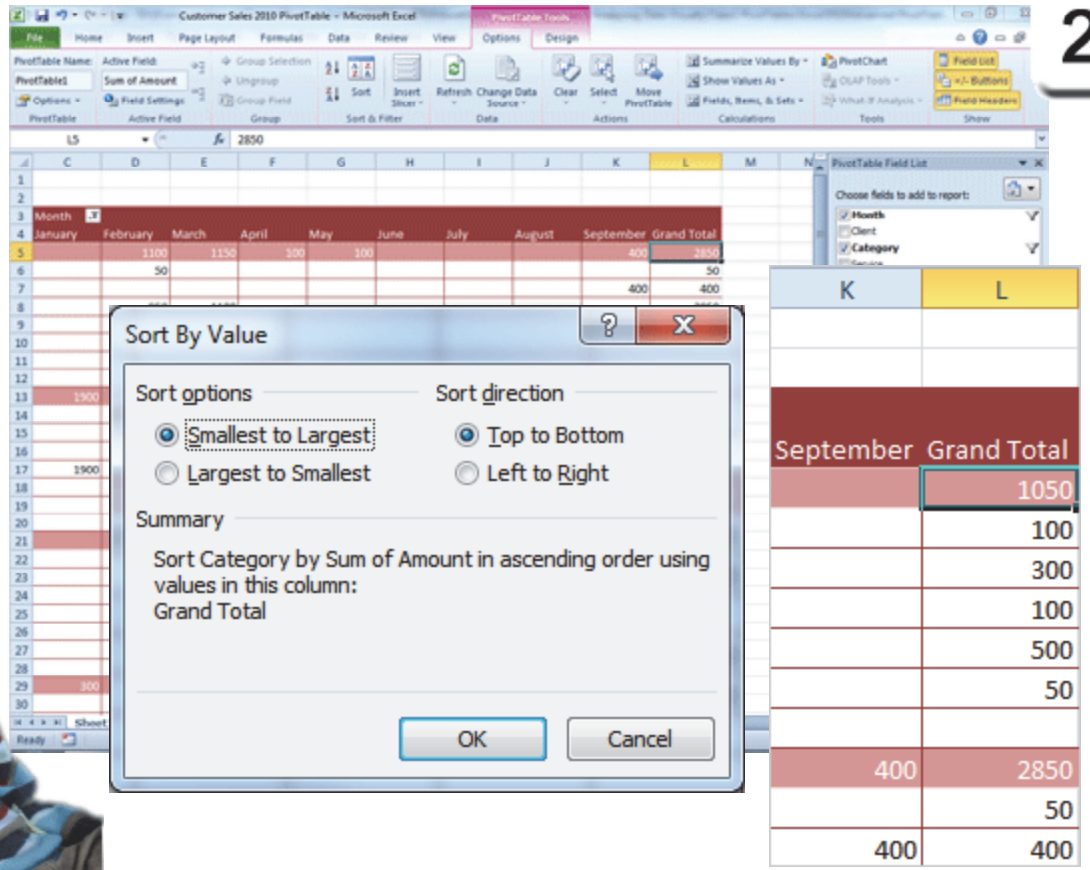
Click **OK** to accept the defaults, please.

What Else Do You See? The Subtotals for each group (Corporate, Educational, etc) were sorted Smallest to Largest.

Look Again: The Totals for each product are NOT sorted Smallest to Largest.

PivotTable Tools ->Options-> Sort & Filter

2





Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Sort & Filter

Take One

PivotTable: Groups

The last example in this lesson is **Group**. It is another way to edit how you display your data. Grouping is a way to Show or Hide the Rows that you select.

Before You Begin: Select the PivotTable. The PivotTable Tools should be available.

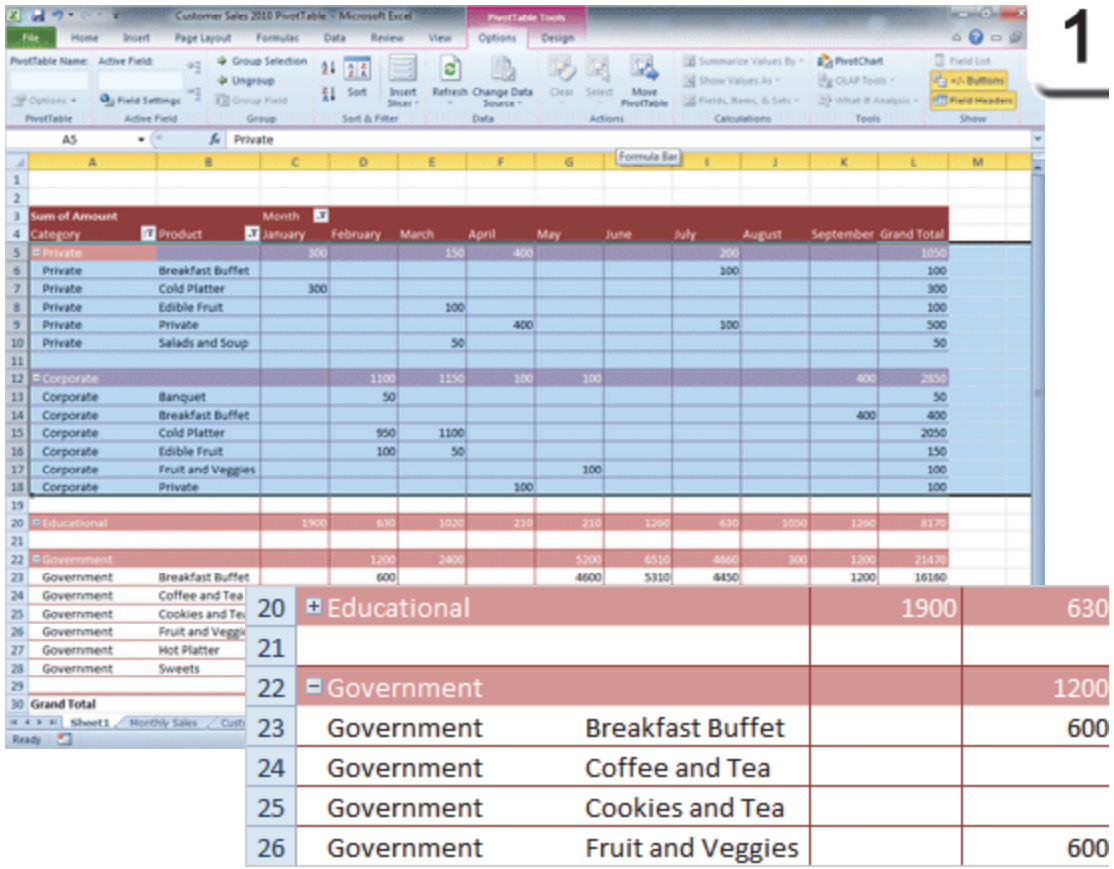
Try it: Group the Data
Select Row 5 through Row 19. In this sample spreadsheet, this is the sales data for the Private and Corporate Sales.

Keep going...

Memo to Self: PivotTables already have Groups. The Groups have a plus (+) sign if the rows are hidden or a minus (-) sign if the rows are displayed.

PivotTable Tools ->Options-> Group-> Group Selection

1



20	⊞ Educational		1900	630
21				
22	⊟ Government			1200
23	Government	Breakfast Buffet		600
24	Government	Coffee and Tea		
25	Government	Cookies and Tea		
26	Government	Fruit and Veggies		600

Take One

PivotTable: Summary

2. Try It: Group the Data
Go to **PivotTable Tools ->Options.**
Go to **Group-> Group Selection.**

What Do You See? When you click on Group, you should see an Outline on the left side of the spreadsheet. At the top of the Outline are two Levels. In the Example on this page, we are on Level 2. OK, that will do...

This lesson looked at PivotTables and the PivotTable Tools. In the next lesson, we will review the options for PivotCharts.

OK, OK. Allez allez in free. You done good. Go get a cookie!



PivotTable Tools ->Options-> Group-> Group Selection

2

	A	B	C	D	E
1					
2					
3	Sum of Amount		Month		
4	Category	Product	January	February	March
5	Private		300		150
6	Private	Breakfast Buffet			
7	Private	Cold Platter	300		
8	Private	Edible Fruit			100
9	Private	Private			
10	Private	Salads and Soup			50
11					
12	Corporate			1100	1150
13	Corporate	Banquet		50	
14	Corporate	Breakfast Buffet			
15	Corporate	Cold Platter		950	1100
16	Corporate	Edible Fruit		100	50
17	Corporate	Fruit and Veggies			
18	Corporate	Private			
19					
20	Educational		1900	630	1020

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.3. Apply and manipulate PivotTables: Report Layout

Practice Activities

Lesson 3: What Happened? (PivotTables)

Before You Begin: Download the sample spreadsheet: Brown Bag Lunch Sales Team.xlsx.

Try This: Do the following steps

1. Open the spreadsheet: Brown Bag Lunch Sales Team.xlsx.
2. Go to Sheet 1. Select Row 1 and remove the Filters.
3. Select Sheet 1 and Insert a PivotTable on a New Worksheet.
4. Use the PivotTable Tools to Show the Field List.
5. Edit the PivotTable Field list as follows:

   Select the Field: Market (It should be placed in the Row Labels, by default).
6. Drag the Field Sales to the Values (It should be placed in the Values as Count of Sales) .
   Change **Count of Sales** to **Sum of Sales**.
7. Select the Field: Sales Agent (It should be placed in the Row Labels, by default).
8. Move the Field: Sales Agent from the Row Labels to the Column Labels.
9. Format Columns B:G for Accounting.
10. Save this as YOUR NAME What Happened Practice



Test Yourself

1. Which Ribbon has the command for creating Pivot Tables?
a. Home
b. Insert
c. Data
d. Review
Tip: Advanced Excel, page 87

2. Which are the Table Tools Ribbons? (Select all correct answers.)
a. Options
b. Design
c. View
d. Format
Tip: Advanced Excel, page 89

3. Where do the Pivot Table fields come from?
a. Entered in the Pivot Table dialogue box
b. The spreadsheet labels
c. Default in Excel
Tip: Advanced Excel, page 90

4. The row labels in a Pivot Table are filters.
a. True
b. False
Tip: Advanced Excel, page 93

5. Which of the following are functions a Pivot Table can use? (Select all correct answers.)
a. Count Numbers
b. Sum
c. Average
d. Max
e. Min
f. Product
Tip: Advanced Excel, page 97

6. Which of the following are true about subtotals in Pivot Tables? (Select all correct answers.)
a. Default is to show the subtotal at the top of the group
b. Command is Pivot Tables-> Tools-> Design> Layout-> Subtotals
c. Subtotals cannot be removed
Tip: Advanced Excel, page 104

7. Which of the following is an option for Grand Totals? (Select all correct answers.)
a. Added to Rows
b. Added to Columns
c. Added to both Rows and Columns
d. Added to neither Rows or Columns
Tip: Advanced Excel, page 106

8. Which of the following are report options? (Select all correct answers.)
a. Show in Compact form
b. Show in Outline form
c. Show in Tabular form
Tip: Advanced Excel, page 110

9. A Pivot Table can be formatted with Styles
a. True
b. False
Tip: Advanced Excel, page 111



Excel 2010: Analyzing Data Visually

Pivot Charts: What Do You See?

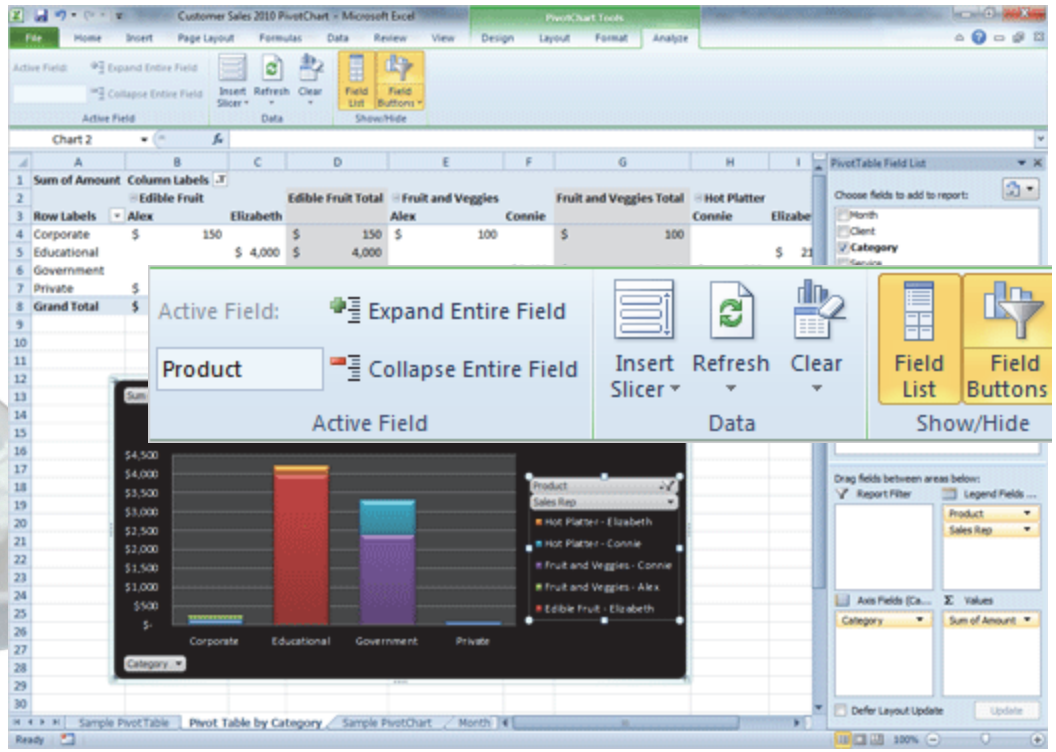
Advanced Excel Objectives

In this lesson, you will learn how to:

1. Analyze data visually with a PivotChart
2. Create a PivotChart and Show the Field List
3. Edit the Value Field Settings
4. Filter the data in the PivotChart
5. Edit the Chart Layouts
6. Apply a Chart Style
7. Use Slicers.



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Lesson 4: PivotCharts: What Do You See?

1. Readings
Read Lesson 4 in the Advanced Excel guide, page 119-159.

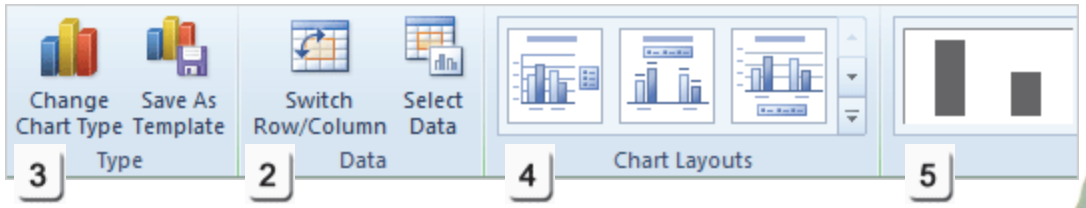
Project
A spreadsheet that uses PivotCharts to present the data in an interactive format.

Downloads
Sales 2010.xlsx
tblCustomers.xml
Brown Bag Sales Data.xlsx

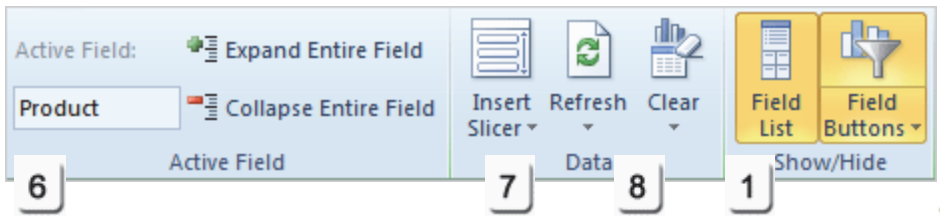
2. Practice
Complete the Practice Activity on page 160.

3. Assessment
Review the Test questions, page 160.

PivotChart Tools->Design



PivotChart Tools->Analyze





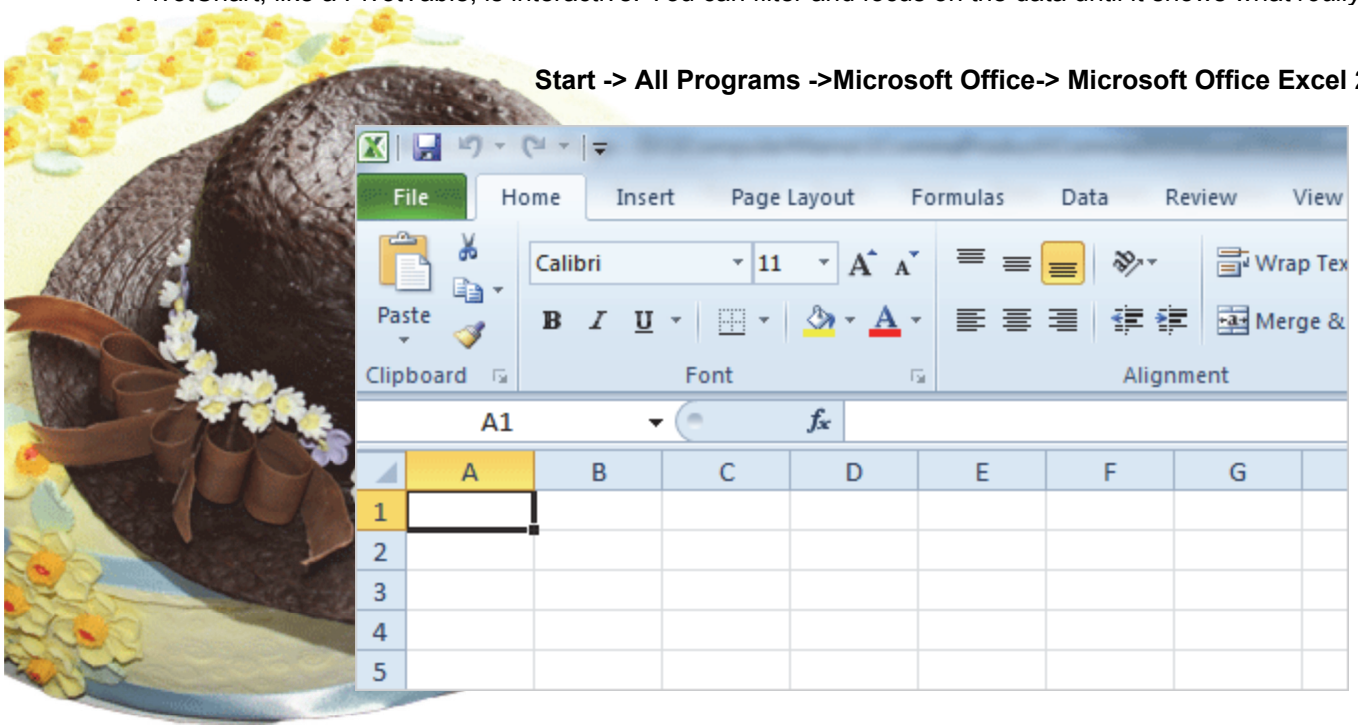
Menu Maps

This lesson shows the **PivotChart Tools**.

1. PivotChart Tools ->Analyze ->Show/Hide->Field List, page 124
2. PivotChart Tools ->Design ->Data->Switch Row/Column, page 132
3. PivotChart Tools ->Design ->Type-> Change Chart Type, page 135
4. PivotChart Tools ->Design ->Chart Layouts, page 137
5. PivotChart Tools ->Design ->Chart Styles, page 140
6. PivotChart Tools ->Analyze ->Active Field, page 143
7. PivotChart Tools ->Analyze ->Data-> Insert Slicers, page 149
8. PivotChart Tools ->Analyze ->Data-> Refresh, page 153

Analyzing Data Visually

Most people do not read numbers well. However, they can read a graph and compare the information. A PivotChart offers the same flexibility to manipulate the data as a PivotTable. A **PivotChart** is a graphic representation of the data in the PivotTable. A PivotChart, like a PivotTable, is interactive. You can filter and focus on the data until it shows what *really* happened.



Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010

Start Microsoft Excel

What Do You See? Is there a Title Bar that says Microsoft Excel? Yes.

Is there a Home Ribbon with the Clipboard, Font, Alignment and Number Groups? Yes.

If your screen looks similar to the one on this page, then you are ready to get started.

Before You Begin

A PivotChart is based on a PivotTable: they go together. This lesson begins with a PivotTable. After the PivotTable is set up, we will review the **PivotChart** options in Microsoft Excel 2010.

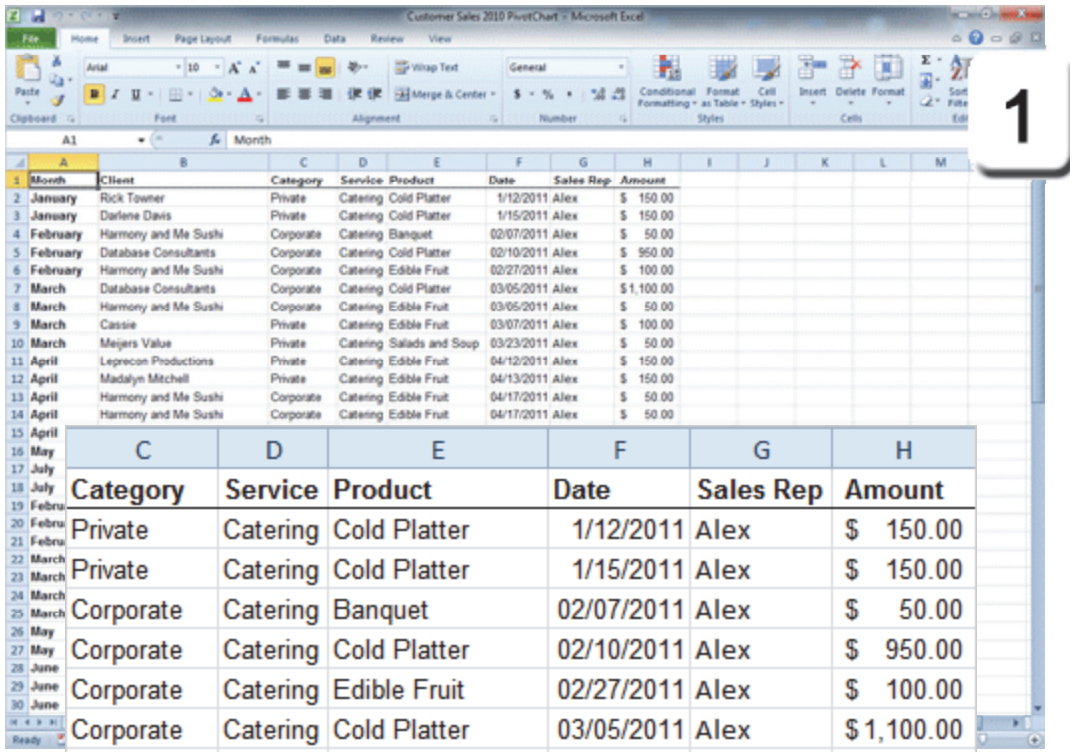
You can use a spreadsheet that you created or download a sample spreadsheet if you wish.

1. Try This: Open a Sample Spreadsheet
Open a sample spreadsheet: Sales2010.xlsx
Go to the **Original Data** sheet.

What Do You See? This sheet shows the product sales for Charlotte' Website. The first row is BOLD: it is the Header Row. There are many rows of data.

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File->Open



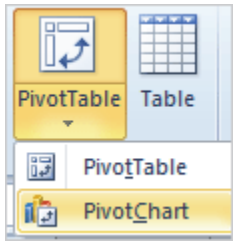
C	D	E	F	G	H
Category	Service	Product	Date	Sales Rep	Amount
Private	Catering	Cold Platter	1/12/2011	Alex	$ 150.00
Private	Catering	Cold Platter	1/15/2011	Alex	$ 150.00
Corporate	Catering	Banquet	02/07/2011	Alex	$ 50.00
Corporate	Catering	Cold Platter	02/10/2011	Alex	$ 950.00
Corporate	Catering	Edible Fruit	02/27/2011	Alex	$ 100.00
Corporate	Catering	Cold Platter	03/05/2011	Alex	$ 1,100.00
Corporate	Catering	Edible Fruit	03/05/2011	Alex	$ 50.00
Private	Catering	Edible Fruit	03/07/2011	Alex	$ 100.00
Private	Catering	Salads and Soup	03/23/2011	Alex	$ 50.00

Take Two

Create a Pivot Chart

2. Try This: Create a PivotChart

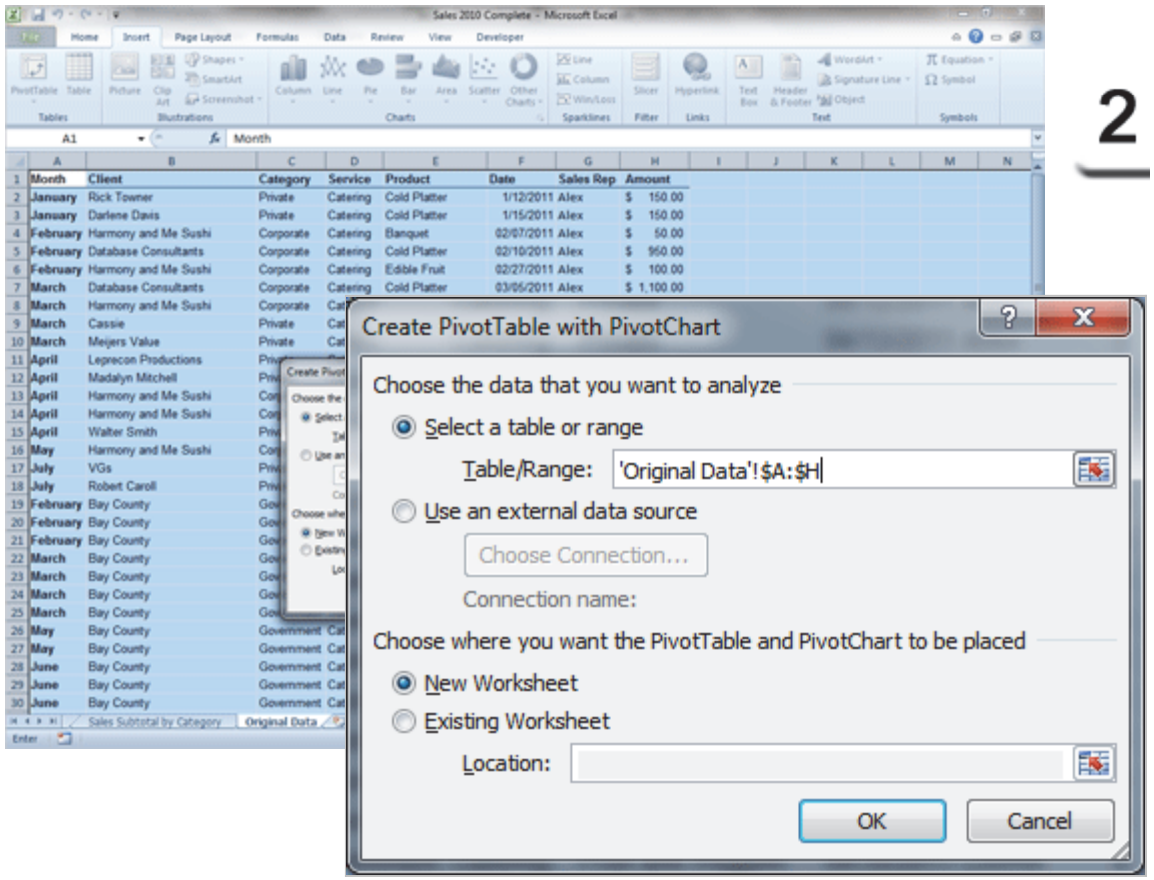
Go to the Original Data spreadsheet.
Select All.
Go to **Insert->Tables->PivotTable.**
Click on **PivotChart.**



You will be asked to confirm the location of the data and whether you would like to place the new PivotChart in a new spreadsheet.

Keep going, please...

Insert-> Tables-> PivotTable->PivotChart



2

Take Two

Hello, Pivot Chart

3. What Do You See? There should be a new, blank **PivotChart**, Chart 1. A blank **PivotTable** should be on the left side of the spreadsheet.

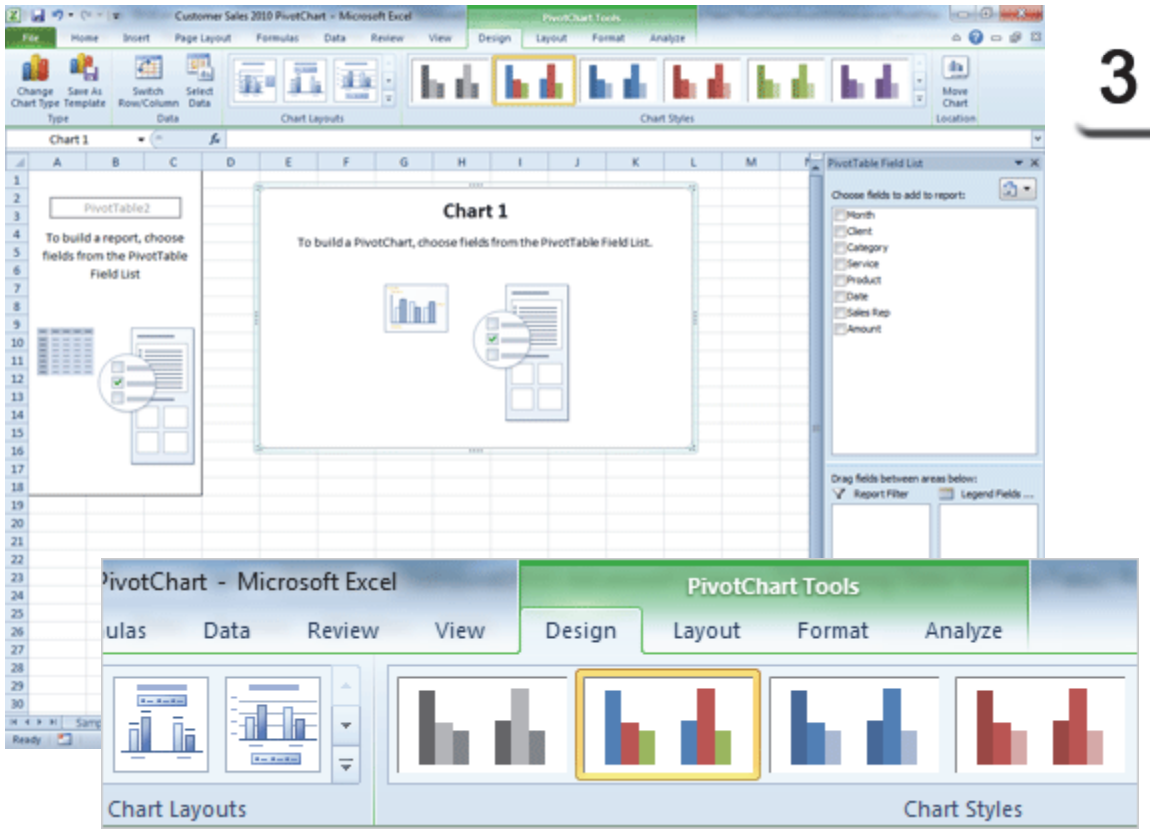
The **PivotTable Field List** should be on the right side.

What Else Do You See? There are four **PivotChart Tools**:
Design
Layout
Format
Analyze

Keep going...

What If You Don't See the PivotTable Field List? Please try this:
Go to **PivotTable Tools ->Analyze.**
Go to **Show/Hide-> Field List**

PivotChart Tools ->Analyze ->Show/Hide->Field List



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts

Take Two

PivotTable Field List

You should see a PivotTable on the left side of your spreadsheet but there will not be any data in the Chart, yet.

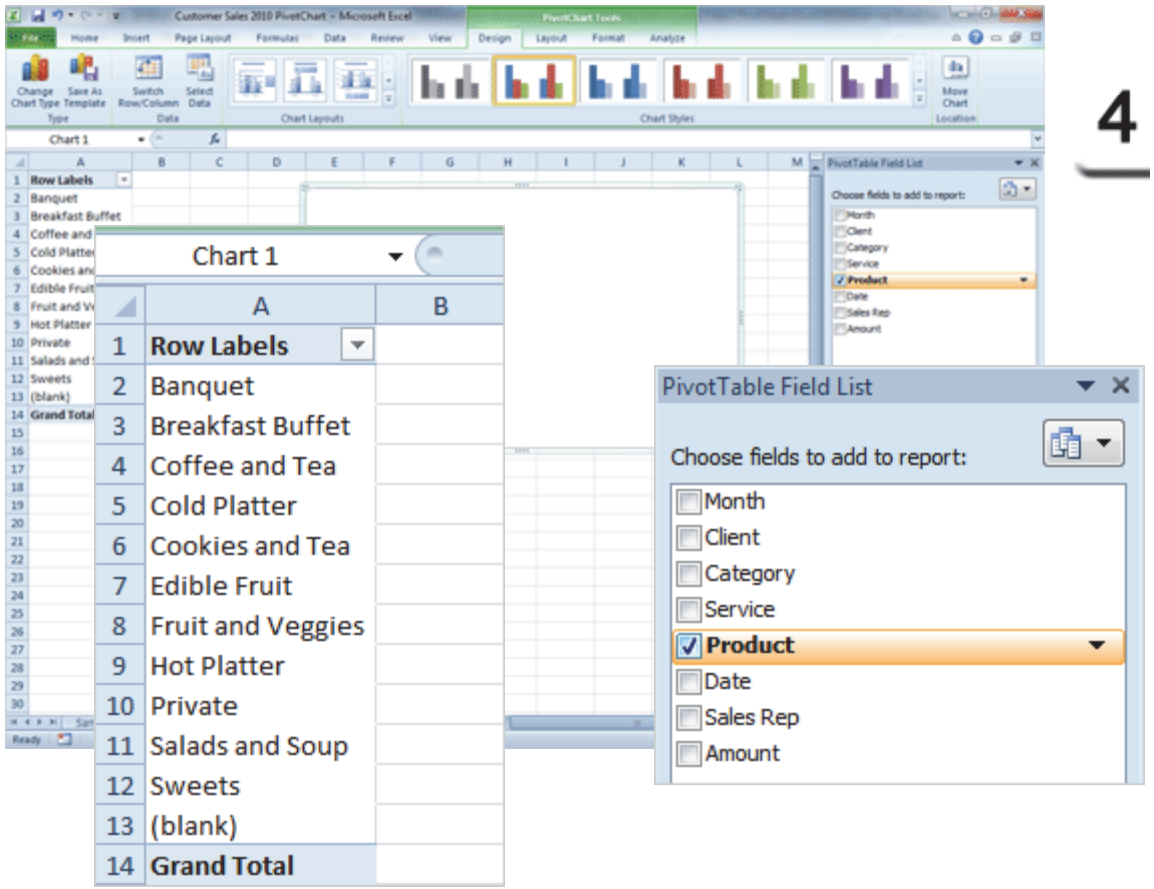
PivotCharts, like PivotTables, need data. We will select the Fields and Count the Value with the Field List to create a PivotTable Report.

4. Try This: Choose a Field
Go to the **PivotTable Field List**.
Select: Product.

What Do You See? The PivotTable should display each Product. The PivotChart has a Product Filter, but the Chart is still blank.

Keep going...

PivotChart Tools ->Analyze ->Show/Hide->Field List



Add a Value

Look at the bottom of the PivotTable Field List. There is only one value: the Product is in the Axis Fields. So far so good.

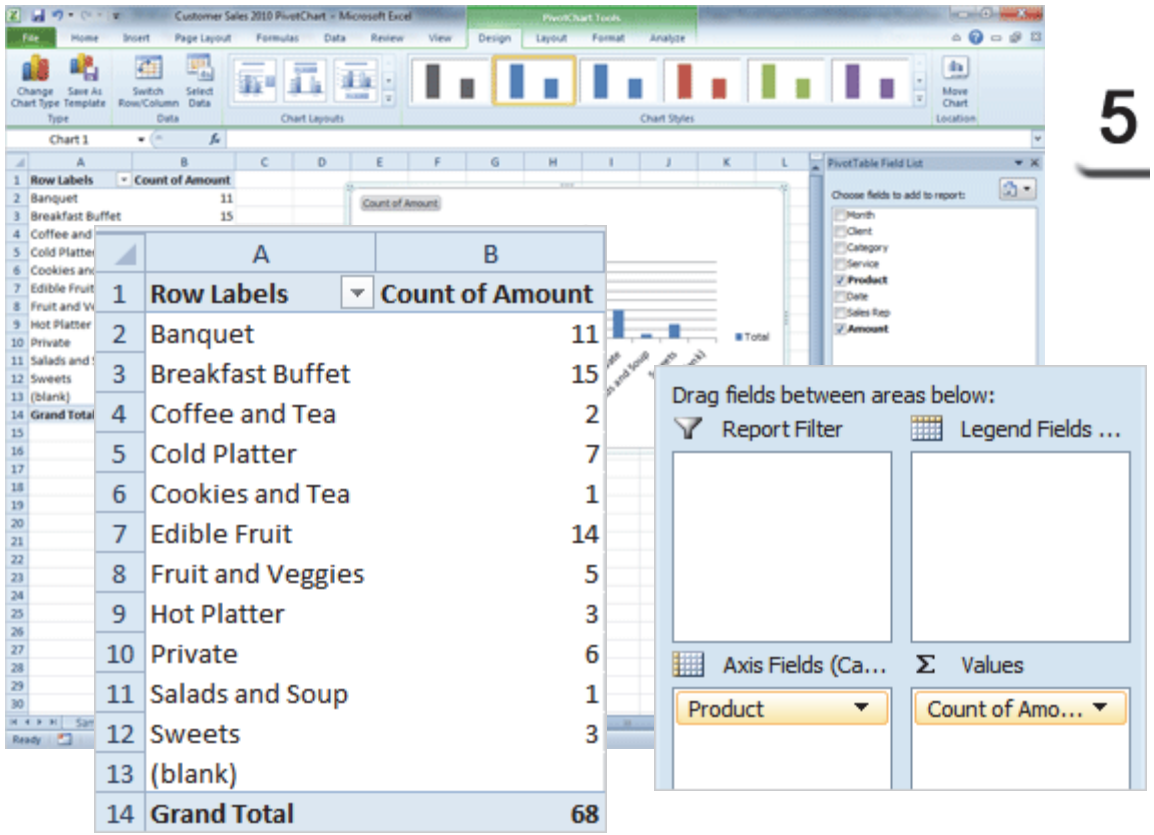
PivotTables and PivotCharts calculate: COUNT, SUM, AVERAGE. This is done by adding a field to the **Values**.

5. Try it: Add a Value
Go to the **PivotTable Field List.**
Select: Amount.
Drag the Amount to the **Values**.

What Do You See? The Value was displayed as **Count of Amount** in the PivotTable as well as the PivotChart.

Keep going...

PivotChart Tools ->Analyze ->Show/Hide->Field List



	A	B
1	Row Labels	Count of Amount
2	Banquet	11
3	Breakfast Buffet	15
4	Coffee and Tea	2
5	Cold Platter	7
6	Cookies and Tea	1
7	Edible Fruit	14
8	Fruit and Veggies	5
9	Hot Platter	3
10	Private	6
11	Salads and Soup	1
12	Sweets	3
13	(blank)	
14	Grand Total	68

Edit the Value Field

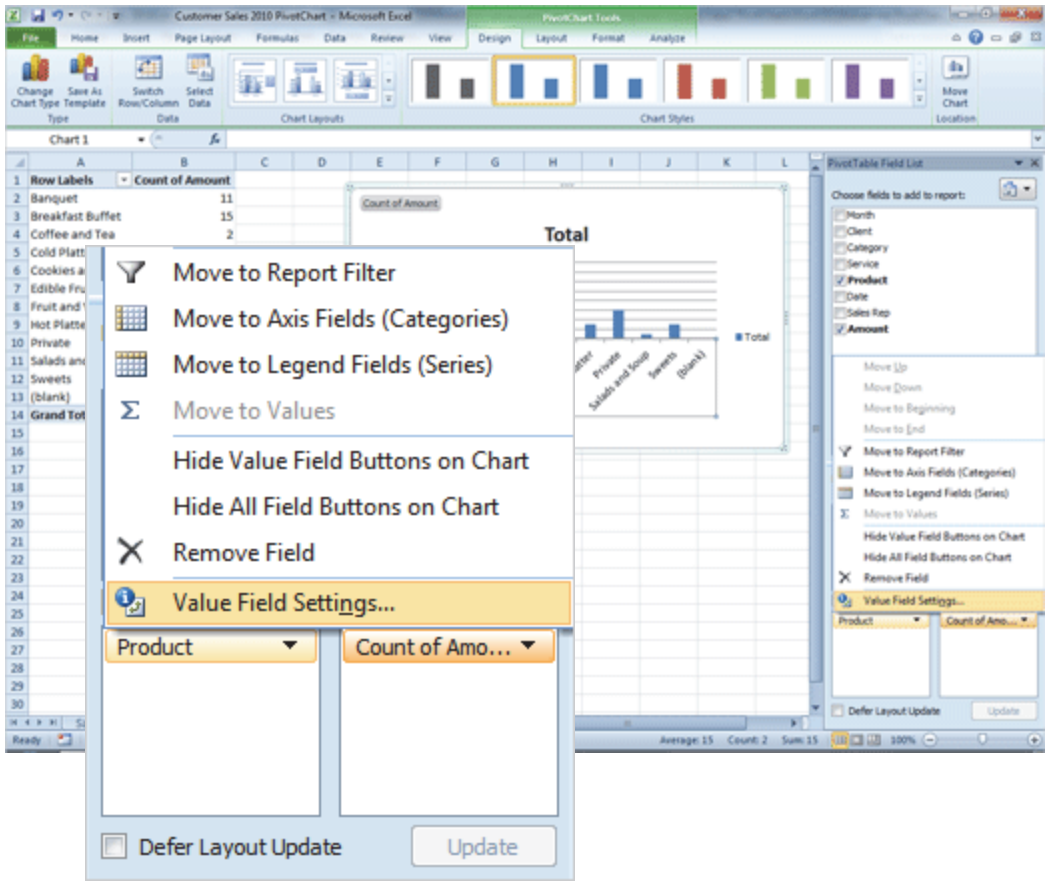
By default, the Value was displayed as Count of Amount. In this example, Amount is money: how much was sold? This data would make more sense if the Value was displayed as the Sum of the Amount.

6. Try it: Edit the Value Field
Go to the **PivotTable Field List.**
Go to the **Values**.
Select: Count of Amount.
Click on **Value Field Settings...**

Keep going...

Memo to Self: The Field options include:
Move to Report Filter
Move to Axis Fields (Categories)
Move to Legend Fields (Series)
Hide Value Field Buttons on Chart
Hide All Field Buttons on Chart
Remove Field
Value Field Settings...

PivotChart Tools ->Analyze ->Show/Hide->Field List



Take Two

Value Field Settings

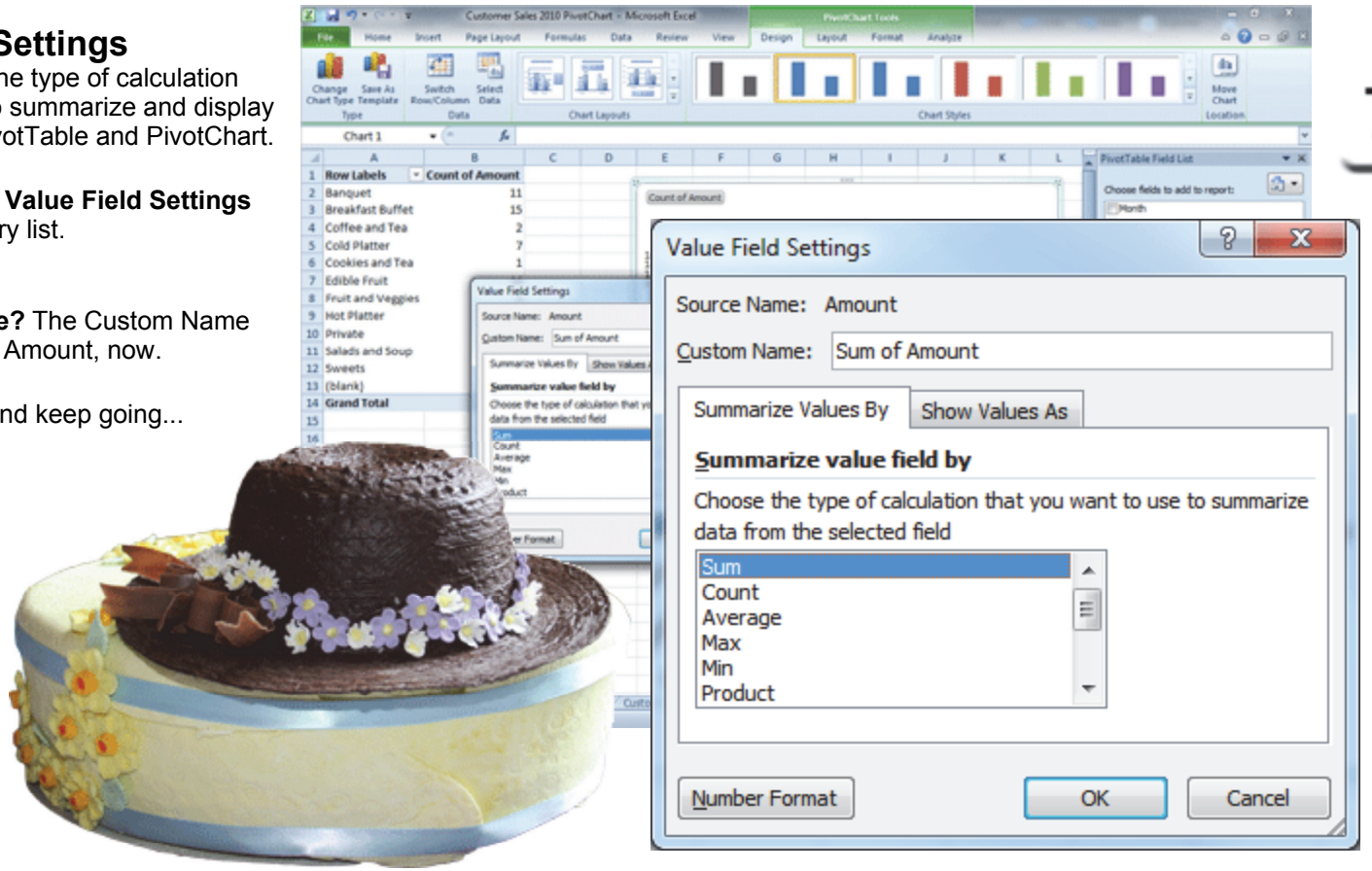
You can choose the type of calculation you wish to use to summarize and display the data in the PivotTable and PivotChart.

7. Try it: Edit the Value Field Settings
Go to the Summary list.
Choose: **Sum**.

What Do You See? The Custom Name should be Sum of Amount, now.

Please click **OK** and keep going...

PivotChart Tools ->Analyze ->Show/Hide->Field List



7

Sum of Amount

8. Try it: Format the Data

Sum of Amount is money-sales data.
Select Column B.
Go to **Home->Number.**
Click on **Currency.**

Select Column B, again.
Go to **Home->Number.**
Click on **Decrease Decimals** twice.

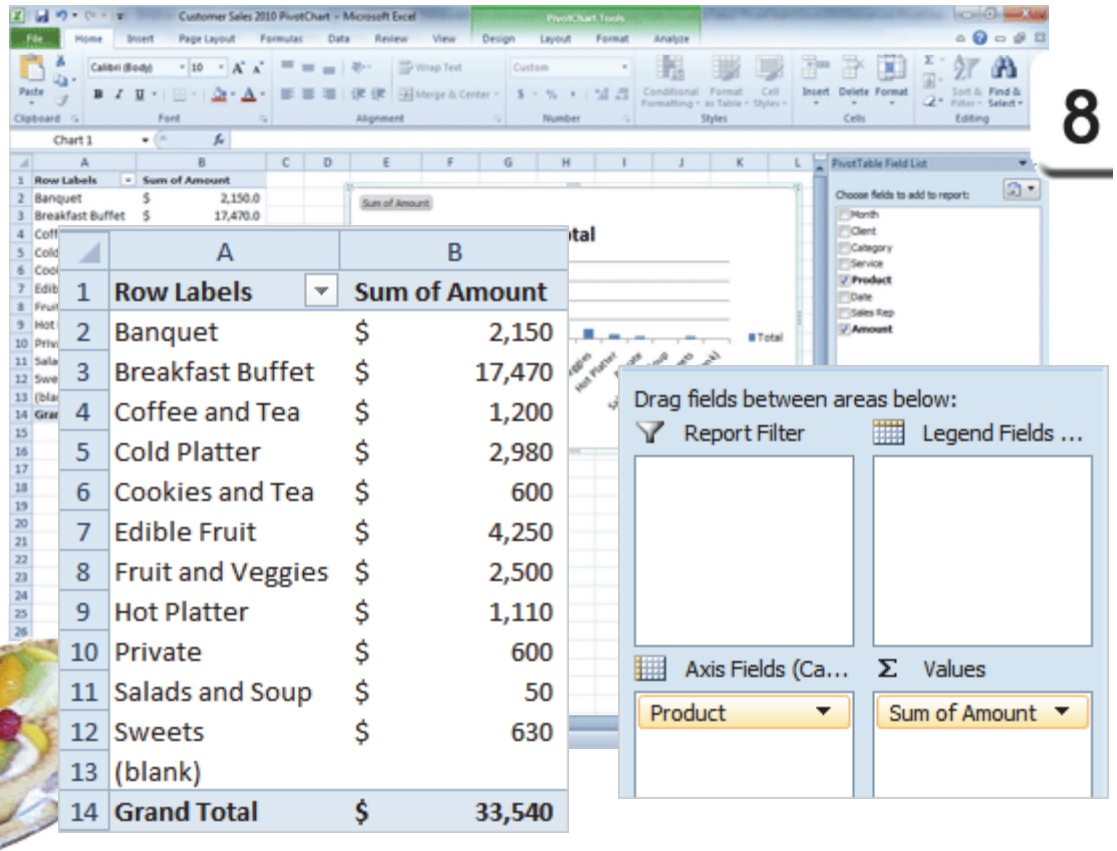
Try This, Too: Save the PivotTable

Go to **File->Save As.**
Name the workbook: MyName PivotCharts.
Save. Save. Save.

Very good.

Home ->Number





	A	B
1	Row Labels	Sum of Amount
2	Banquet	$ 2,150
3	Breakfast Buffet	$ 17,470
4	Coffee and Tea	$ 1,200
5	Cold Platter	$ 2,980
6	Cookies and Tea	$ 600
7	Edible Fruit	$ 4,250
8	Fruit and Veggies	$ 2,500
9	Hot Platter	$ 1,110
10	Private	$ 600
11	Salads and Soup	$ 50
12	Sweets	$ 630
13	(blank)	
14	Grand Total	$ 33,540

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts: Edit the Value Field Settings

Add Another Field

At this point, our PivotTable has one field in the Axis (the Category) and the Sum of Amount for the Value. When you add another field to the PivotTable, you add another layer of complexity to your chart.

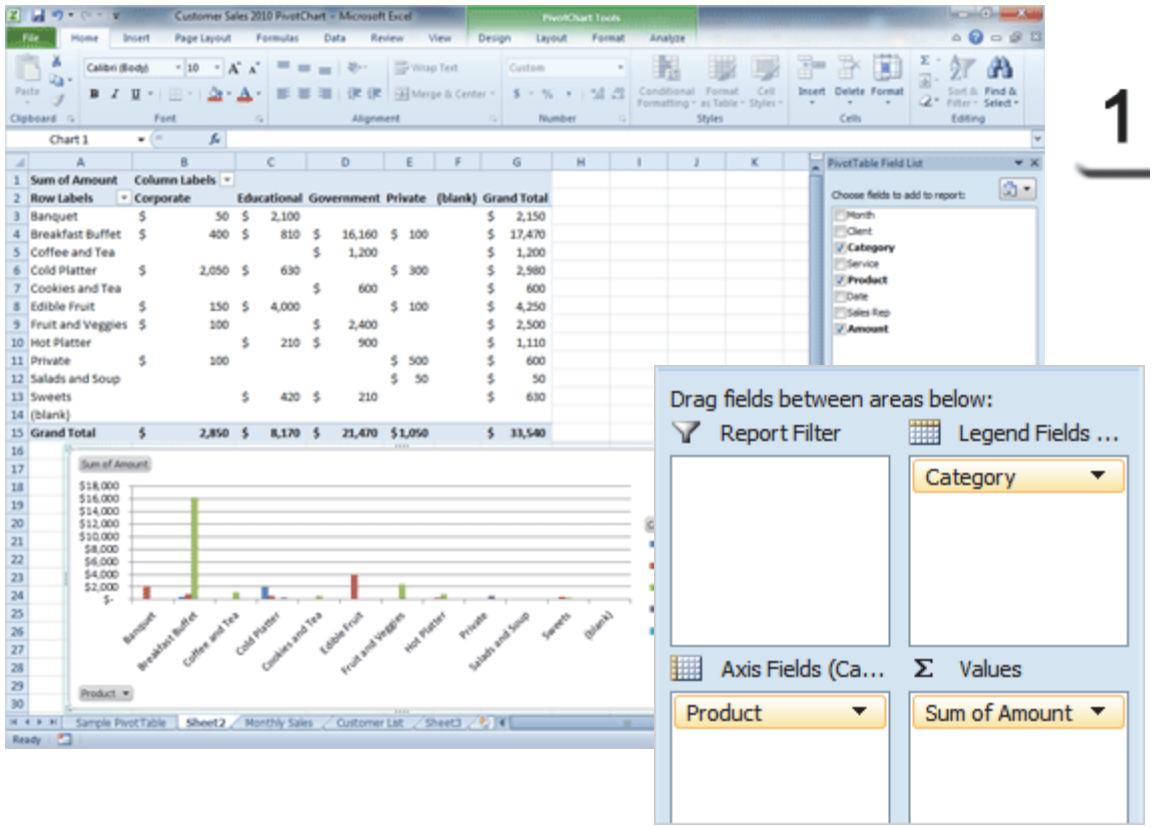
This lesson will add a field to the Legend, (the Series). This will create a Cross-Tab PivotTable. It will also change how the data is displayed in the PivotChart.

Before You Begin: Select the PivotChart. The PivotChart Tools should be available.

1. Try it: Add Another Field
Go to **PivotChart Tools ->Analyze.**
Go to **Show/Hide->Field List**
Select: Category
Drag Category to the **Legend Fields**.

Keep going...

PivotChart Tools ->Analyze ->Show/Hide->Field List

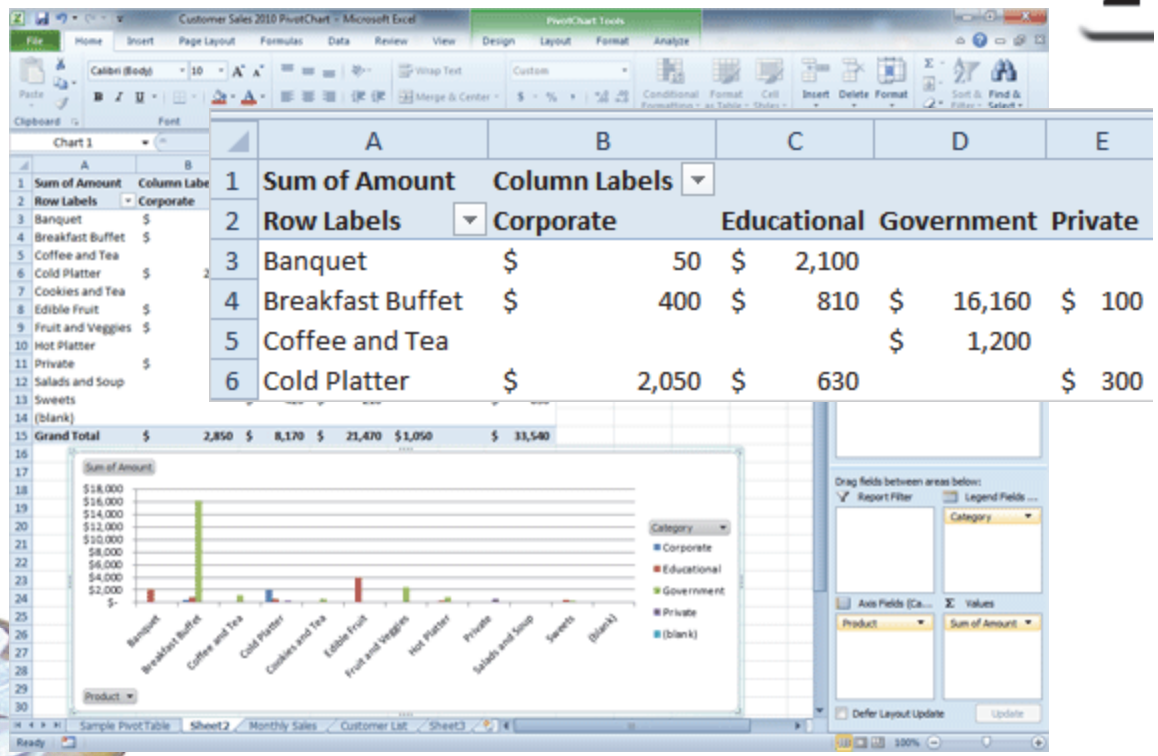


PivotChart Displays

2. What Do You See? The PivotTable has the following **Column Labels**: Corporate, Educational, Government, and Private. There is a **Filter** on the Column Labels as well as on the Row Labels that list the products sold.

What Else Do You See? The PivotChart may be displayed on top of the PivotTable. In the example on this page, the PivotChart was moved down and resized wider to see the columns better.

Keep going...



	A	B	C	D	E
1	Sum of Amount	Column Labels			
2	Row Labels	Corporate	Educational	Government	Private
3	Banquet	$ 50	$ 2,100		
4	Breakfast Buffet	$ 400	$ 810	$ 16,160	$ 100
5	Coffee and Tea			$ 1,200	
6	Cold Platter	$ 2,050	$ 630		$ 300

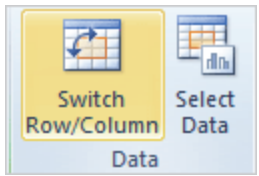


PivotChart Design

The purpose of creating a PivotTable or PivotChart is to analyze the data visually. Sometimes the data may be easier to understand if the Rows and Columns are switched. By definition, this is how you "pivot" the table.

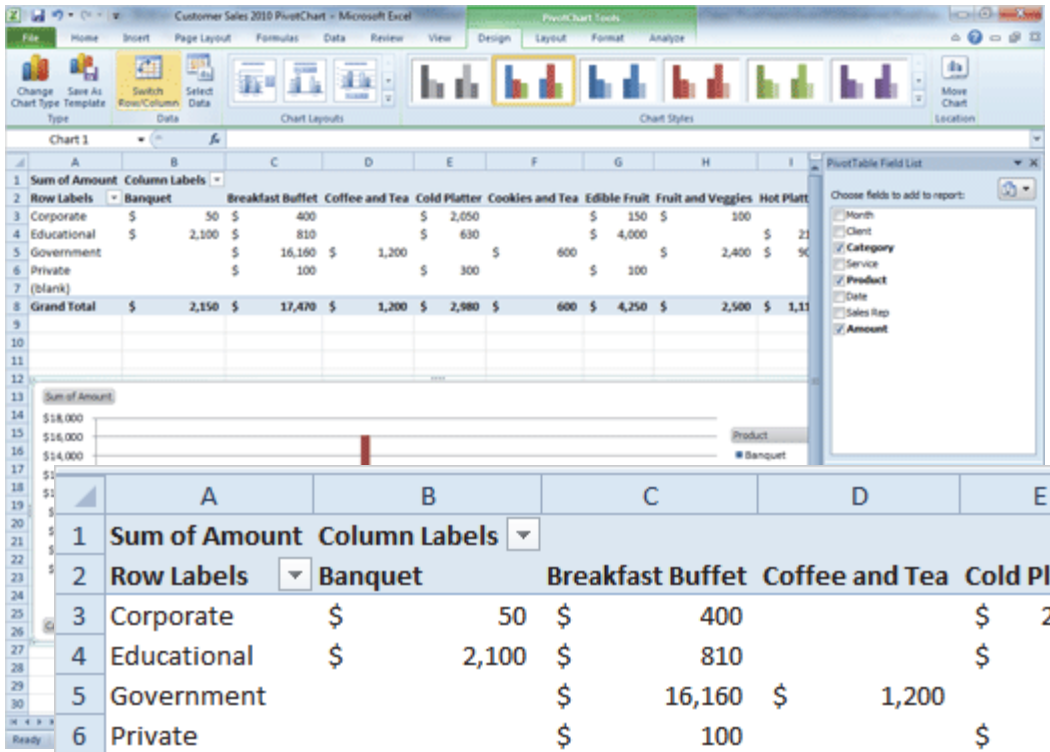
Before You Begin: Select the PivotChart. The PivotChart Tools should be available.

3. Try It: Switch Rows and Columns
Go to **PivotChart Tools ->Design.**
Go to **Data->Switch Row/Column.**



What Do You See? The data has been switched: the products are displayed in the Columns and the Categories are shown in the Rows. Keep going...!

PivotChart Tools ->Design ->Data->Switch Row/Column

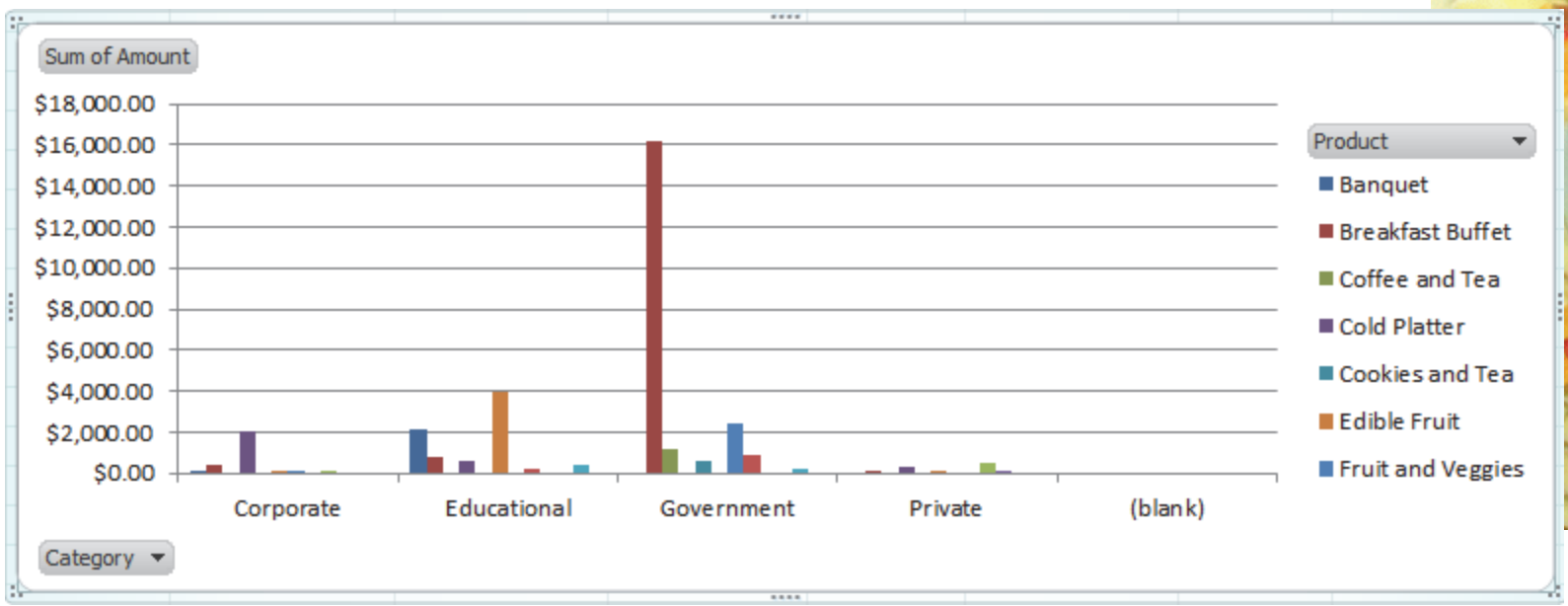


	A	B	C	D	E
1	Sum of Amount	Column Labels			
2	Row Labels	Banquet	Breakfast Buffet	Coffee and Tea	Cold Platter
3	Corporate	$ 50	$ 400		$ 2,050
4	Educational	$ 2,100	$ 810		$ 630
5	Government		$ 16,160	$ 1,200	
6	Private		$ 100		$ 300
7	(blank)				
8	Grand Total	$ 2,150	$ 17,470	$ 1,200	$ 2,980

Data: Switch Row/Column

4. What Else Do You See? When you switched the Rows and Columns, the PivotChart was updated as well. This PivotChart uses color and position to display the sales data. Each product listed on the Axis can have up to four columns of data. The Sum of Amount is displayed on the left, formatted as currency. **What Do You Think?** Can you read and understand this PivotChart? Keep going...!

PivotChart Tools ->Design ->Data->Switch Row/Column



Filter the Data

Filters let you focus on key information. Say you wanted to analyze just the three new products. Here are the steps.

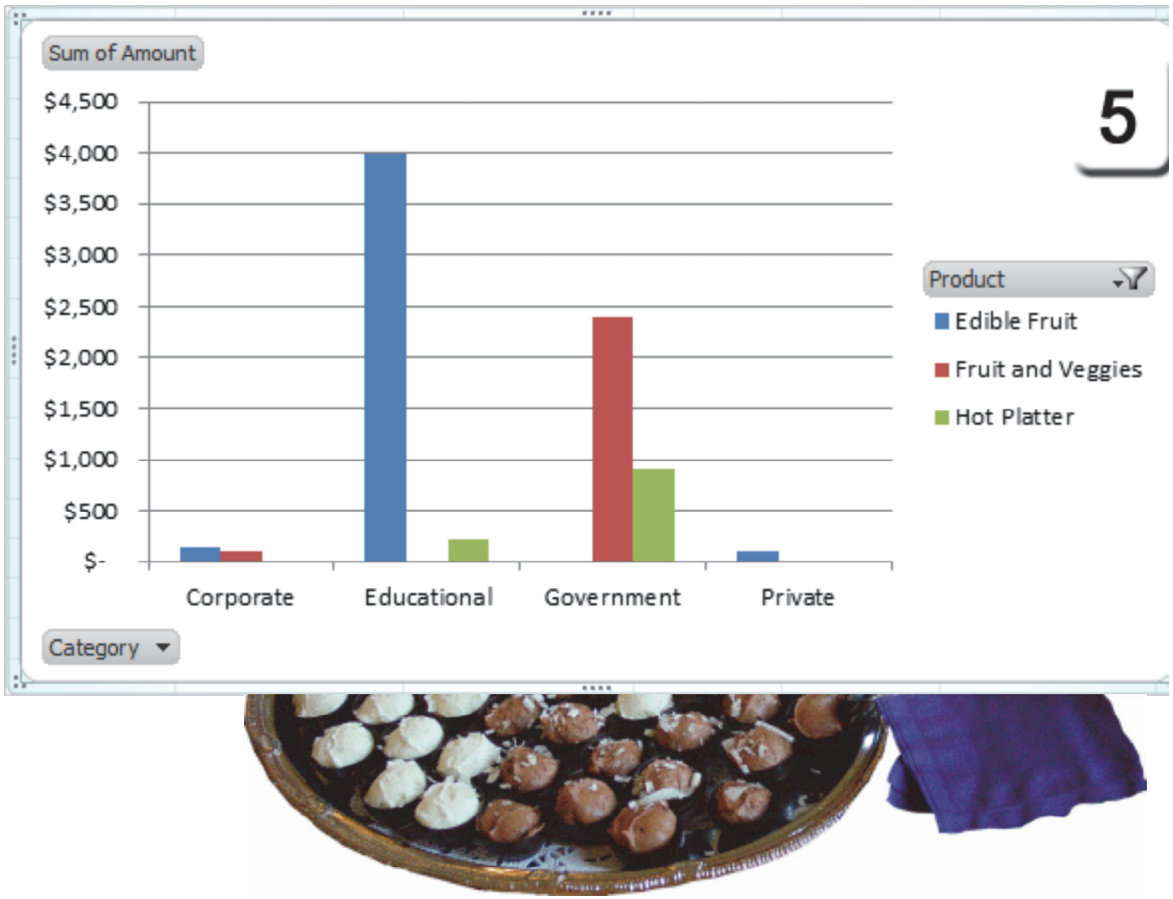
Before You Begin: Select the PivotChart or PivotTable, please.

5. Try This: Filter the Data
Go to the PivotTable.
Click on the **Column Labels** and select:
Edible Fruit
Fruit and Veggies
Hot Platter

What Do You See, Now? The Computer Mama sez it is easier to compare a few products than the dozen or so products that were displayed on the previous page.

Memo to Self: This step is easy if you click off "Select All," first,

PivotChart Tools ->Design



Design: Change Chart Type

The following pages will go through the options on the PivotChart **Design** Ribbon.

Our discussion will include how to edit the Chart Type, Layouts and Styles. We will also Move the PivotChart to a different spreadsheet.

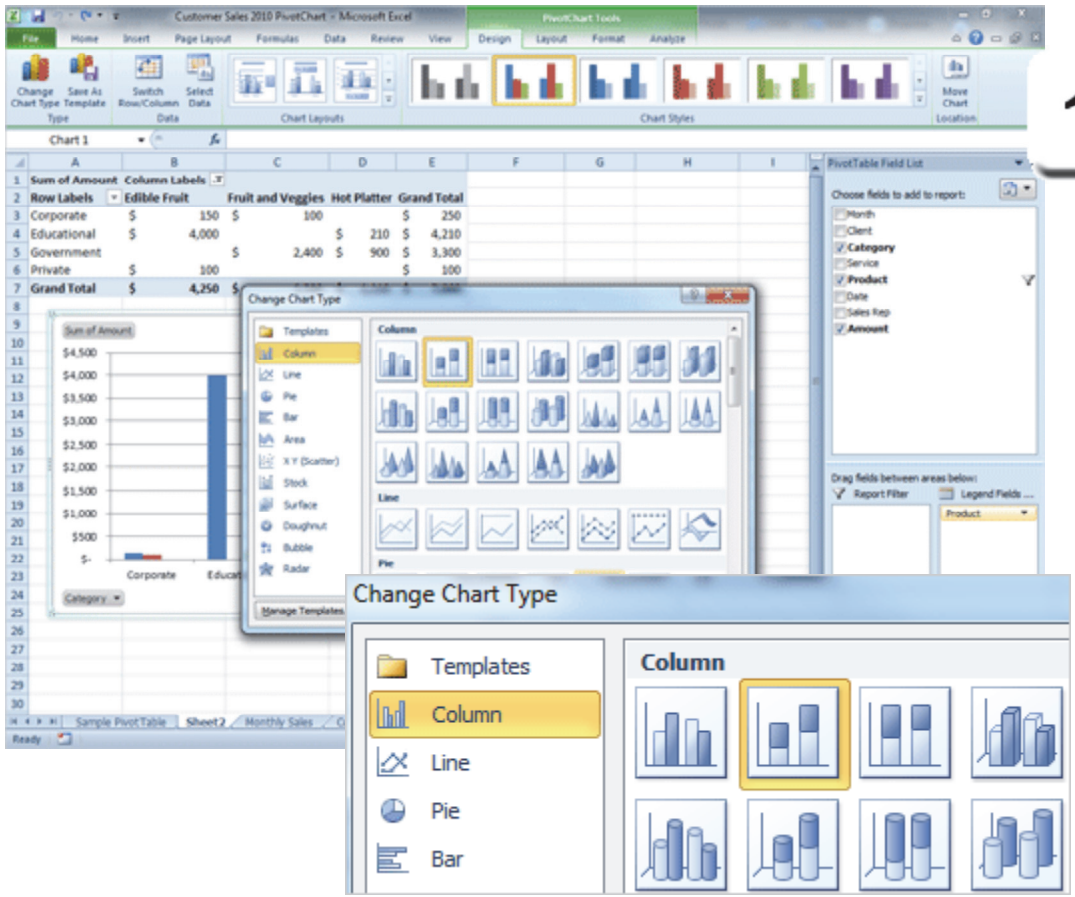
Before You Begin: Select the PivotChart.

1. Try it: Change the Chart Type
Go to **PivotChart Tools ->Design->Type.**
Click on: **Change Chart Type.**
There should be a gallery of Chart Types: Column, Line, Pie, Bar, etc.

Try This, Too: Select a New Chart Type
Go to the **Column** category.
Select: **Stacked Column**.

Click **OK**. Keep going...

PivotChart Tools ->Design ->Type-> Change Chart Type



1

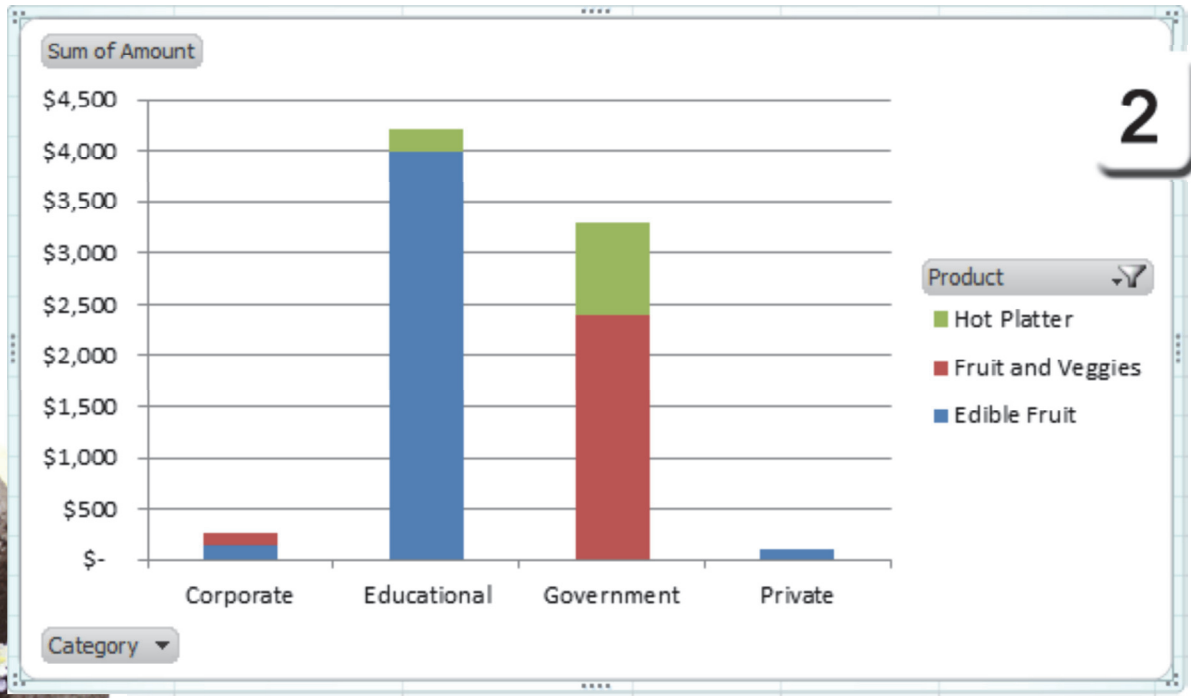
Chart Type Options

2. What Do You See? The PivotChart should update to the new Chart Type.

The **Stacked Column** format simplified the PivotChart. Instead of three columns for each customer category (Corporate, Educational, etc) there is only one that shows how the Products add up together. Keep going...



PivotChart Tools ->Design ->Type-> Change Chart Type



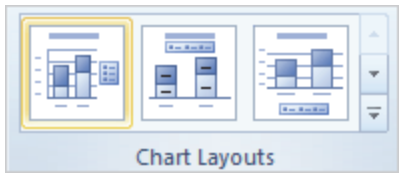
Take Two

Design: Chart Layouts

Microsoft Excel 2010 has a library of **Chart Layouts:** templates that format the Title, Legend, Data Tables and Axis Labels. Here are the steps.

Before You Begin: Select the PivotChart. The PivotChart Tools should be available.

1. Try it: Change the Chart Layout
Go to **PivotChart Tools ->Design.**
Click on: **Chart Layouts.**



There should be a gallery of Chart Layouts. Select: **Layout1.**
Keep going...

PivotChart Tools ->Design ->Chart Layouts

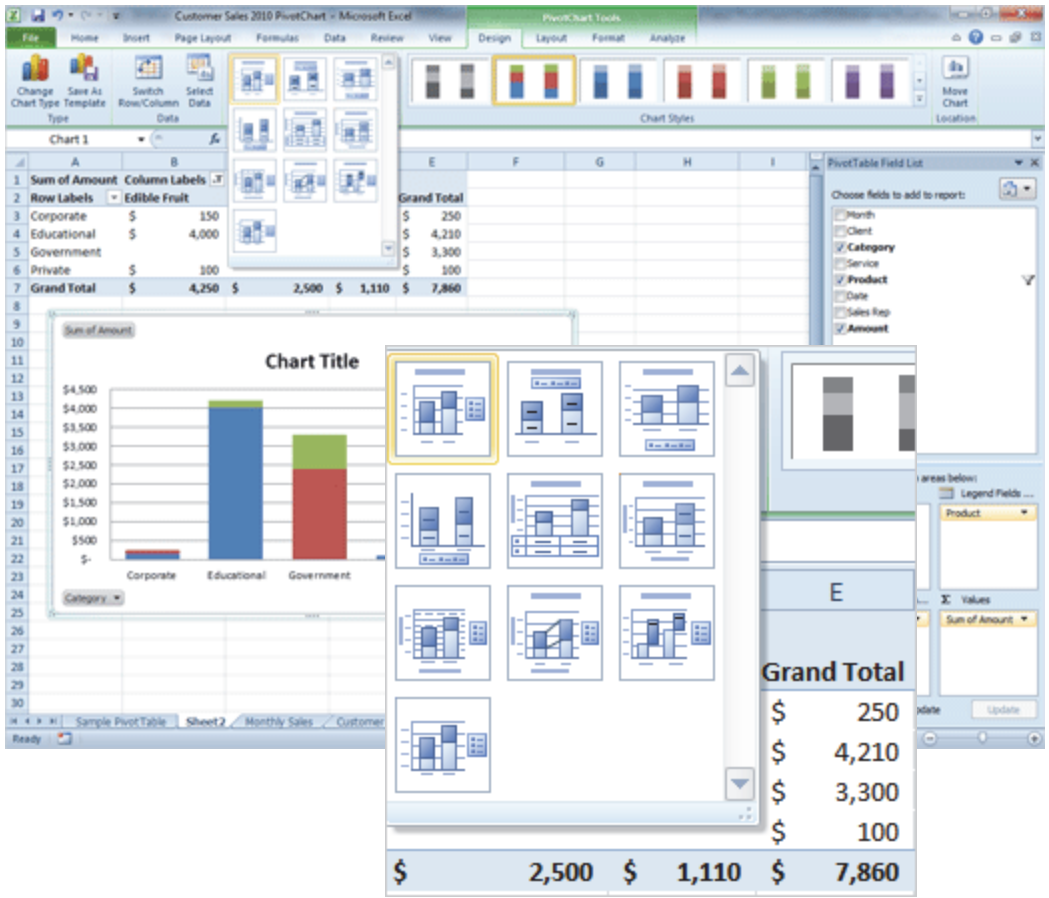


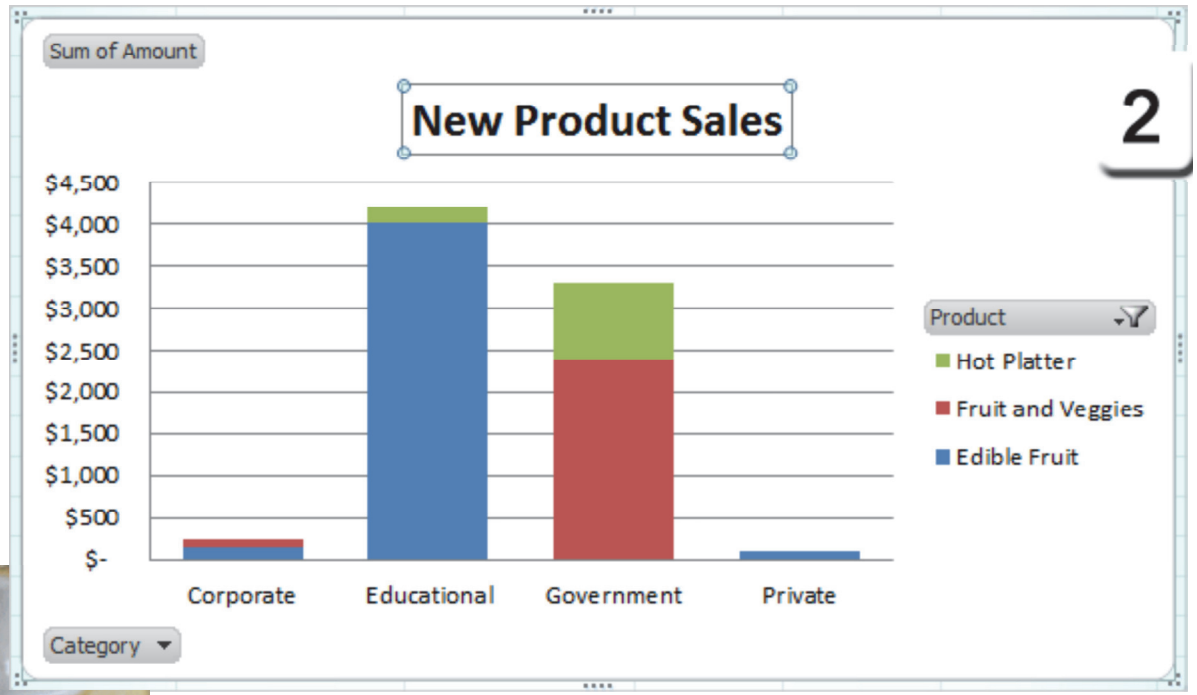
Chart Layout Options

2. What Do You See? The PivotChart Layout formatted the Stacked Columns. It is easier to see the data bands on the wider columns.

Try This, Too: Edit the Chart Title
Double Click the Chart Title.
Type: New Product Sales.

Very good. That was Chart Type and Chart Layouts. Keep going...!

PivotChart Tools ->Design ->Chart Layouts





PivotChart: Layout Review

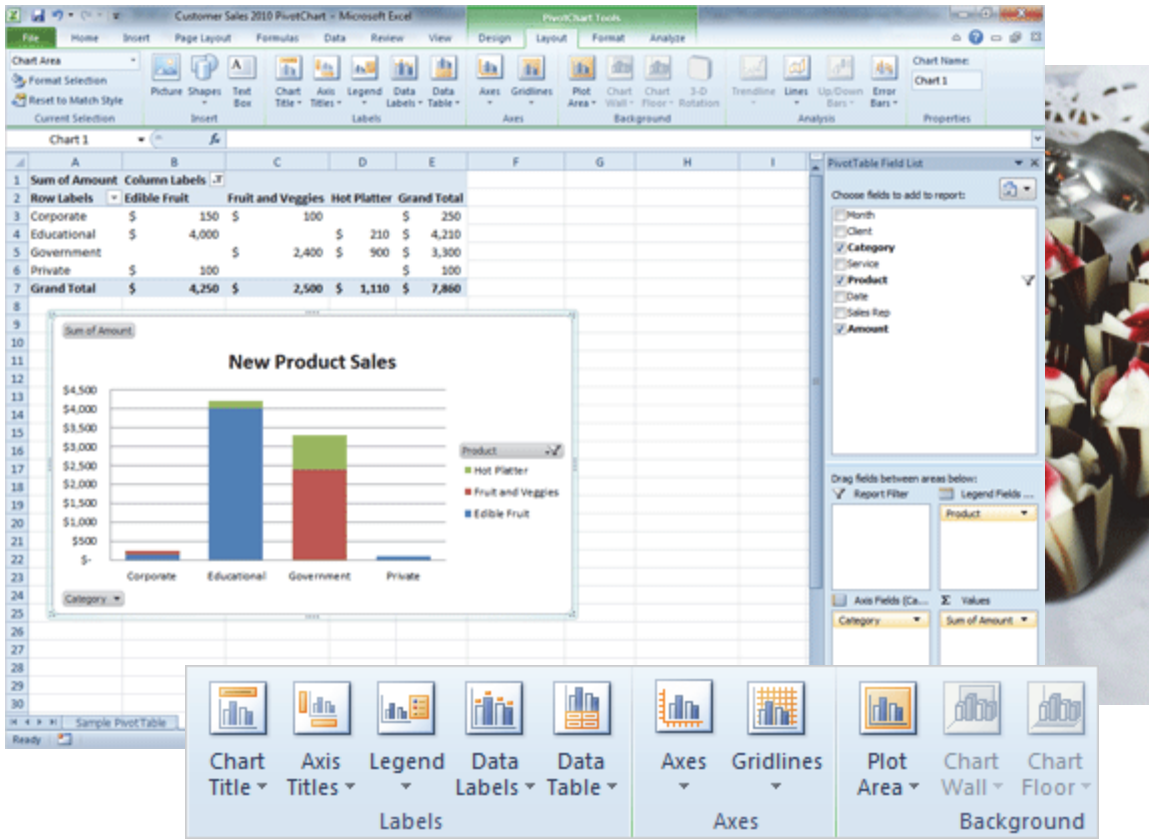
The Chart Layouts offer several pre-formatted templates. Each object in a PivotChart can be edited by hand as well.

We covered Chart Design and Layout extensively in the Beginning Guide to Excel 2010. The PivotChart **Layout** Tools are the same.

PivotChart Tools ->Layout include:
Current Selection
Insert (Picture, Shapes, Text Box)
Labels
Axes
Background
Analysis
Properties

Our discussion continues...keep going.

PivotChart Tools ->Layout



Design: Chart Styles

The **Chart Styles** format the Data (columns or pie pieces), Shape Fill and Shape Outline, Background and Axis.

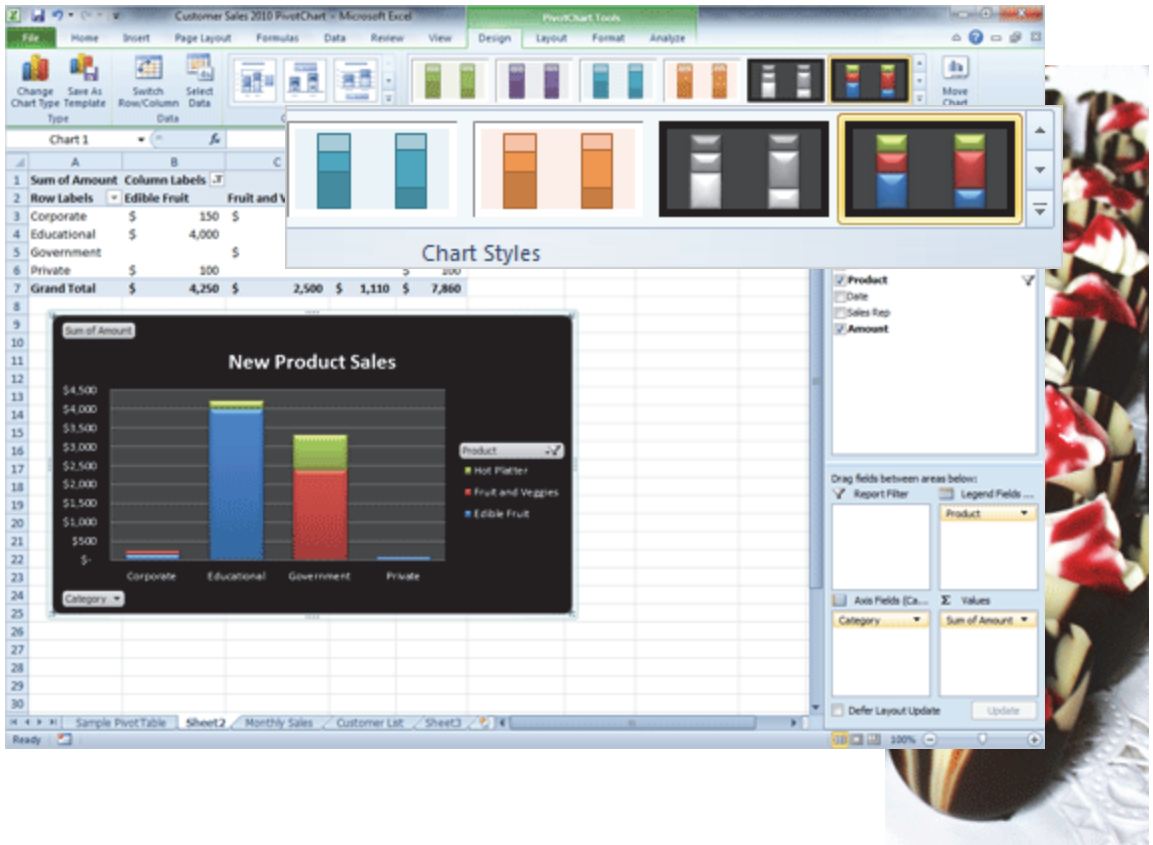
Before You Begin: Select the PivotChart. The PivotChart Tools should be available.

Try it: Select a Chart Style
Go to **PivotChart Tools ->Design.**
Go to **Chart Styles.**

There should be a gallery of Chart Styles. Choose one that you like.

That works.

PivotChart Tools ->Design ->Chart Styles



Design: Move Chart

By default, a PivotChart is usually created on the same sheet that has the PivotTable. You can **Move** a PivotChart to a different sheet if you wish. Here are the steps.

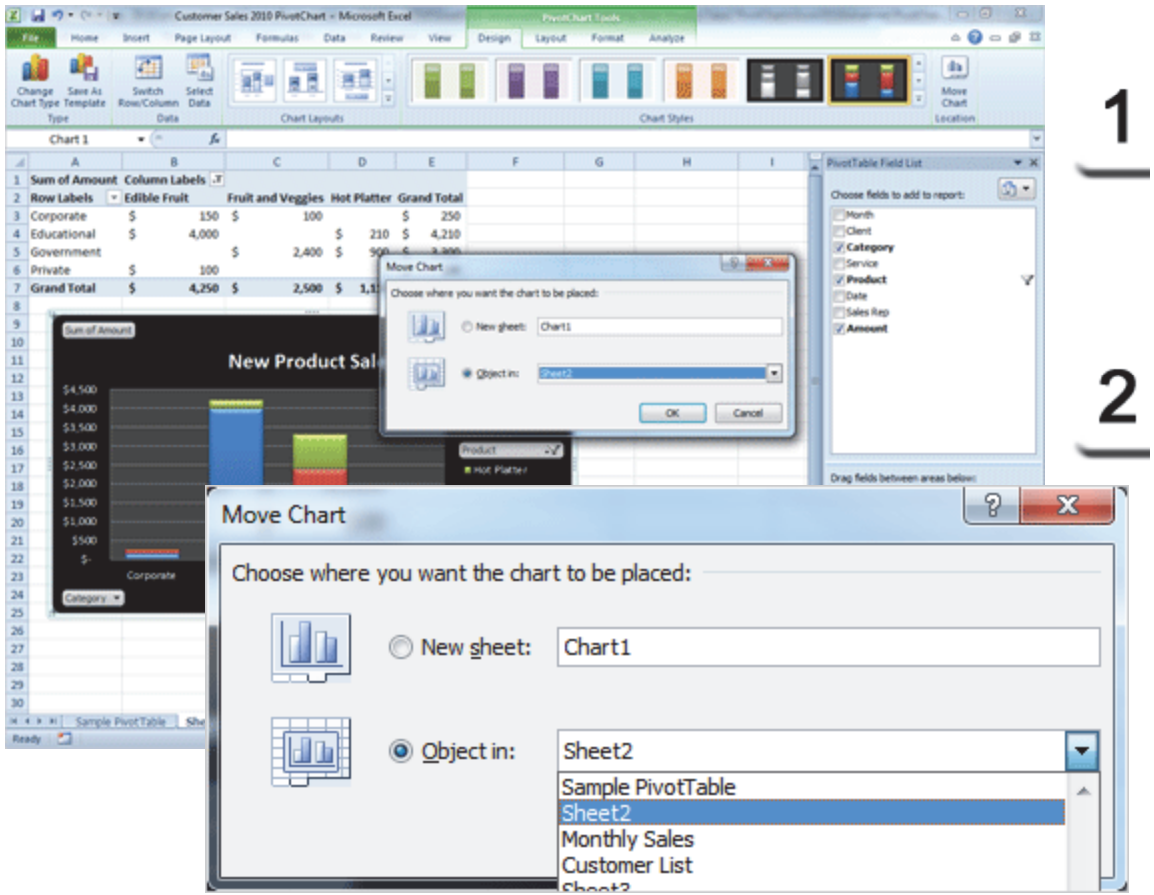
Before You Begin: Select the PivotChart. The PivotChart Tools should be available.

1. Try it: Move a PivotChart
Go to **PivotChart Tools ->Design.**
Go to **Move Chart-> Location.**

2. What Do You See? You will be asked where you want to move the chart. You can move the chart to a **New Sheet.** You can also place the chart as an **Object in** an existing sheet.

No surprises here. Click CANCEL and keep going, please.

PivotChart Tools ->Design ->Move Chart-> Location



Take Two

Analysis Tools

One of the newest tools in Excel is the **Slicer**. The Slicer can be found on the **Analyze** Ribbon as part of the **PivotChart Tools**. We'll start with the options for the Active Field and then work with the Slicer.

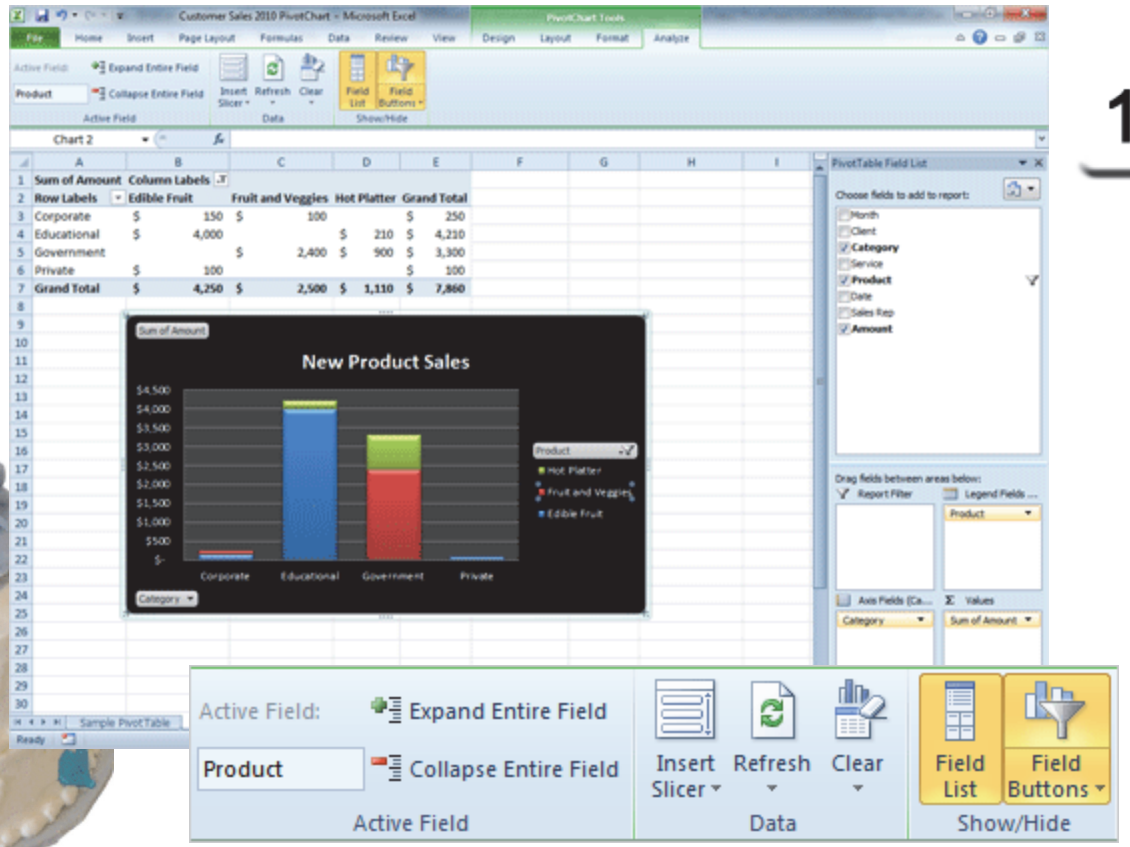
Before You Begin: Select the PivotChart. The PivotChart Tools should be available.

1. Try it: Review the Analyze Tools
The **Analyze** Tools include:
Active Field
Data
and Show/Hide.

Keep going...!



PivotChart Tools ->Analyze



1

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts: Analyze

Analysis: Active Field

Start with the simple tools: You can select any field and show additional data. The field that you select is called the **Active Field**.

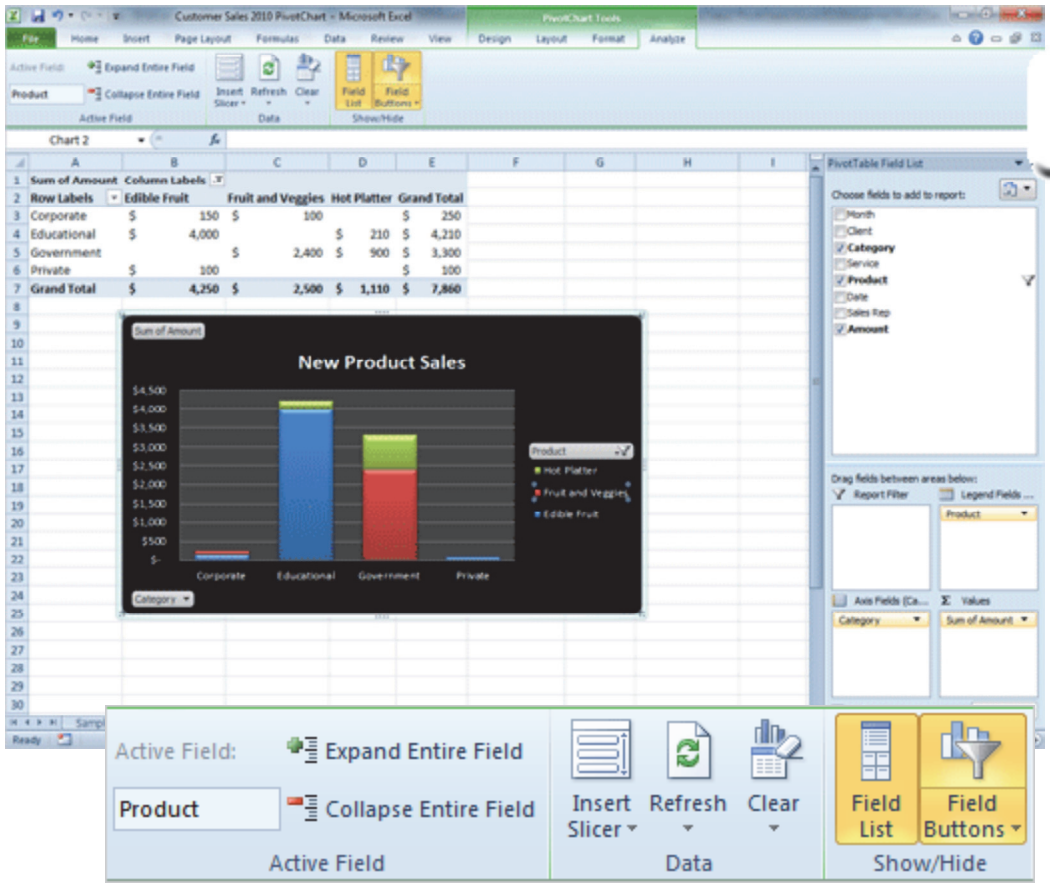
You can use the Active Field to Expand (show) or Collapse (hide) more details. Say you wanted to see who sold the Fruit and Veggie products. Here are the steps.

2. Try it: Select a Field in the PivotChart
Click on the PivotChart Legend.
Click on a Field: Fruit and Veggies.
Keep going...

Memo to Self: Expanding or Collapsing a field is easy. Selecting the correct place on the PivotChart can be frustrating!

What should you look for? When you select a Field, the Analysis Tools will display this field as well as any other that you have enhanced.

PivotChart Tools ->Analyze ->Active Field



2

Analysis: Use the Active Field

3. Try it: Expand the Active Field
Go to **PivotChart Tools->Analyze.**
Go to **Active Field.**
Click on **Expand Entire Field.**

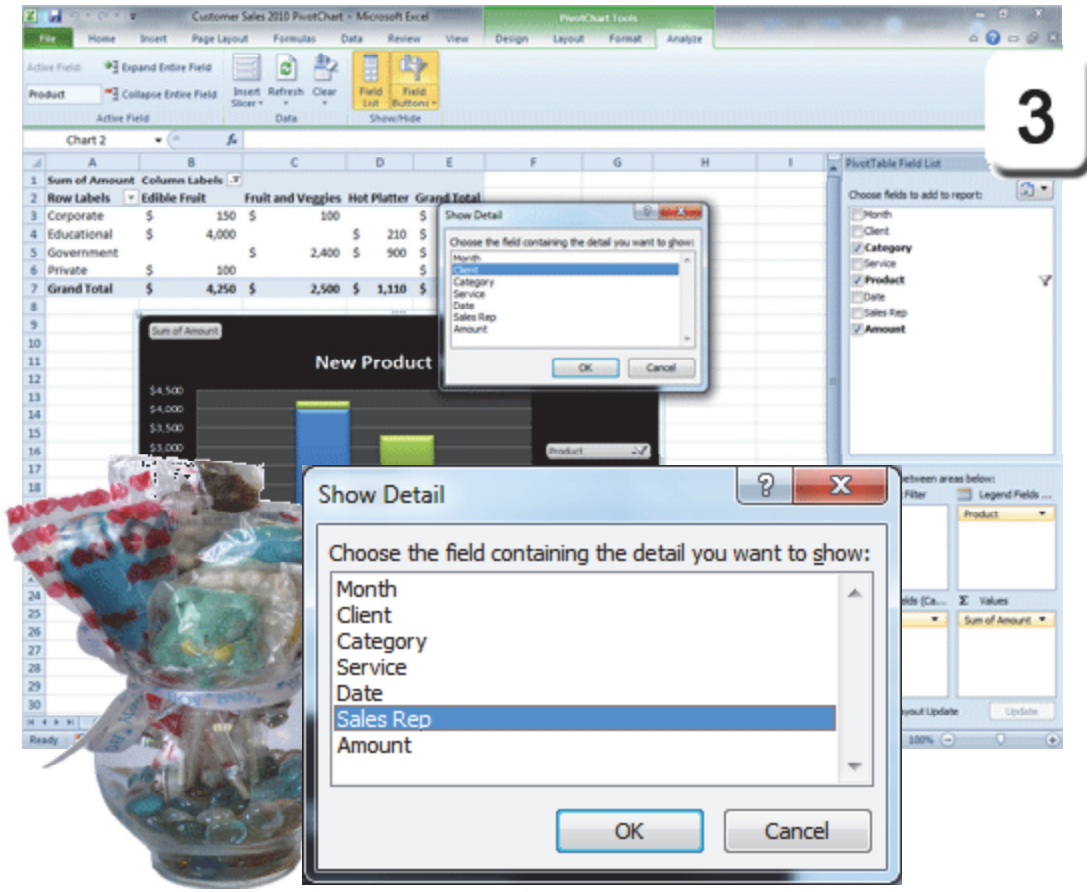
What Do You See? You will be prompted to choose which data you would like to show.

Our question was: Who sold what? If you choose Sales Rep, the PivotChart will display the names of the people who sold products.

Try this, Too: Select a Field for the Detail
Show Detail: Sales Rep.

Please click **OK** and keep going...

PivotChart Tools ->Analyze ->Active Field





PivotChart Tools ->Analyze ->Active Field

Expand Active Field

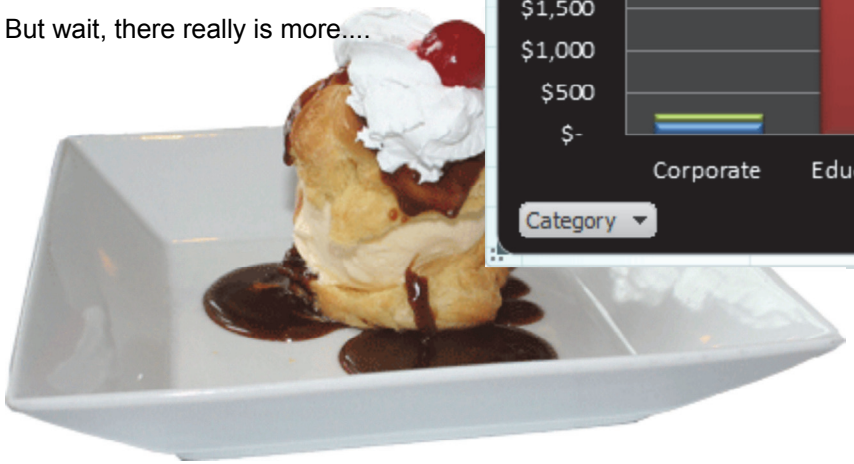
4. What Do You See? There should be a new filter on the PivotChart legend.

The example on this page shows which sales rep sold what products.

This is an interactive PivotChart. You can filter the information by Category (Corporate, Educational, Government, Private), Product and Sales Rep.

But wait, there really is more....





Take Two

PivotTable: Analyze

5. What Else Do You See? When you edit the PivotChart, you are modifying the PivotTable as well.

The **Column Labels** show new subtotals for each product. The subtotals calculate how much product each sales rep sold.

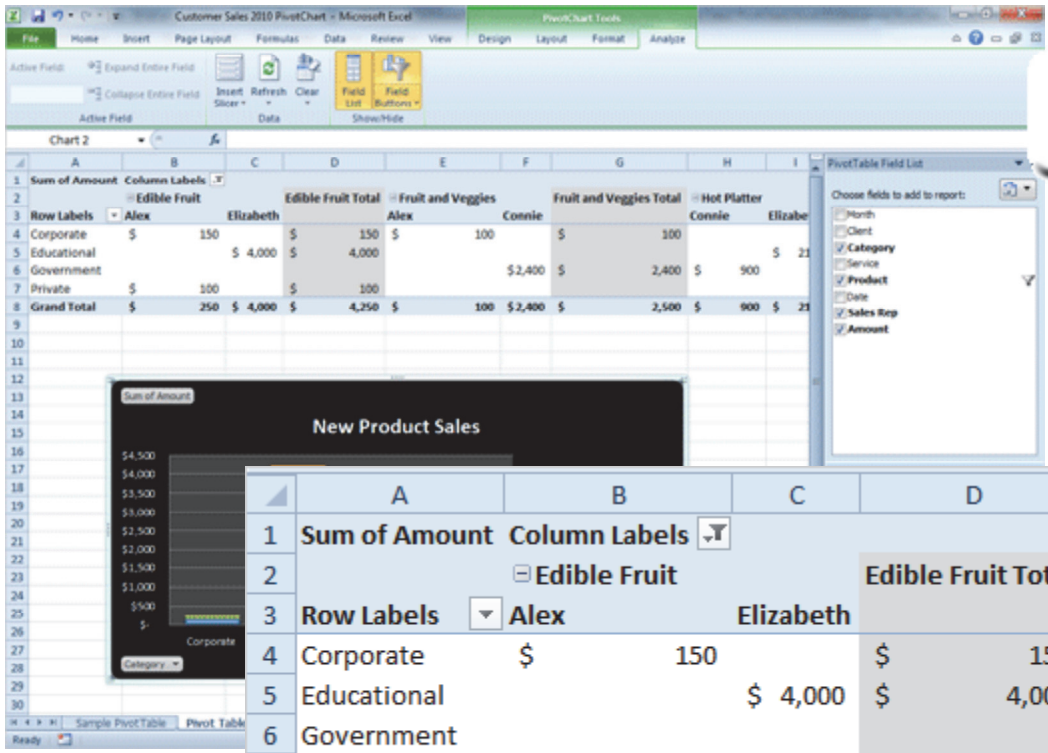
The PivotTable was formatted automatically with banded columns.

Rename this spreadsheet PivotTable by Category and **Save** your work.

Memo to Self: As you work with the tools you should keep in mind the purpose of this chart. What story are you trying to convey in a quick, effective visualization? Would it be easier to see the data as a PivotTable?

Keep it simple and easy to read.

PivotChart Tools ->Analyze



	A	B	C	D
1	Sum of Amount	Column Labels		
2		Edible Fruit		Edible Fruit Total
3	Row Labels	Alex	Elizabeth	
4	Corporate	$ 150		$ 150
5	Educational		$ 4,000	$ 4,000
6	Government			
7	Private	$ 100		$ 100
8	Grand Total	$ 250	$ 4,000	$ 4,250

5

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts

Take Two

Analyze: Slicers

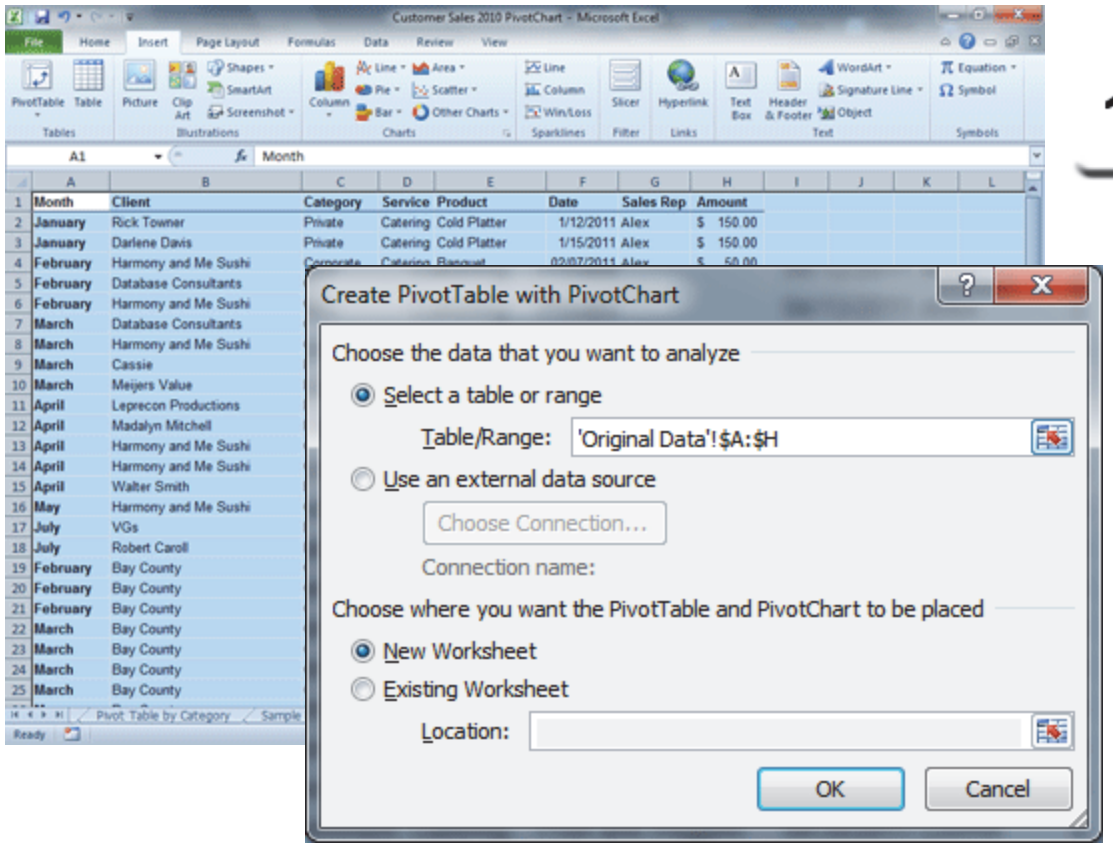
Slicers are a new way to filter the data in PivotTables and PivotCharts. The previous pages walked you through the steps of building a complex PivotChart with multiple filters. It is effective, but rather clumsy to work with.

The next couple of pages begin with a new PivotChart and demonstrates how you can use the Slicers.

1. Try it: Create a new PivotChart
Go to the Original Data spreadsheet.
Select All.
Go to **Insert-> Table-> PivotTable**.
Click on **PivotChart.**

You will be asked to confirm the location of the data and whether you would like to place the new PivotChart in a new worksheet. Click **OK**. Keep going...

Insert-> Table-> PivotTable->PivotChart



1

Modify the PivotChart

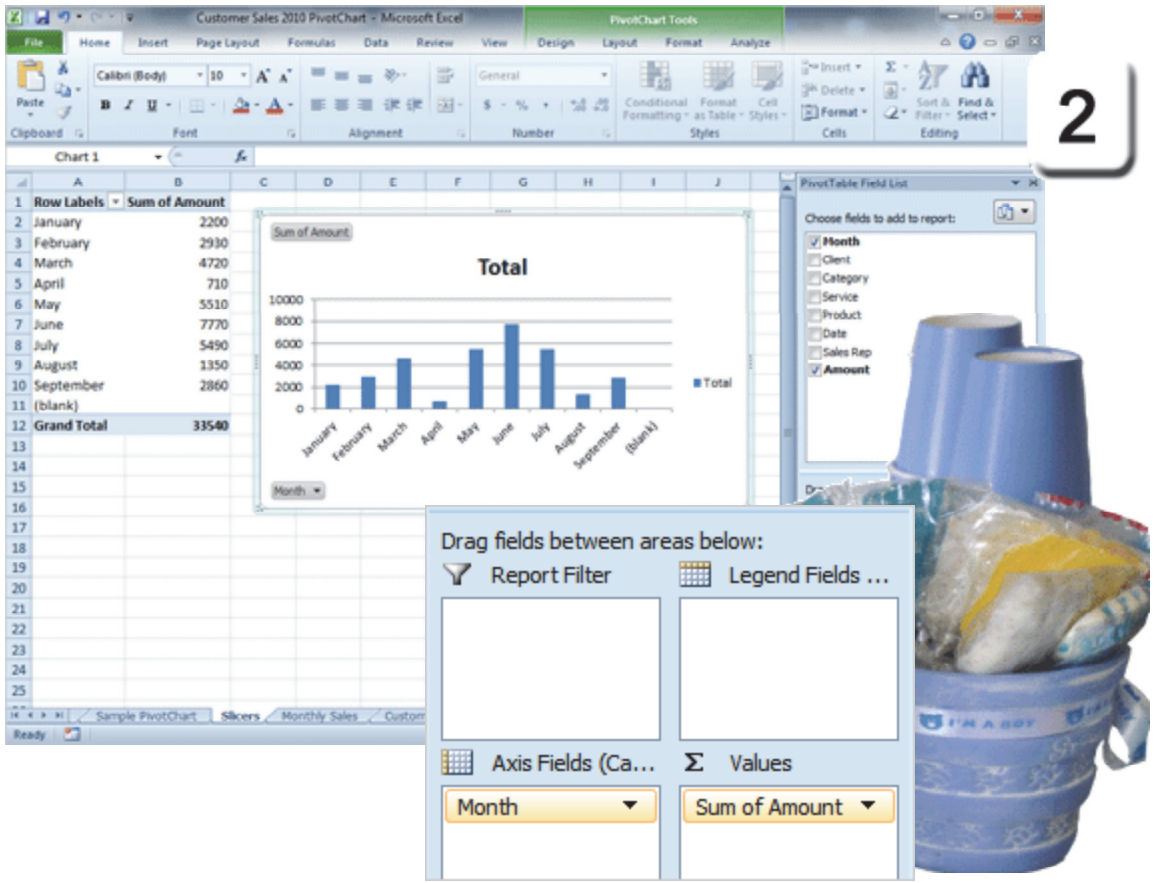
2. Try This: Choose a Field
Go to the **PivotTable Field List.**
Select: Month.

Try This, Too: Add a Value
Go to the **PivotTable Field List.**
Select: Amount.
Drag the Amount to the **Values**.
You should see Count of Amount.

And This: Edit the Value Field Settings
Go to the **Values**.
Select: Count of Amount.
Click on **Value Field Settings...**
Summarize Field Value by: SUM.

Keep going...

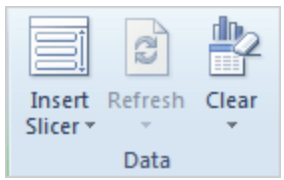
PivotChart Tools ->Analyze ->Show/Hide->Field List



Use Slicers to Filter the Data

Before You Begin: Click on the PivotChart. The PivotChart Tools should be available**.**

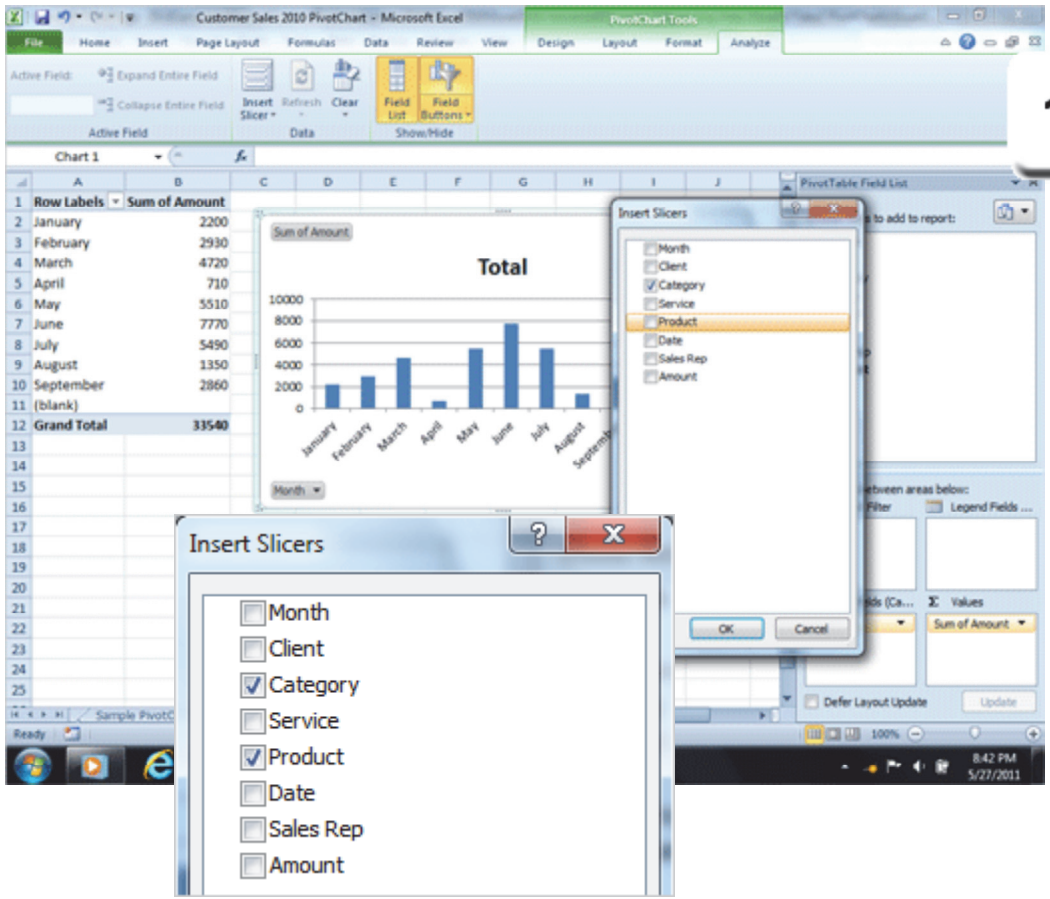
1. Try it: Insert Slicers
Go to **PivotChart Tools ->Analyze-> Data**.
Click on **Insert Slicer**.



What Do You See? You will be prompted to select the Fields you want to include.
Select the following fields:
Category
Product

Please click **OK**. Keep going...

PivotChart Tools ->Analyze ->Data-> Insert Slicers



1

Hello, Slicers!

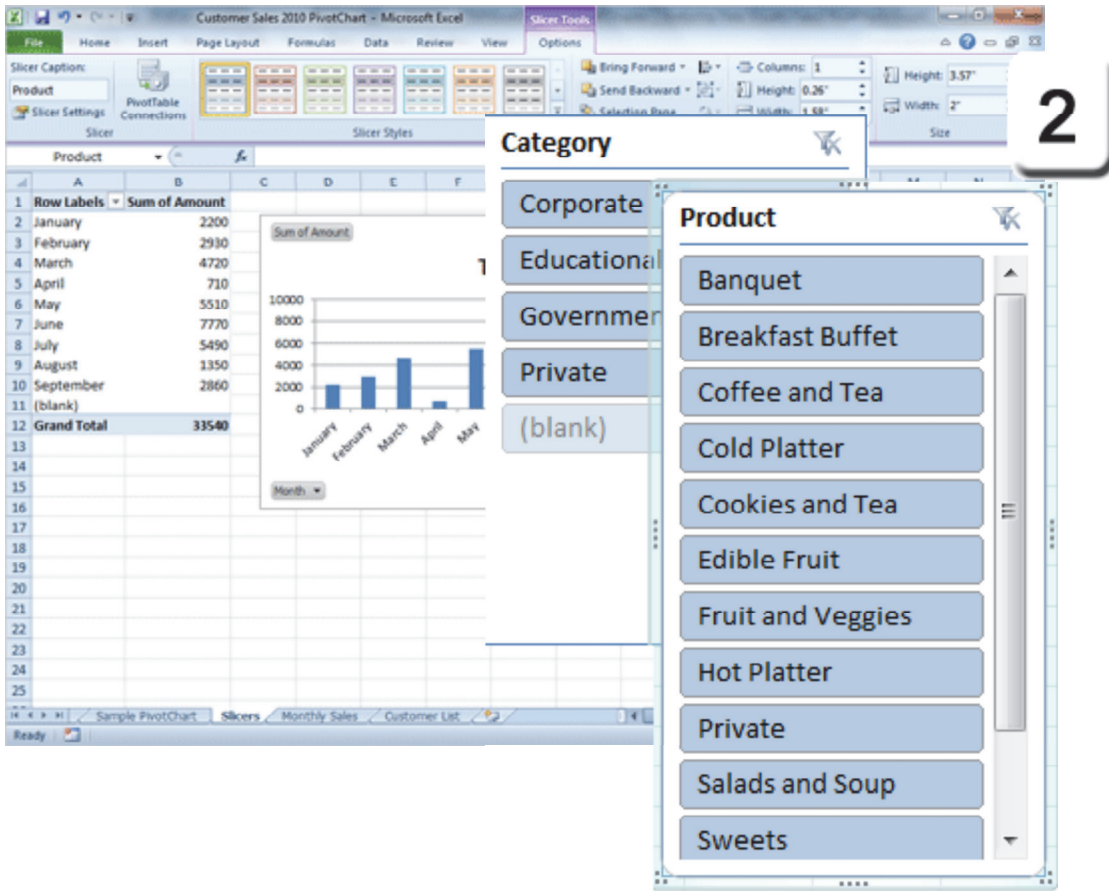
2. What Do You See? At the top of the Slicers is a Header. Next to the name on the Header is a Filter.

Below the Header you should see a list of **Items**. You can use the Items to filter your data. To the right of the Item list, on the scroll bar, is the **Clear Filter** button. Look for three lines stacked like a Slicer.

So, How Do They Work? By default, new Slicers display all of the data. If you click on a Item in the Slicer-say Breakfast Buffet-the PivotTable and PivotChart will show only the data for Breakfast Platters.

Memo to Self: You can select more than one Item by holding the CONTROL key on your keyboard as you click on the Items.

PivotChart Tools ->Analyze ->Data ->Insert Slicers



Slicer Tools

Slicers, like Charts, Shapes and Pictures, have their own set of Tools.

The Slicer Tools include:
Slice
Slice Style
Arrange
Buttons
Size

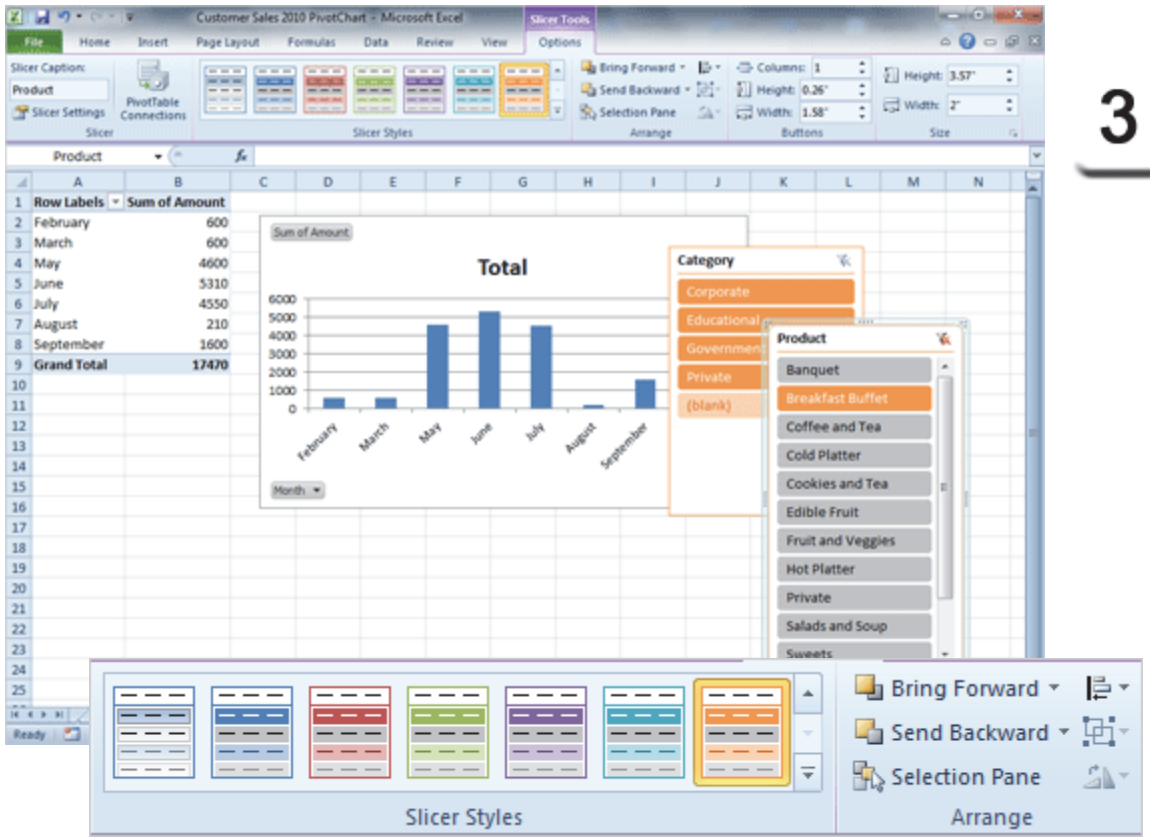
Before You Begin: Click on the Slicer. The Slicer Tools should be available.

3. Try it: Format the Slicer
Go to **Slicer Tools ->Options.**
Select a **Slicer Style**: Dark 6

What Else Do You See? You can use the options in the **Arrange** group to bring a Slice in front or back if you wish.

Rename this spreadsheet Slicers and **Save** your work.

Slicer Tools ->Options-> Slicer Styles



Analyze: Refresh

The beauty of working with PivotTables and PivotCharts is how easy it is to update the information in the Table or Chart.

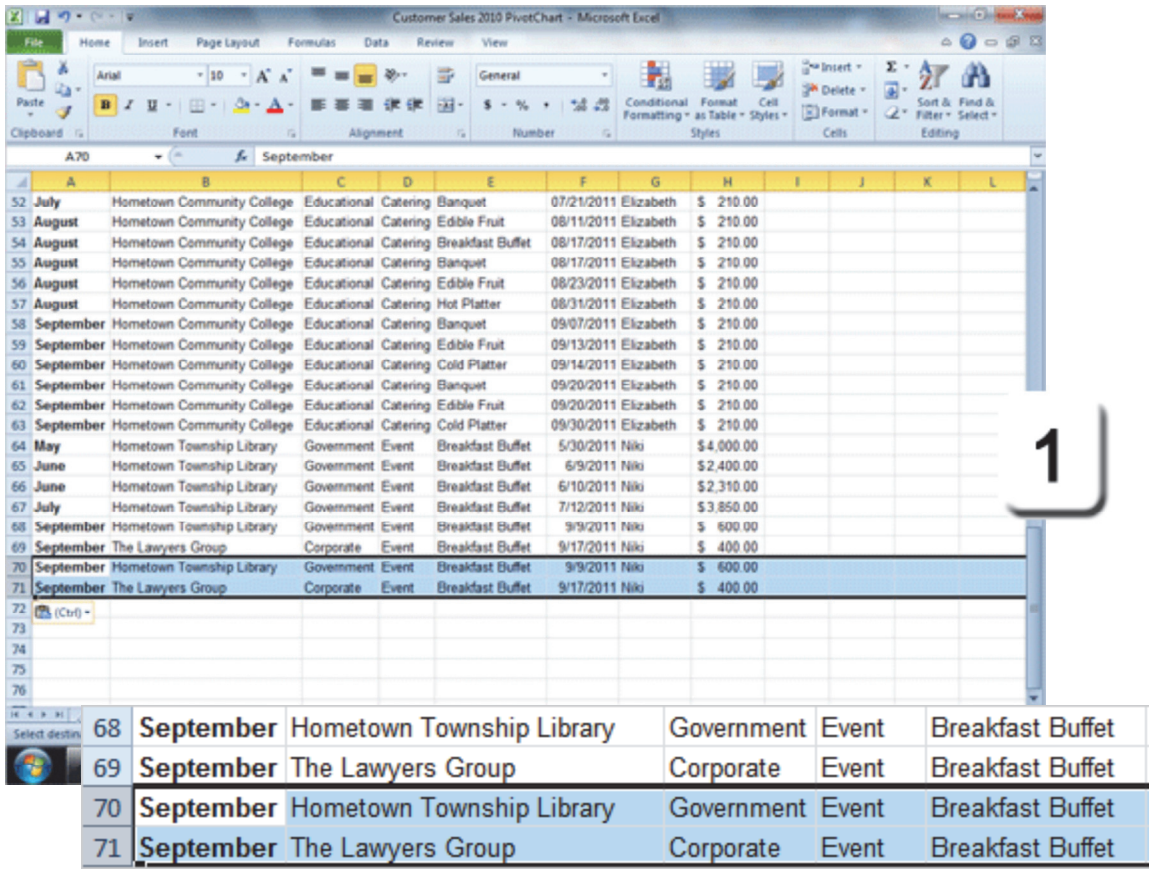
Before You Begin: Go to the Slicer spreadsheet. Select the PivotChart. The PivotChart Tools should be available. Please remove all Filters on the Slicers.

1. Try it: Add More Data
Go to the **Monthly Sales sheet.**
Select the last two Rows: Row 68 and 69.
Go to **Home->Copy**.
Select Cell A70.
Go to **Home->Paste**.

The data in this example has been updated. There are now two more Breakfast Buffets in the records.

Did the PivotTable update? Let's find out...

PivotChart Tools ->Analyze ->Data



Refresh the PivotChart

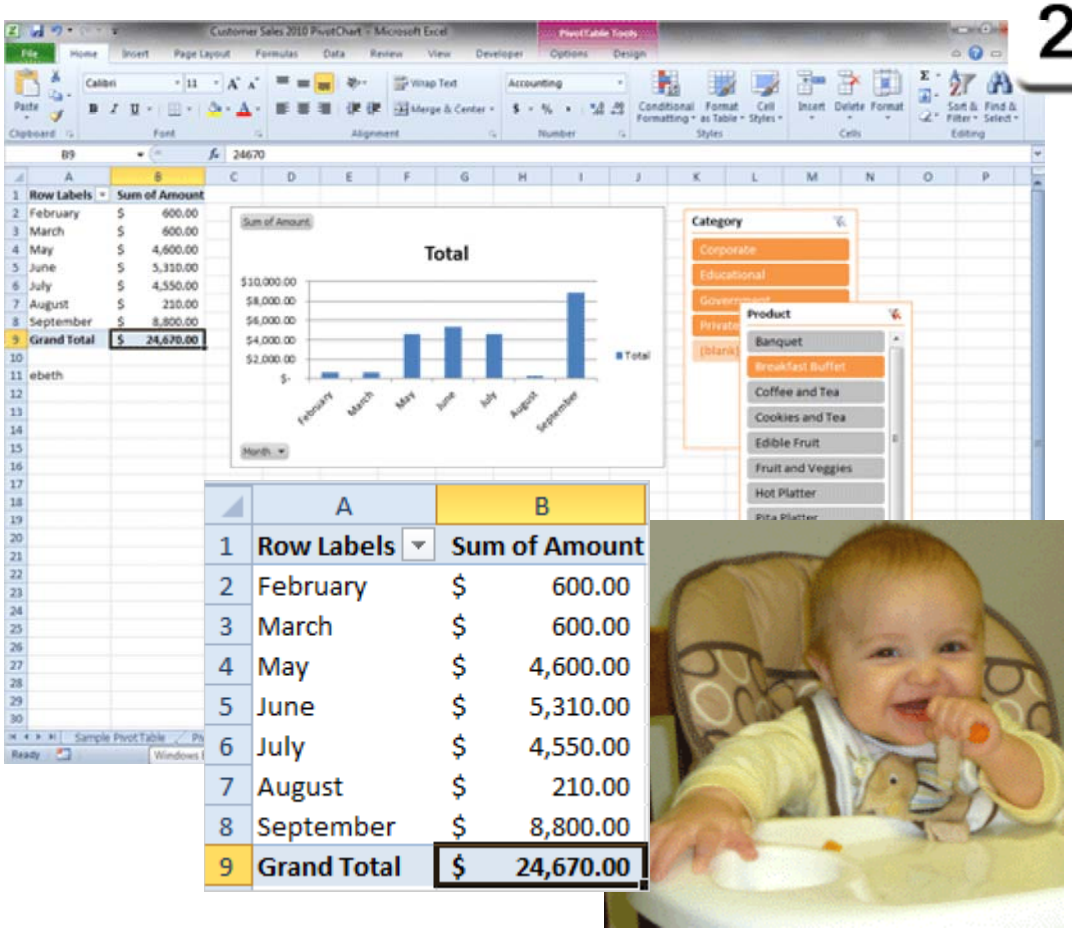
2. First, Review the PivotChart
Go to the **Slicer** spreadsheet.
Did the PivotTable or PivotChart update?
Maybe,..maybe not. What if it didn't?

OK, Try This: Refresh the Data.
Click on the PivotChart to select it.
Go to **PivotChart Tools ->Analyze ->Data.**
Click on **Refresh**.

What Do You See? The data for the Breakfast Buffet has updated. The sales subtotal has been updated to include the two, new sales.

PivotChart Tools ->Analyze ->Data-> Refresh

2



	A	B
1	Row Labels	Sum of Amount
2	February	$ 600.00
3	March	$ 600.00
4	May	$ 4,600.00
5	June	$ 5,310.00
6	July	$ 4,550.00
7	August	$ 210.00
8	September	$ 8,800.00
9	Grand Total	$ 24,670.00

Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts

Analyze External Data in Excel

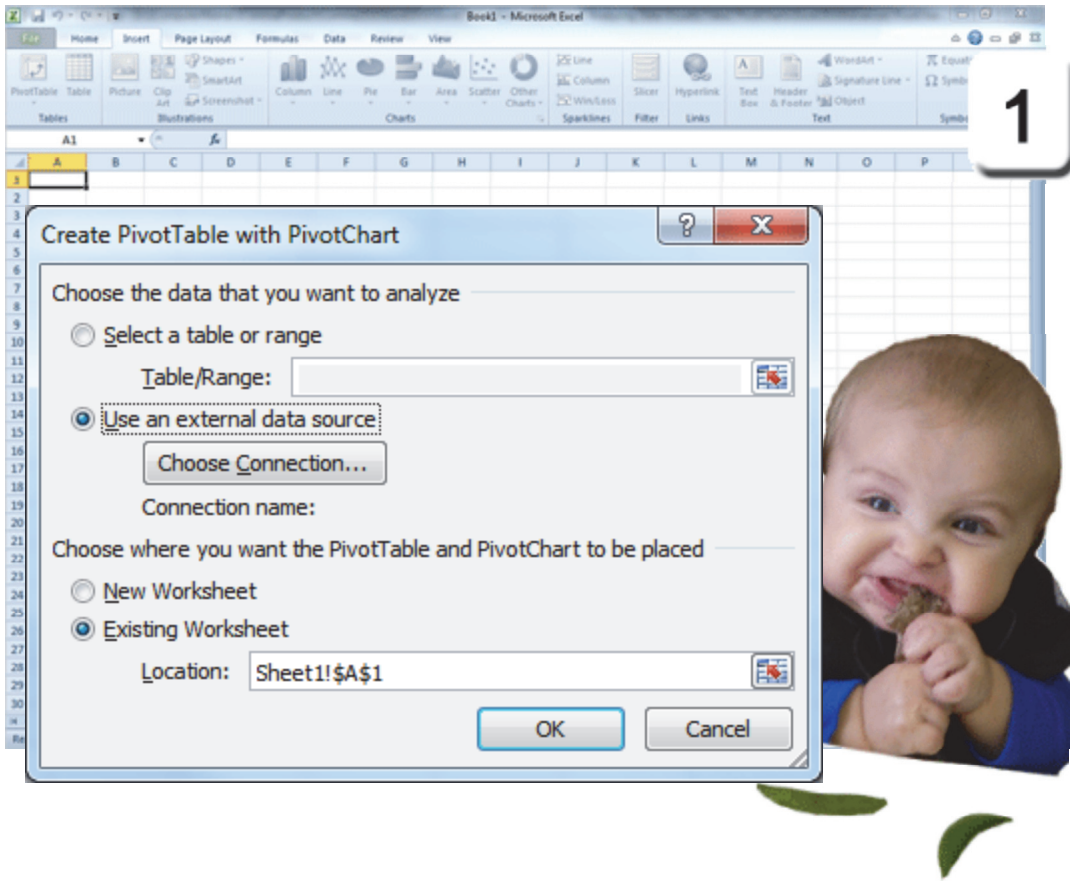
You can use **PivotTables, PivotCharts,** and **Slicers** to analyze information outside of a spreadsheet. The **External Data** can come from Microsoft Access, from the Internet, or from a server or mainframe. Microsoft Excel can also connect to a SharePoint server.

The following pages will show how to connect a PivotTable to a mighty Microsoft Access database that has a table of customers, tblCustomers.

1. Try This: Insert a PivotChart
Open the a new, blank spreadsheet.
Go to **Insert-> Table-> PivotTable.**
Click on **PivotChart.**
Go to **Use an external data source**.
Click on **Choose Connection**.
Keep going...

Memo to Self: This lesson uses a sample Microsoft Access database. If you are not familiar with Access, or if you do not have Access on your computer, you may not be able to practice these steps. That is OK.

Insert-> Table->PivotTable-> PivotChart



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts

Connect to Other Data

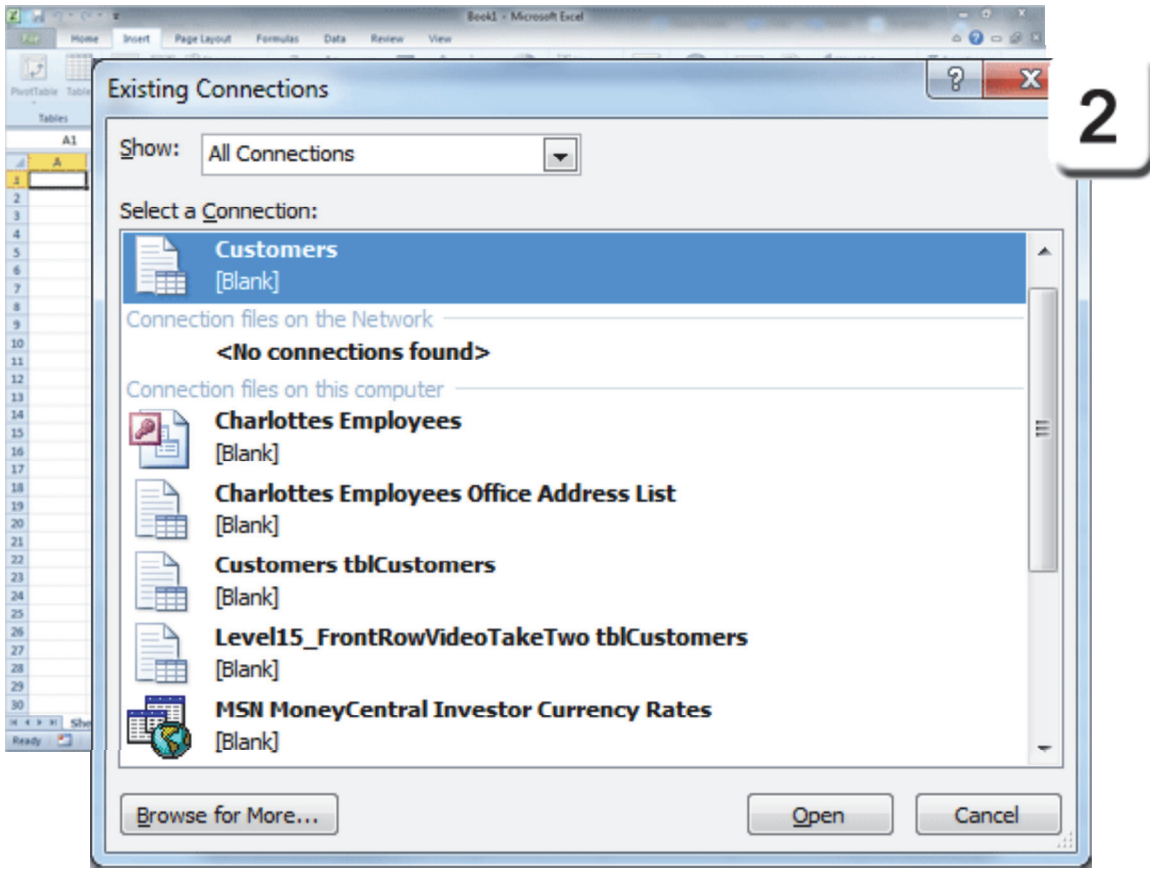
When you click on **Choose Connection**, you will see a list of data connections. By default the list shows All Connections.

The Existing Connections can include:
All Connections
Connections files in the Workbook
Connection files on the Network
Connection files on this computer

If you don't see you data source listed, you can **Browse for More**.

2. Try it: Browse for More
At the **Existing Connections** window.
Click on **Browse for More**.
Keep going...!

Insert-> Table-> PivotChart->Use an External Data Source



Exam 77-888: Microsoft Excel Expert 2010
3. Presenting Data Visually
3.4. Apply and manipulate PivotCharts: Use an External Data Source

Take Two

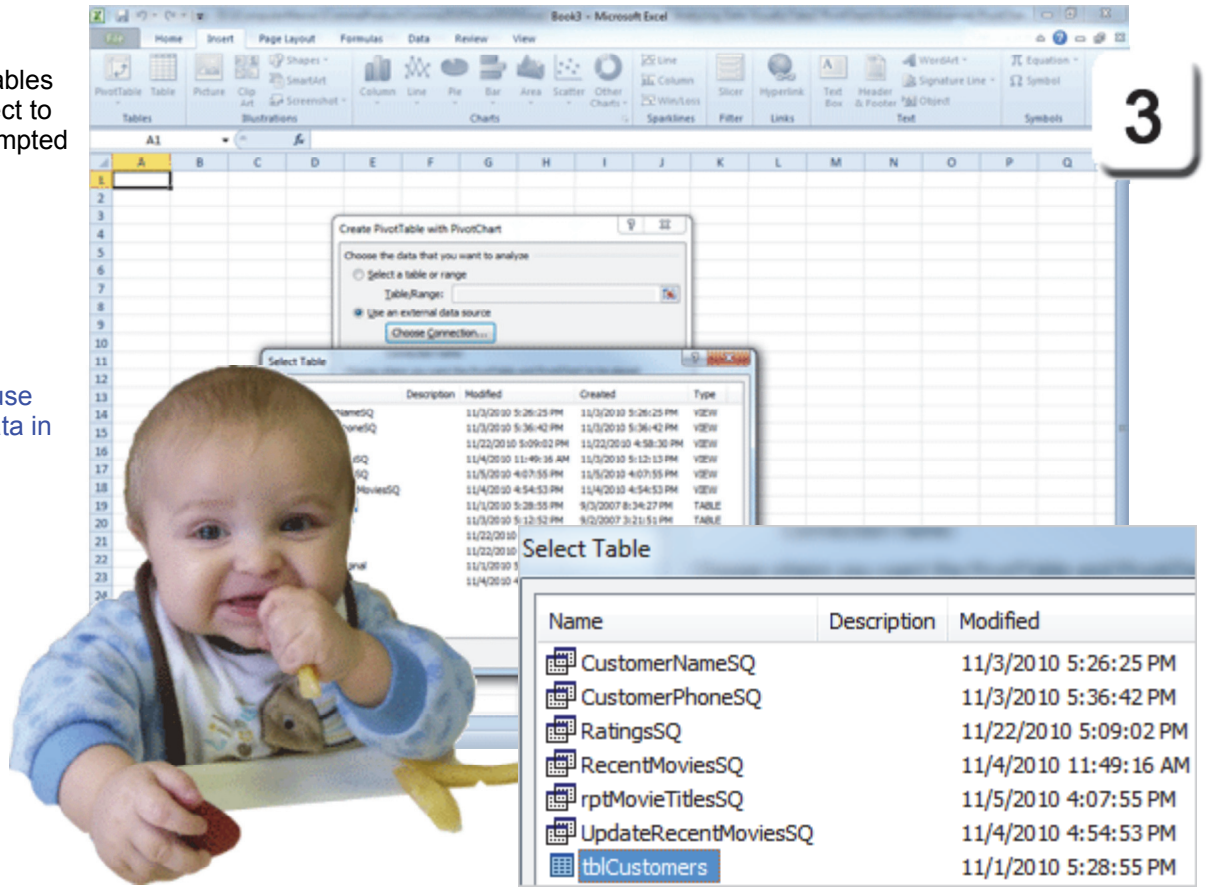
Select the External Data

Microsoft Access databases have Tables as well as Queries. When you connect to an Access database, you will be prompted to Select a Table or Query.

3. Try it: Select a Table of Query
Select Table: tblCustomers.
Keep going...!

Memo to Self: A Query is a way to use formulas and filters to present the data in your tables.

Insert-> Table-> PivotChart->Use an External Data Source



Analyze the External Data

4. Create a PivotTable with External Data
The following steps add fields and values to create a PivotChart using the Access table.

Try This: Choose a Field
Go to the **PivotTable Field List.**
Select: City.

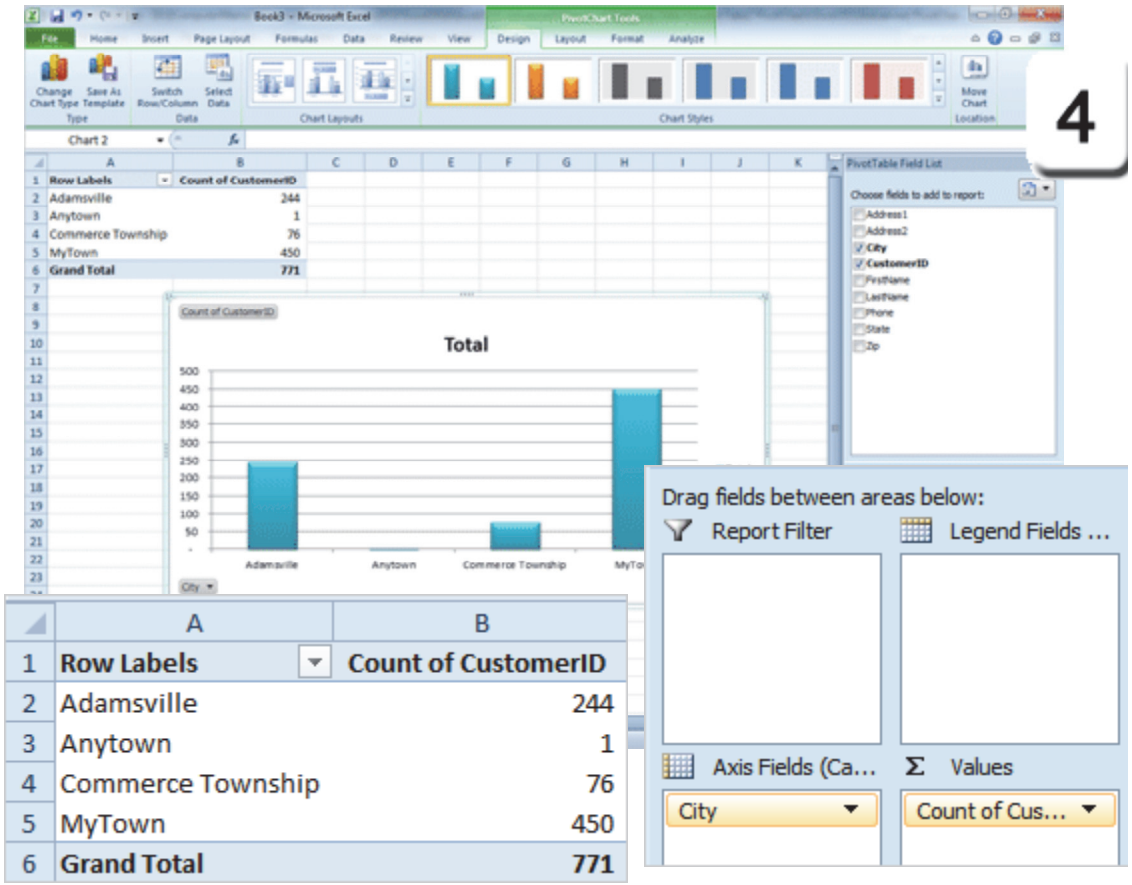
Try This, Too: Add a Value
Go to the **PivotTable Field List**.
Select: CustomerID.
Drag the CustomerID to the **Values**.
You should see Count of CustomerID.

What if it says Sum of CustomerID?
Click on Sum of CustomerID.
Click on **Value Field Settings**.
Select: COUNT

And Try This: Change the Chart Style
Go to **PivotChart Tools ->Design.**
Choose a **Chart Style**.

This works. Keep going...

PivotChart Tools ->Design ->Chart Styles



	A	B
1	Row Labels	Count of CustomerID
2	Adamsville	244
3	Anytown	1
4	Commerce Township	76
5	MyTown	450
6	Grand Total	771

Refresh the Data

Data is dynamic. Say business is good and a lot of new customers were added today. You can use the PivotTable or PivotChart Tools to **Refresh** the data.

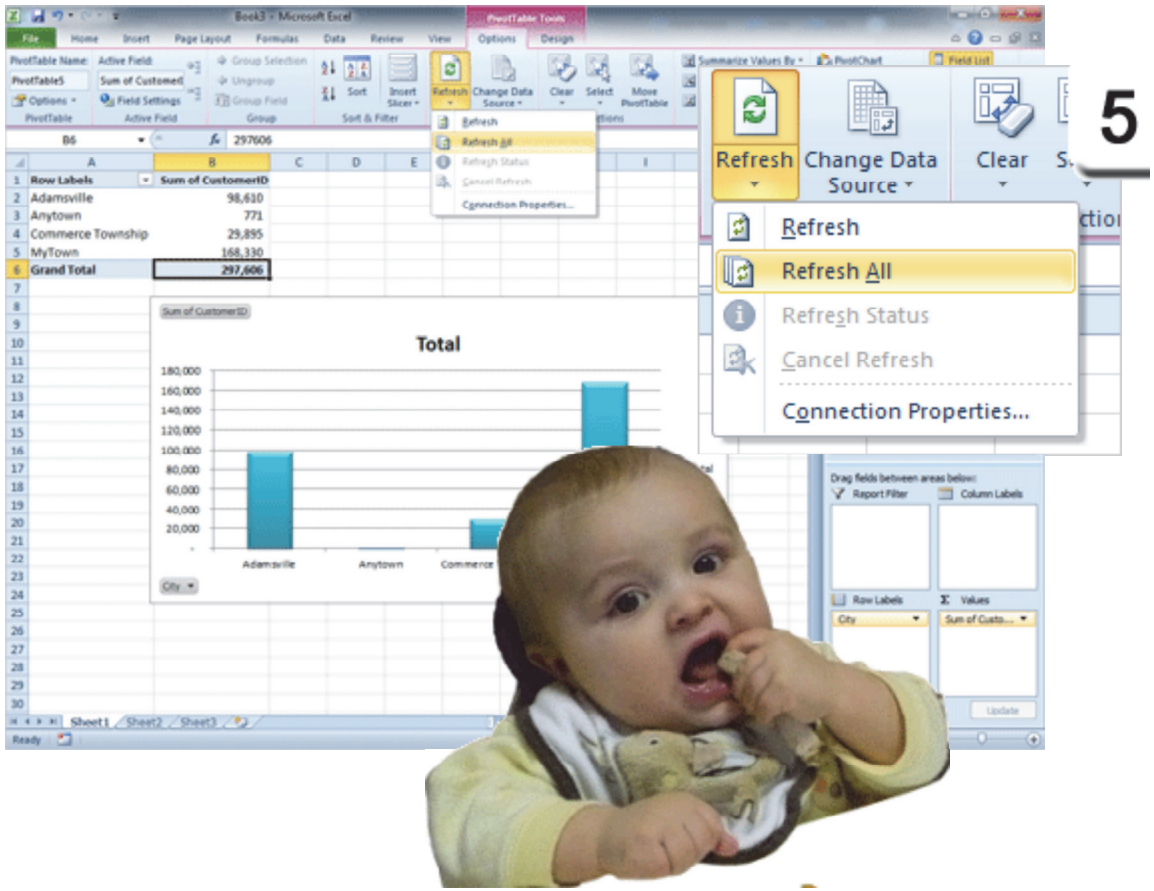
5. Try it: Refresh the Data
Click on the PivotTable Grand Total.
The PivotTable Tools should be available.
Go to **PivotTable Tools ->Data**.
Click on **Refresh**.

The options include:
Refresh
Refresh All
Refresh Status
Cancel Refresh

You can also manage the Connection Properties if you wish.

Very good.
You do NOT have to save this example.

PivotTable Tools ->Data ->Refresh



Summary

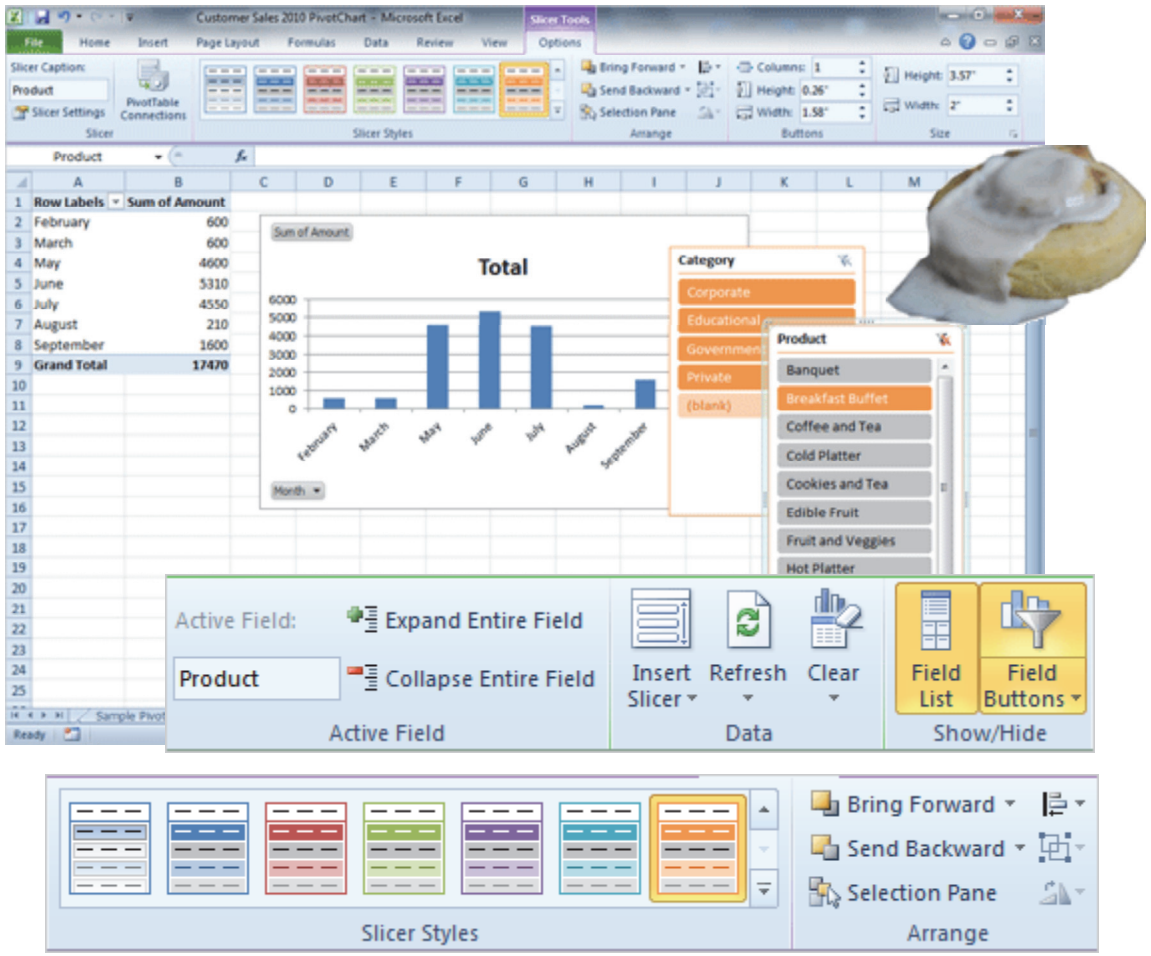
This discussion began by introducing the methods and options for displaying your data in a PivotChart.

There were several new Toolbars used in these pages. However, the PivotChart Design, Layout and Format Ribbons are very similar to the Table Ribbons we worked with in an earlier spreadsheet.

The new **Slicer** filters for PivotTables and PivotCharts works very well. That's one the Computer Mama will use at work.

Well, that was a loooong discussion. You get a cookie.





Practice

Lesson 4: What Did You See? (Formatting PivotCharts)

Before You Begin: Download the sample spreadsheet:
Brown Bag Sales Data.xlsx.

Try This: Do the following steps

1. Open the spreadsheet: Brown Bag Sales Data.xlsx..
2. Select Sheet 1and Insert a PivotChart on a New Worksheet.
3. Use the PivotChart Tools to Show the Field List
4. Edit the PivotTable Field List as follows:
   Axis Field: Product
   Values: Sum of Amount
5. Use the PivotChart Tool to the Chart Design:
   Change Chart Type: 3D Pie
   Chart Style: Style 6
6. Filter the Row Labels to show Breakfast Sandwiches, Coffee and Tea, and Fruit and Veggie.
7. Use the PivotChart Tools to edit the Chart Layout:
   Legend: None
   Data Labels: Outside End
   3-D Rotation: edit X to be 50
8. Save this a YOUR NAME What Did You See Practice.

Test Yourself

1. Which Ribbon has the Pivot Chart command?
a. Home
b. Insert
c. Data
d. View
Tip: Advanced Excel, page 123

2. Which of the following are Pivot Chart Tools ribbons?
a. Design
b. Layout
c. Format
d. Analyze
Tip: Advanced Excel, page 124

3. When inserting a new blank Pivot Chart, a Pivot Table is also created
a. True
b. False
Tip: Advanced Excel, page 125

4. Rows in a Pivot Table cannot be formatted with currency.
a. True
b. False
Tip: Advanced Excel, page 129

5. When the rows and columns of a Pivot Table are switched the Chart is switched as well.
a. True
b. False
Tip: Advanced Excel, page 133

6. Which of the following are Chart types that can be applied to a Pivot Chart? (Select all correct answers.)
a. Column
b. Line
c. Pie
d. Bar
Tip: Advanced Excel, page 135

7. Pivot Charts have Styles
a. True
b. False
Tip: Advanced Excel, page 140

8. A chart cannot be moved to a new spreadsheet after it's been created.
a. True
b. False
Tip: Advanced Excel, page 141

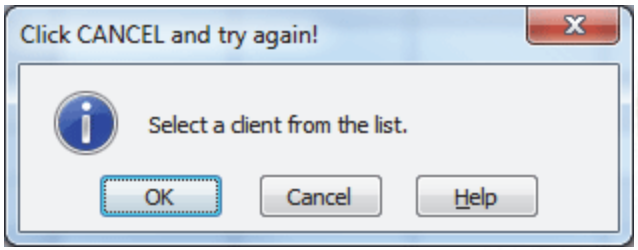
Excel 2010: Sharing and Collaboration

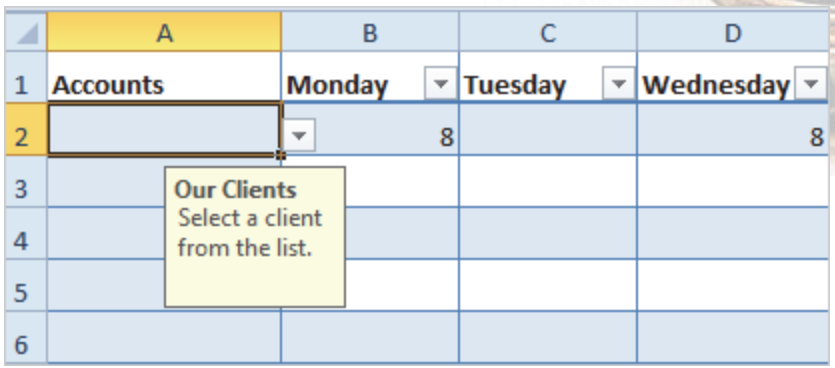
Form Design: Working Overtime

Advanced Excel Objectives

In this lesson, you will learn how to:

1. Enter data and fill a series
2. Enter data in a reference list
3. Create a drop-down list
4. Identify options for Data Integrity and Validation
5. Install the Developer's Ribbon
6. Create a Control with Visual Basic for Applications







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Lesson 5 Form Design: Working Overtime

1. Readings
Read Lesson 5 in the Advanced Excel guide, page 161-193.

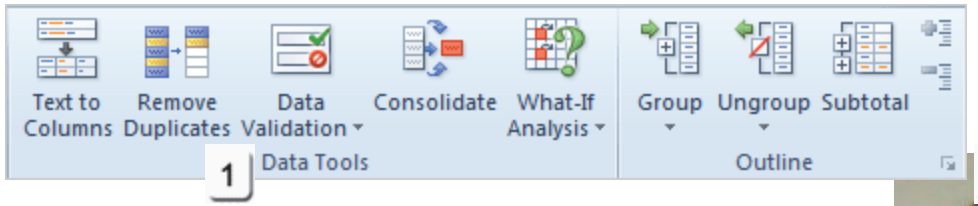
Project
This lesson shows how to create and modify forms, enter data with Combo Boxes and form controls, ensure data integrity using data validation.

Downloads
Time Sheet 2010.xlsx (Complete)

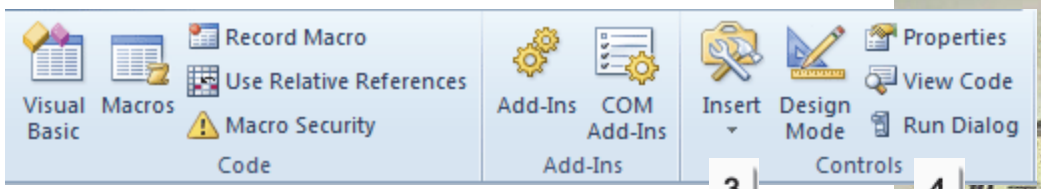
2. Practice
Review the Practice Activity on page 194.

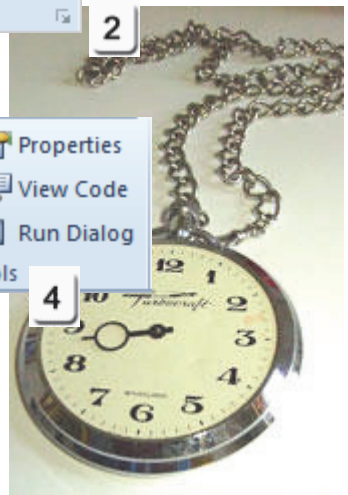
3. Assessment
Review the Test questions, page 194.

Data Ribbon



Developer Ribbon





Menu Maps

From the **Data Ribbon**.
1. Data ->Data Tools-> Data Validation, page 171

From the **Formulas Ribbon**.
2. Formulas ->Defined Names-> Define Name, page 175

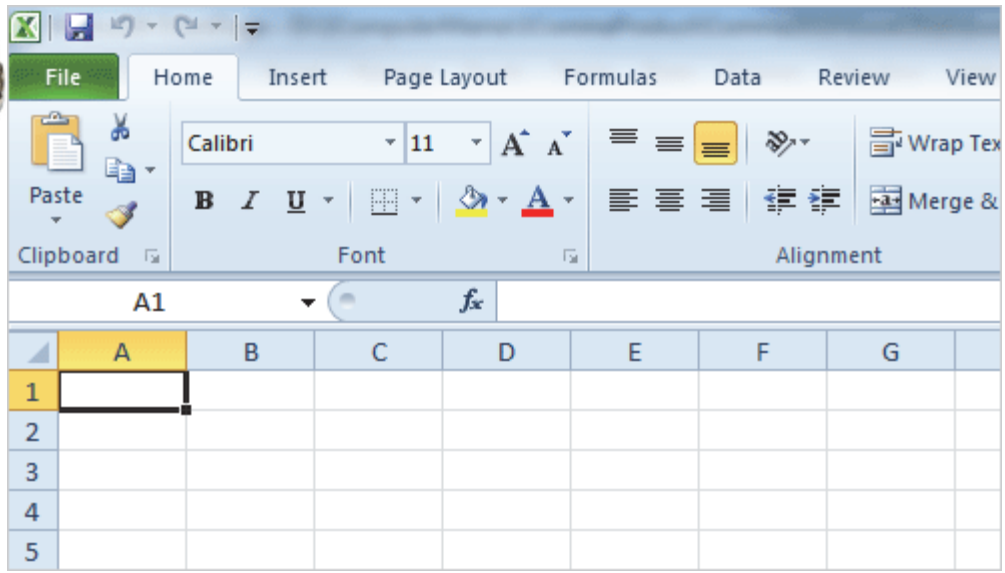
From the **Developers** Ribbon
3. Developer ->Controls->Insert->Combo Box, page 187
4. Developer ->Controls ->Properties, page 189



Creating Forms in Excel

Time is money. The Computer Mama gets paid by the hour, so she has to keep track of how long it takes to complete each task. The technical term is billable hours. Suppose you work for the same Accounts every week. What if you could just choose the Account from a list? Choosing the answer from a list has two benefits: the data entry is faster, and it is spelled correctly. This lesson shows how a little time invested into creating a form can save time again and gather accurate information.

Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010



Start Microsoft Excel

What Do You See? Is there a Title Bar that says Microsoft Excel? Yes.

Is there a Home Ribbon with the Clipboard, Font, Alignment and Number Groups? Yes.

If your screen looks similar to the one on this page, then you are ready to get started.

Take One

Begin with the Labels

There are three parts to a spreadsheet: labels, data, and formulas. Let's begin with the labels.

Before You Begin: Open a new, blank spreadsheet in Excel.

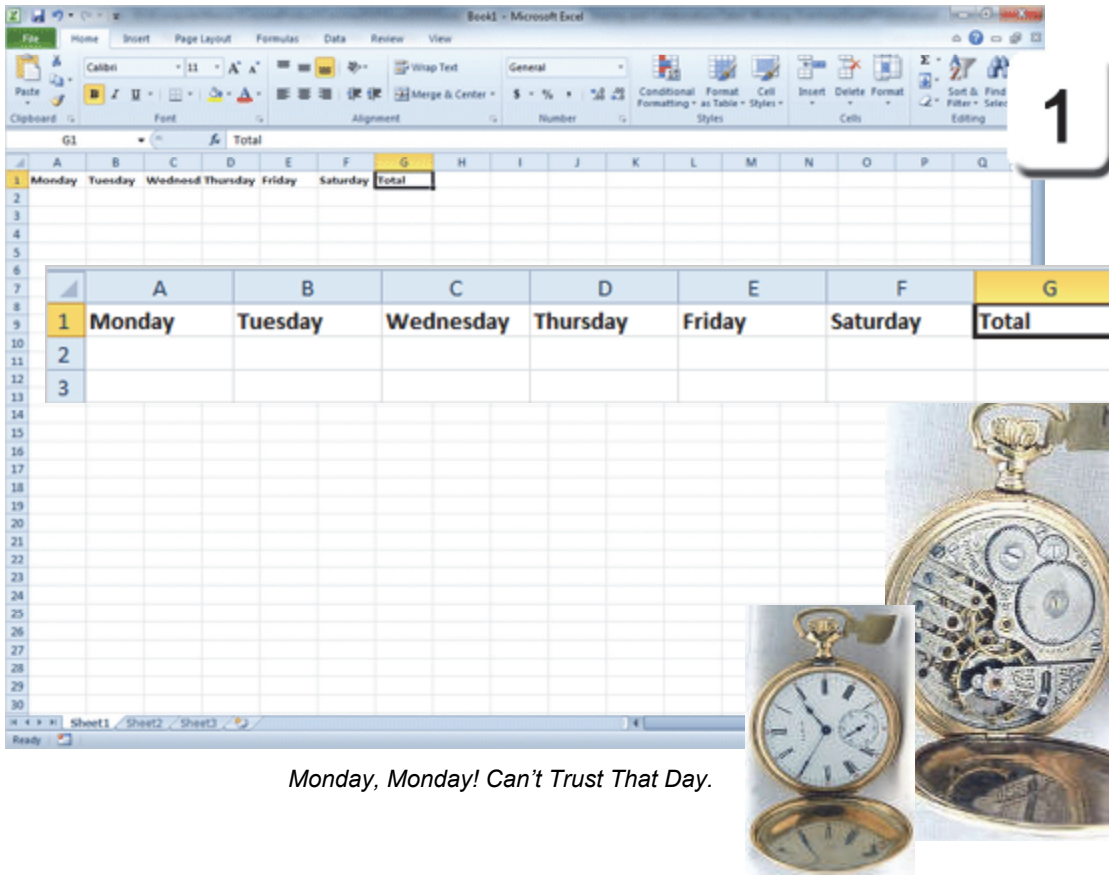
1. Try This: Enter the Labels
In Cell A1 type: Monday
Use the AutoFill Handle to fill in the series.
In Cell G1 type: Total

If these are labels (and they are):
Select Row 1.
Go to **Home->Font->Bold.**

Try This, Too: Format the Column Width
Select Columns A:G
Go to **Home->Cells->Format**.
Click on **Column Width**.
Enter the width: 12.

So far so good. Keep going...

Home->Font->Bold



Monday, Monday! Can't Trust That Day.

Take One

Calculate the Hours

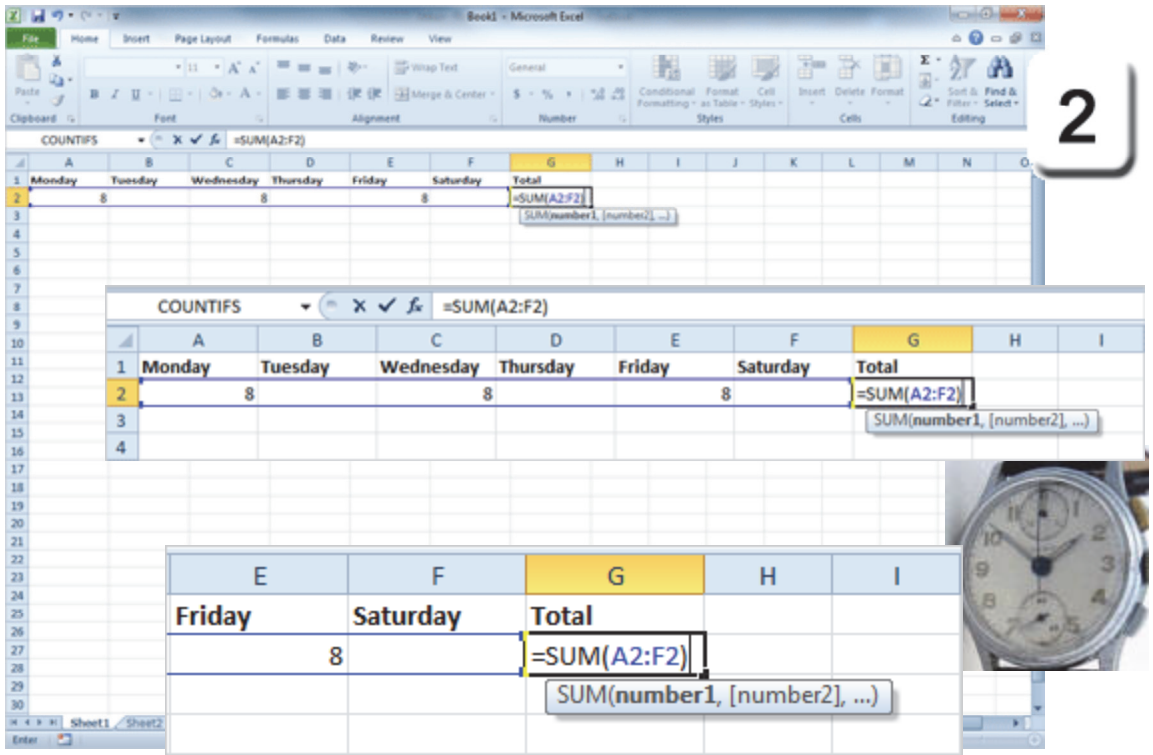
We need an equation to add up all of our hours. All good equations start with "=."

2. Try it: Calculate the Sum
In Cell G2 type: =SUM(A2:F2)

Try This, As Well: Verify Your Work
Say you worked 8 hours on Monday, Wednesday and Friday.
In Cell A2, C2 and E2 type: 8
Does the Sum equal 24?

Keep going...

Home ->Edit ->Sum



Take One

Home ->Edit ->Sum

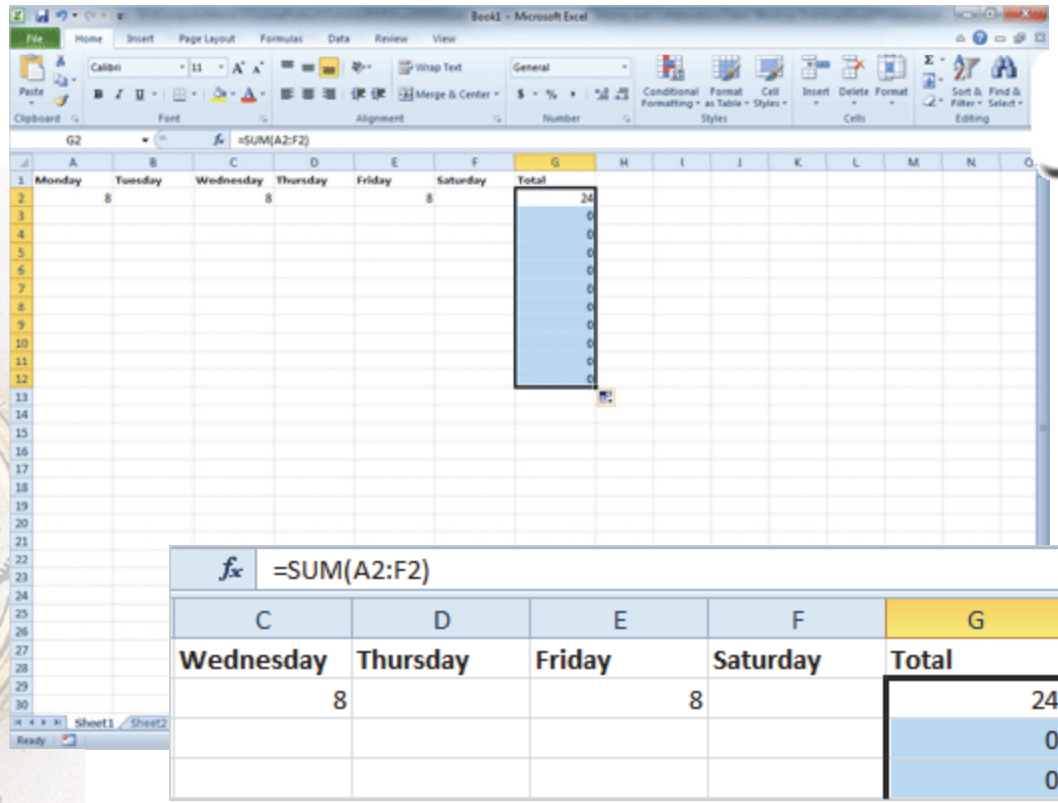
AutoFill the Formula

3. Try This: AutoFill the Total

Select Cell G2, the one with the formula for the Total. Use the **AutoFill** handle to copy the formula down to Row 12.

Keep going, please...





3

Take One

Format the Spreadsheet

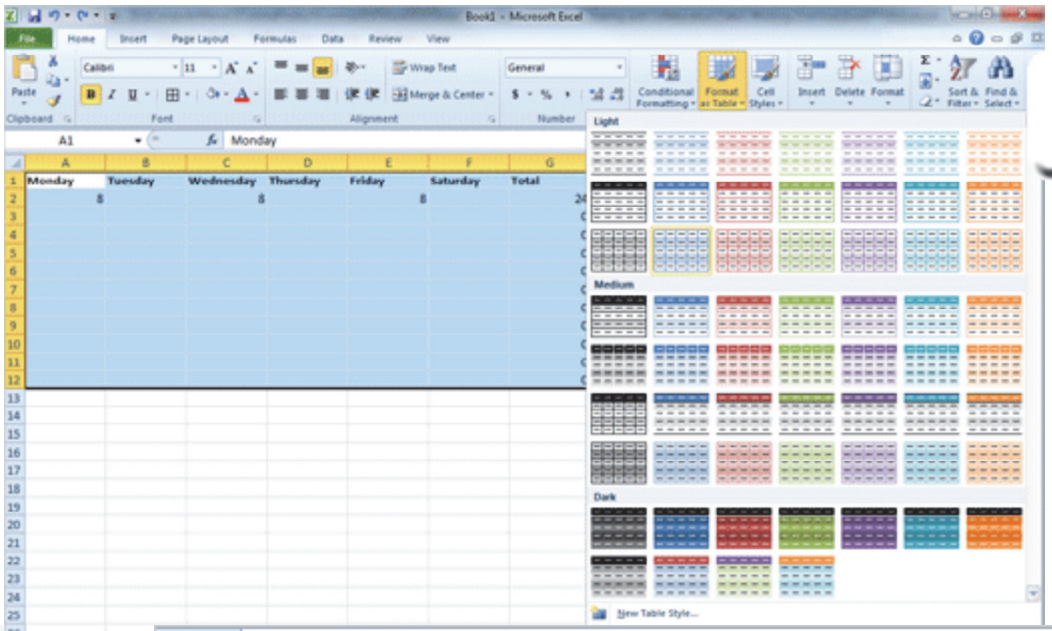
4. Try it: Format as Table
Select Cells A1:G12.
Go to **Home->Styles->Format as Table**.
Click on Table Style Light 16.

And Try This: Format the Rows
Select Cells A1:G12.
Go to **Home->Cells->Format..**
Click on **Row Height**.
When you are prompted type: 20.

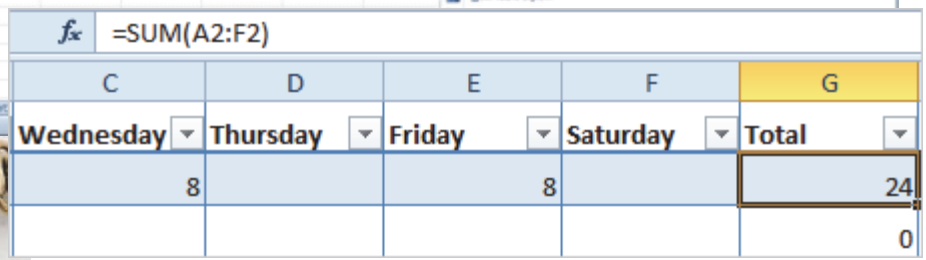
What Do You See? The Cell formatting makes it easy to pick the right Row. The Row Height was increased to make the Rows big enough to write in by hand if someone uses this form as a print out.

Keep going...

Home ->Styles->Format as Table







4

Exam 77-882: Microsoft Excel 2010 Core
3. Formatting Cells and Worksheets
3.1. Apply and modify cell formats

Take One

AutoSum the Hours

This timesheet will calculate the daily total. For example, how many hours did you work on Monday?

5. Try it: AutoSum the Data
Select Cell A13.
Go to **Formulas ->AutoSum ->Sum.**

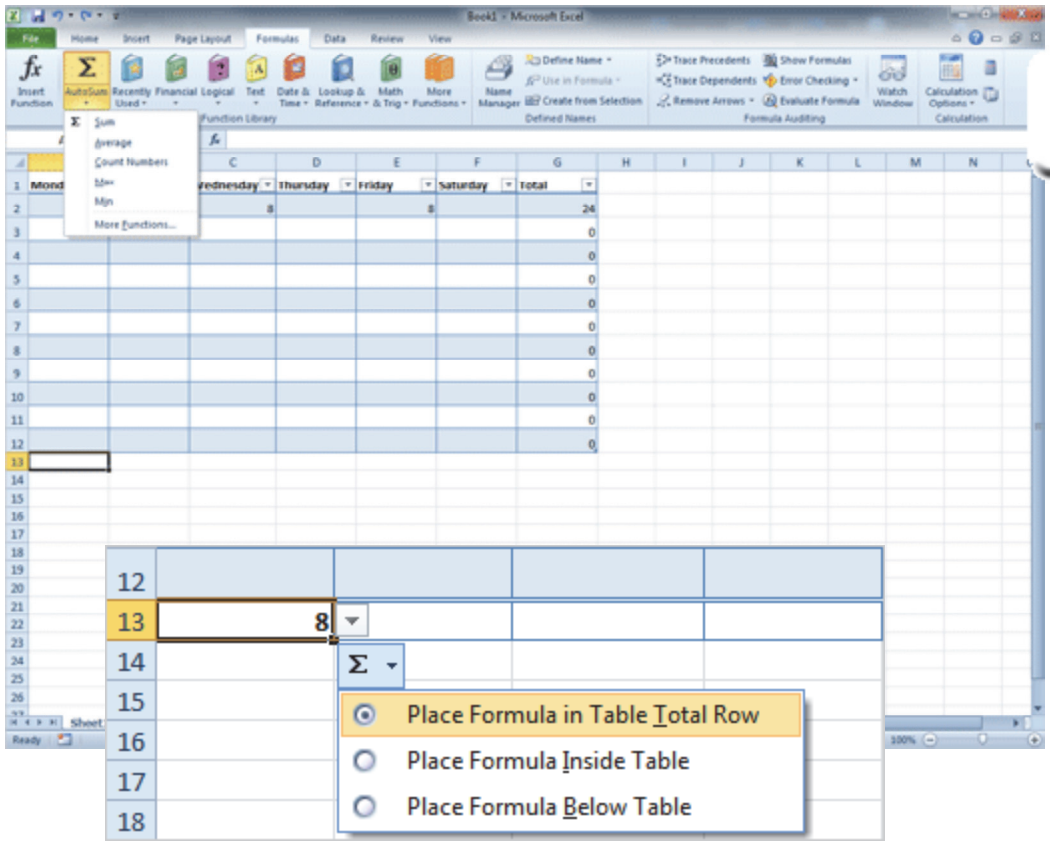
What Do You See? The formula in Cell A13 is =SUBTOTAL(109,[Monday])

What Else Do You See? The AutoCorrect options allows you to select the following:
Place Formula in Table Total Row
Place Formula Inside Table
Place Formula Below Table.

Pick **Place Formula in Table Total Row.**
Keep going...!

Memo to Self: You may have been expecting a formula that looked like this: **=SUM(A2:A12).**
This is a Table, so the function is different.

Formulas ->AutoSum ->Sum



5

Take One

AutoFill the Formula

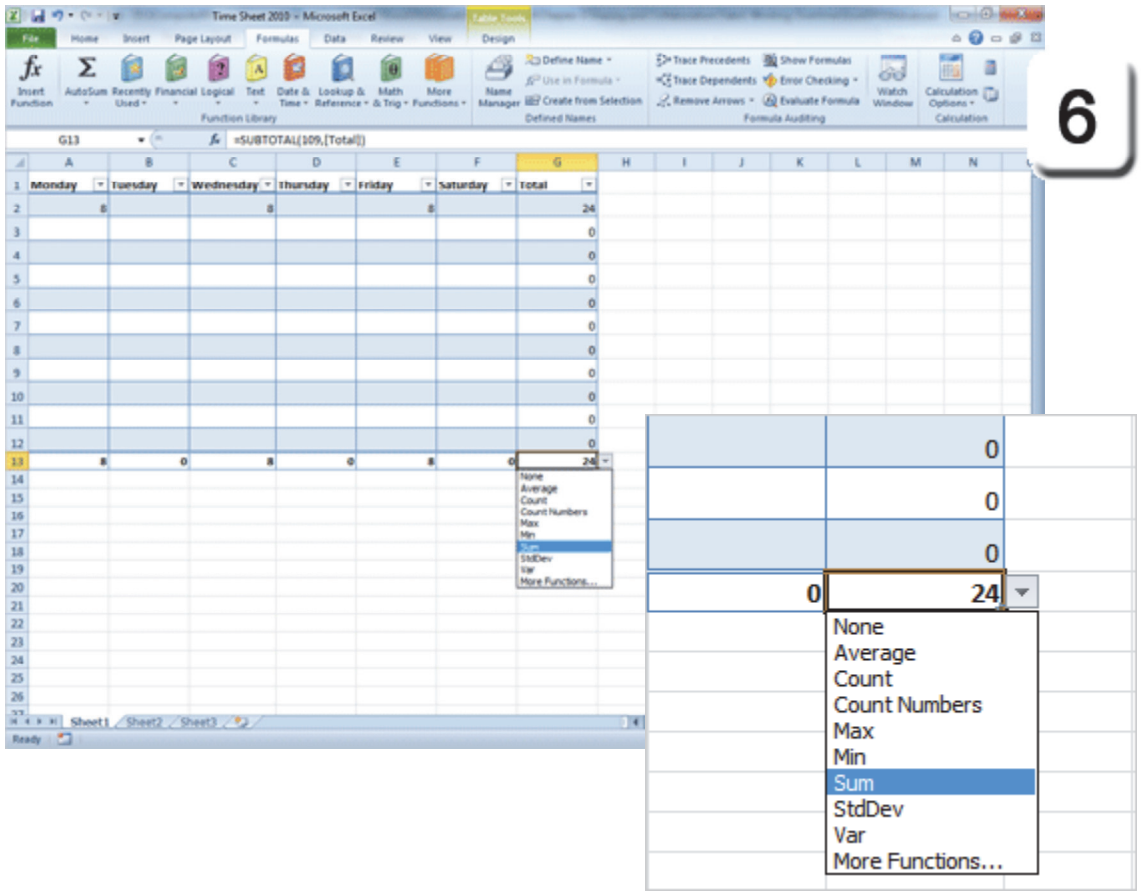
You can use AutoFill to copy the formula to all of the Cells in Row 13 from Column A through Column G.

6. Try it: AutoFill the Formula
Select Cell A13.
Use the AutoFill handle to copy the formula to B13 through G13.

What Do You See? The Total Row in a Table has options. When you click on a formula in the Total Row, you can choose which function you would like to use.

Keep going...

Formulas ->AutoSum ->Sum



Take One

Insert Columns

Suppose we work for more than one company. How can we show that?

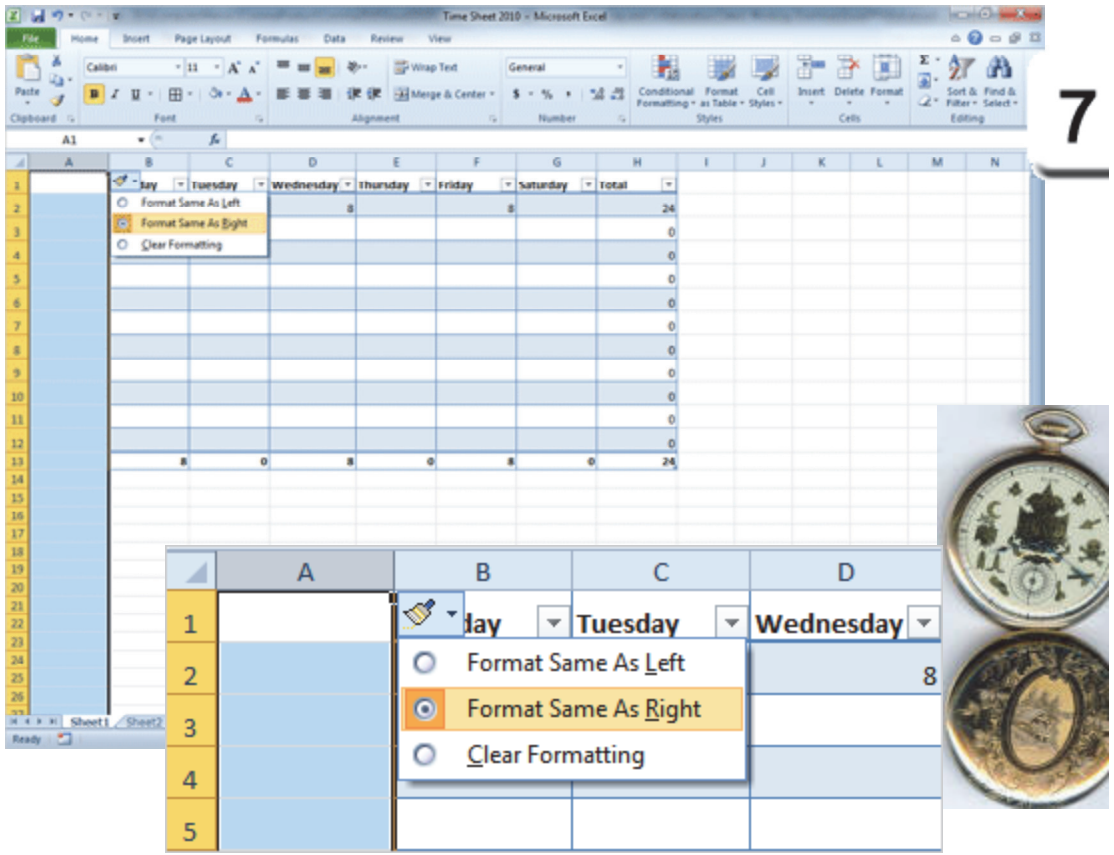
7. Try This: Add a Column
Select Column A.
Go to **Home->Cells->Insert.**
Click on **Insert Sheet Columns**.
There will be a new, blank Column A.
Click on Cell A1 and type: Accounts.

Try This, Too: Labels Should Be Bold
Select Row 1 and make the labels bold by going to **Home->Font->Bold**.

And Try This: Labels Should Fit
When you insert a Column, you may see the Format Painter. The options include:
Format Same as Left
Format Same as Right
Clear Formatting.

Click on **Format Same as Right**
Rename this spreadsheet: Timesheet.
Keep going, please.

Home ->Cells ->Insert-> Insert Sheet Columns



7

Take One

Data Validation

Data Validation is used to ensure data integrity. **Data Integrity** means the user typed in the value that belongs to the cell.

Data Validation compares what the user types and alerts them if they typed something that did not match.

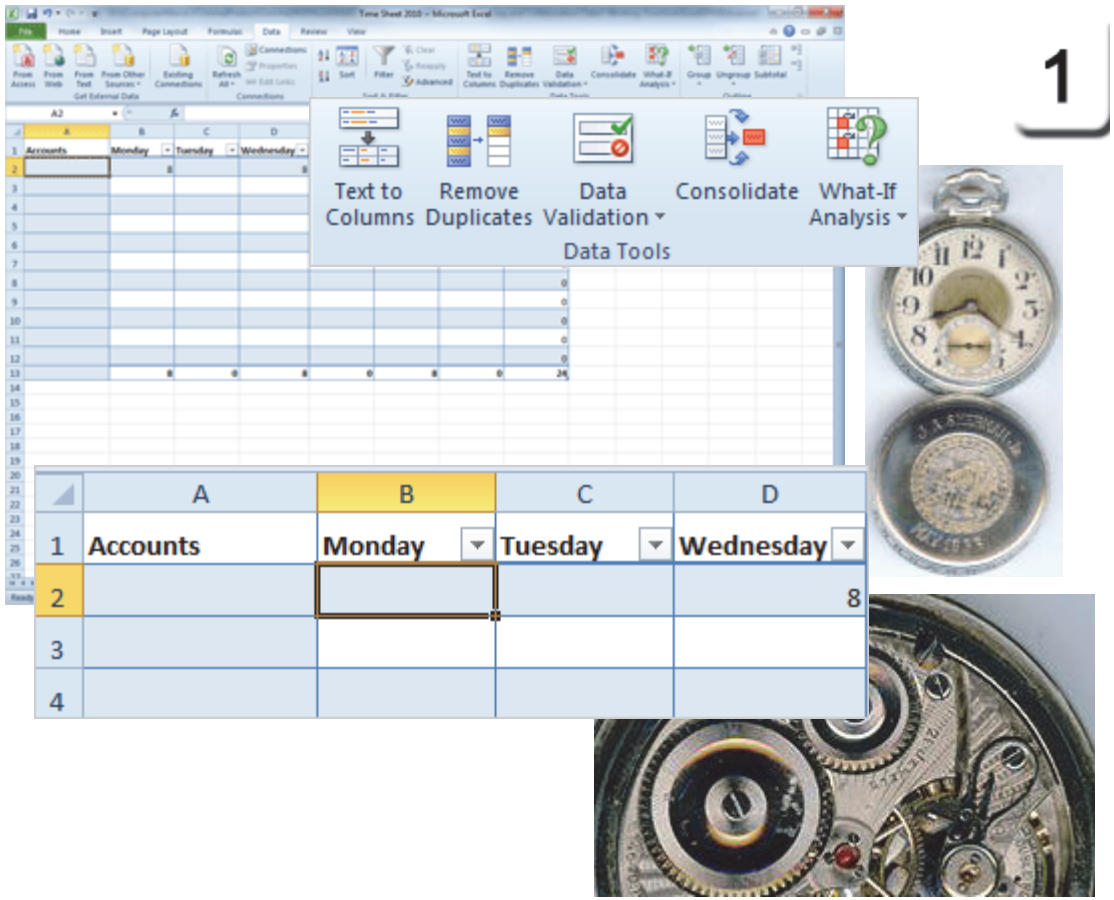
For example: Did your users enter today's date instead of number of hours in the time sheet? If they make a mistake Data Validation would alert them with an error message.

Better yet, the message would give them enough information to correct their mistake and try again.

1. Try it: Practice with Data Validation
Select Cell B2.
Delete any sample data, please.
Go to **Data ->Data Tools-> Data Validation.**

Keep going...

Data ->Data Tools-> Data Validation



1

Take One

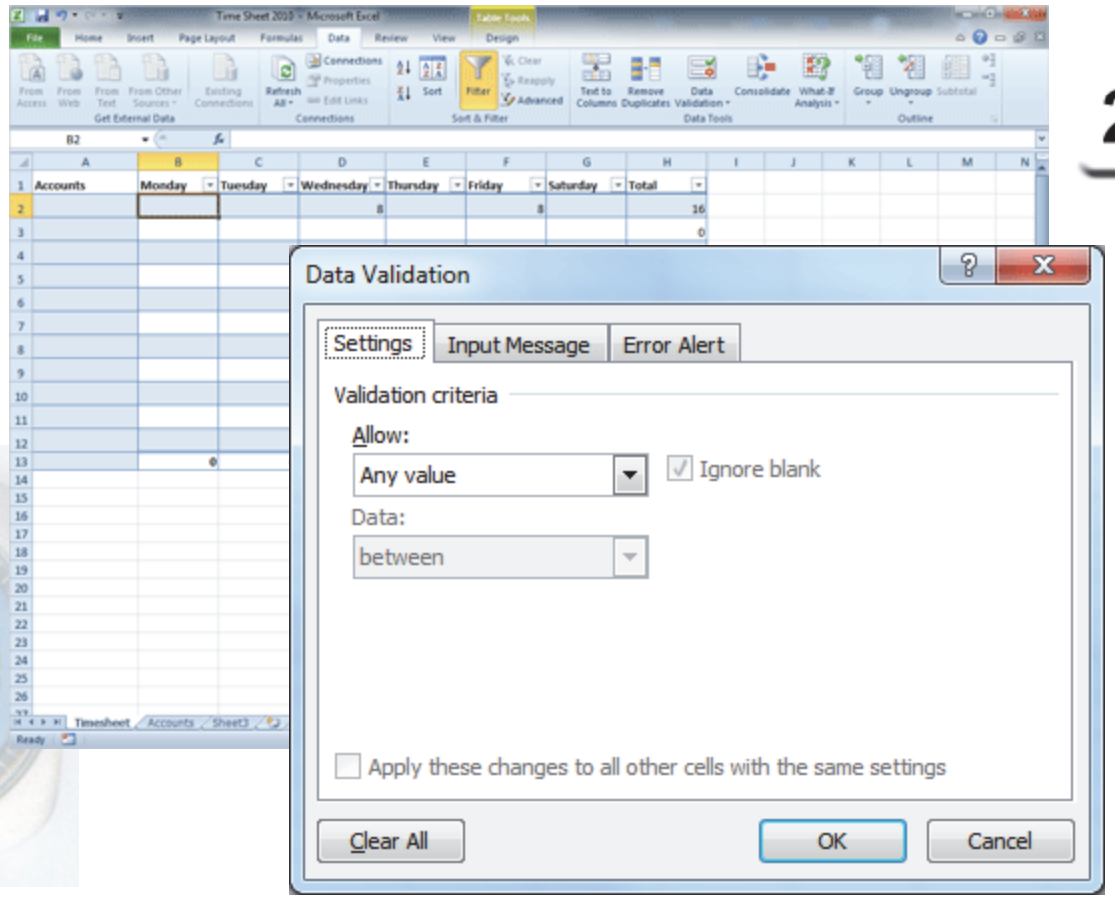
Data Validation: Settings

2. What Do You See? Data Validation has three tabs: Settings, Input Message and Error Alert.

What Else Do You See? By default, Microsoft Excel accepts **Any value**: you can enter an equation or type the words to *Good Night, Moon*.

Keep going...

Data ->Data Tools-> Data Validation





2

Take One

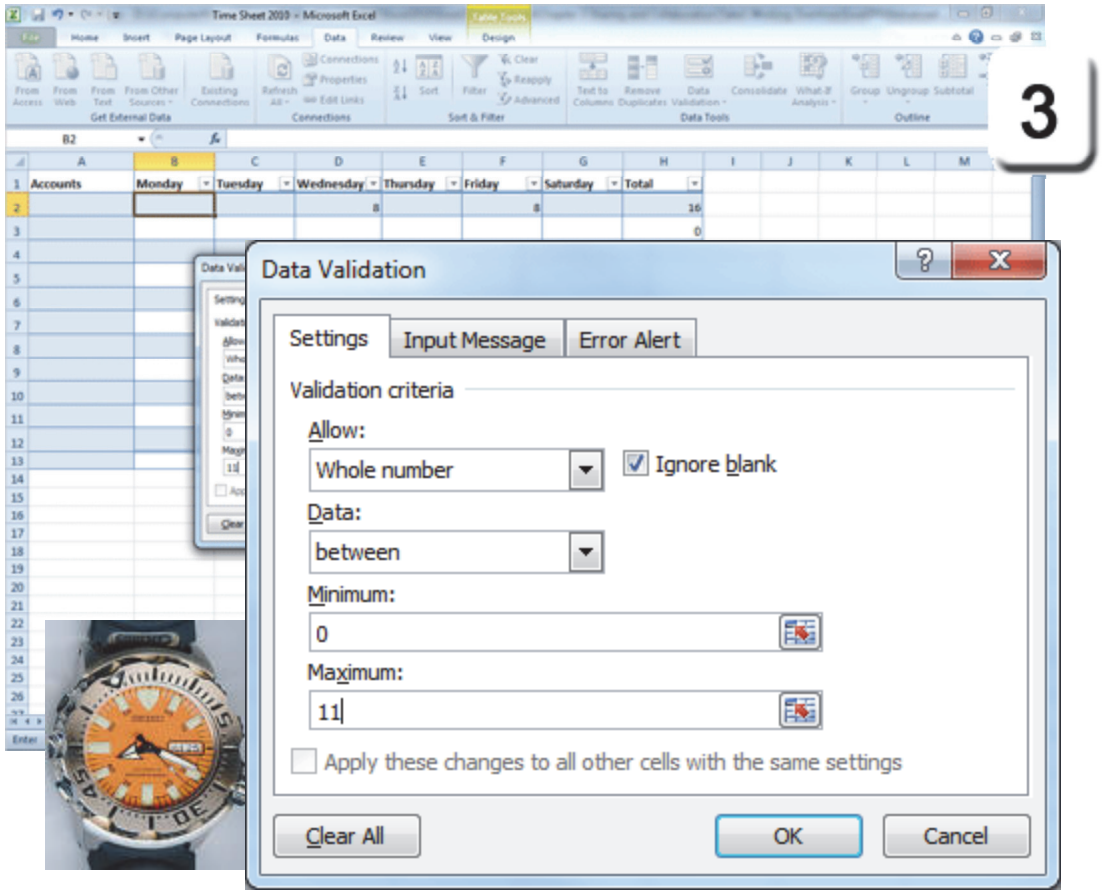
Data Validation: Settings

Pick a Number from 1 to 10
Here is an example that allows a Whole Number between 0 and 11.

3. Try it: Enter the Validation criteria
Allow: Whole Number
Data: between
Minimum: 0 (that's a zero)
Maximum: 11

Click **OK** and keep going...

Data ->Data Tools-> Data Validation



Take One

Test the Settings

4. Try it: Enter an invalid number
Go to Cell B2.
Type: 12
Click Tab or Enter to leave the cell.

What Do You See? Well, it's a Microsoft error message: completely accurate but not exactly clear.

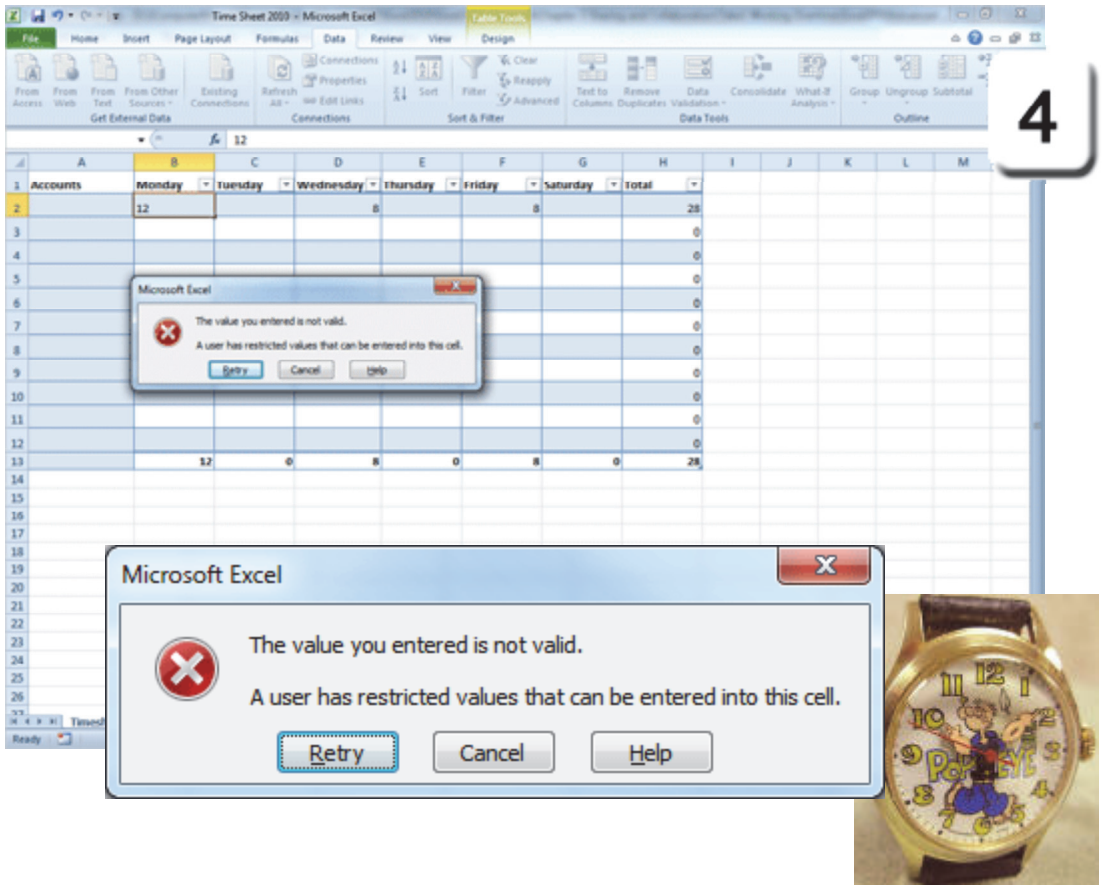
There are three error options:
Retry: leaves the wrong number in Cell B2.
Cancel: Clears the wrong number in Cell B2.
Help: Opens a Help article.

Say this is the first time you saw this error message. How would you know what each button meant? Keep that in mind...

Click CANCEL. Cell B2 should be empty.

So far, so good. Let's investigate a different validation criteria, please.

Data ->Data Tools-> Data Validation



Take One

Create a Drop Down List

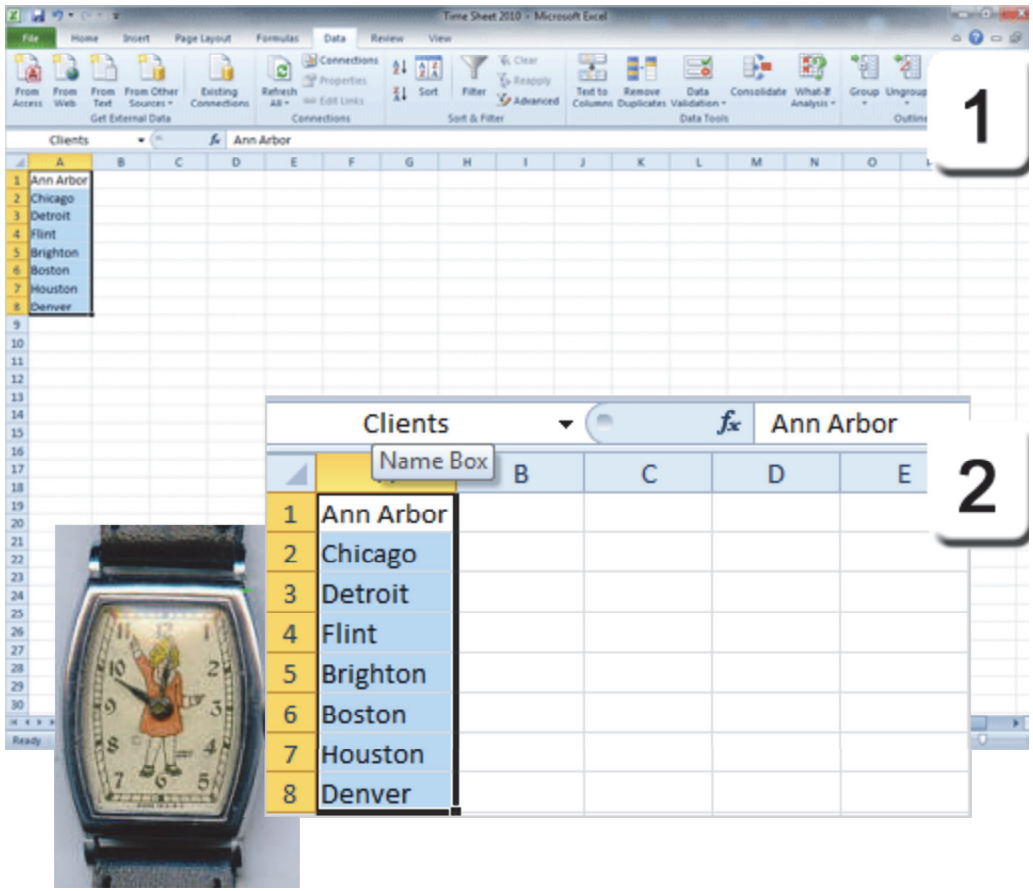
You can use **Data Validation** to create a **Drop Down List** that looks up the values in a table. This Timesheet will lookup a list of clients in a Table. The clients will be names of cities in this example.

There are 3 steps to creating a Drop Down List
1. Create the reference table
2. Name the reference table
3. Use the Named Range in the Validation Settings.

1. Try This: Create the Reference Table
Go to a blank spreadsheet. Enter the following:
In Cell A1 type: Ann Arbor
In Cell A2 type: Chicago
In Cell A3 type: Detroit
In Cell A4 type: Flint
In Cell A5 type: Brighton
In Cell A6 type: Boston
In Cell A7 type: Houston
In Cell A8 type: Denver

2. Try This, Too: Name the Reference Table
Select A1:A8.
Name the Range: Clients.

Formulas ->Defined Names-> Define Name



Take One

Data Validation: Settings

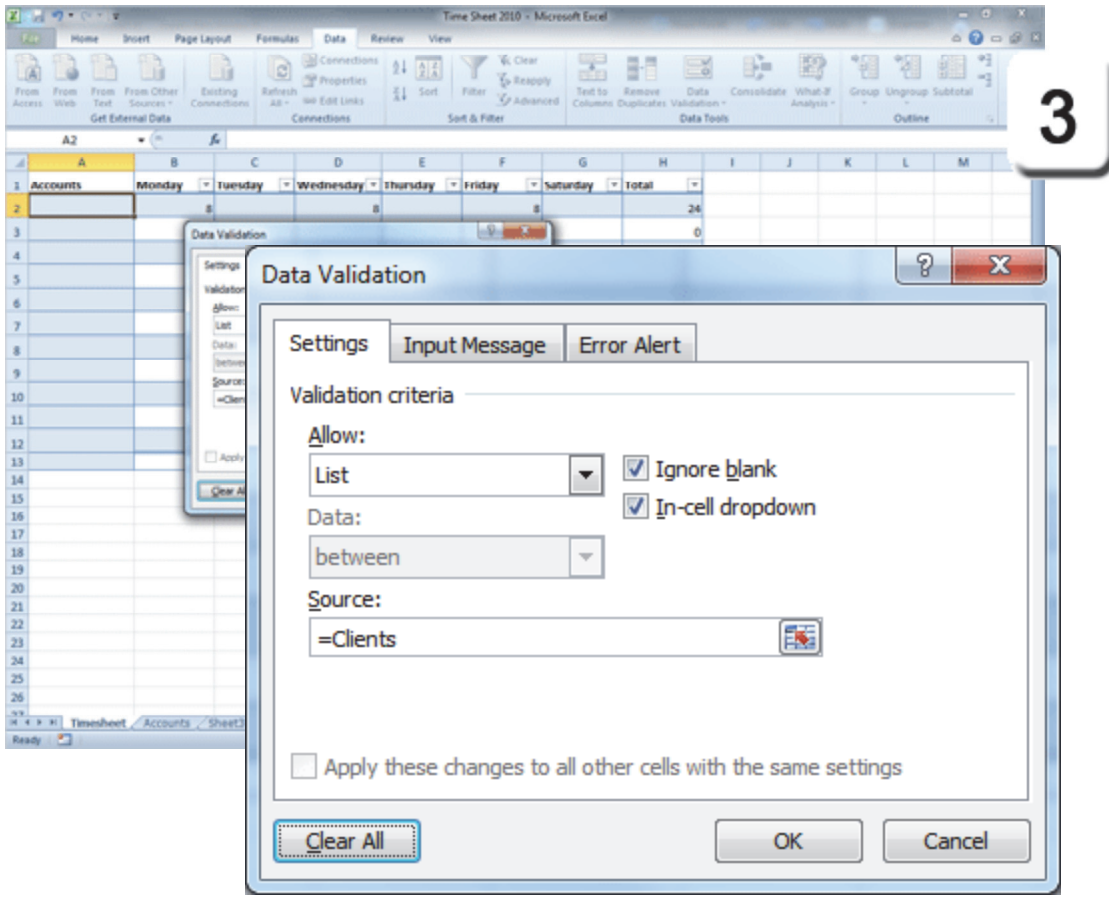
Before You Begin: Rename the Sheet
Double-click the tab.
Rename the sheet: Accounts.

3. Try This: Create a Drop Down List
Go to the Time Sheet.
Select Cell A2.
Go to **Data ->Data Tools-> Data Validation.**
Allow: List
Source: =Clients

Keep going...

Memo to Self: All equations begin with equals. (=). Clients is the Name of the reference table.

Data ->Data Tools-> Data Validation



Take One

Data Validation: Input Message

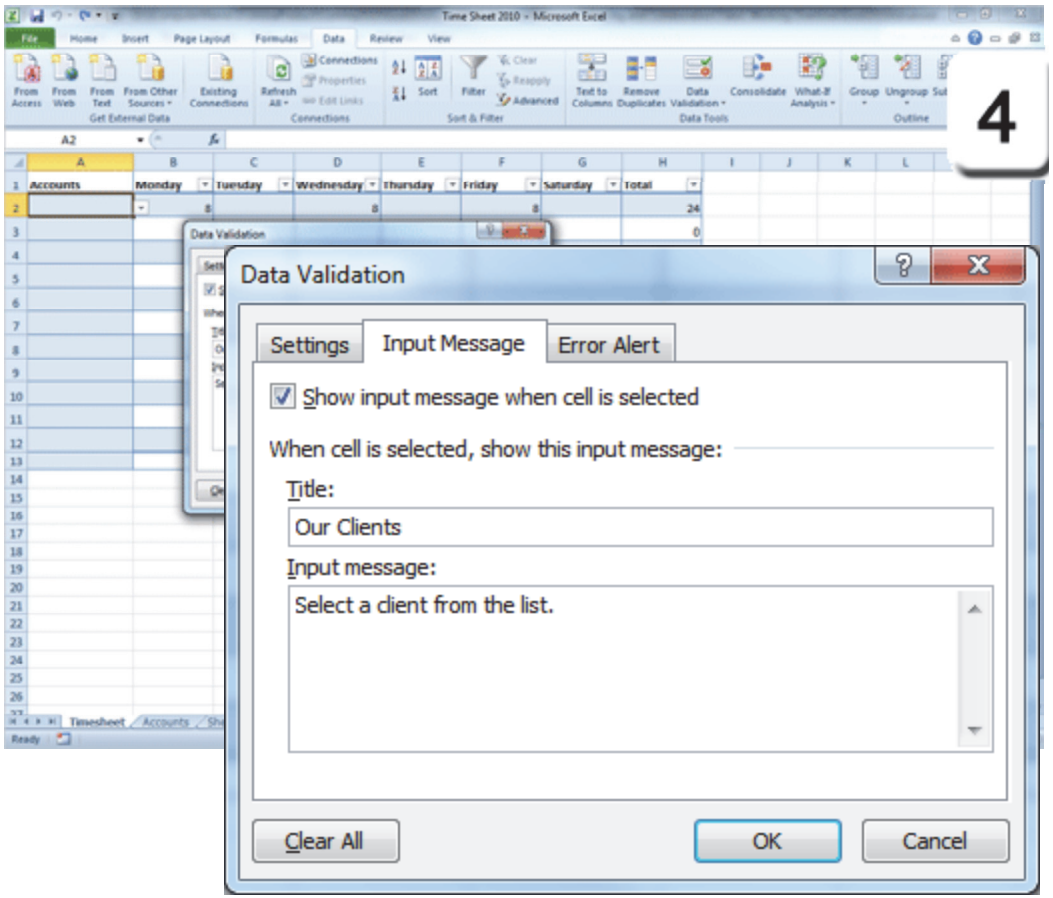
Who wants to be successful? Yes, anyone who fills out your form hopes to complete the task quickly and correctly. So, use the **Input Message** to teach them how to fill in the blanks. Here are the steps:

4. Try This: Edit the Input Message
Go to the Input Message Tab.
Please type the following:
Title: Our Clients
Input Message: Select a client form the list.

Keep going...!



Data ->Data Tools-> Data Validation



Exam 77-888: Microsoft Excel Expert 2010
2. Applying Formulas and Functions
2.4. Apply functions in formulas: Data Validation Input Message

Take One

Data Validation: Error Alert

The **Error Alert** prompts people to fill in the right data. The Error Alert has a Title, Error message and a Style.

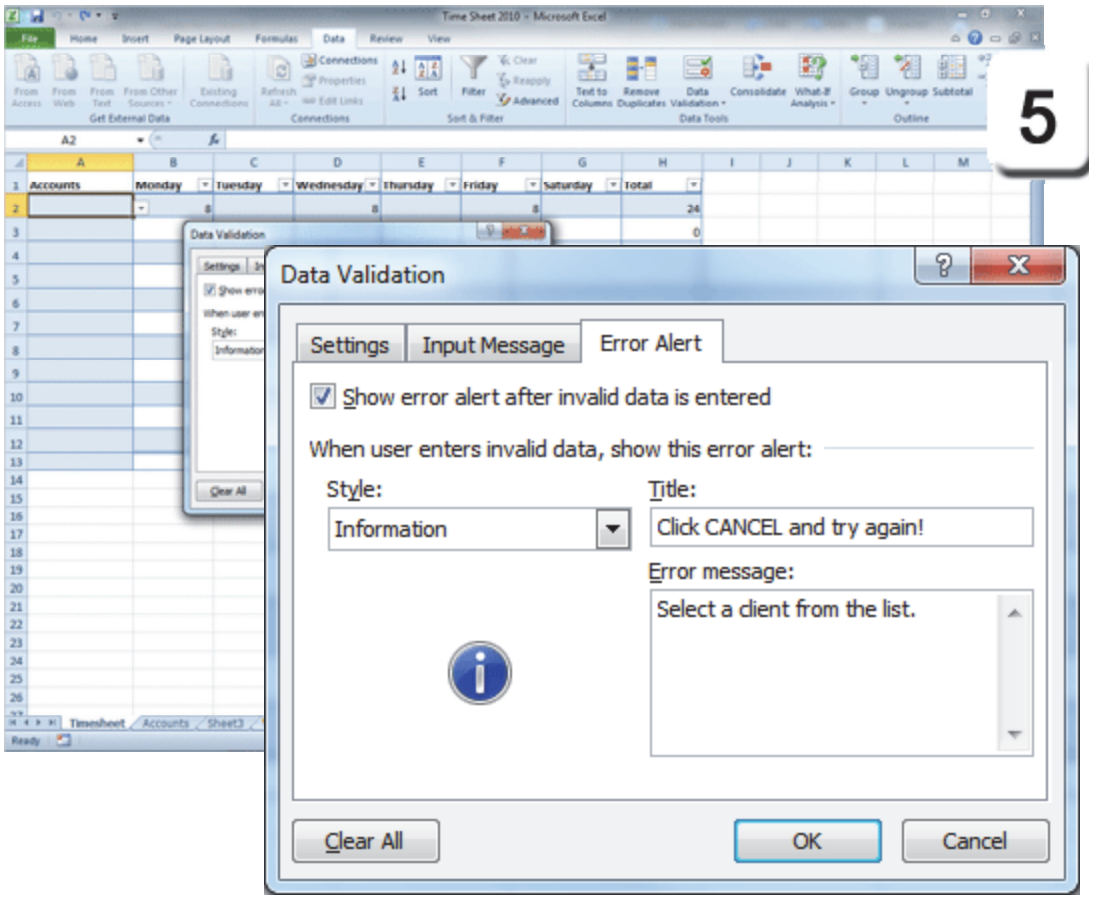
5. Try it: Edit the Error Alert
Go to the Error Alert Tab.
Select the Style: Information
Title: Click CANCEL and try again
Error Message: Select a client from the list.

Click **OK** and keep going...

Memo to Self: There are three **Styles** of Error Alerts: Stop, Warning, or Information. Each one has a different symbol and a different sound. Something as simple as picking a name from a list is Information, not a Critical Stop with every bell and whistle firing....really.

The Computer Mama has a theory that the more you help your users, instead of scaring the wits out of them, the more they will be inclined to use your forms.

Data ->Data Tools-> Data Validation



Exam 77-888: Microsoft Excel Expert 2010
2. Applying Formulas and Functions
2.4. Apply functions in formulas: Data Validation Error Alert

Take One

Data Validation: Try it

What Do You See? The Input Message has a title and little bit of help.

What Else Do You See? Cell A2 has a Drop-Down list.

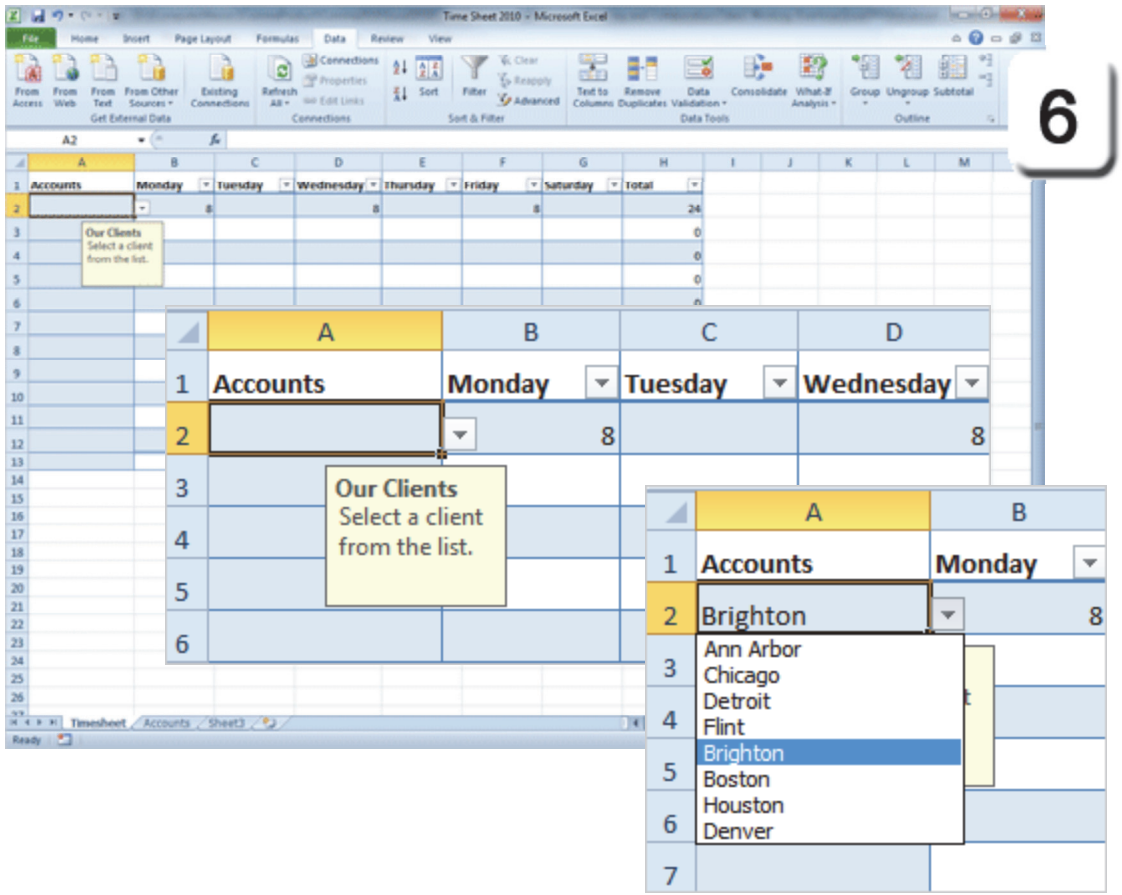
6. Try it: Select a Name from the List
Go to Cell A2.
Select Brighton from the list.
Click TAB on the keyboard to go to B2.

Very good. Keep going...!

What If It Doesn't Work? There are two parts to testing a Drop Down list.
1. Can you see the list?
2. Can you click on a list on the list?

If you cannot see the list, then the name for your reference list is spelled wrong or you forgot to include the equals (=) sign in your Settings.

Data ->Data Tools-> Data Validation



Exam 77-888: Microsoft Excel Expert 2010
2. Applying Formulas and Functions
2.4. Apply functions in formulas: Data Validation

Take One

Data Validation: Errors

What happens if you type a name that is NOT on the list...as many users do?

7. Try it: Type the Wrong Name
Go to Cell A2.
Type: Lansing.
Click TAB on your keyboard to go to B2.

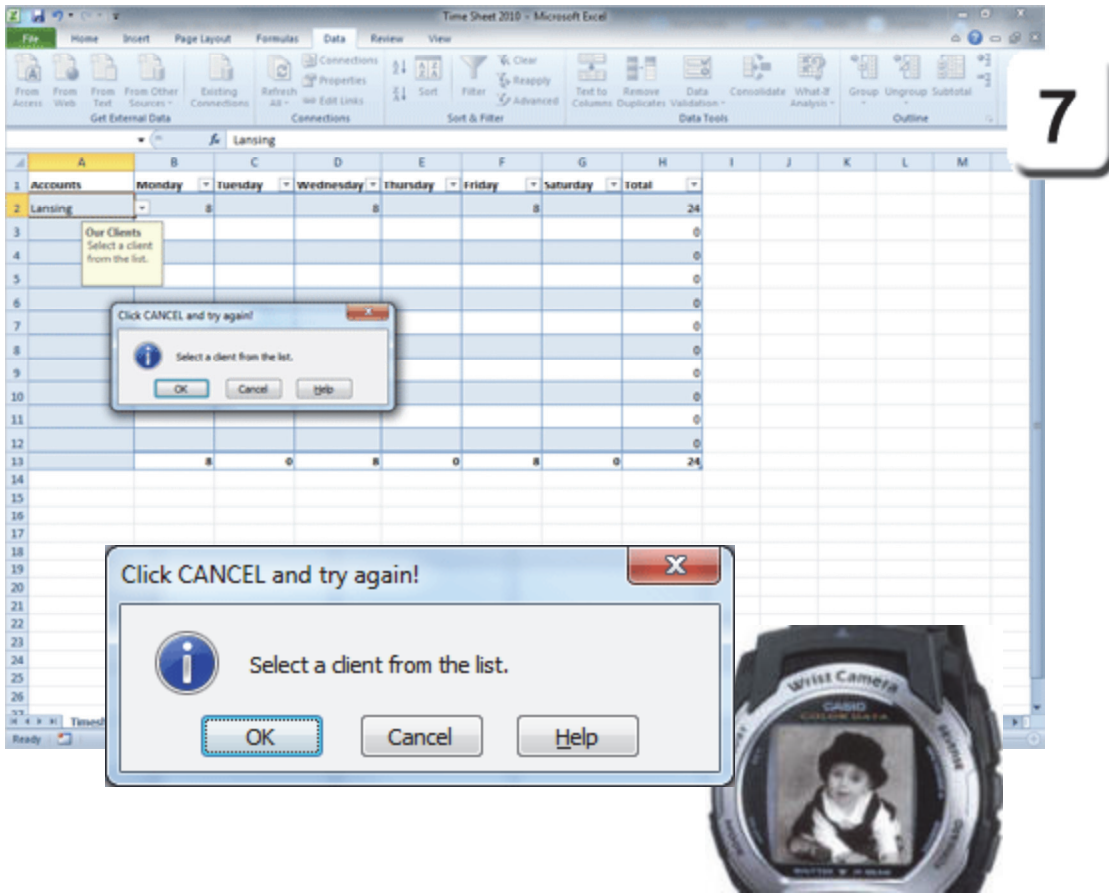
What Do You See? If the data does not match--hence it isn't valid--then you will be prompted with your Error Alert.

What Did You Hear? Did you hear a little chime when you tabbed out of Cell A2?

What Are the Options? If you click **OK** you will return to Cell A2, but leaves the wrong name there. If you click **CANCEL** then you will return to Cell A2 and it will be empty.

Click **CANCEL**, please.

Data ->Data Tools-> Data Validation



Exam 77-888: Microsoft Excel Expert 2010
2. Applying Formulas and Functions
2.4. Apply functions in formulas: Data Validation

Take One

Data Validation: Summary

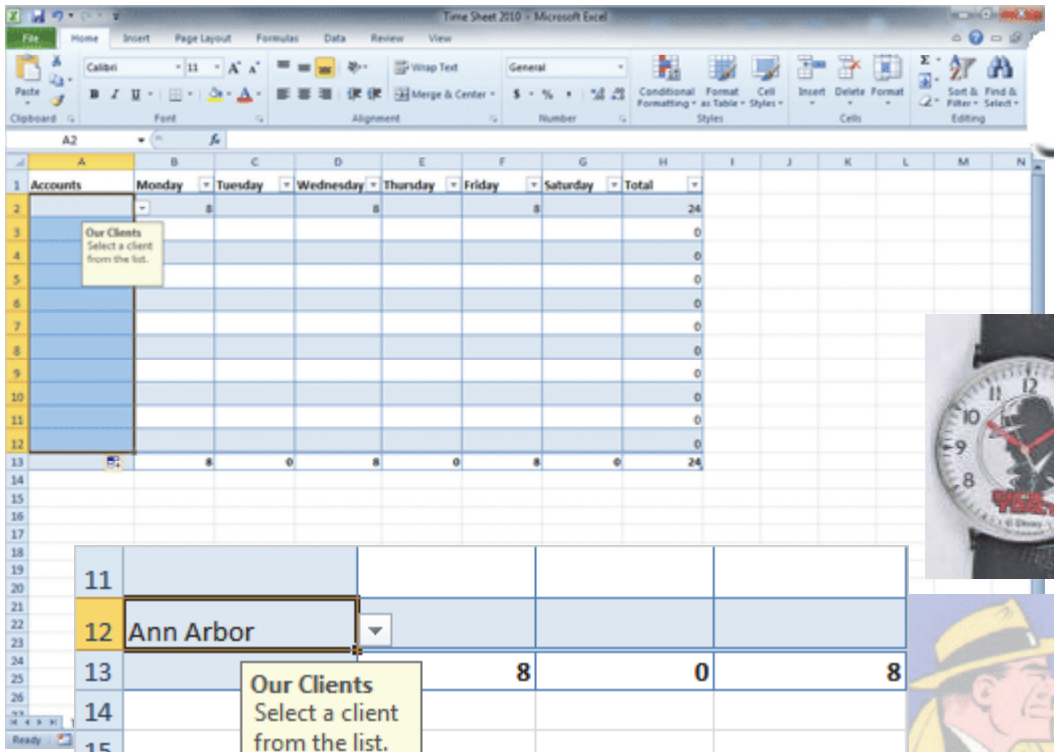
You can Autofill the Data Validation--including the Input Message and Error Alert--to the rest of the cells in Column A.

8. Try it: Autofill the Data Validation
Select Cell A2.
Use the Autofill handle to copy and paste the Data Validation from A2:A12

Do This, Too: Save Your Work
Go to **File->Save**.
File Name: Your Name Time Sheet

You done good.

Data ->Data Tools-> Data Validation







8

Exam 77-888: Microsoft Excel Expert 2010
2. Applying Formulas and Functions
2.4. Apply functions in formulas: Data Validation

Take One

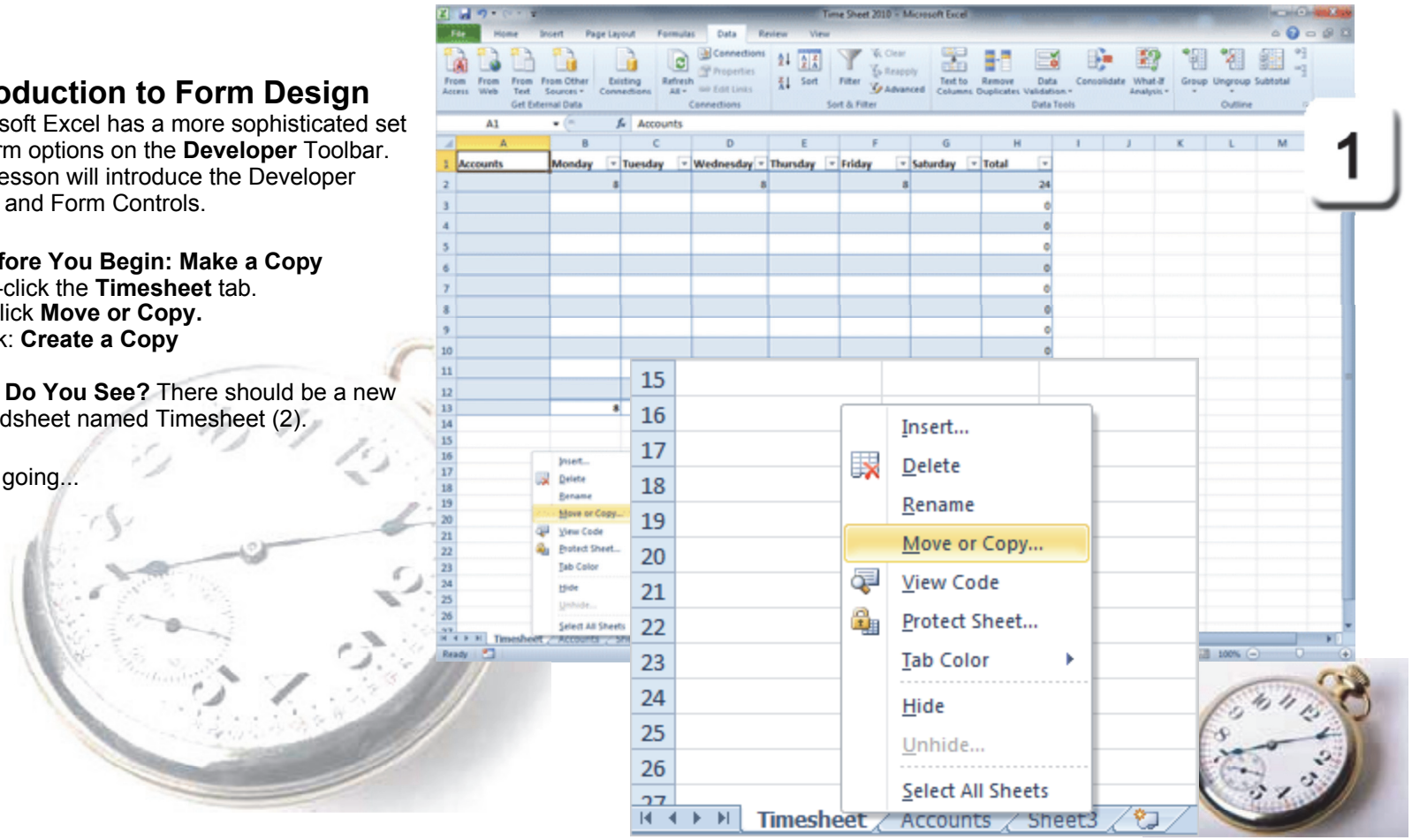
Introduction to Form Design

Microsoft Excel has a more sophisticated set of Form options on the **Developer** Toolbar. This lesson will introduce the Developer Tools and Form Controls.

1. Before You Begin: Make a Copy
Right-click the **Timesheet** tab.
Left-click **Move or Copy.**
Check: **Create a Copy**

What Do You See? There should be a new spreadsheet named Timesheet (2).

Keep going...



Take One

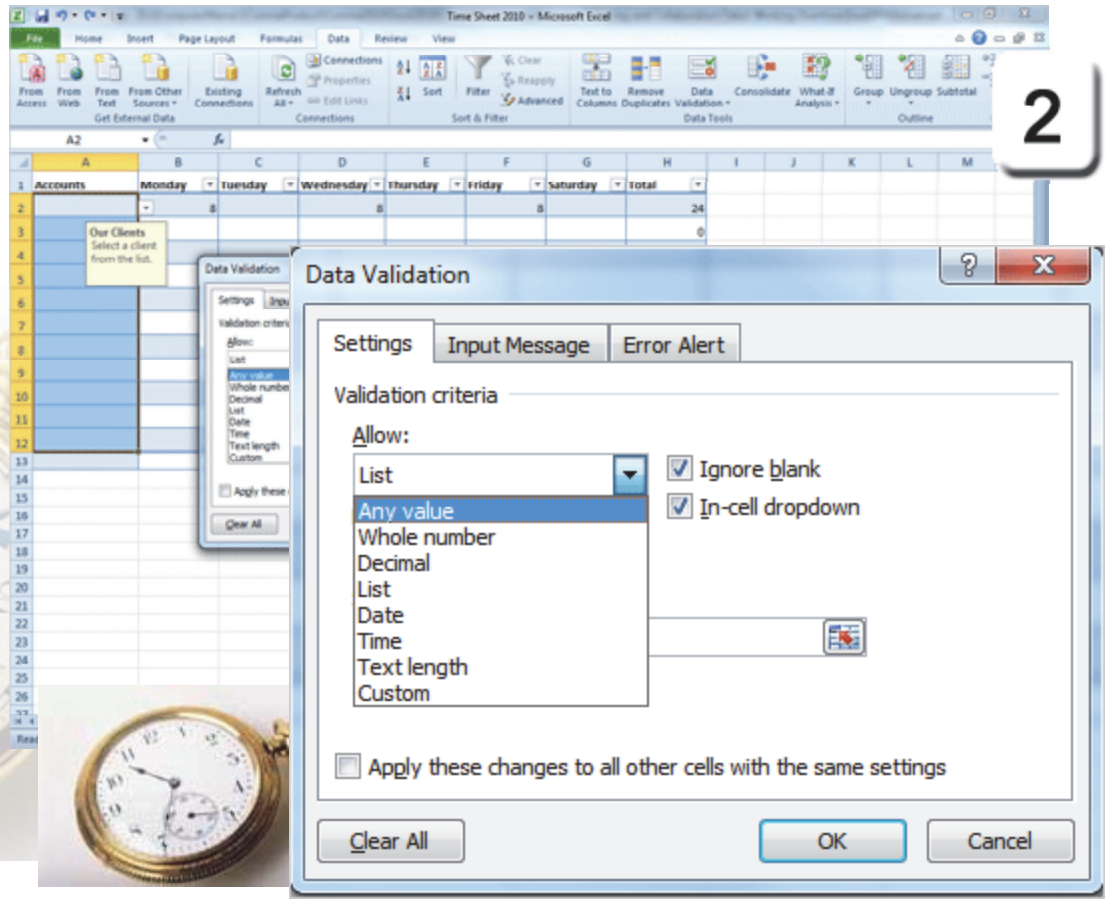
Still Before You Begin

The spreadsheet that we just copied has cells formatted with Data Validation. Here are the steps to remove those settings.

2. Try it: Change the Validation Criteria
Go to Timesheet (2).
Select Cells A2:A12.
Go to **Data ->Data Tools-> Data Validation**.
Click on **Clear All.**

Click **OK**. Keep going...

Data ->Data Tools-> Data Validation



Take One

Find the Developer Tools

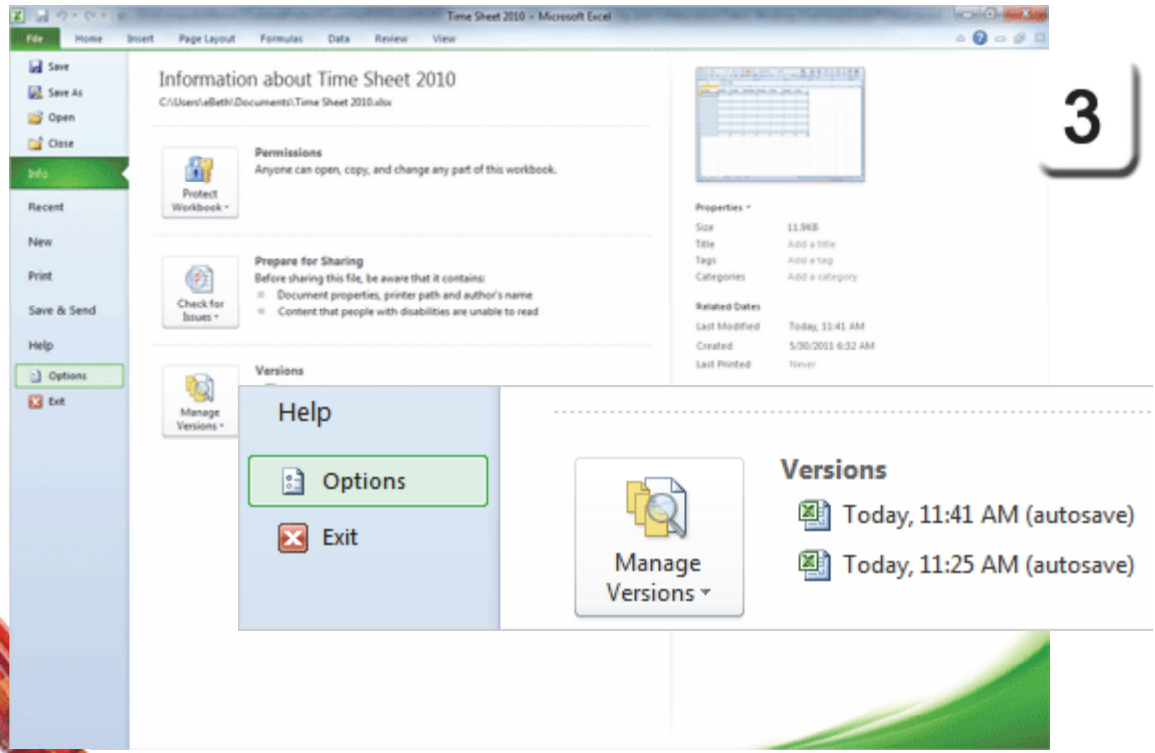
By default, the **Developer** Toolbar is not visible. You can make the Developer Tools available in the **Excel Options**.

3. Try it: Edit the Options

Go to **File**. This is the **Backstage View**. Click on **Options**. Keep going...!



File ->Options



Exam 77-882: Microsoft Excel 2010 Core
1. Managing the Worksheet Environment
1.3. Personalize environment by using Backstage

Take One

Customize the Ribbons

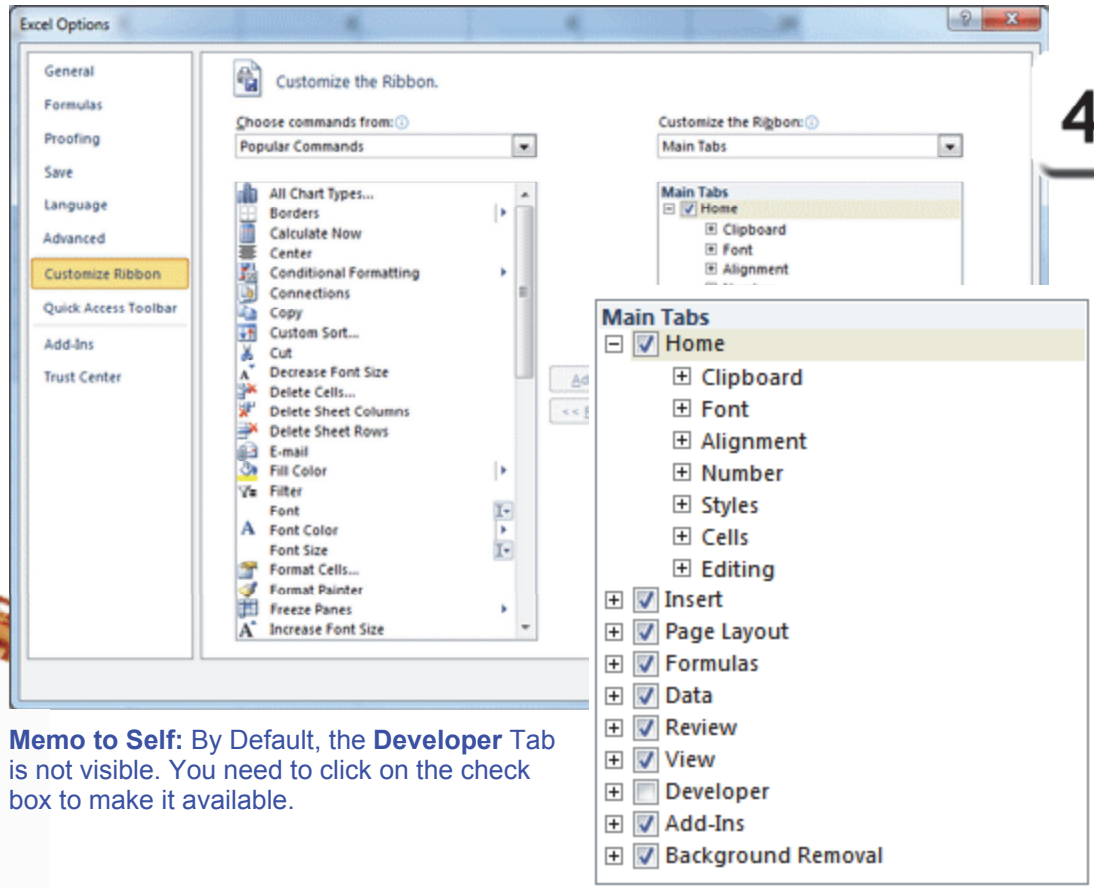
You can choose which Commands and Ribbons you wish to display in Excel.

The Main Tabs include:
Home
Insert
Page Layout
Formulas
Data
Review
View.

4. Try it: Customize the Ribbon
Go to **Customize Ribbon**.
Go to the right column, the **Main Tabs**.
Check: **Developer**
Click **OK** and keep going...



File ->Options->Customize Ribbon



4

Memo to Self: By Default, the **Developer** Tab is not visible. You need to click on the check box to make it available.

Take One

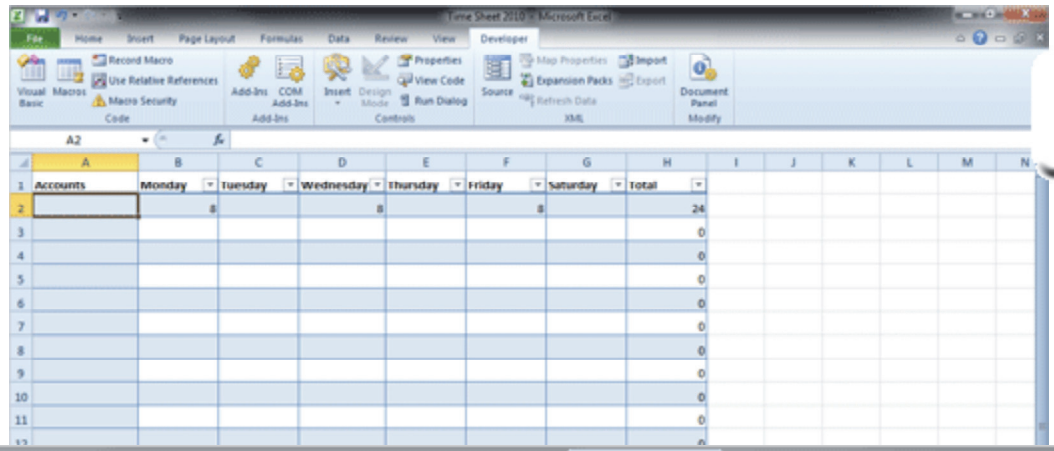
The Developer Tab

The **Developer** Tab is placed at the far right of the Ribbons.

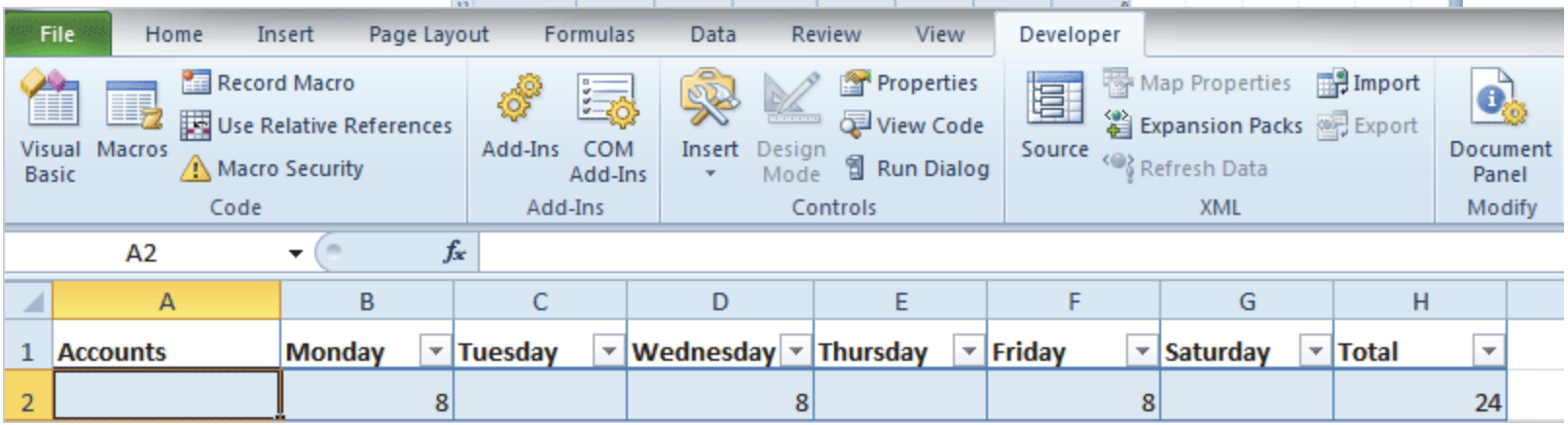
5. Try it: Review the Developer Tools

The Developer groups include:
Code
Add-Ins
Controls
XML
Modify
Very good. Let's build a form.

Developer



5



Take One

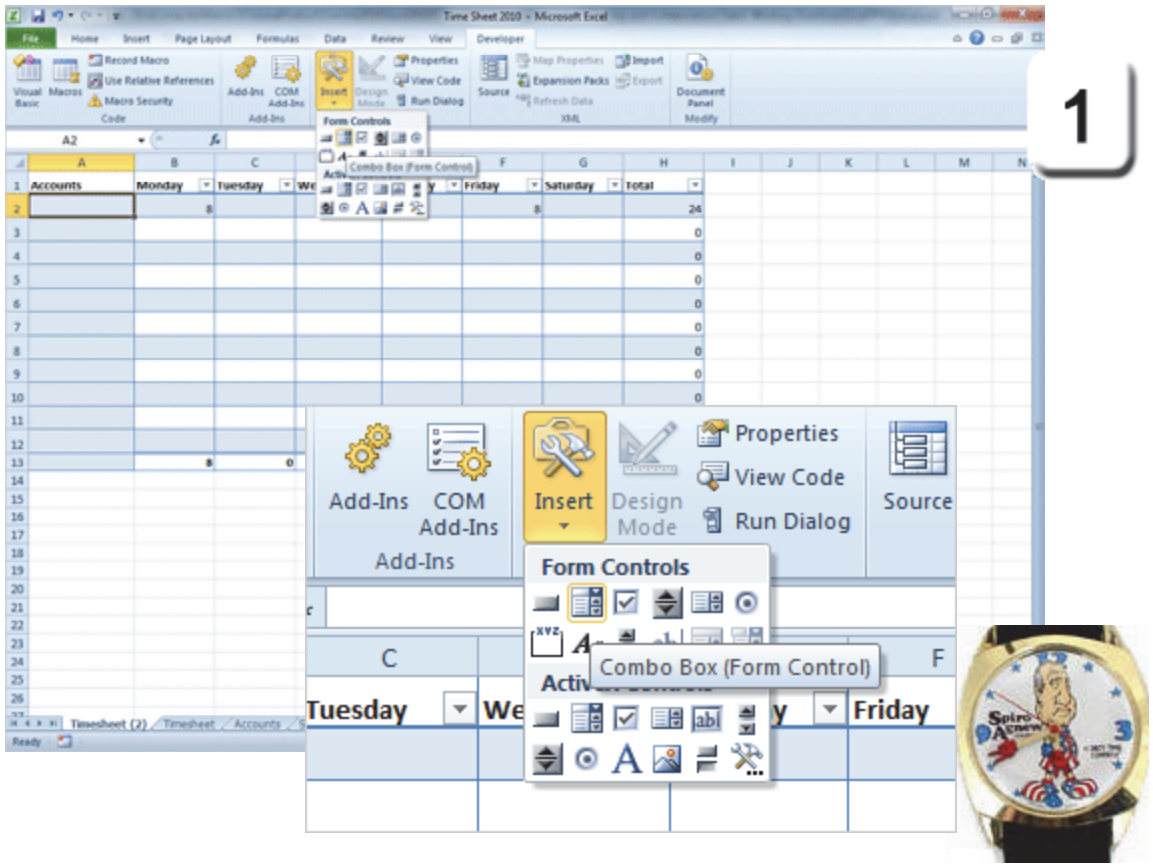
Add a Combo Box

Microsoft Excel has several methods for enabling the user to select an item from a list. Data Validation can be used to create an In-Cell Drop Down. Visual Basic programming is another method.

1. Try it: Add a Combo Box
Go to Timesheet (2)
Select Cell A2.
Go to **Developer ->Controls.**
Click on **Insert->Combo Box.**

Keep going, please.

Developer ->Controls->Insert->Combo Box



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.2. Insert and manipulate form controls

Take One

Create the Combo Box

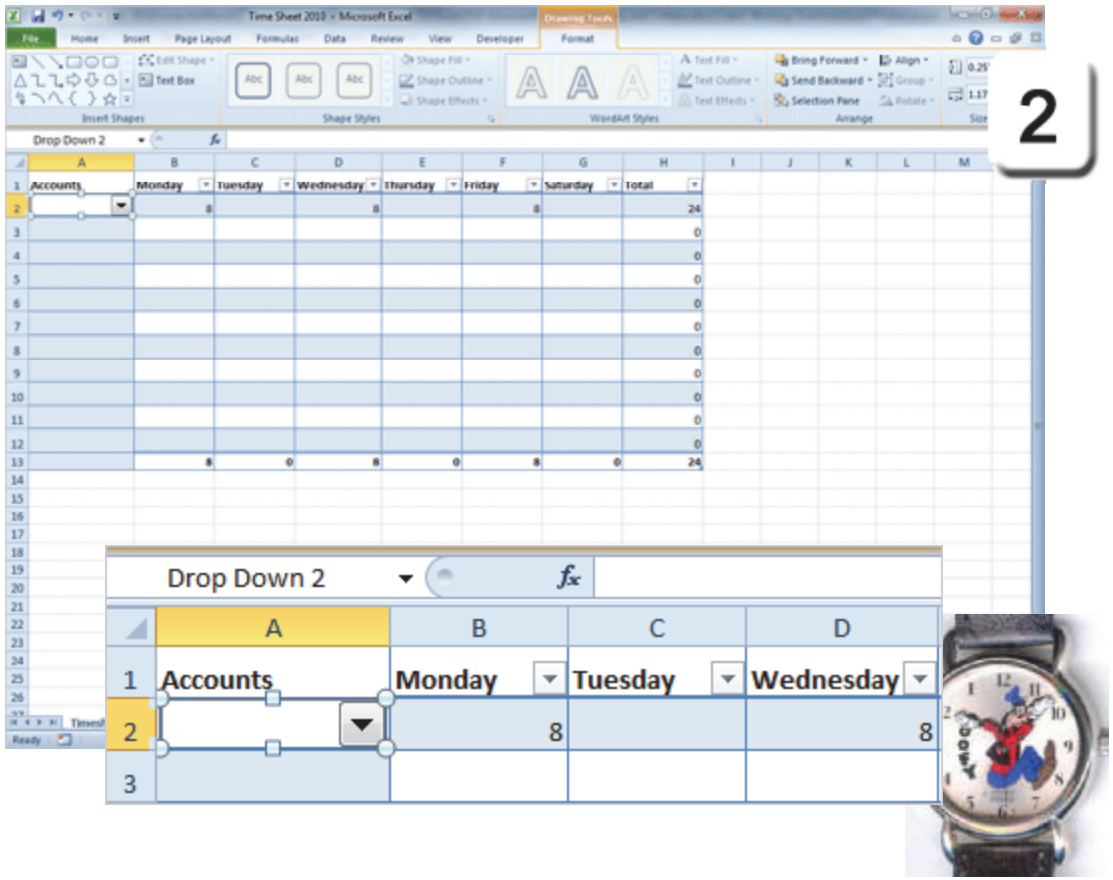
After you select the Combo Box Control, you need to draw the Control in your spreadsheet.

2. Try it: Create the Combo Box
Drag the size of the Combo so that would fit in Cell A2.

What Else Do You See? The Combo Box is a Shape. When you select the Combo Box, the Drawing Tools should be available as well.

Keep going...!

Developer ->Controls



Take One

Edit the Control Properties

All Combo Boxes need a reference table to look up the values. Earlier in our lesson, we created a table and named the range Clients.

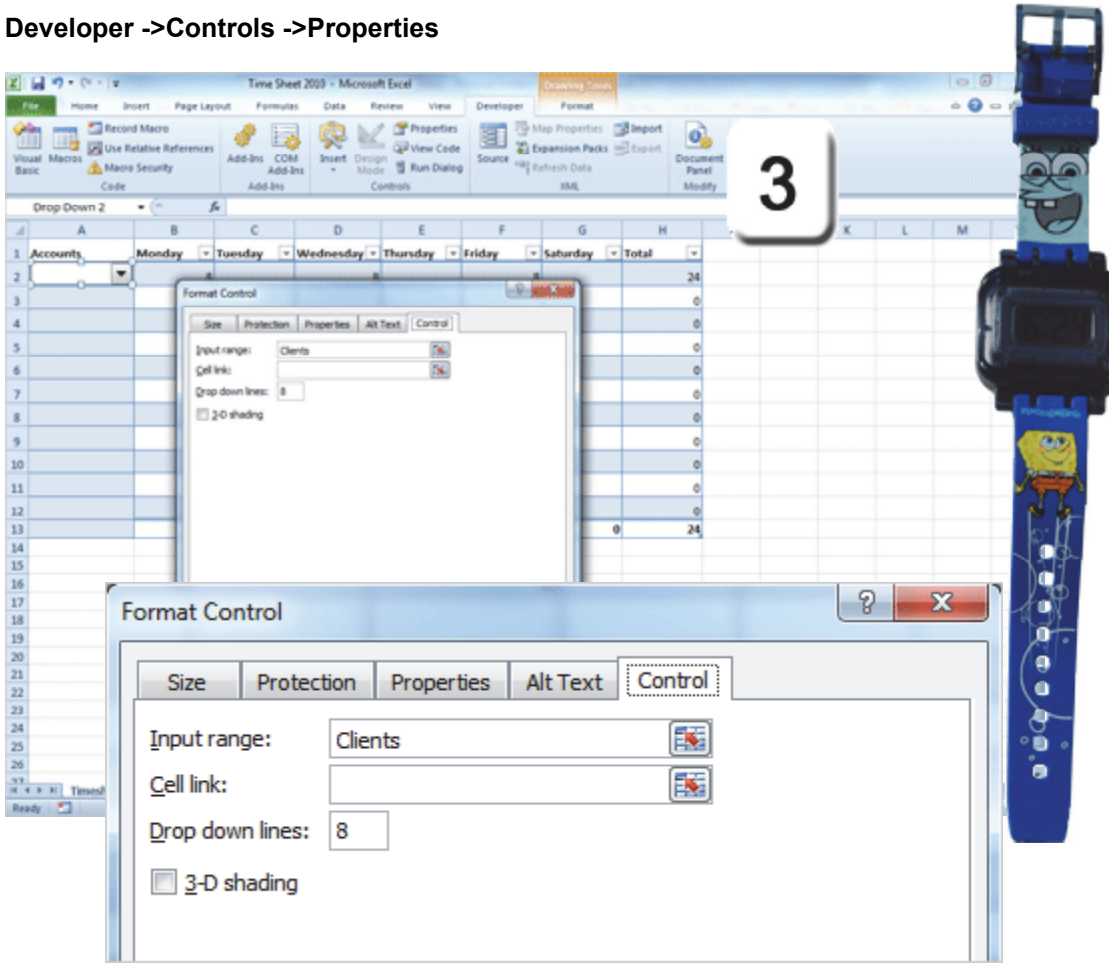
3. Try it: Edit the Control Properties
Click once on the Combo Box to select it.
Go to **Developer ->Controls.**
Click on **Properties.**

What Do You See? Each Control has Properties that you can edit. The Properties include Size, Protection, Properties, Alt Text and Control.

Try This, Too: Edit the Input Range
Input Range: Clients

Click **OK**. Keep going...!

Developer ->Controls ->Properties



Take One

Test the Control

4. Before You Begin: Deselect the Combo
When you are working on a Control, you should see Handles in each corner, just like when you select a picture or chart. This is the Developer's view.

When you deselect the Combo Box. (Click on anything else) the Combo Box will look and behave as it should when a user clicks on it.

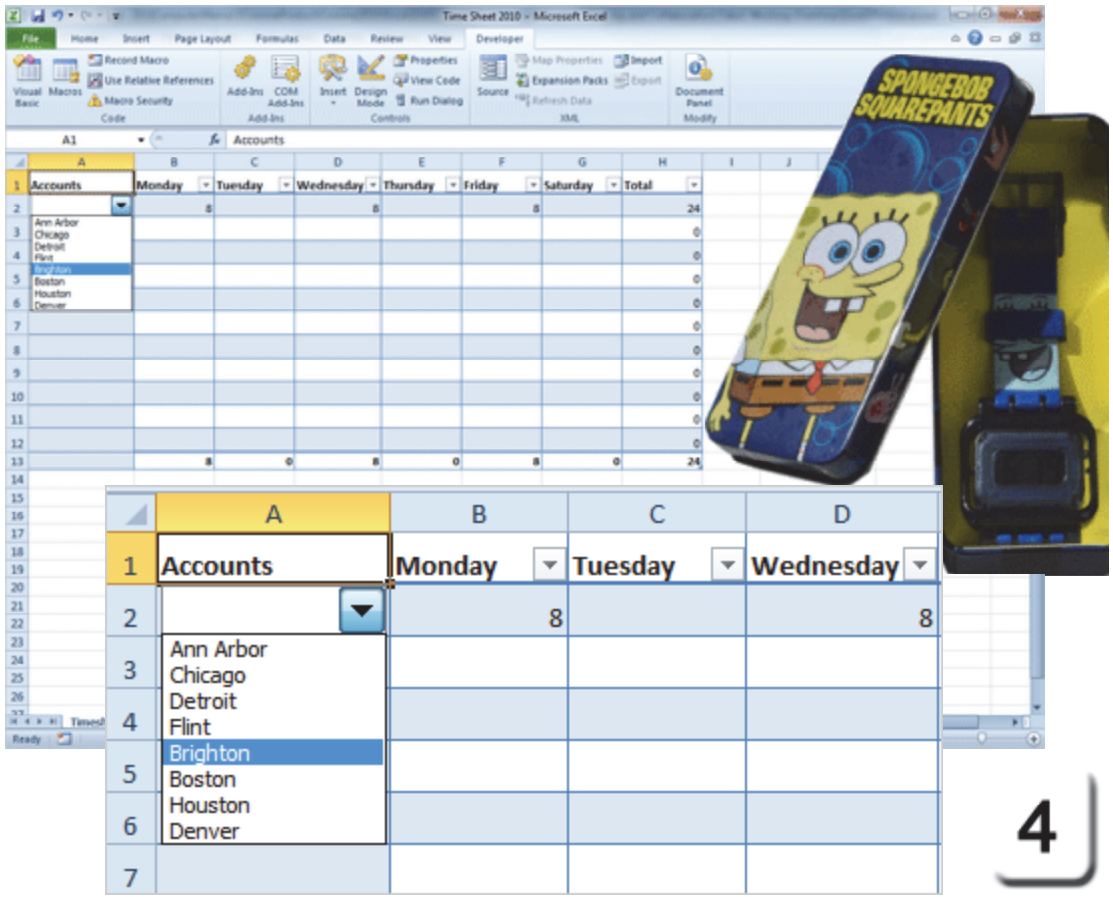
Try This: Test the Control
Go to the Combo Box and select a Client.

What If It Doesn't Work?
There are two parts to the test:
1. Can you click on the Combo Box and see the list of reference names?
2. Can you select an item from the list?

If you cannot see the list, then check the spelling of the Named Range.

Memo to Self: This control does NOT include the equals (=) sign in the Input Range, just the name of the Named Range.

Developer ->Controls



4

Copy the Control

This little Combo Box works, now. Here are the steps to copy and paste the control to the other Cells in the Time Sheet.

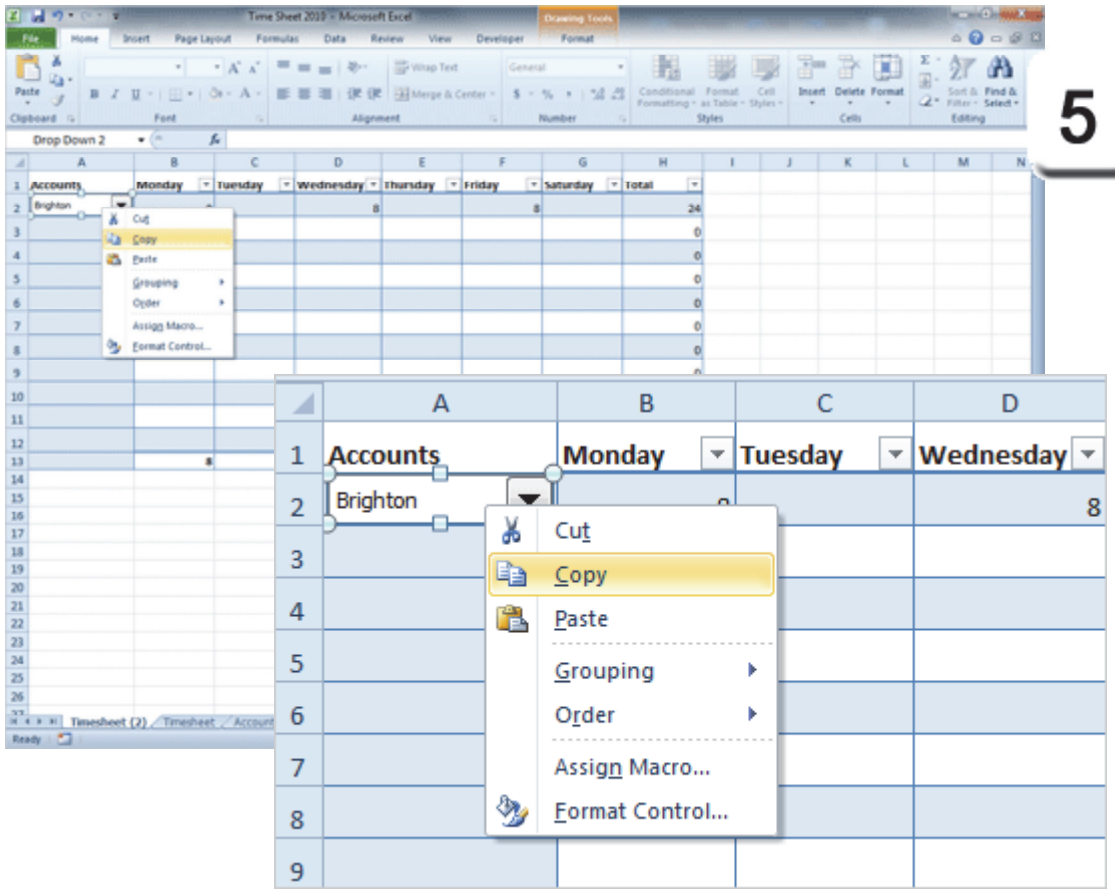
5. Try it: Copy and Paste the Control
Right-click the Control to select it. You should see Handles in each corner.
Go to **Home ->Copy.**
Click on Cell A3.
Go to **Home-> Paste**.

Paste the Control in Cells A4 through A12.

Do This, Too: Save Your Work
Go to **File->Save**.
Type the File Name: MyName Timesheet
Click on **Save**.

Very good.

Home ->Copy



Take One

Controlling Data Entry

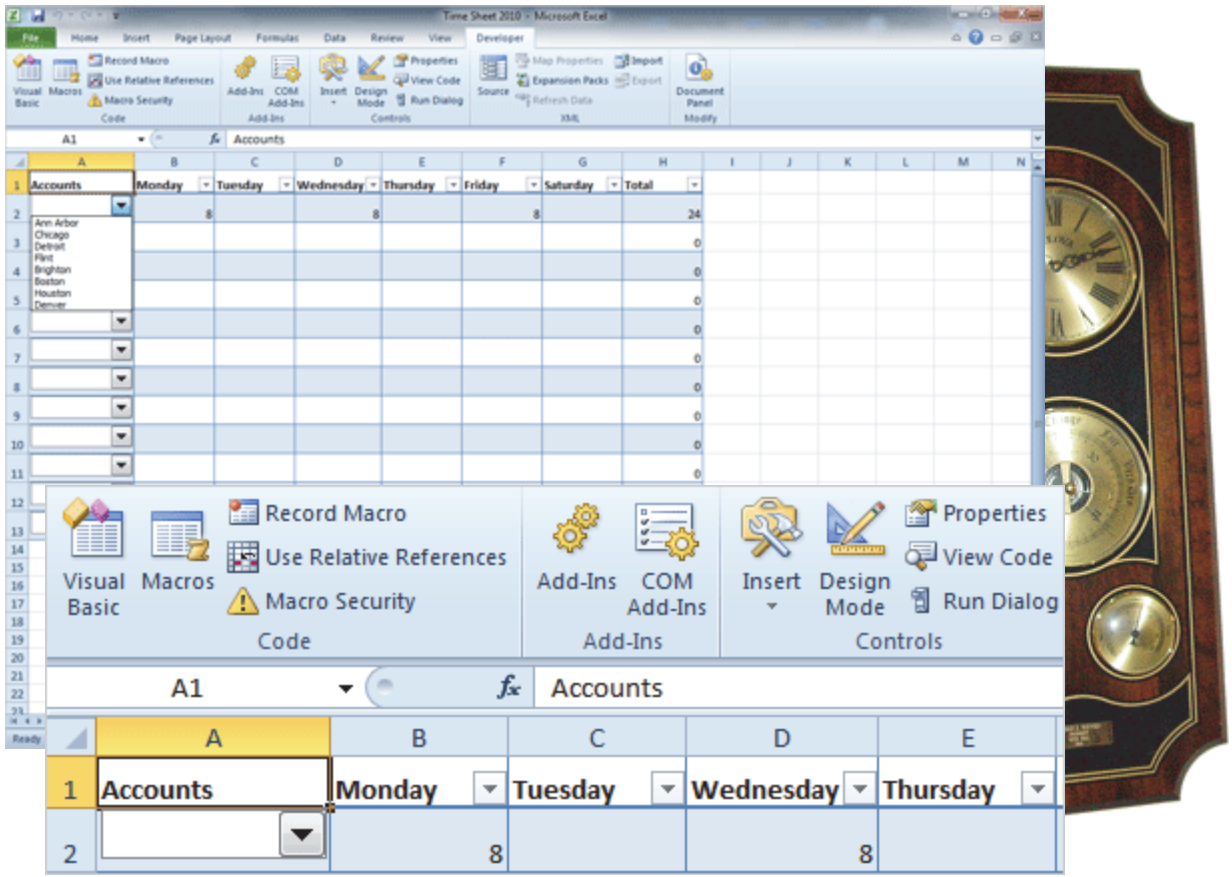
What Do You Think? Making a Combo Box with Visual Basic is similar to creating a Drop-Down list with Data Validation.

Data Validation is a simple, user-friendly tool. Designing Visual Basic applications takes some thought.

Programming adds a responsive element: What happens when a user selects something from the list? What if a user enters something that isn't on the list?

Both methods look up the data in a reference table. Both Controls enable the user to select an item from a list.

Developer ->Controls



Summary

Our lesson began by creating a timesheet that looks up the clients in a reference table. We designed two different Combo Boxes and tested them.

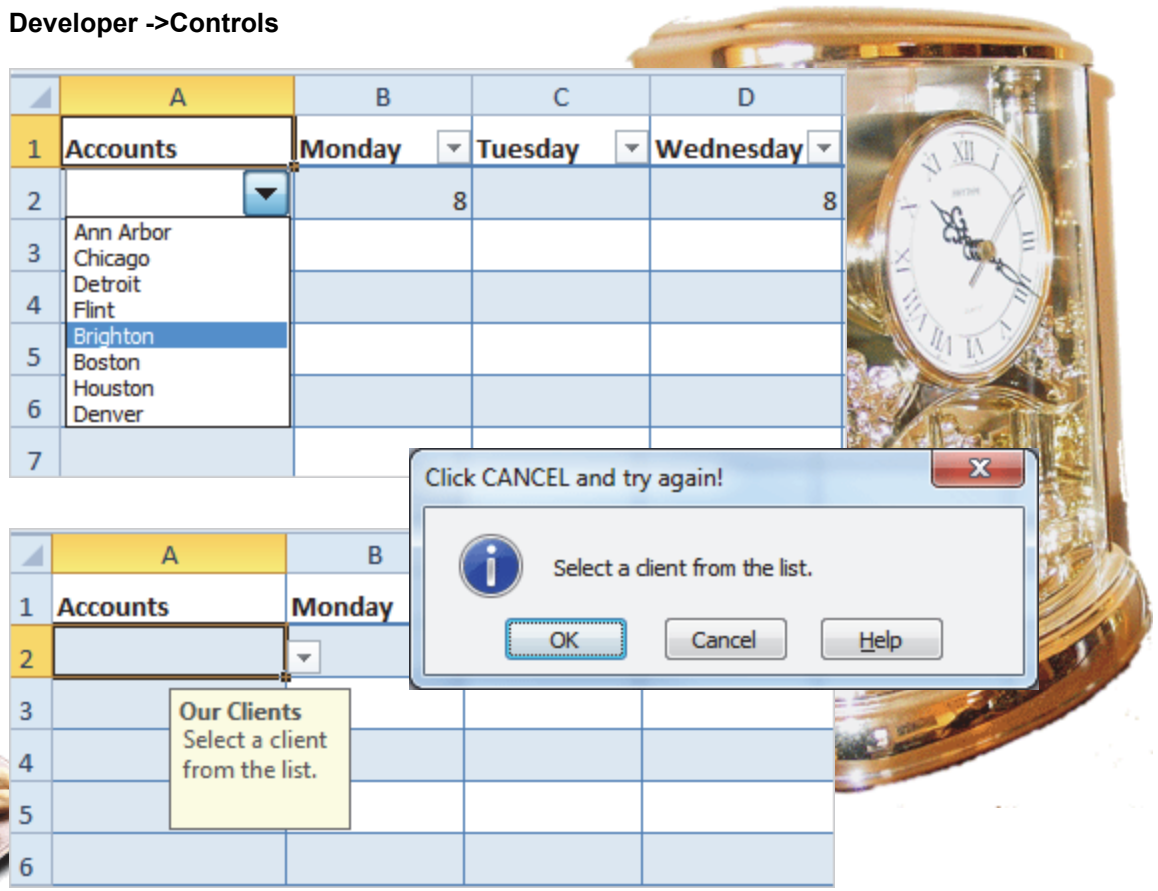
This is a good introduction to Form Design. Our discussion continues with a beginner's guide to Macros that can be found in the Appendix at the end of this book.

If you enjoy programming and developing forms, it is an excellent field to consider following up with additional training. Form Design and programming pay well.

You done good.
You get the cookie this time.



Developer ->Controls



Practice Activities

Lesson 5: Working Overtime

Before You Begin: Start Microsoft Excel 2010.

Try This: Do the following steps

1. Open the **MyName Timesheet** that you created earlier in this lesson.

2. Go to the Timesheet and select Cell H13. In this example, it is the Cell that Sums the total hours worked.

3. Go to **Home->Styles-> Conditional Formatting**.

4. Select: **Highlight Cell Rules-> Greater Than...**

5. **Format Cells that are Greater Than**: 40
   With: Green Fill and Dark Green Text

6. Click **OK** and test the formatting as follows:

Enter sample data in the Time Sheet so that each day of the week, (Monday through Saturday has 8 hours. The Sum in Cell H13 should be 48, which is greater than 40.

7. Save this as YOUR NAME Working Overtime Practice.

Test Yourself

1. Data Validation alerts a user if the typed data does not match the set value.
a. True
b. False
Tip: Advanced Excel, page 171

2. Which of the following are options for Data Validation?
(Select all correct answers.)
a. Settings
b. Input Message
c. Error Alert
Tip: Advanced Excel, page 172

3. Which of the following are options for Data Validation error message options?
(Select all correct answers.)
a. Retry: leaves the error
b. Cancel: clears the error
c. Help: opens Excel's help menu
d. Ok: Accepts the error
Tip: Advanced Excel, page 174

4. You can Autofill data validation
a. True
b. False
Tip: Advanced Excel, page 181

5. Which Ribbon has the commands for Form Controls?
a. Developer Ribbon
b. Insert Ribbon
c. Data Ribbon
d. Review
Tip: Advanced Excel, page 186

6. Which of the following is true about Combo Boxes?
(Select all correct answers.)
a. It's a shape
b. It has Drawing Tools available
Tip: Advanced Excel, page 188



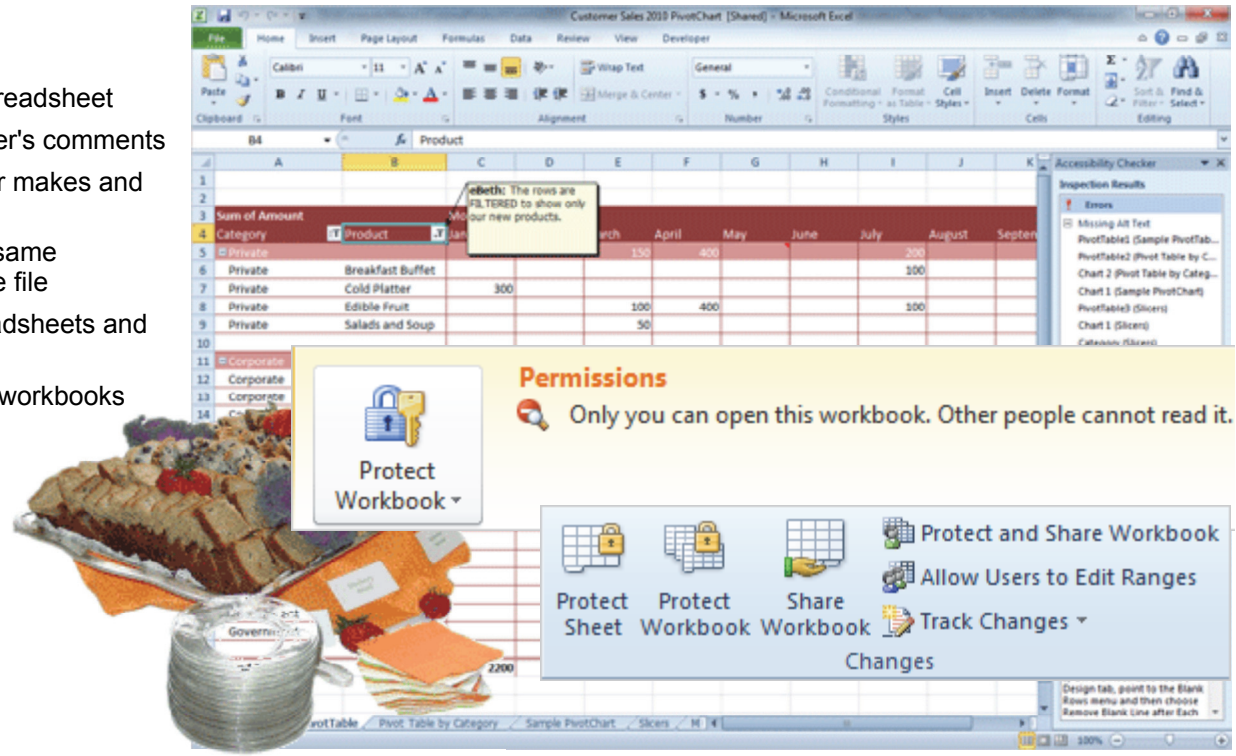
Excel 2010: Sharing and Collaboration

Prepare to Share

Advanced Excel Objectives

In this lesson, you will learn how to:

1. Use the Review Ribbon to proof a spreadsheet
2. Insert, edit, view and manage reviewer's comments
3. Track the changes that each reviewer makes and accept or reject those changes
4. Compare two similar versions of the same spreadsheet and combine them into one file
5. Apply protection and sharing to spreadsheets and to workbooks prior to sharing your work
6. Restrict Permissions on worksheets, workbooks with Passwords and Digital IDs



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Lesson 6 Sharing and Collaboration: Prepare to Share

1. Readings
Read Lesson 6 in the Advanced Excel guide, page 195-243.

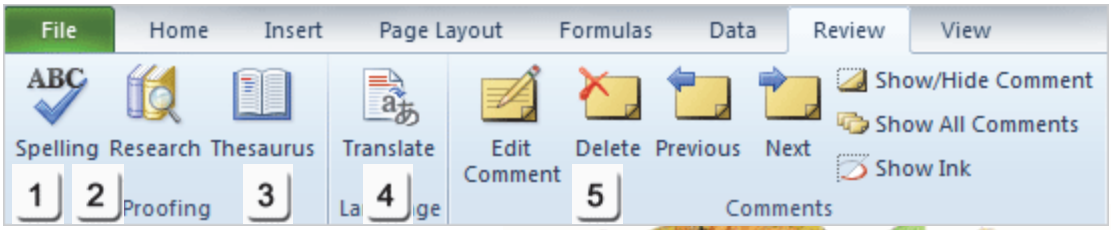
Project
This lesson shows how to prepare a file for sharing including: proofing, comments, and tracking changes. The lessons will show how to protect and share a spreadsheet or a workbook.

Downloads
Customer Sales 2010 PivotChart.xlsx.
Time Sheet 2010.xlsx (complete)

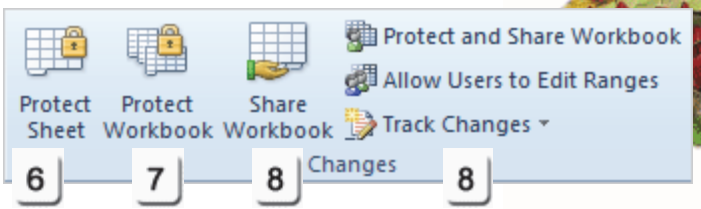
2. Practice
There is no Practice Activity in this lesson.

3. Assessment
Review the Test questions on page 244.

Review Ribbon



Review Ribbon





Menu Maps
From the **Review Ribbon**.
1. Review ->Proofing-> Spelling, page 200
2. Review ->Proofing-> Research, page 201
3. Review ->Proofing-> Thesaurus, page 203
4. Review ->Language-> Translate, page 205
5. Review ->Comments, page 215
6. Review ->Changes-> Protect Sheet, page 206
7. Review ->Changes-> Protect Workbook, page 207
8. Review ->Changes-> Share Workbook, page 208
9. Review ->Changes-> Track Changes, page 211

Menu Maps
From the Backstage
1. File ->Options-> Quick Access, page 220
2. File ->Info-> Properties, page 223
3. File ->Info->Check for Issues, page 224
4. File ->Info->Permissions, page 229

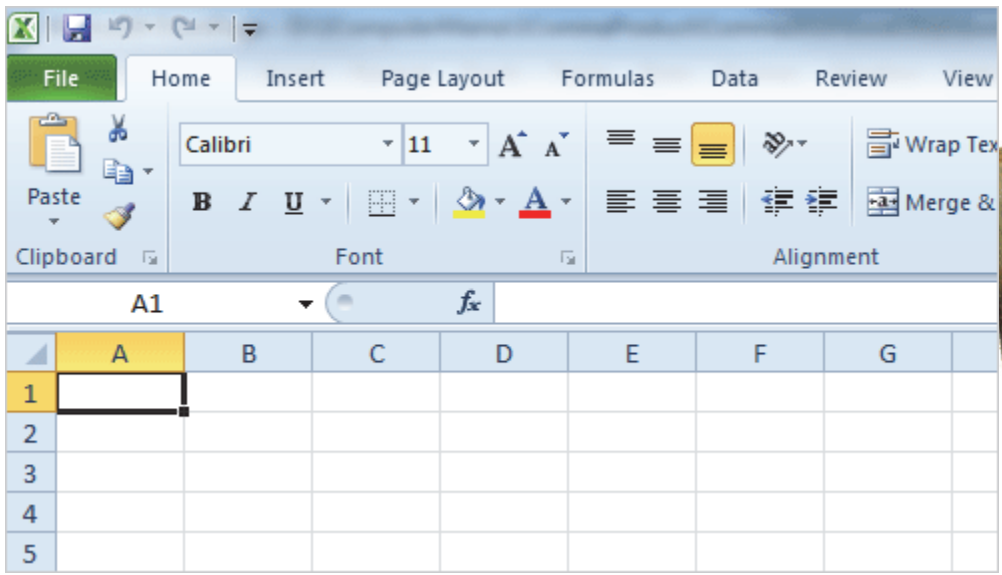


Sharing Data and Working Together

My mentor, Fr. Paul, talked about an old church where the sisters kept all of the vital records on index cards for over 40 years: thousands of births, deaths, marriages and family details. The records were stored in boxes and trunks in the basement of the rectory. Who could ever find anything in those boxes and boxes of index cards? How could anyone ever connect the names and the families?

Information is vital to a community as well as a company. However, people need a way to access and use that data. Otherwise it is just noise. This lesson looks at the options for sharing and collaborating.

Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010





Before You Begin

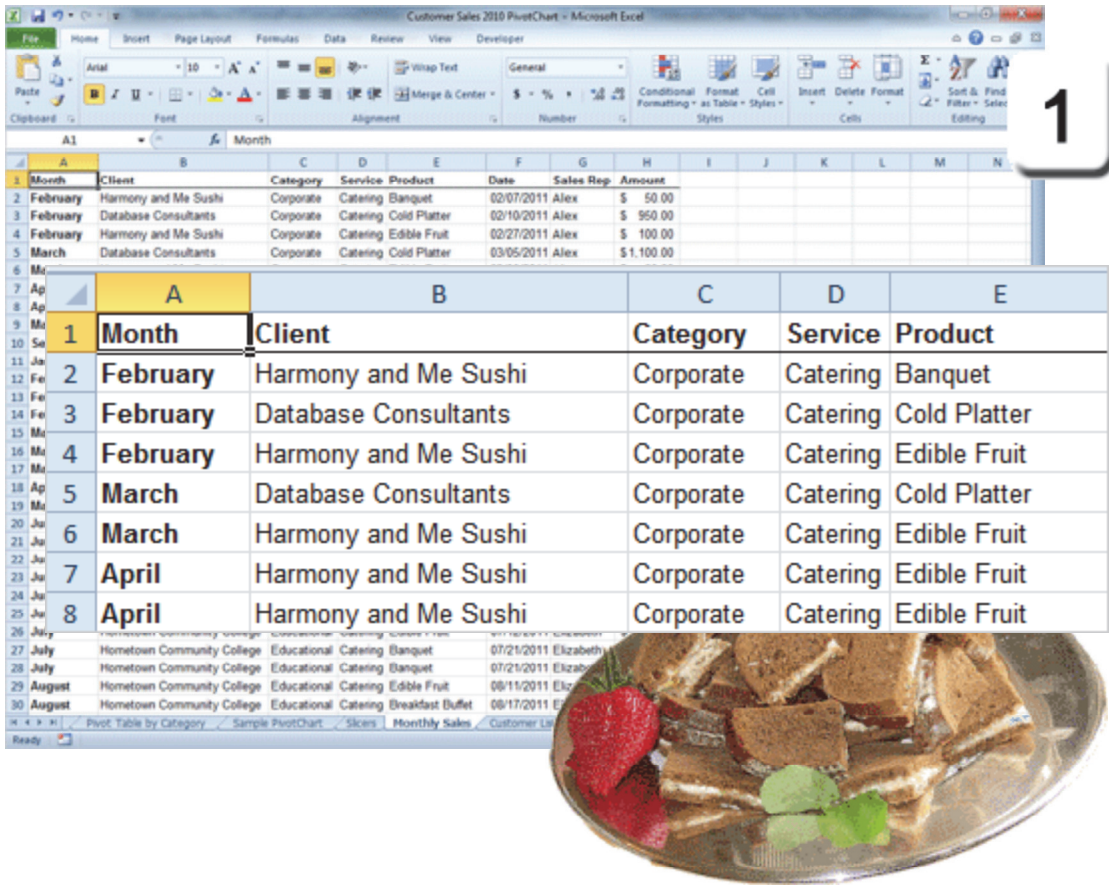
This lesson uses a sample spreadsheet which is available online. You can create your own spreadsheet if you wish. When you are ready, please start Microsoft Excel.

1. Try This: Open a Sample Spreadsheet
Open a sample spreadsheet:
Customer Sales 2010 PivotChart.xlsx
Go to the **Monthly Sales** sheet.

What Do You See? This sheet shows the product sales for Charlotte' Website. The first row is BOLD: It is the Header Row. There are many rows of data. The example on this page has been sorted by Column C, Category. Please keep going...

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File->Open



Take Two

Review: Proofing

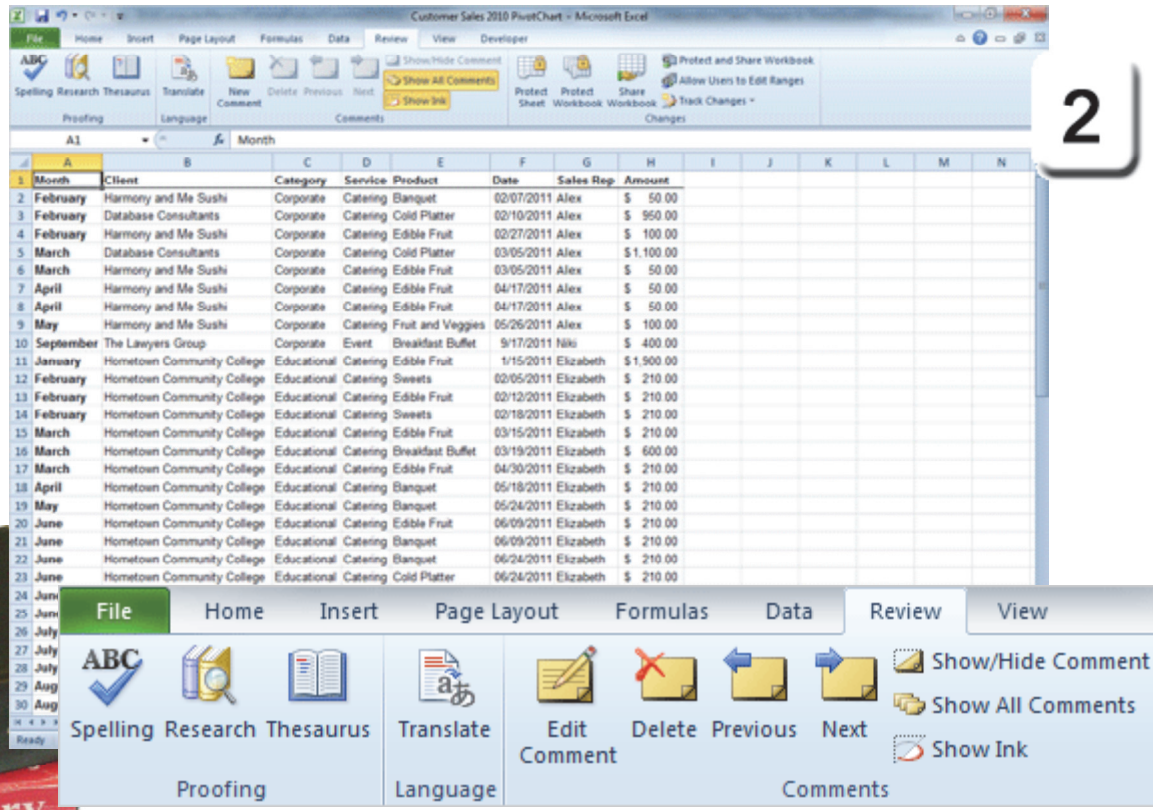
Microsoft Excel 2010 gathers all of the proofing tools on the **Review** Ribbon..

2. Try it: Review Your Spreadsheet
Go to the **Review** Ribbon.

What Do You See? There are four groups on the **Review** Ribbon:
Proofing
Language
Comments
Changes

Keep going...!

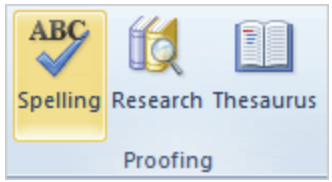
Review ->Proofing



Review: Spelling

Most people see Numbers when they think of spreadsheets. However, our products and customers names are Text. So, you need to proof and spell check your spreadsheets.

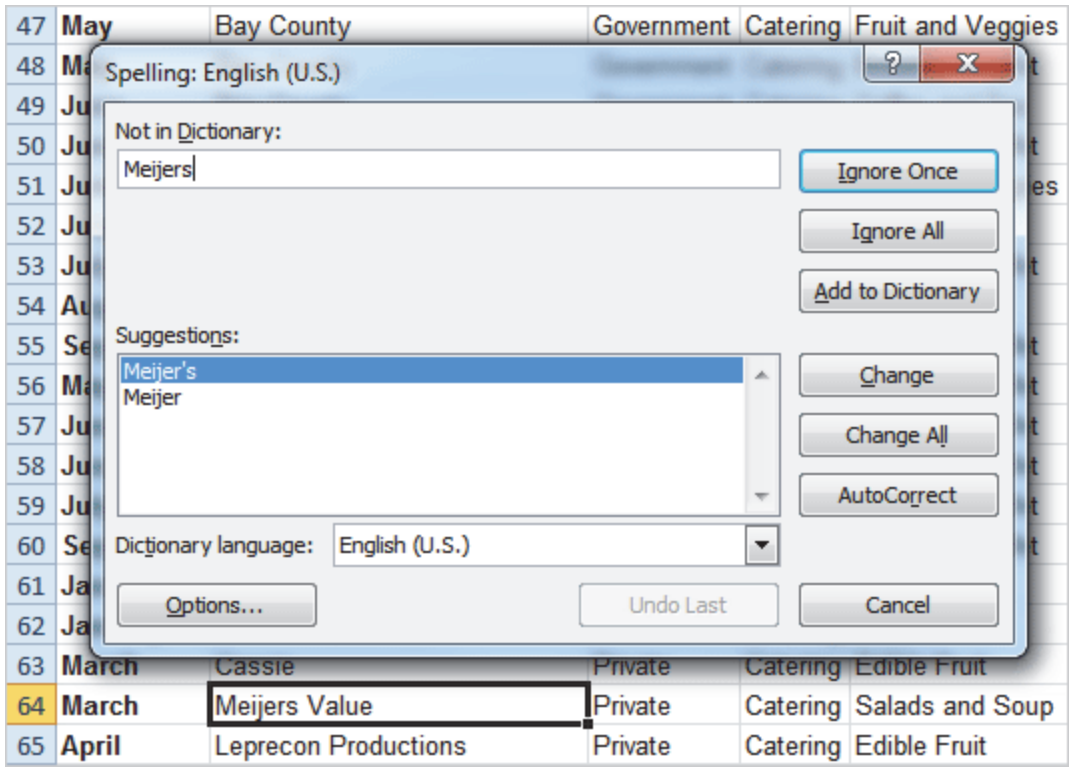
Try it: Check the Spelling
Go to **Review ->Proofing**.
Click on **Spelling and Grammar**



Excel will review the **Spelling** in your data and alert you when there is something that does not match a word in the dictionary.

You can choose **Suggestions** from the list.
You can also **Ignore** or **Add to Dictionary**.

Review ->Proofing-> Spelling



Review: Research

Sometimes it is better to look something up, rather than just guess at the right answer. You can use the **Proofing** tools to **Research** the spelling as well as the meaning.

1. Try it: Research a Word
In this sample spreadsheet, there is a client named Harmony and Me Sushi. This example will research the word "sushi."

Select Cell B4.
Go to **Review ->Proofing-> Research**
The **Research Pane** should be available on the right. The default search option is Reference Books. Select: **All Research Sites.**

Search For: Sushi

What Do You See? The Research results on this page shows answers from Wikipedia, an online encyclopedia, as well as many other sites including a South Park cartoon video about sushi.

Review ->Proofing-> Research



Review: Research Options

Microsoft Office 2010 uses the Internet to find answers. By default, the Research Pane may show only one web site.

You can edit the Search options to show:
All Reference Books (Dictionary, Thesaurus)
All Research Sites
All Business and Financial Sites

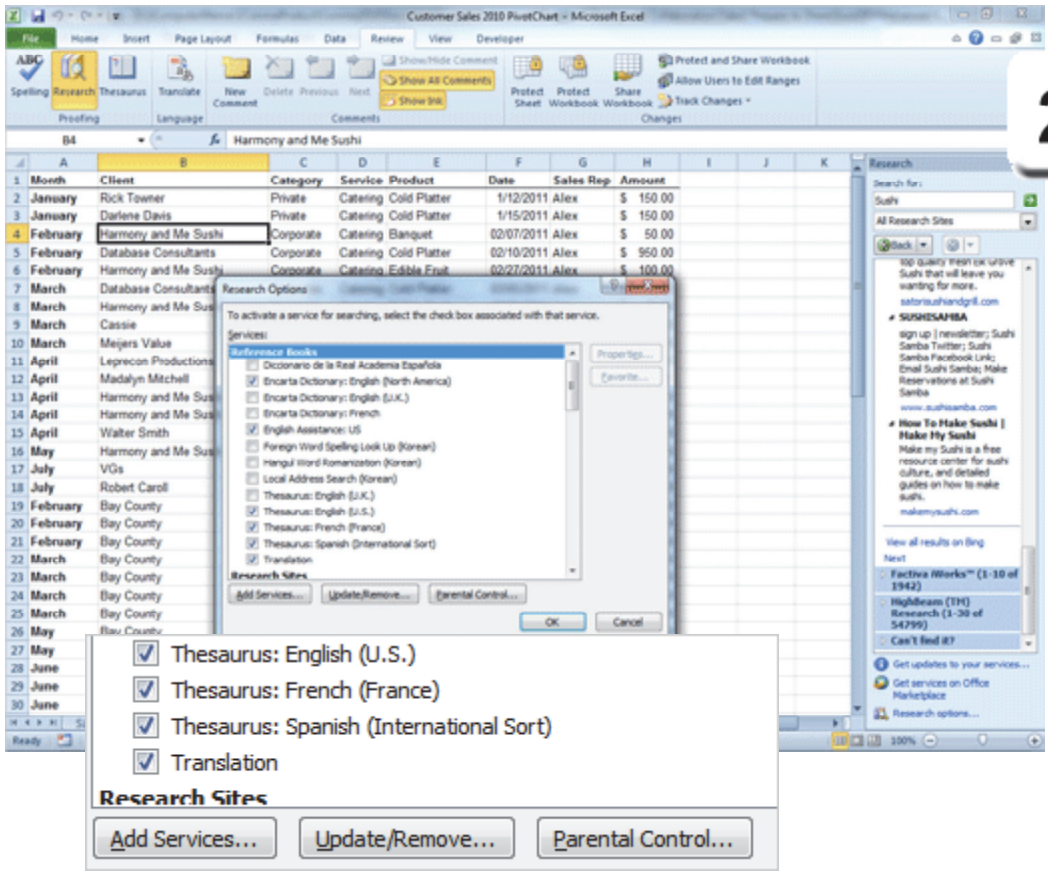
2. Try This: Edit the Research Options
At the bottom of the Research Pane you may see a link for **Research Options**.

When you click that link you should see a list of the sites you can use.

If you don't see the site you want for your work, you can also edit this list. The options include **Add Services**, **Update/Remove** and **Parental Control**.

Please click **OK** and keep going...

Review ->Proofing-> Research-> Research Options

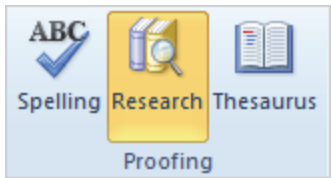


Research: Thesaurus

A **Dictionary**, like the research answers on the previous page, offers the correct spelling, definition and pronunciation of words.

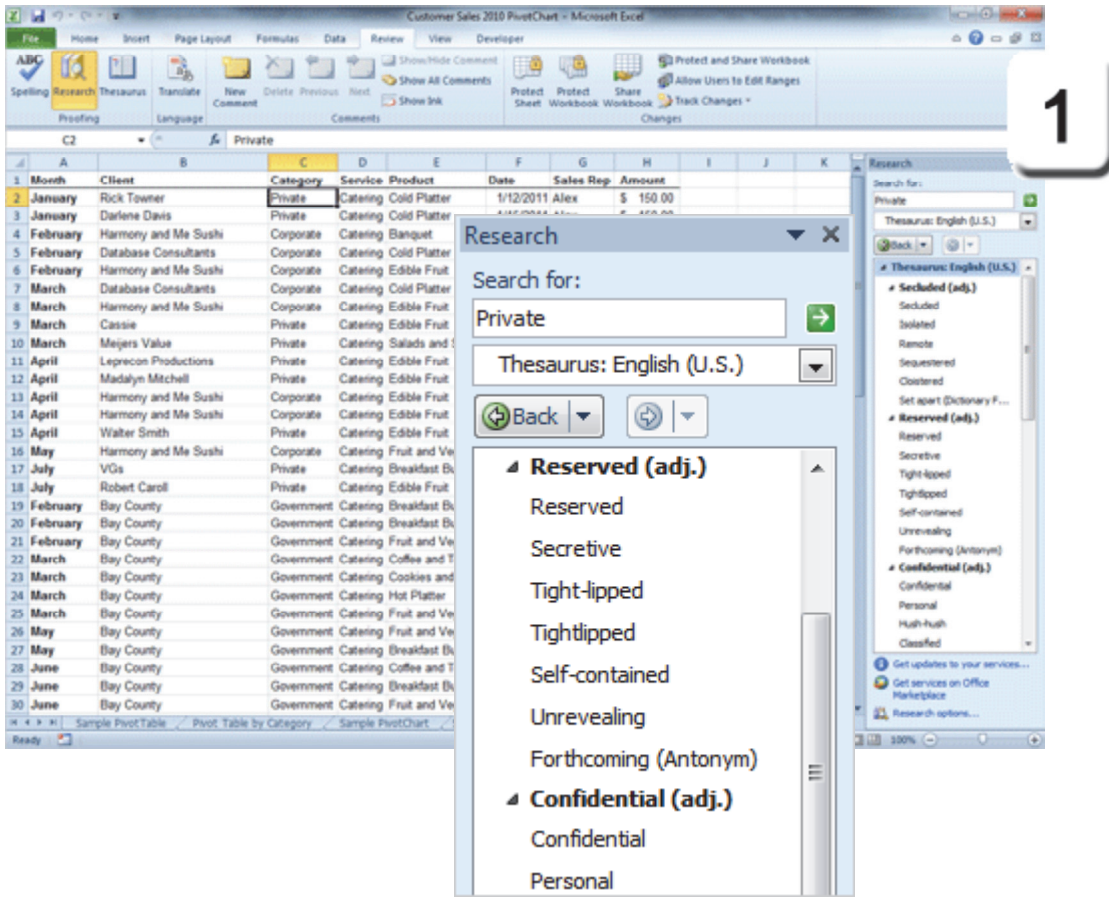
A **Thesaurus** looks up words that are related. They can have a similar meaning. These are synonyms. The Thesaurus can also list words that have mean the opposite: the antonyms.

1. Try This: Use the Thesaurus
Select Cell C2, or any sample Cell that has the word: Private.
Go to **Review ->Proofing**.
Click on **Thesaurus.**



Keep going please...

Review ->Proofing-> Thesaurus

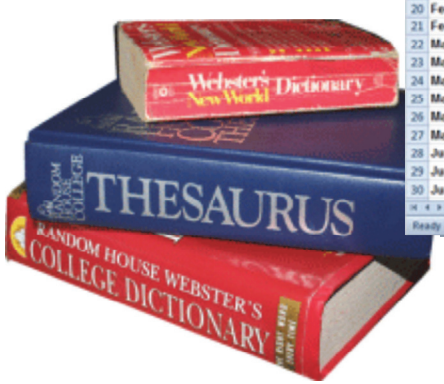


Thesaurus Options

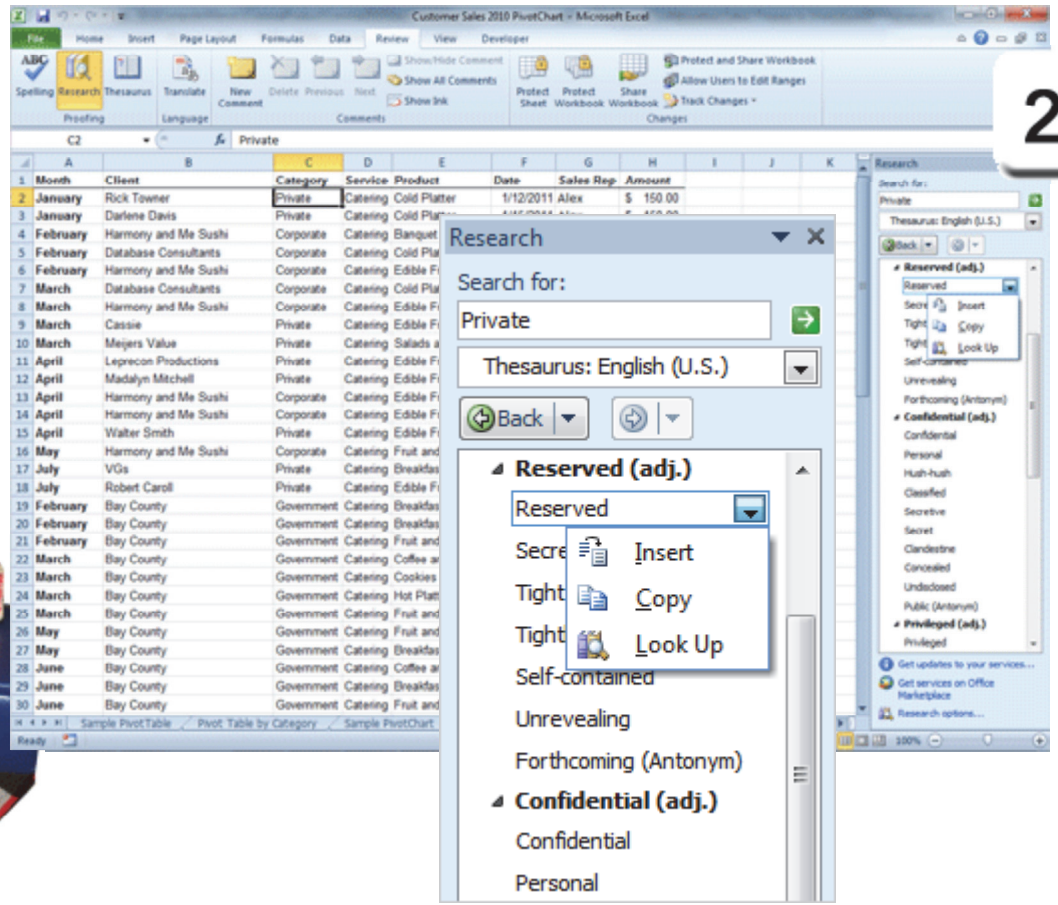
2. What Do You See? The Research Pane will display words that are related to the one you searched. You can click on any word to see additional suggestion. You can also use the **Back** button to page back to a previous word.

When you find a good word, click on the option arrow on the right side. The Thesaurus has three options:
Insert
Copy
Look Up

You can **Insert** a word if you wish.



Review ->Proofing-> Thesaurus

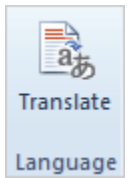


2

Review: Translate Text

You can use the **Translate** option to translate your text into a different language.

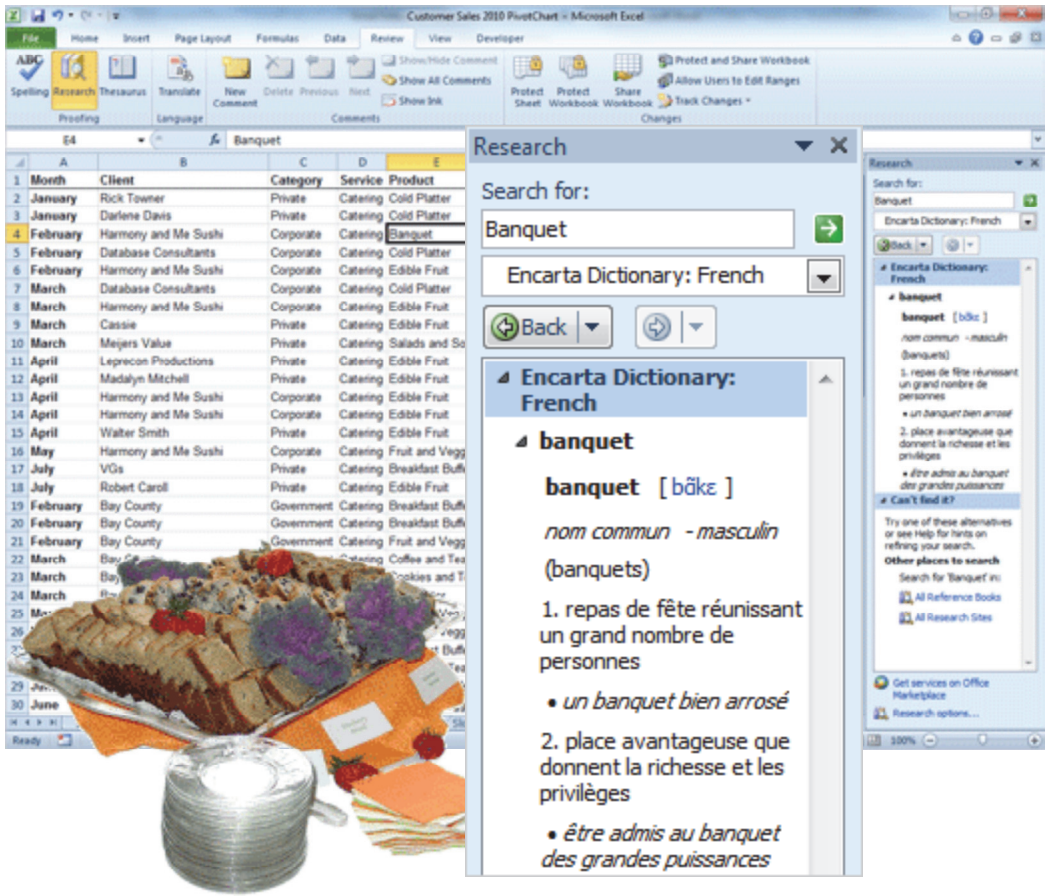
Try This: Translate Selected Text
Selectany sample Cell and type: Banquet.
Go to **Review ->Language-> Translate.**
Choose a **Language.**



What Do You See? The Research Pane should bring up different translations.

Memo to Self: The Computer Mama sez it would be a good idea to have a professional review your translations if you are not fluent in the language. There are legends about the translation mash up that happened when WANG computers introduced their desktop computers in the United States in the 1980's.

Review ->Language-> Translate



Prepare to Share

Say you are ready to send this workbook around the office for comments and review. Before you send it around the office you may wish to consider if you should **Share** or **Protect** your work. Let's think about Protecting the data. When you **Protect** a sheet or workbook, you are restricting what users can or cannot do.

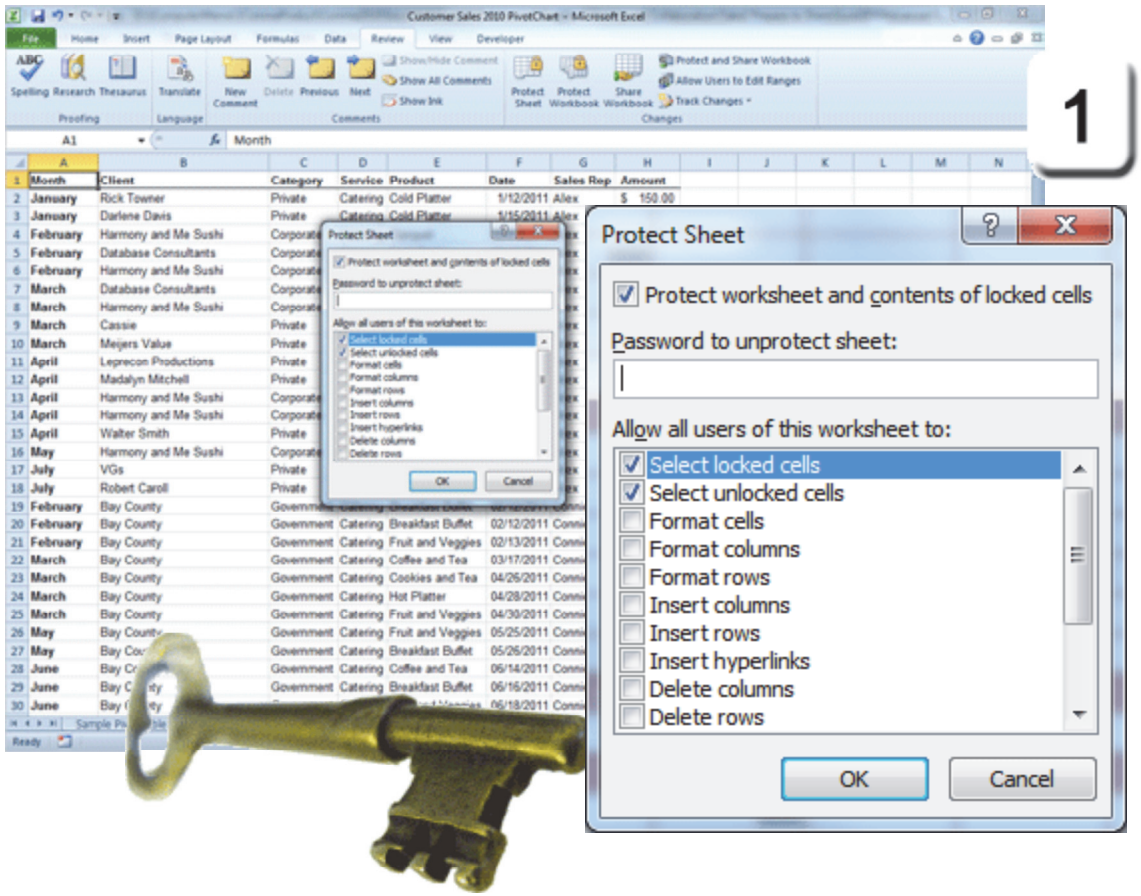
1. Try it: Protect the Sheet
Go to **Review->Changes**.
Select **Protect Sheet**.

What Do You See? You will be prompted to **Protect worksheet and contents**. By default, when you Protect a worksheet all of the cells will be locked. You can select which options you would allow your users to do, such as Insert row or Format cells.

You can enter a **Password** to unprotect the sheet, or not.

Click **CANCEL** and keep going, please.

Review ->Changes-> Protect Sheet



Protect the Workbook

Every Microsoft Excel Workbook has a **structure**. The workbook structure includes sheets that are visible, others that are hidden. The structure can also include the size and position of the windows.

When you **Protect a Workbook**, you prevent the users from finding hidden sheets or changing the data. **Workbook Protection is applied to the entire workbook and all of the spreadsheets in it.** Before you lock the Workbook you can choose cells you would like unlocked so the users can enter data.

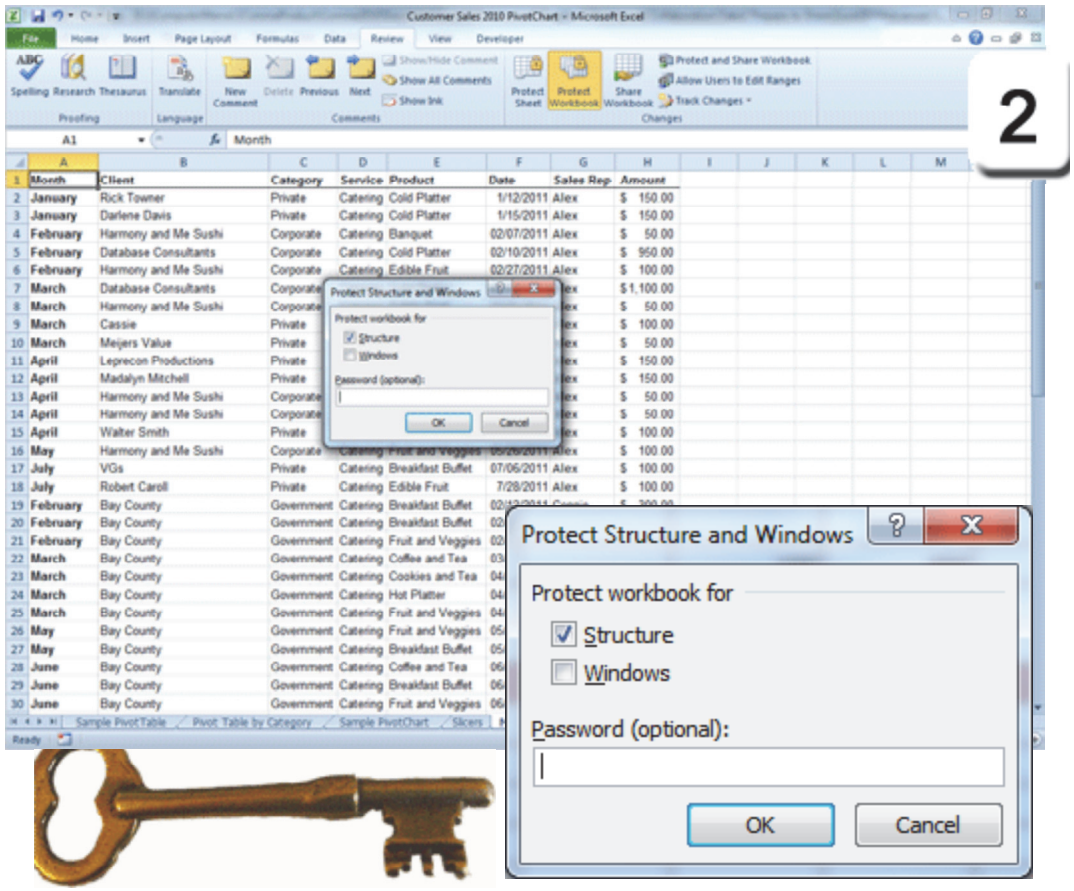
2. Try it: Protect a Workbook
Go to a **Review ->Changes.**
Click on **Protect Workbook.**

What Do You See? By default, there is checkmark to Protect the Structure.

You will be prompted to enter a **Password**. Write it down. Not even Microsoft can unlock a Workbook if you lose the Password.

Click **CANCEL** and keep going...

Review ->Changes-> Protect Workbook



Share a Workbook

This discussion began by reviewing the steps to **Protect** a sheet or workbook. The next pages will look at how to **Share**.

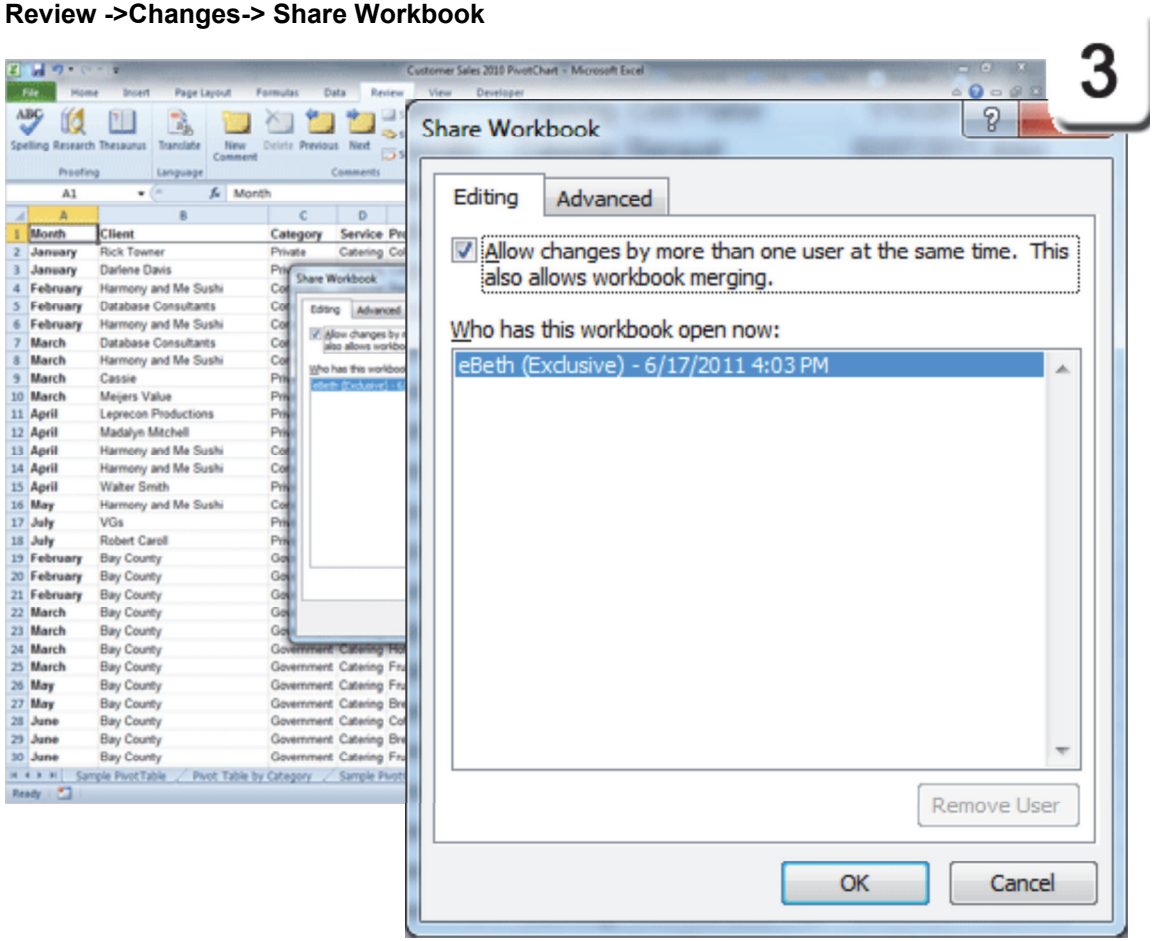
3. Try it: Share a Workbook
Go to **Review ->Changes.**
Click on **Share Workbook.**

What Do You See? By default, there is a check mark to allow changes by more than one user at the same time. The **Editing** tab also displays who currently has the workbook open.

What Else Do You See? Before you Share a Workbook, it will be marked as **Exclusive**: only one person can edit it at a time. After you Share a Workbook, it will no longer be listed as Exclusive.

Keep going..

Review ->Changes-> Share Workbook



Advanced Sharing Options

In addition to the **Editing** options, there are **Advanced** options when you **Share a Workbook**. Let's review them now.

4. Try it: Review the Advanced Options
The **Advanced** Sharing options include:

Track Changes: You can keep a history of all the changes and specify how many days you need to keep in the log..

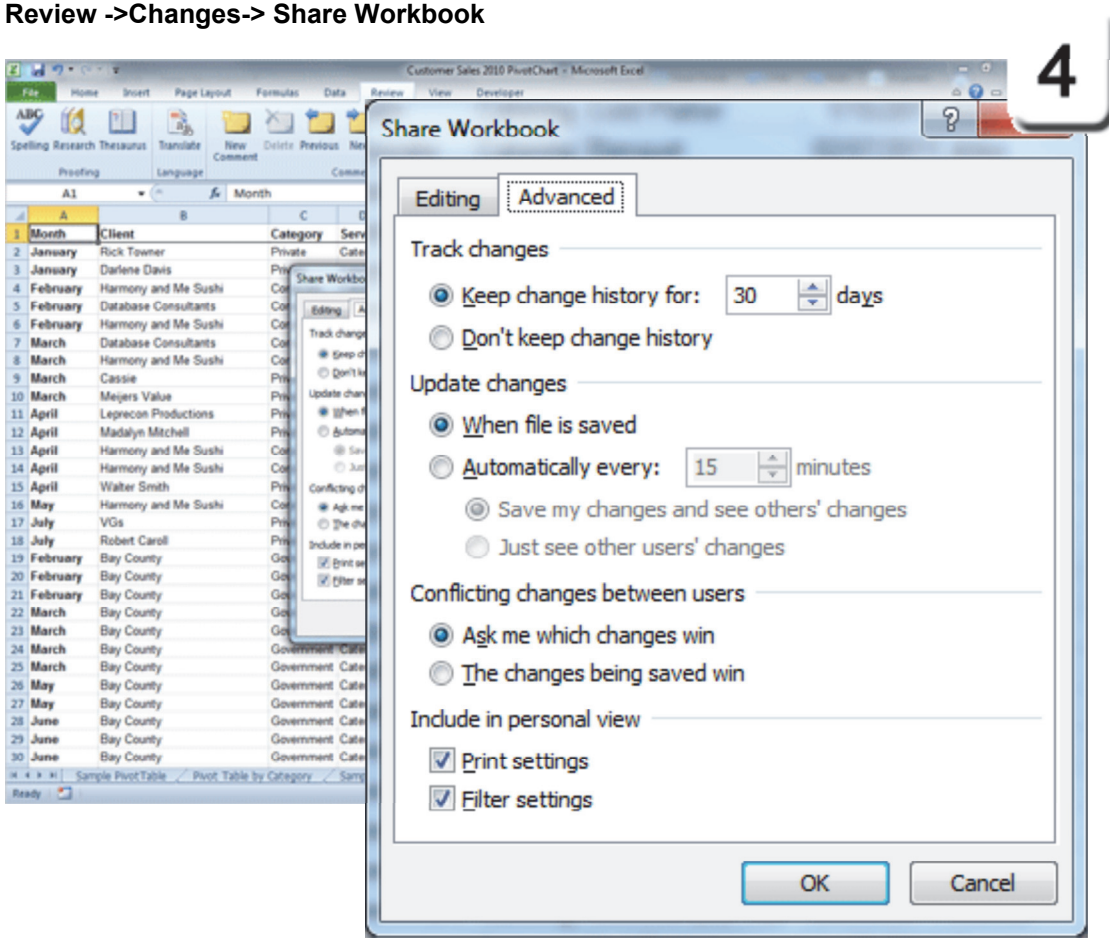
Update Changes: By default, the changes are updated each time a file is saved. They can also be set to update automatically.

Conflicting changes between users: You can choose to be asked ore let the last saved change "win."

Include in personal view: The Print and Filter settings are both included by default.

Click **CANCEL** and keep going...

Review ->Changes-> Share Workbook



Protect and Share

If you are editing this workbook in a group or department, you can **Protect and Share** your workbook. Here are the steps.

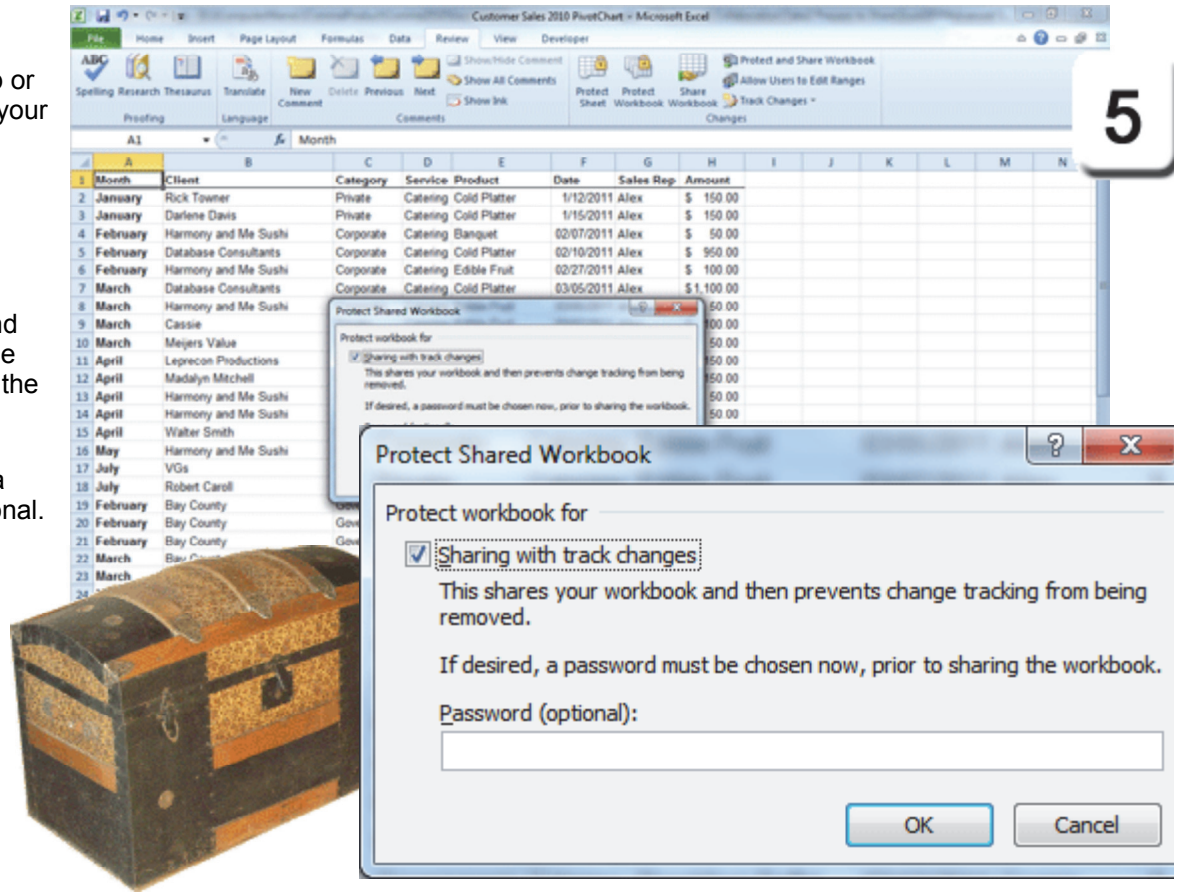
5. Try it: Protect and Share
Go to **Review->Changes**.
Select **Protect and Share**.

What Do You See? When you Protect and Share a Workbook, this option turns on the **Tracking** and prevents folks from turning the Tracking off.

What Else Do You See? You can enter a **Password** as well. The Password is optional.

When you click **OK** this workbook will be **Shared**. Click **OK** and keep going...

Review->Changes-> Protect and Share



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.2. Apply protection and sharing properties to workbooks and worksheets.

Review: Track Changes

You can **Track** each person who reviews this spreadsheet and if they made any changes.

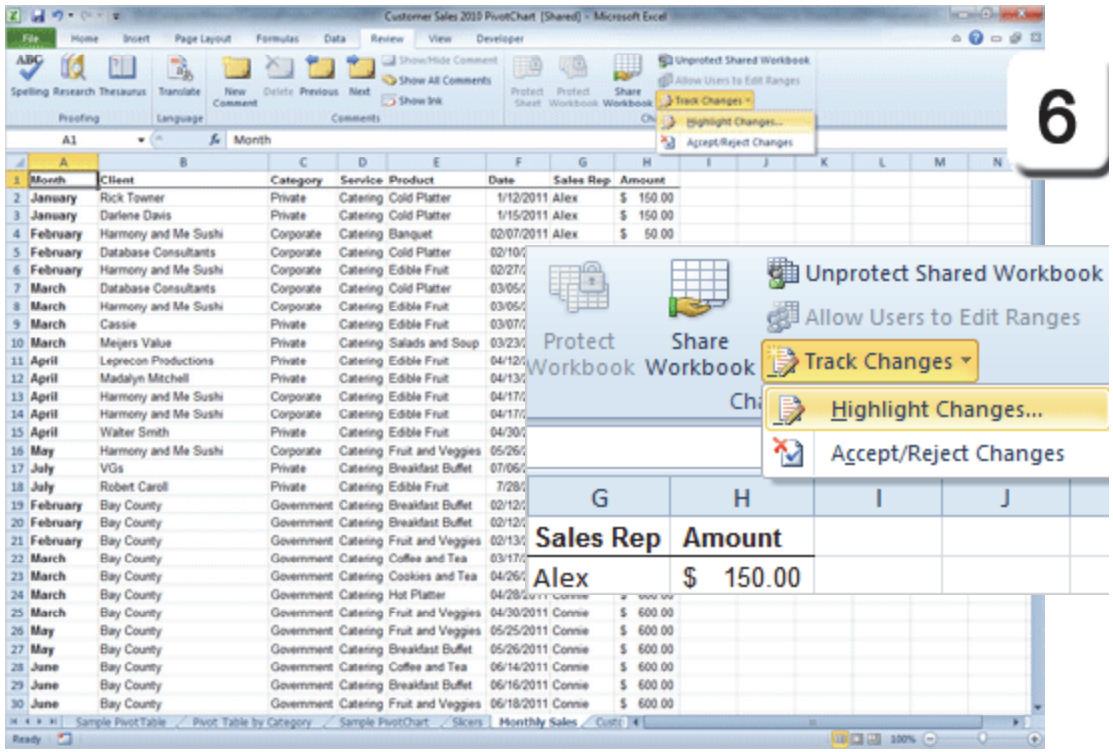
Each reviewer's changes can be highlighted in a different color. If you choose to **Track Changes**, you can see which changes were made, who made the changes and where you can find their changes.

6. Try it: Track Changes
Go to **Review->Changes.**
Go to **Track Changes->Highlight Changes.**

Keep going...



Review ->Changes-> Track Changes->Highlight Changes



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.3. Maintain shared workbooks: Track Changes

Take Two

Review ->Changes-> Track Changes

Track Change Options

7. What Do You See? You will be prompted to choose which changes you would like to highlight. The options include:

When: Since I last saved.
The other options are All, Not Yet Reviewed, and Since Date...

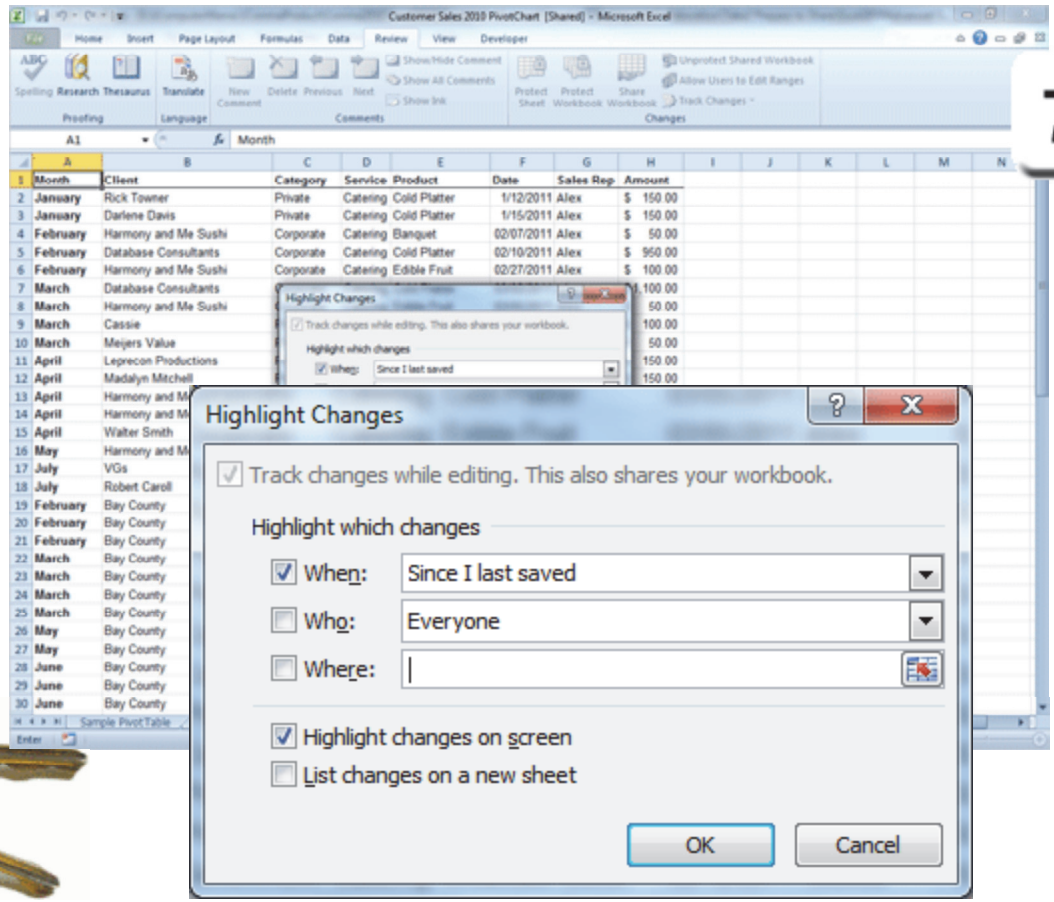
Who: Everyone.
The other option is Everyone but me.

Where: By default this is blank.
You can select a range of cells to Track.

What Else Do You See? There should be a check mark to **Highlight changes on screen.**

Click **OK** and keep going...





7

Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.3. Maintain shared workbooks: Highlight Tracked Changes

Review the Tracked Changes

So, what does **Tracking** look like? In this sample spreadsheet there are 7 records for "Cold Platter." Let's **Find and Replace** "Cold Platter" with "Pita Platter."

8. Try it: Make Some Changes
Select Column E: Products.
Go to **Home->Editing->Find and Select**.
Click on **Replace**.

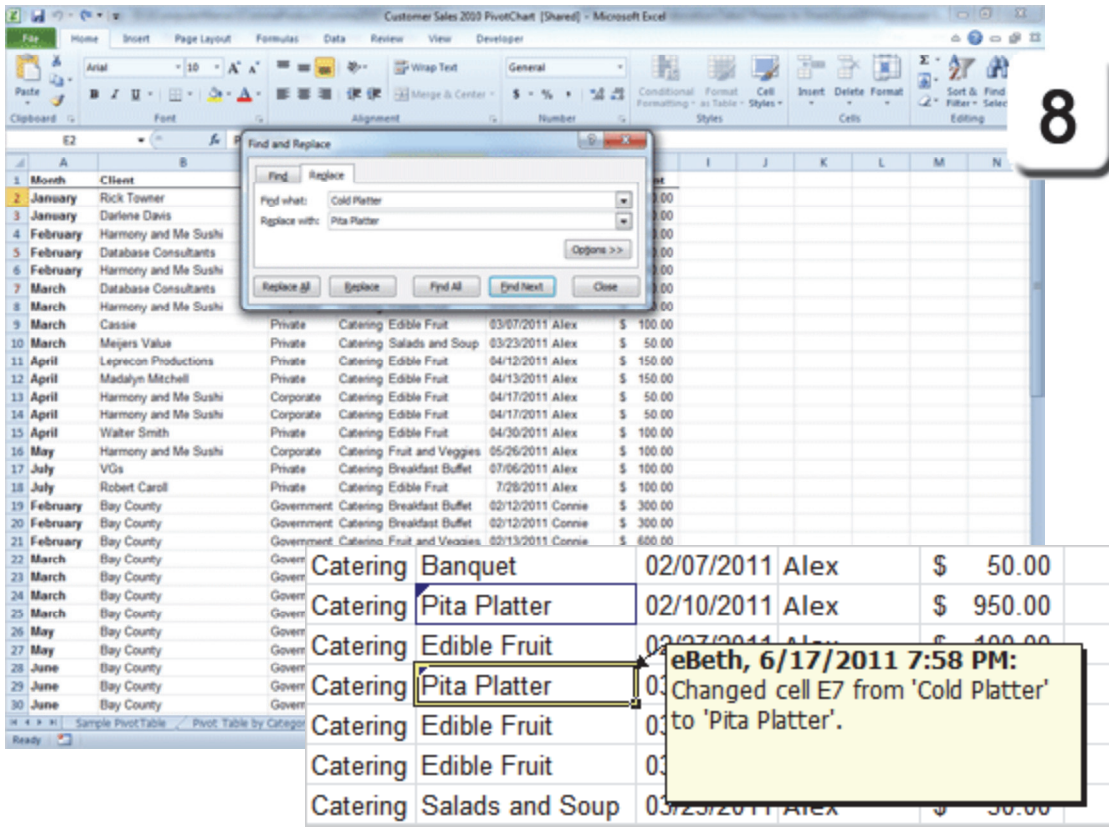
You will be prompted to enter the following:
Find What: Cold Platter
Replace With: Pita Platter
Click **Replace All** to make 7 replacements.

What Do You See? There should be a border around the cells that were changed.

When you run your cursor over the highlighted cell you should see the name of the person **who** changed the data, **when** it was changed and **what** was changed.

One more time, keep going...!

Home->Editing->Find and Select-> Replace



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.3. Maintain shared workbooks: Highlight Tracked Changes

Review ->Changes-> Track Changes-> Accept or Reject Changes

9

Accept or Reject the Changes

As you review the tracked changes, you can choose to **Accept** or **Reject** those changes.

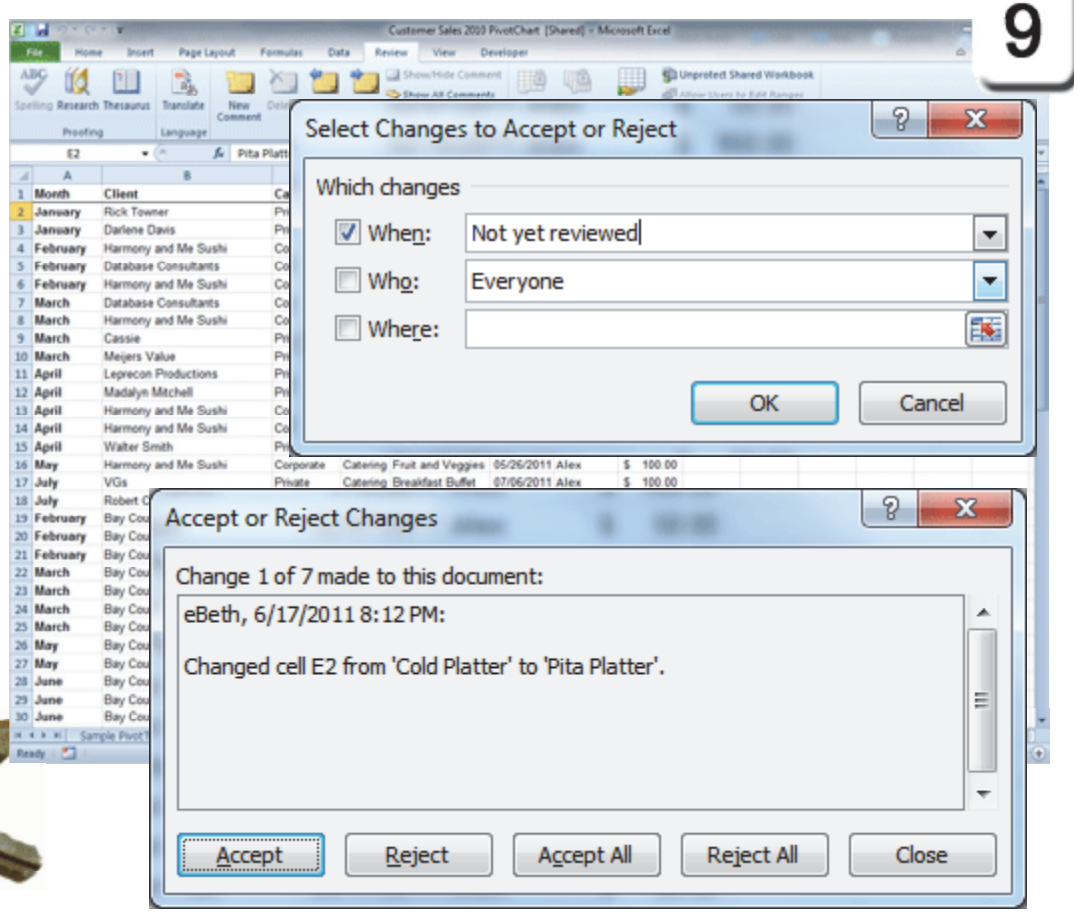
9. Try it: Select Changes
Go to **Review ->Changes-> Track Changes**.
Click on **Accept or Reject Changes.**

You will be prompted to select which changes.
When: Not yet reviewed
Who: Everyone
Click **OK**.

Try This, Too: Accept or Reject Changes
The options include:
Accept
Reject
Accept All
Reject All
Accept All Changes and **Close** the window.

Very good.





Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.3. Maintain shared workbooks: Accept or Reject Tracked Changes

Review: Add a Comment

How do you scribble your observations or corrections on a spreadsheet? In Microsoft Excel you can use **Comments** to share your thoughts with your team.

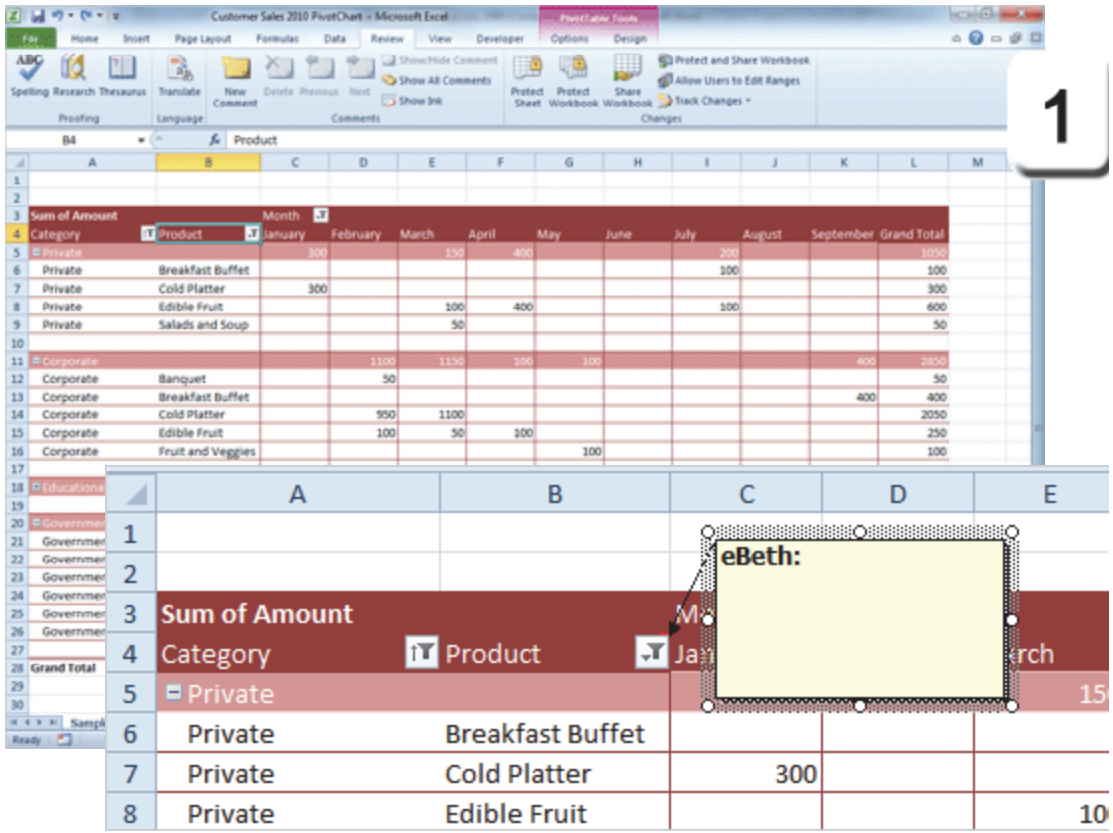
Before You Begin: The examples on this page are from the *Sample PivotTable*.

1. Try This: Add a Comment
Select Cell B4.
Go to **Review ->Comments**.
Click on **New Comment**.

What Do You See? A new comment will be placed in your spreadsheet. The comment on this page shows that it was added by eBeth.

Keep going, please...

Review ->Comments-> New Comment



Review: Edit Comments

When you create a new comment, your cursor should be in the balloon, ready to type. Here are the steps to **Edit** the Comment.

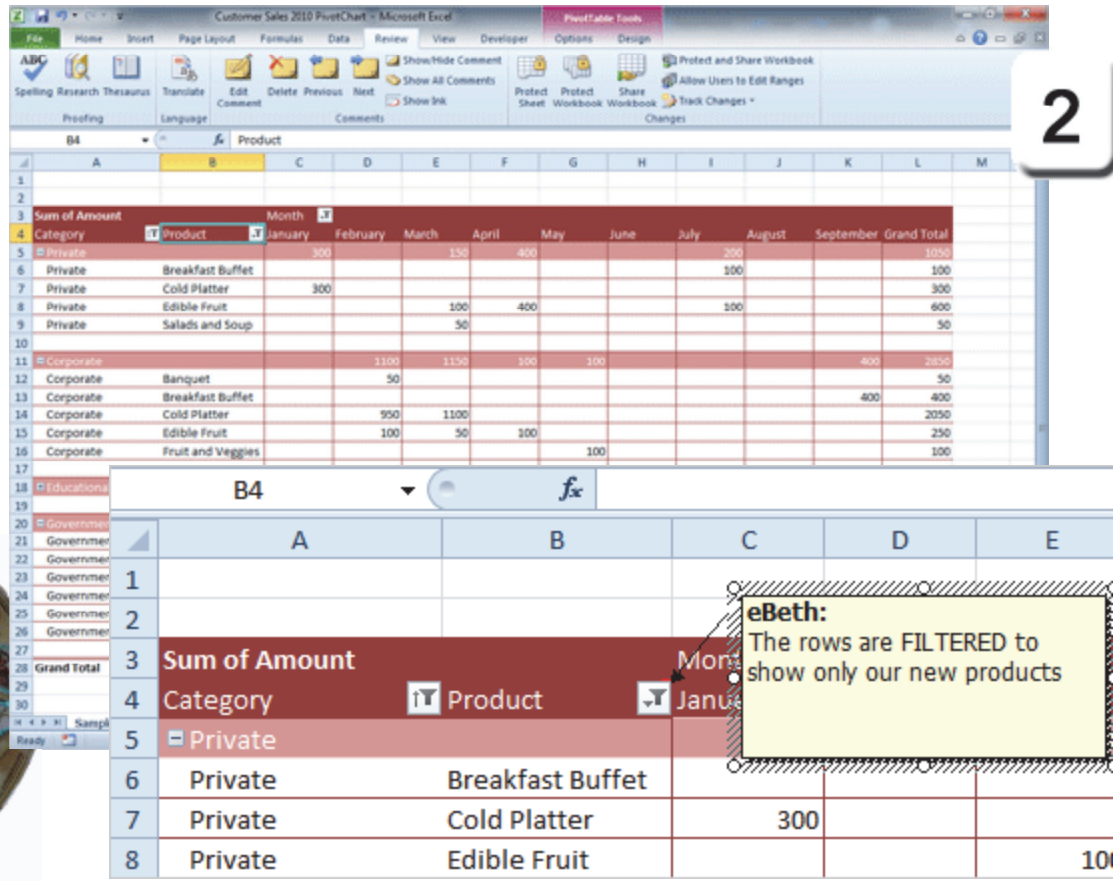
2. Try it: Edit the Comment
Select Cell B4 (The one with the Comment).
Go to **Review ->Comments.**
Click on **Edit Comment.**
Type: The rows are FILTERED to show only our new products

What Do You See? A Comment is a special Text Box. You can edit the Comment to make it taller or wider if you wish.

Keep going...



Review ->Comments-> Edit Comment



Review the Comments

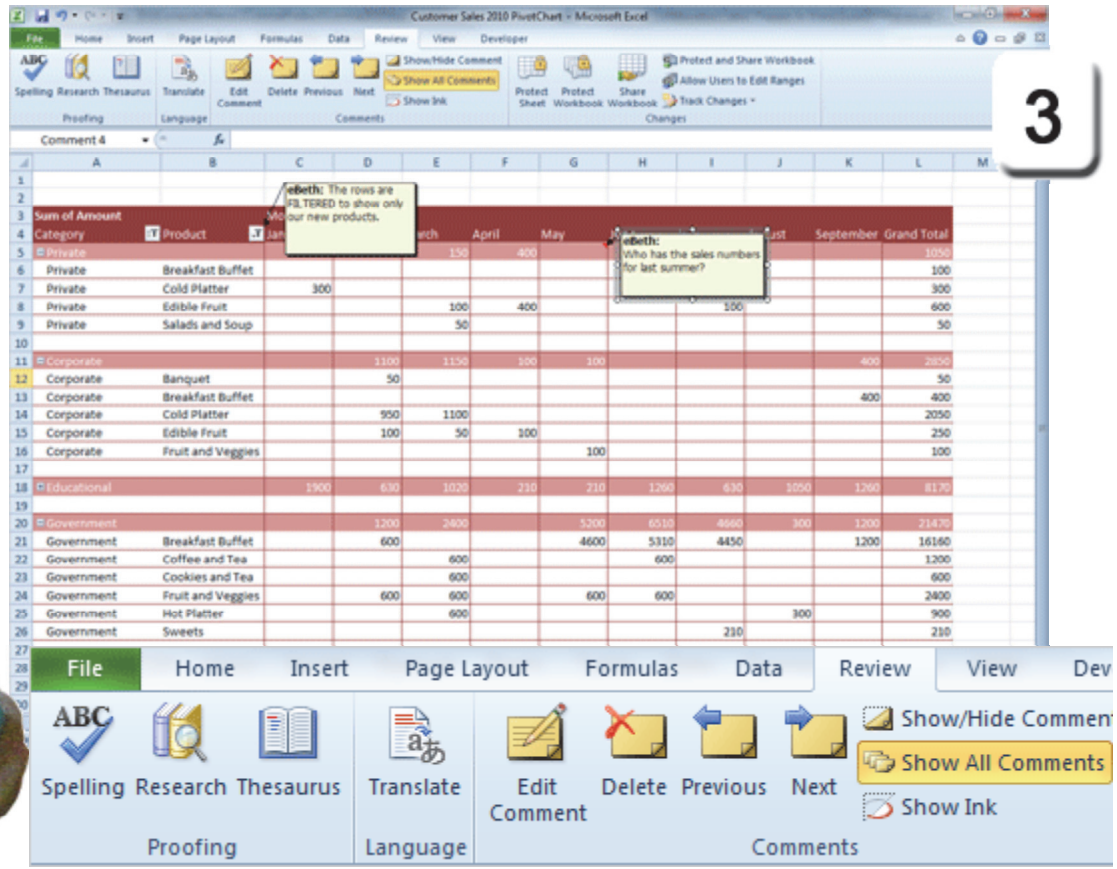
Look again at the **Review** Ribbon. The **Comments** group has a couple of useful buttons for navigation and display.

Before You Begin: Select 2 or 3 different cells and add a Comment (e.g. Comment1, Comment2) to each one.

3. Try This: Review the Options
Go to **Review ->Comments**.
Navigate around the Comments with the **Previous** and **Next** options.

What Else Do You See? When you select a Comment you can also **Delete** it.

Review ->Comments-> Edit Comment

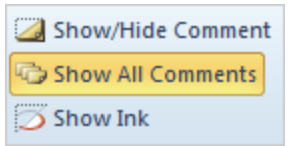




Show/Hide Comments

Say your workbook has Comments from several Reviewers. You can choose which ones should be shown or hidden.

4. Try This, Too: Show/Hide the Comments
Go to **Review ->Comments.**
Click on **Show/Hide Comment.**

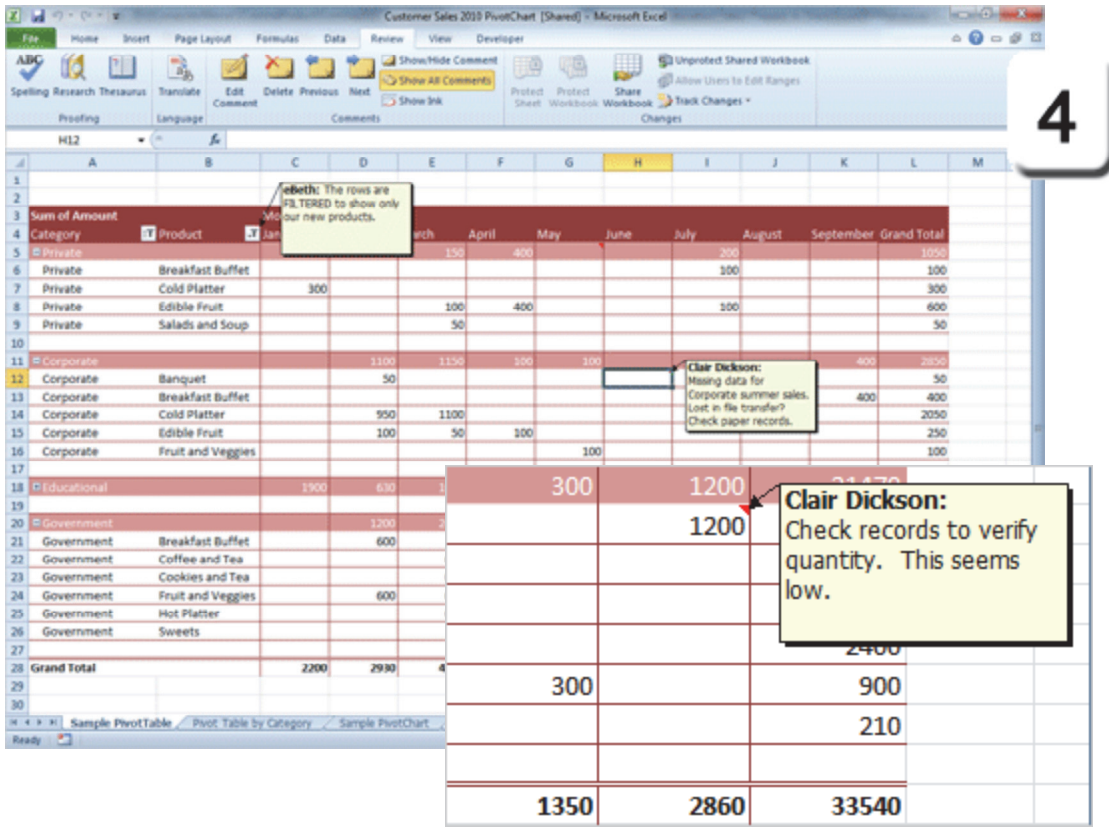


What Do You See? There should be a small triangle in the upper right corner of the cell that has a Comment.

OK, that completes this discussion on the **Review** Ribbon: Proofing, Language, Comments and Changes.

SAVE your changes, please.

Review ->Comments-> Show/Hide Comment



Working Together

Say two people need to work on the same file at the same time. How would you compare the two files and merge the changes? Microsoft Excel 2010 has a tool you can add that automates the steps: **Compare and Merge Workbooks.**

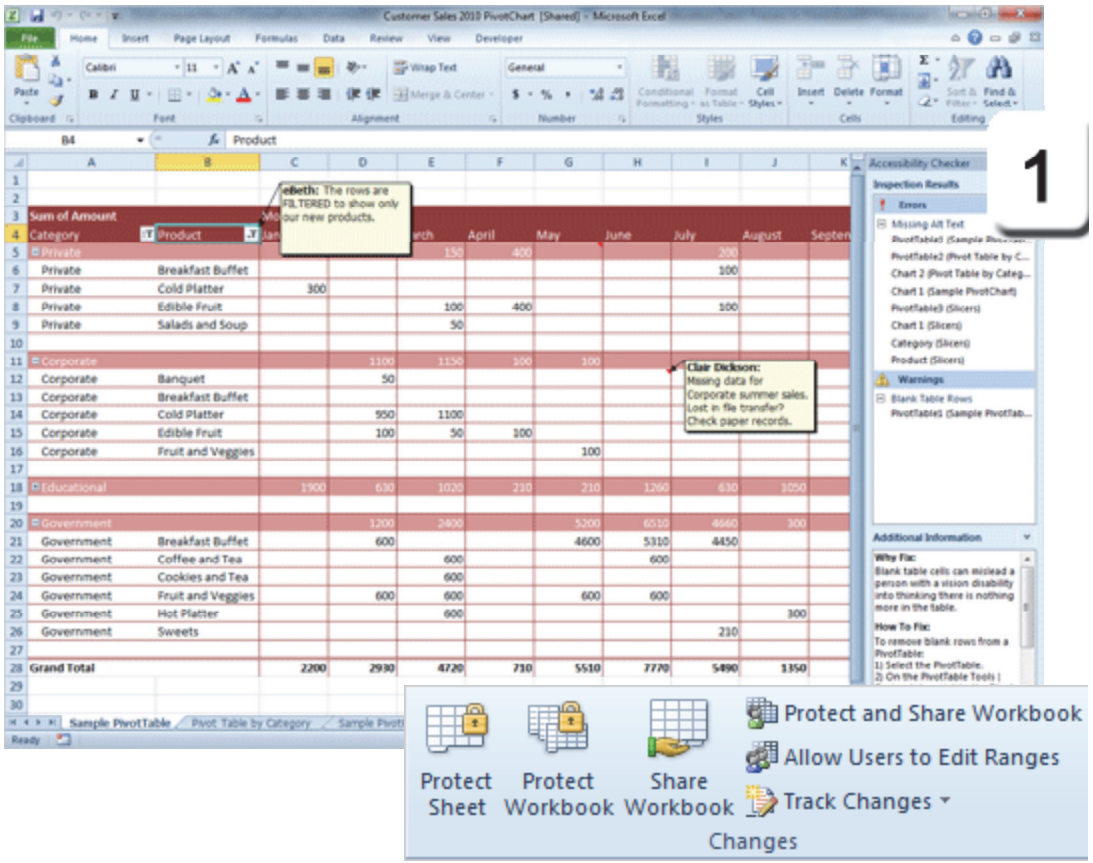
1. Here are some thoughts to consider:

Where are you sharing your work?
For the best results, you need to save all of the shared copies in the same folder on the server.

Where is the command button?
You also need to customize the Quick Access and add the **Compare and Merge Workbooks** button. This option is NOT available in the **Review** Ribbon by default.

Working With the Same Shared Copies
Compare and Merge Workbooks only works with copies of the same **Shared** workbook. It cannot be used to combine workbooks that are not Shared.

Keep going...



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.3. Maintain shared workbooks

Add a Command to the Quick Access Toolbar

Here are the steps to customize the **Quick Access Toolbar** and add the **Compare and Merge Workbooks** button.

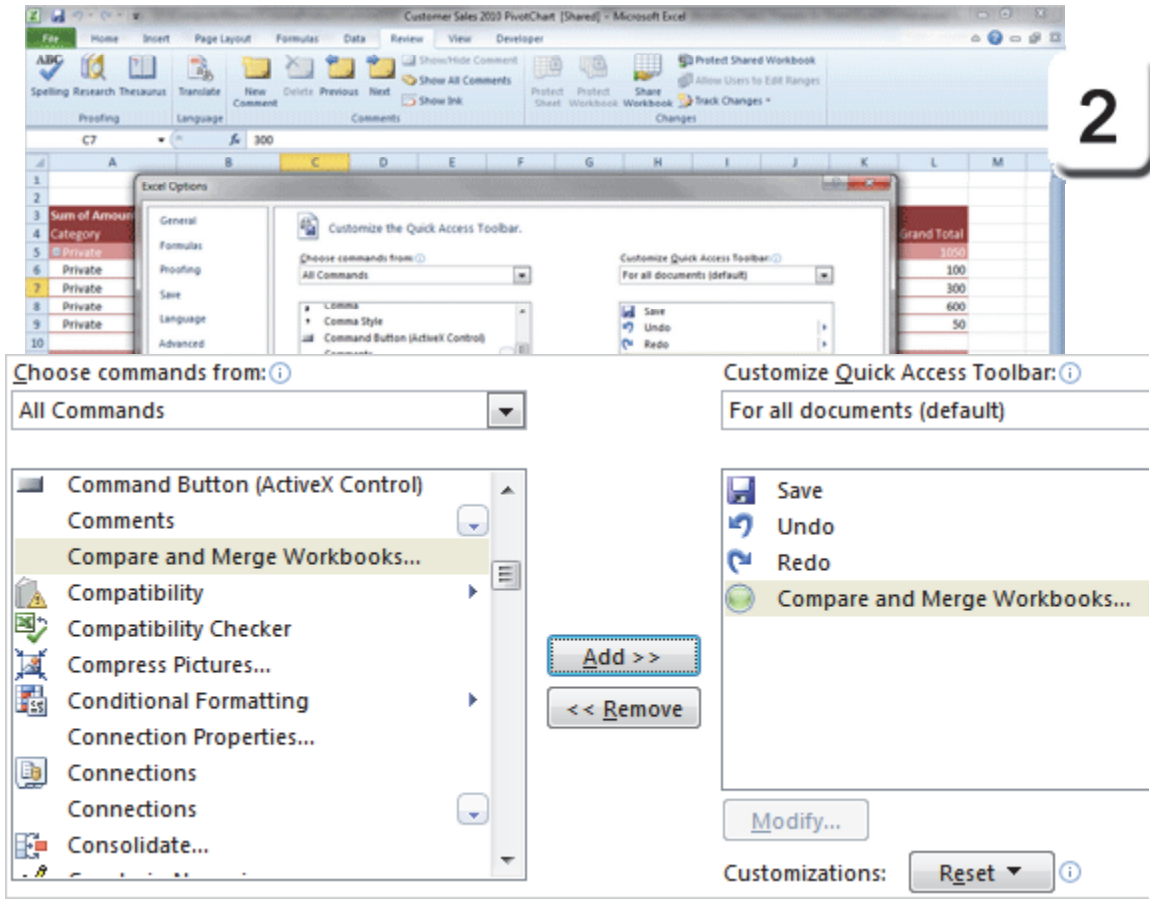
Before You Begin: The sample workbook, [Customer Sales 2010 PivotChart.xlsx], is open and **Shared**.

2. Try This: Add Compare and Merge Workbooks to the Quick Access Toolbar
Go to **File ->Options.**
Click on the **Quick Access Toolbar** tab.

Customize the Quick Access Toolbar
Choose commands from: All Commands.
Select **Compare and Merge Workbooks.**
Click **Add.**

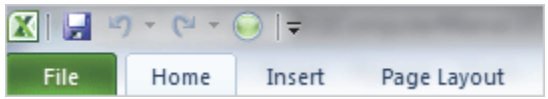
The **Compare and Merge Workbooks** command should be displayed on the right side. Click **OK.** Keep going...!

File ->Options-> Quick Access Toolbar



Compare and Merge

The **Quick Access Toolbar** should have a new button, **Compare and Merge Workbooks**. In the image on this page the custom button is to the right of the Undo and Redo arrows.



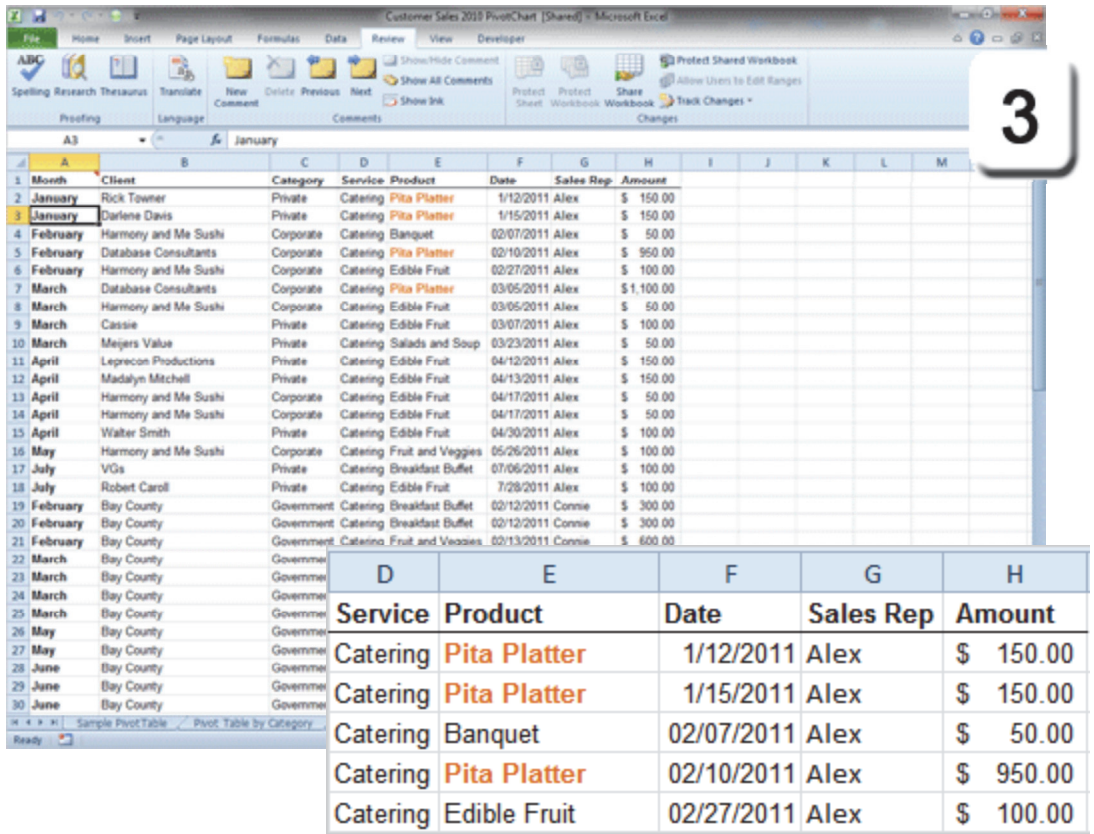
3. What if two people edit the same file?
Say there are two people who go to the same folder and open the same Shared workbook.

Say User2 clicked on **Find and Replace** to get all of the Pita Platter sales and format the data orange. User2 then SAVED her changes.

Keep going...

Memo to Self: Some of these examples cannot really be tested if you are working alone.

Quick Access Toolbar ->Compare and Merge Workbooks



D	E	F	G	H
Service	Product	Date	Sales Rep	Amount
Catering	Pita Platter	1/12/2011	Alex	$ 150.00
Catering	Pita Platter	1/15/2011	Alex	$ 150.00
Catering	Banquet	02/07/2011	Alex	$ 50.00
Catering	Pita Platter	02/10/2011	Alex	$ 950.00
Catering	Edible Fruit	02/27/2011	Alex	$ 100.00

Updating the Shared File

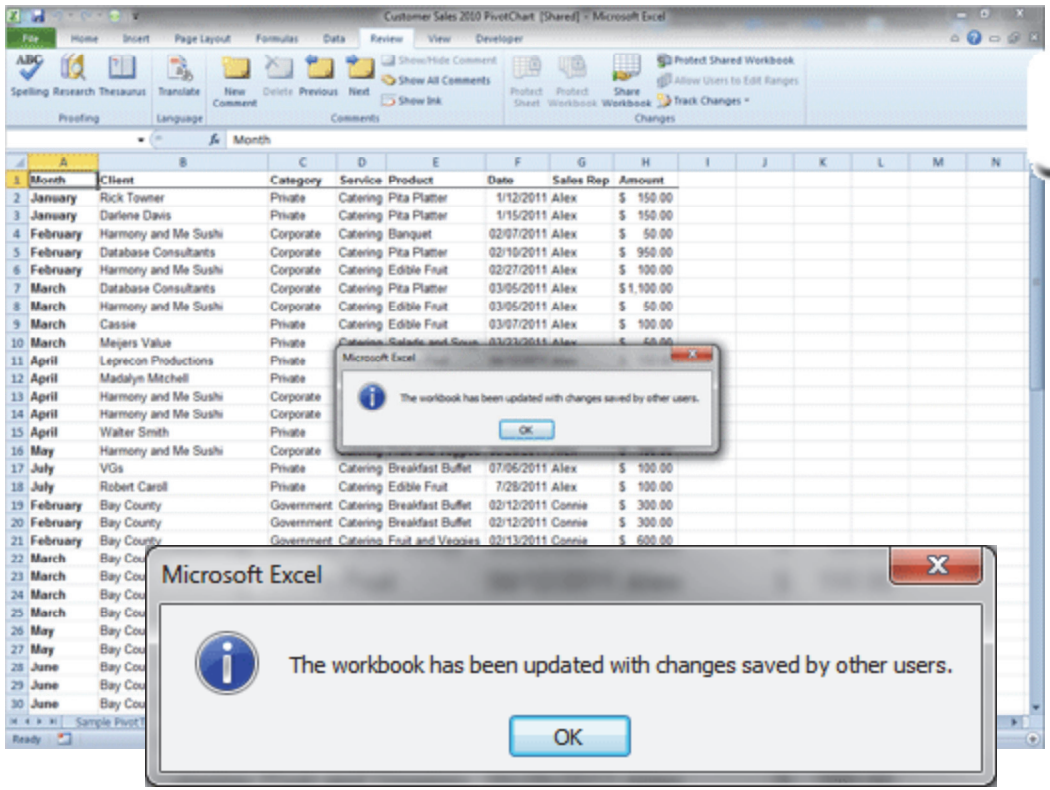
4. What happens when you click on Compare and Merge Workbooks?
User1 and User2 both made changes to the same workbook. Say User1 went to the Quick Access toolbar and clicked **Compare and Merge Workbooks.**

Microsoft Excel will update User1's copy of the spreadsheet with User2's changes. A small window will pop up confirming that your workbook has been updated.

That was it: Excel compared both versions of the Shared workbook and updated User1's copy.

That's that...Let's take up a new topic.

Quick Access Toolbar ->Compare and Merge Workbooks



4

Document Properties

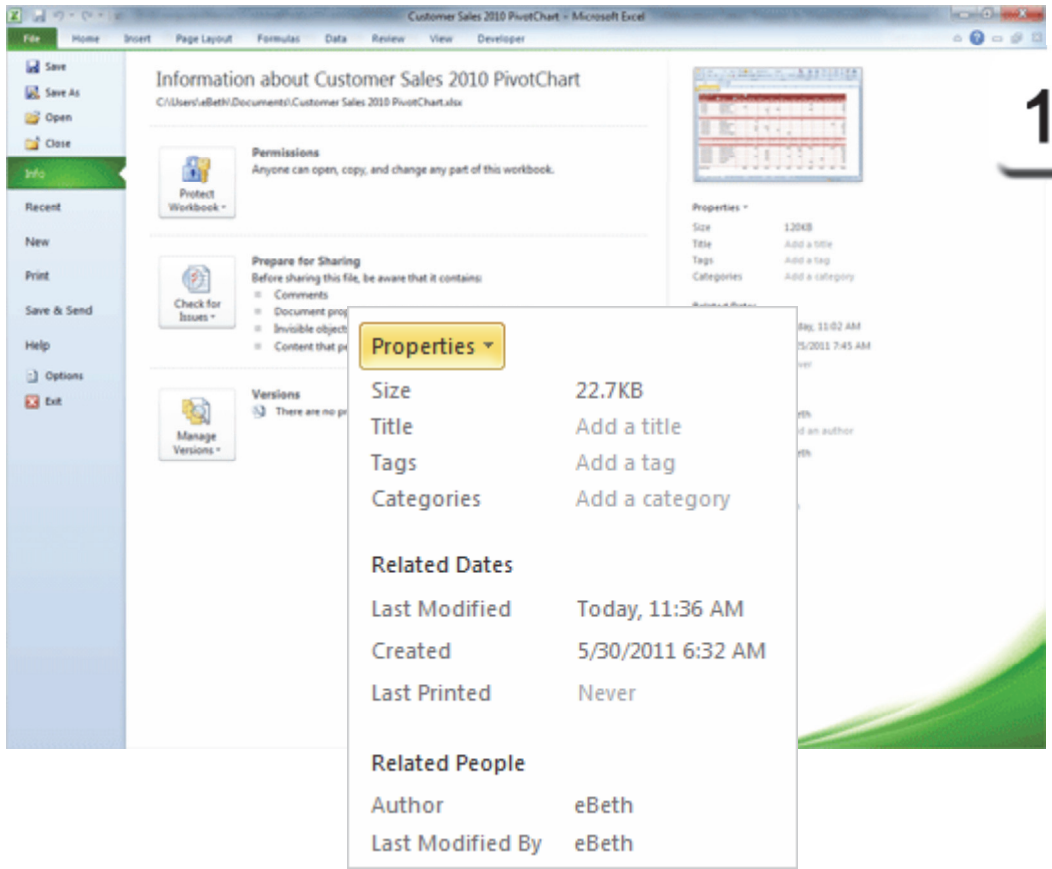
Every file has **Properties**. The basic Properties include the name of the file and when it was created or modified.

1. Try it: Find the Properties
Go to **File ->Info-> Properties.**

What Do You See? The Properties include:
Size
Title
Tags
Last Modified
Created
Last Printed
Author
Last Modified By

Keep going, there's more...

File ->Info-> Properties



1

Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Document Properties

Edit the Properties

Most of the **Properties** are updated by the computer when you SAVE a file. Some of the Properties can be customized.

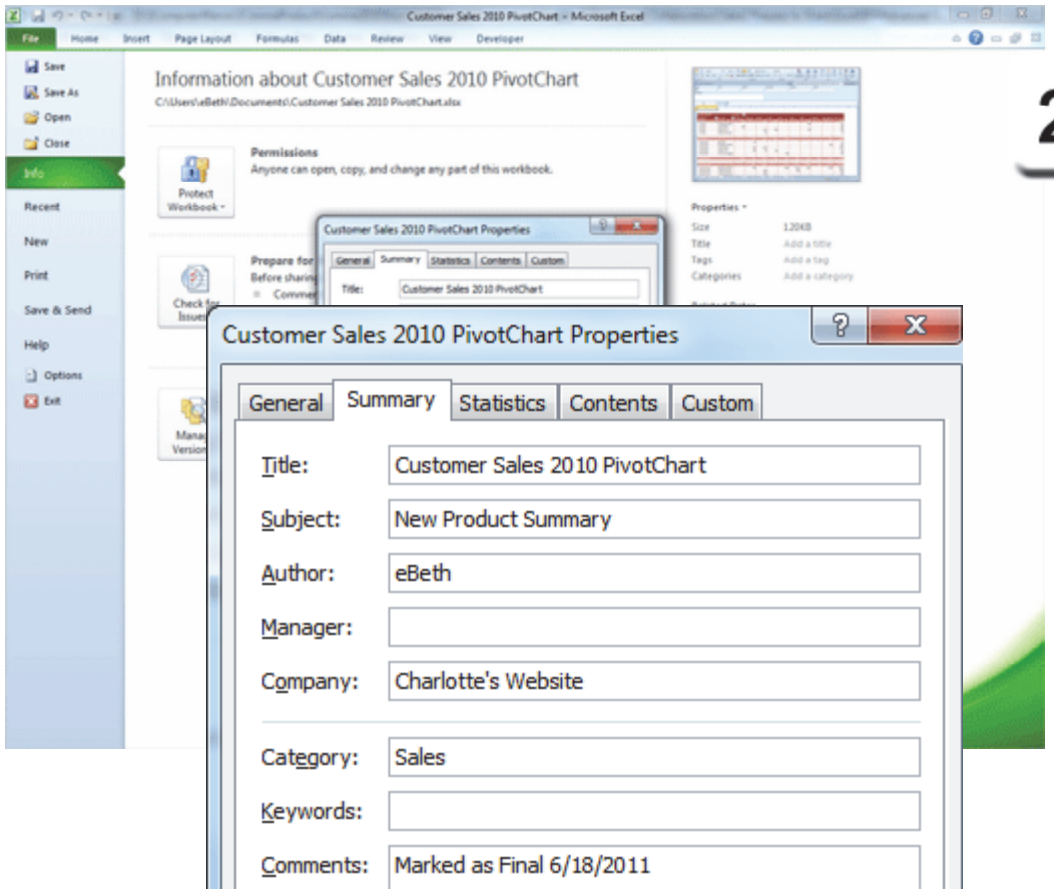
2. Try it: Open the Advanced Properties
Go to **File ->Info-> Properties.**
Click on **Advanced Properties**.

What Do You See? A Property Sheet with 5 tabs should open. The **General** tab displays the same basic information that was available in the Backstage View: name and dates.

Try This, Too: Edit the Summary
You can edit many fields on the Summary tab:
Title
Subject
Author
Manager
Company
Category
Keywords (that's metadata)
Comments

Type some sample data and keep going...

File ->Info-> Properties

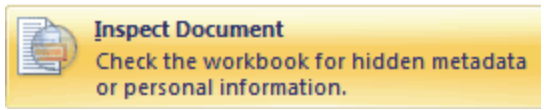


Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Document Properties

Inspect the Document

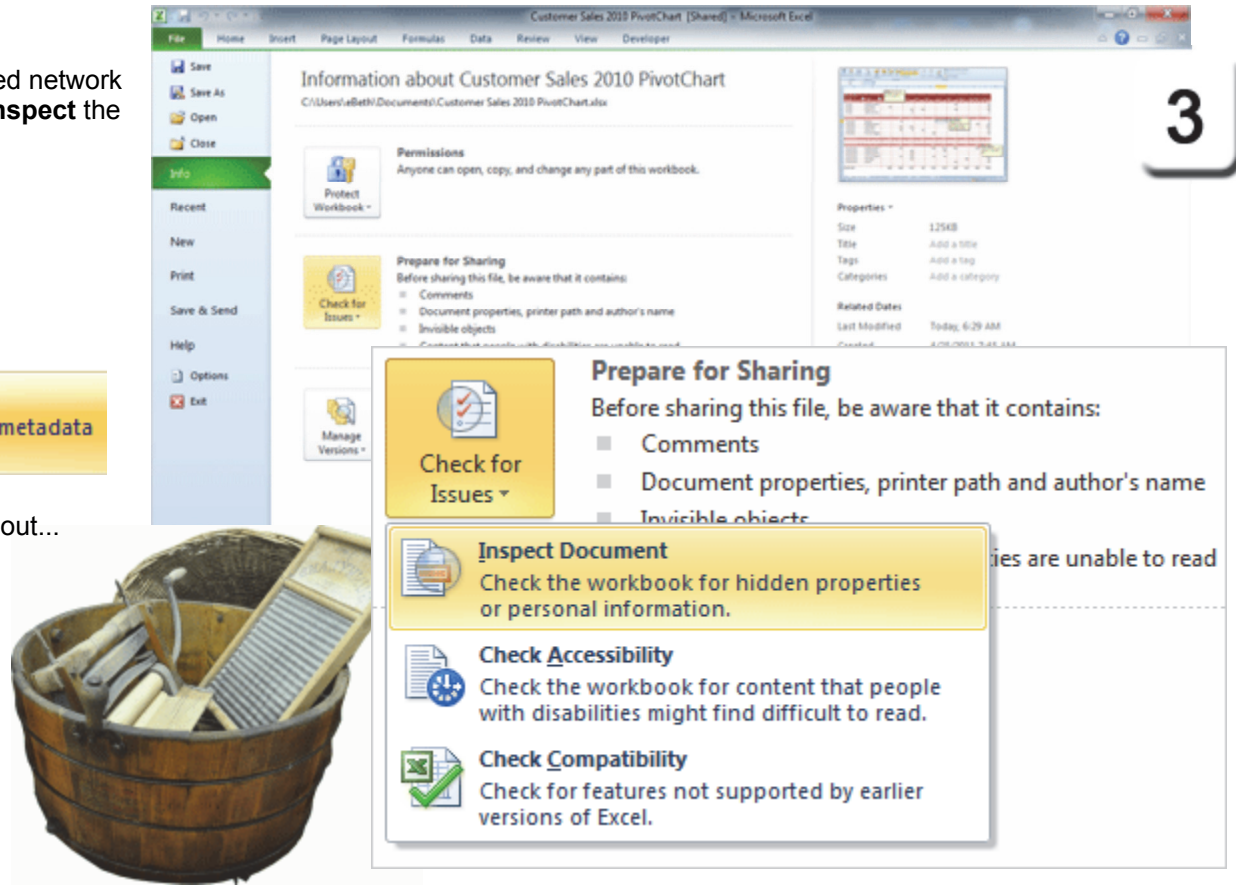
Prior to posting your work on a shared network drive or on the Internet you should **Inspect** the **Properties** for metadata or personal information.

3. Try it: Inspect the Document
Go to **File->Info.**
Go to **Check for Issues.**
Click on **Inspect Document.**



What does it do? Keep going to find out...

File ->Info->Check for Issues-> Inspect Document



3

The Document Inspector

4. What Do You See?

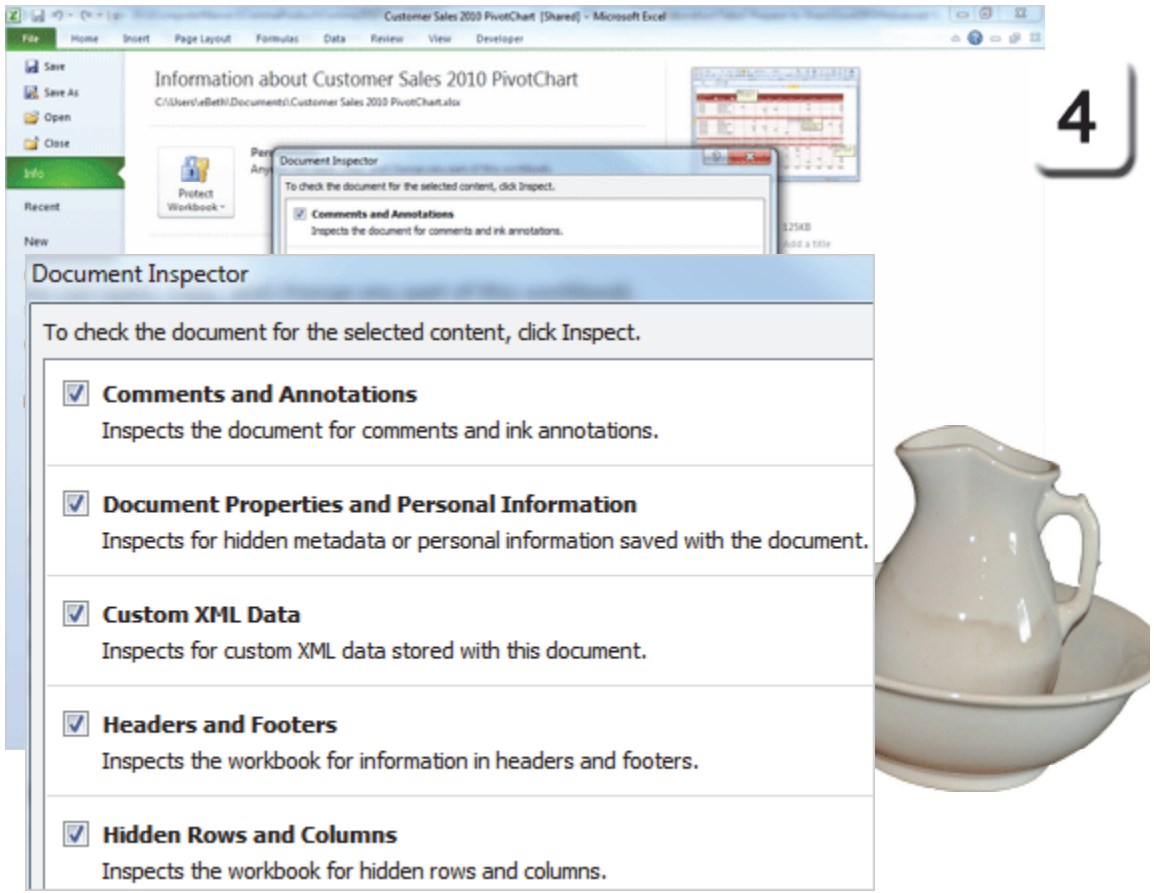
Meet the **Document Inspector**.

This tool reviews your work and looks for:
Comments and Annotations
Document Properties and Personal Information
Custom XML Data
Headers and Footers
Hidden Rows and Columns
Invisible Content

If the **Document Inspector** finds any metadata or personal information, you will be prompted to ignore or delete it.

Memo to Self: Hidden Data cannot be removed in Shared Workbooks.

File ->Info->Check for Issues-> Inspect Document



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Check for Issues

Check Compatibility

Microsoft Office 2007 and Office 2010 are in a new file format: XML (Extended Markup Language). All new files now have four letter extensions. For example, Excel 2010 workbooks are saved as myname.xlsx.

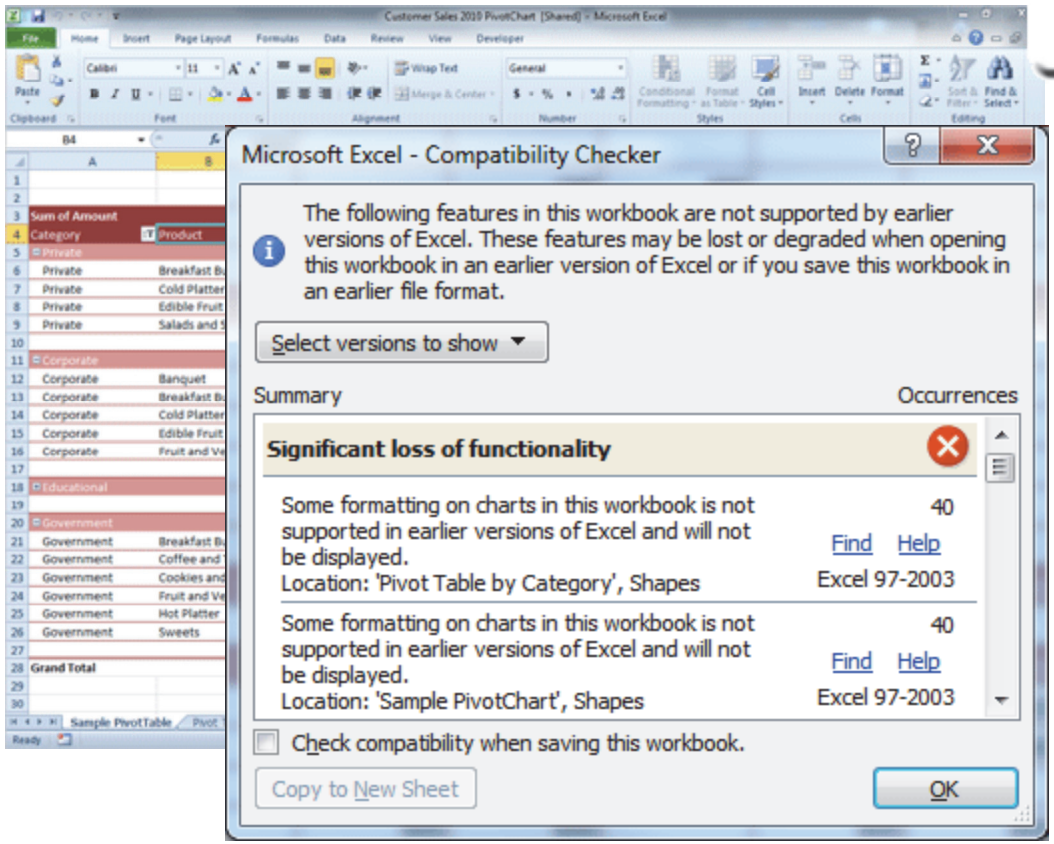
The format is so different that older versions of Microsoft Office cannot even open the new files without a free add-on. People are slow to upgrade their systems. So, there may be some **Compatibility** issues.

5. Try it: Check Compatibility
Go to **File ->Info->Check for Issues.**
Click on **Compatibility Checker.**

Compatibility issues are grouped into 2 categories: **Significant** and **Minor** loss of functionality. What do you lose? The new Themes and Styles are not supported by earlier versions of Microsoft Office. New functions such as Sparklines and PivotTable Slicers are not supported, either.

(Aw, you never let me have any fun.)

File ->Info->Check for Issues-> Compatibility Checker



Accessibility Checker

Computers have always helped people with disabilities access information. Since the early days of Windows 95, computers could read text out loud as well as type what was said. The assistive technology needs your input, though. For example, pictures and charts should have Alternative Text (Alt Text) that describes the graphic.

6. Try it: Run the Accessibility Checker

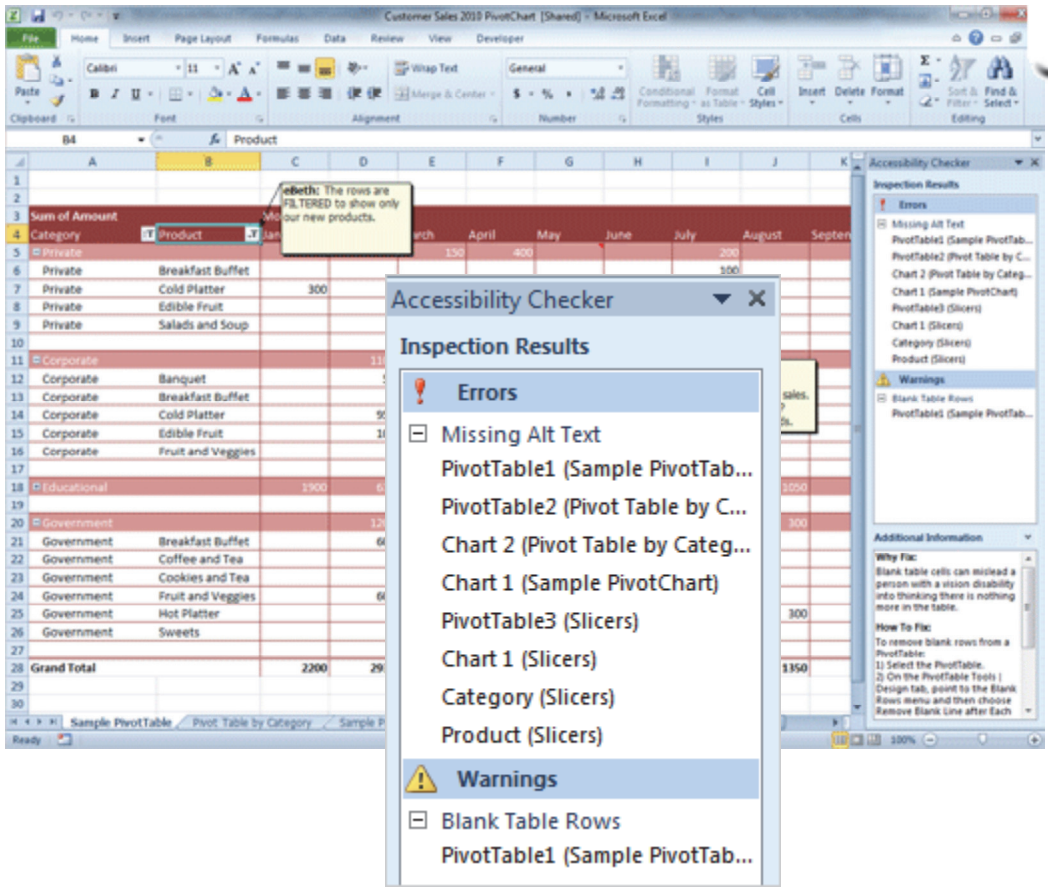
Go to **File ->Info->Check for Issues**.
Click on **Accessibility Checker.**

What Do You See? The **Accessibility Checker** should be available on the right side of your screen. The **Inspection Results** will list **Errors** and **Warnings**.

What Else Do You See? Select an Error or Warning and look at the bottom of the **Accessibility Checker**. There should be a summary of the problem and suggestions for how to correct it.

OK, **SAVE** and **CLOSE** this workbook.

File ->Info->Check for Issues-> Accessibility Checker



Permissions and Protection

Security and permissions can be set at many levels. Earlier in this lesson we looked at how to Share or Protect a sheet or a workbook for changes and comments. The following pages will discuss **Permissions** using the Microsoft Excel 2010 Backstage properties.

Before You Begin: This lesson will use a different sample file that has NOT been Shared or Protected.

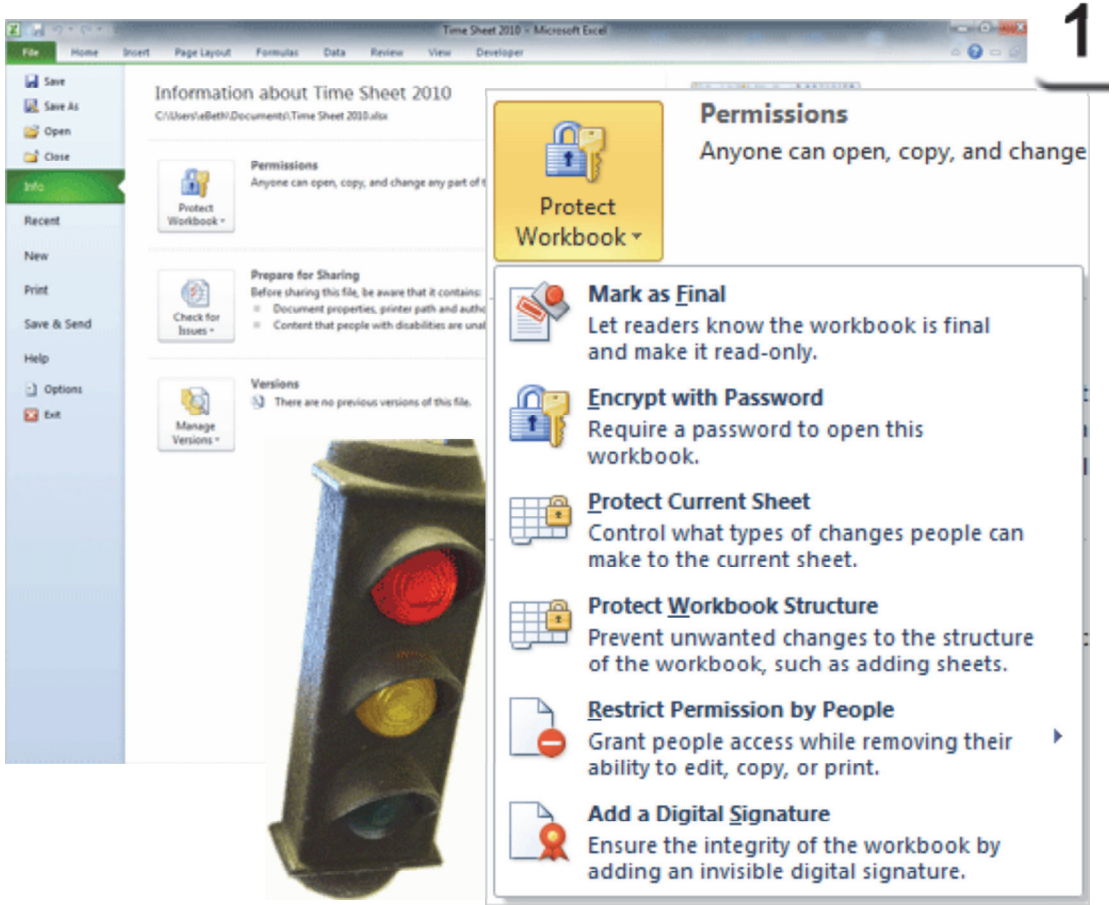
1. Try it: Review the Permissions
Open the spreadsheet: Time Sheet 2010
Go to **File ->Info->Permissions**.
Click on **Protect Workbook**.

What Do You See: The Permissions are:
Mark as Final
Encrypt with Password
Protect Current Sheet
Protect Workbook Structure
Restrict Permission by People
Add a Digital Signature.

Let's review these options. Keep going...

File ->Info->Permissions->Protect Workbook

1



Permissions: Mark As Final

Say the spreadsheets are proofed, corrected and ready to go. When you **Mark as Final** you are indicating that this file is done: do not edit it anymore.

2. Try it: Mark As Final

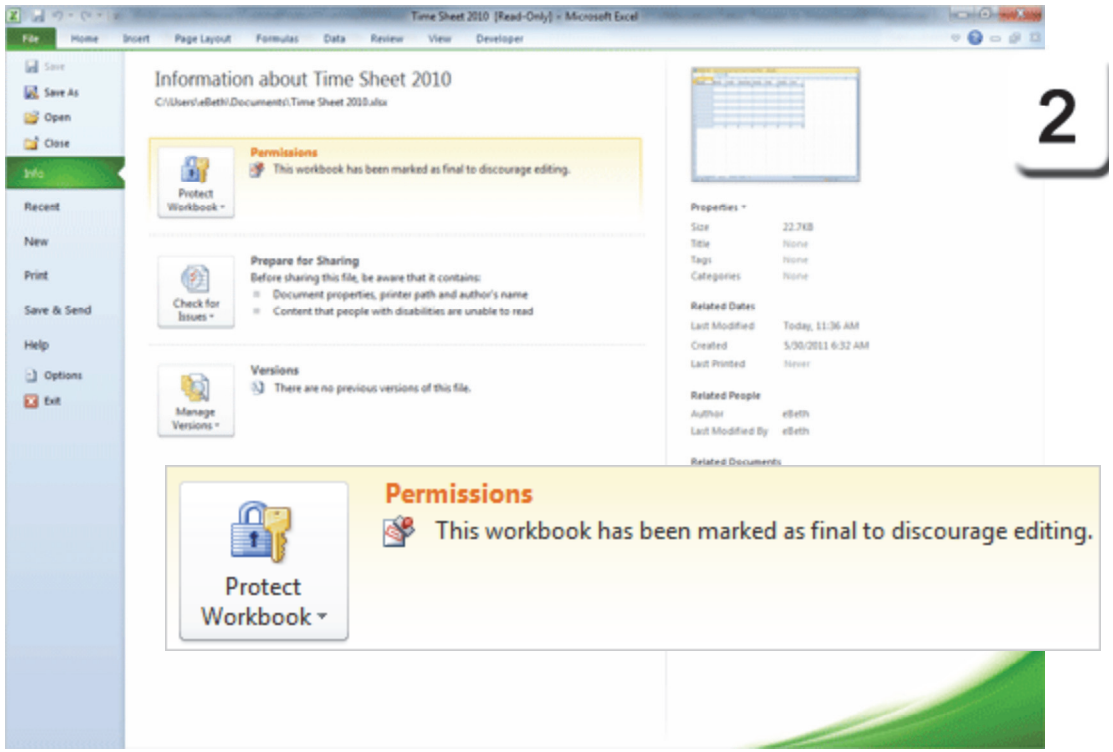
Go to **File ->Info->Permissions.**
Go to **Protect Workbook.**
Click on **Mark As Final**

What Do You See? You may be prompted to **SAVE** your work before it is Marked Final.

A second message may pop up saying that this step will make the file **Read Only**.

Keep going..

File ->Info->Permissions->Protect Workbook->Mark As Final



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Mark As Final

Mark As Final: Edit Anyway

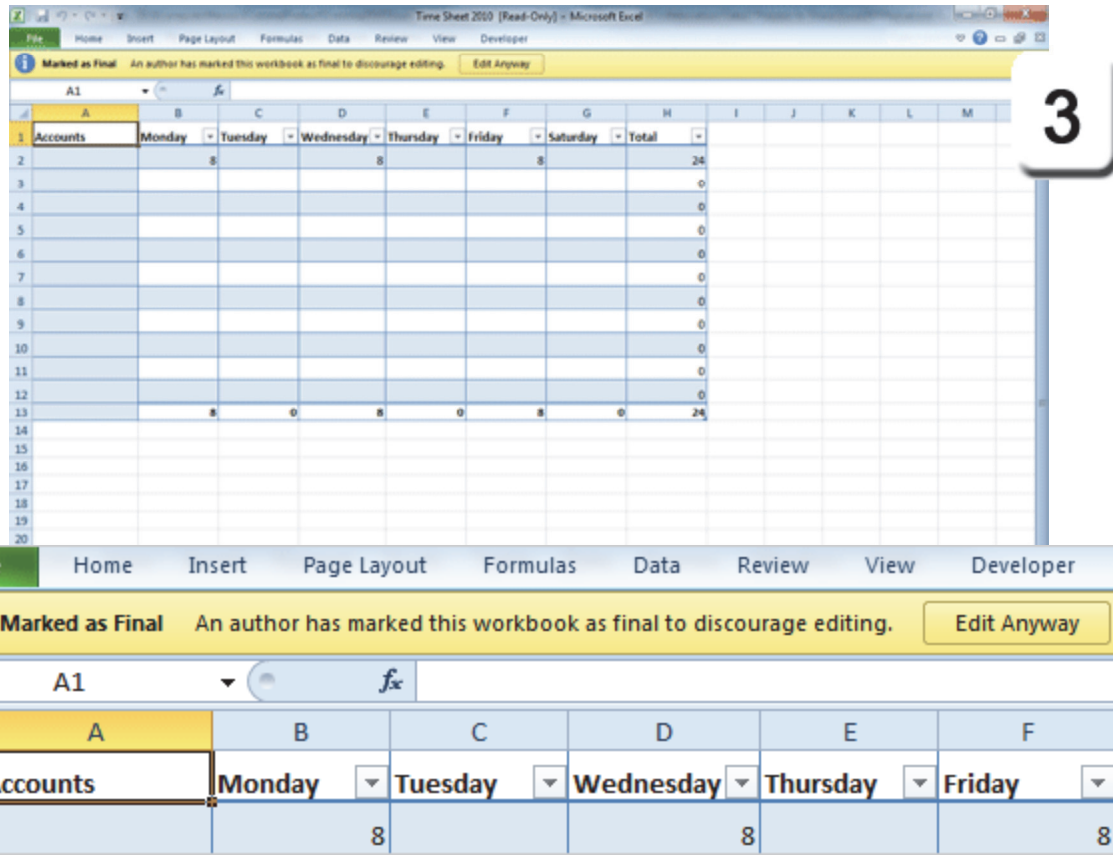
3. What Do You See? If you return to the Home Ribbon, you will see a yellow security banner at the top of the spreadsheet indicating that the file has been marked as final.

What Else Do You See? There is an option to override the author and edit the file anyway.
If you click **Edit Anyway**, the file will no longer be Read Only and you can change the data.

So, this is not secure.

Do This, Too: Remove the Read Only
Click on **Edit Anyway**. Keep going...!

File ->Info->Permissions->Protect Workbook->Mark As Final



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Mark As Final

Password Protect a File

Adding a **Password** to a file increases the security. This is called **encryption**.

Passwords should not be easy to guess, such as your name or birthday. You should choose a password that is at least 6 characters long and includes letters and numbers.

4. Try it: Encrypt the Document

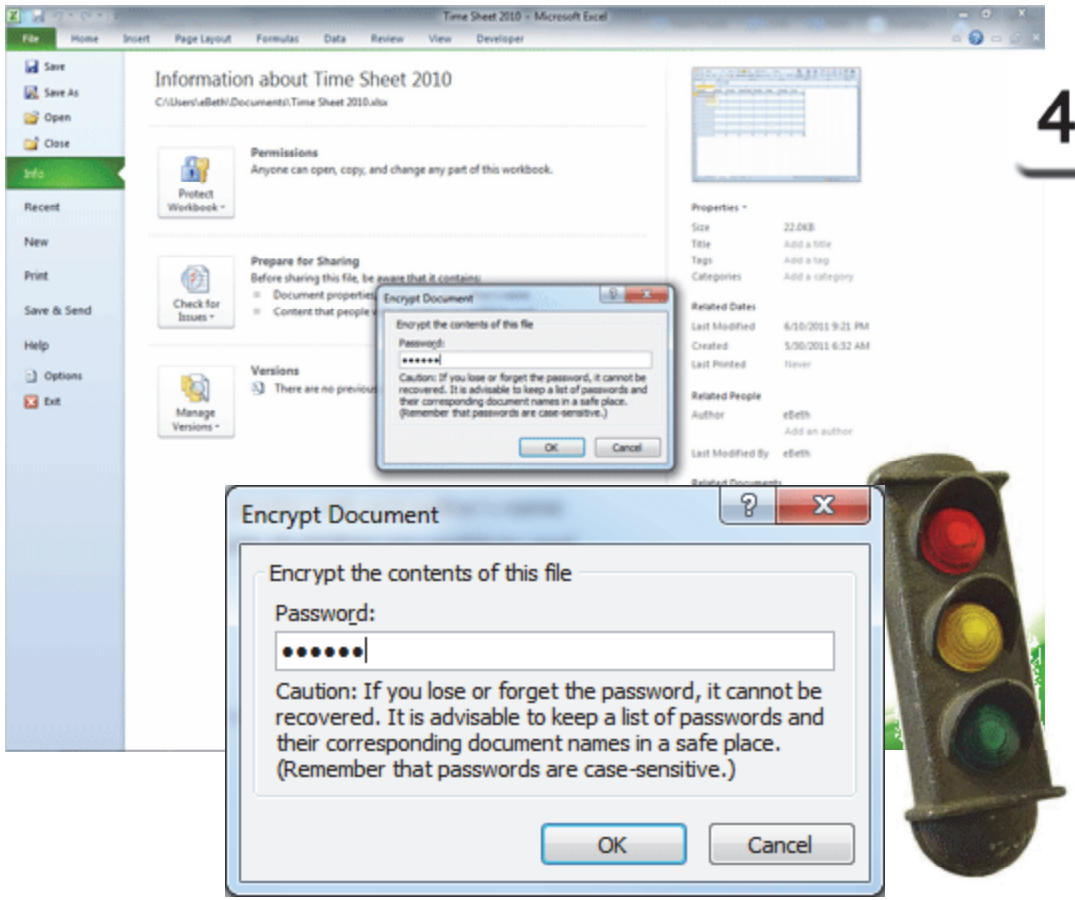
Go to **File ->Info->Permissions.**
Go to **Protect Workbook.**
Click on **Encrypt with Password.**

What Do You See? You will be prompted to enter a password. Anyone who opens your file will be asked for a password as well.

Click **CANCEL**. Keep going...

Memo to Self: Microsoft takes security seriously and strives to meet Department of Defense standards. There is NO UNDO if you forget the password!

File ->Info->Permissions->Protect Workbook->Encrypt with Password



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Require a Password

Take Two

User Permissions

The security settings shown in the previous pages are "all or nothing." Either the file is locked or it is not. The Permissions are applied to the sheet or to the entire workbook.

1. Introduction to Permissions by People
Permission can also be based on Users and Groups. When you **Restrict Permissions by People** you can decide who has access to your file. The Permissions are authenticated by **Digital Signatures**: each person has a secure ID that identifies them.

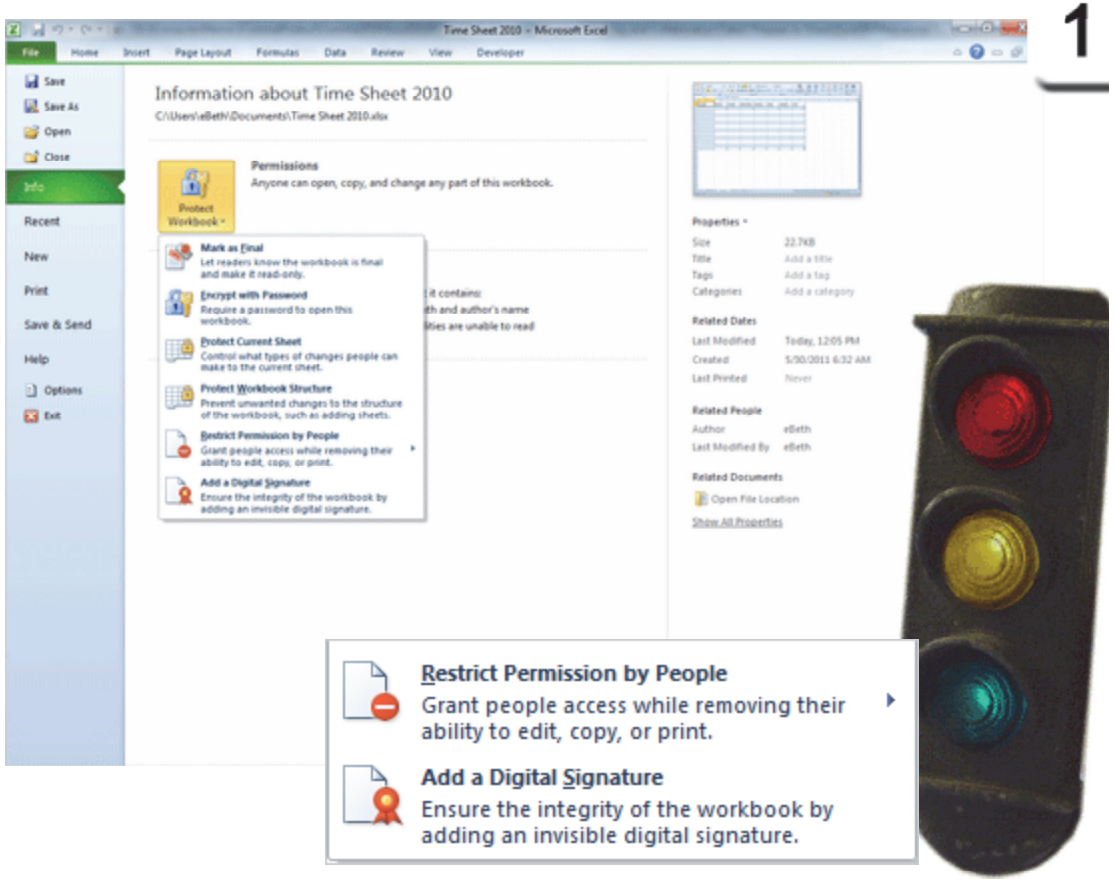
So, this process has two steps: getting a Digital ID, and then granting Permission to Digital IDs that you trust.

A **Digital Signature** shows who signed this document and if it was changed since it was signed. It is a method for determining if the email, spreadsheet or document is authentic.

Keep going...

File ->Info->Permissions->Protect Workbook->Add a Digital Signature

1



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Add a Digital Signature

Create a Digital Signature

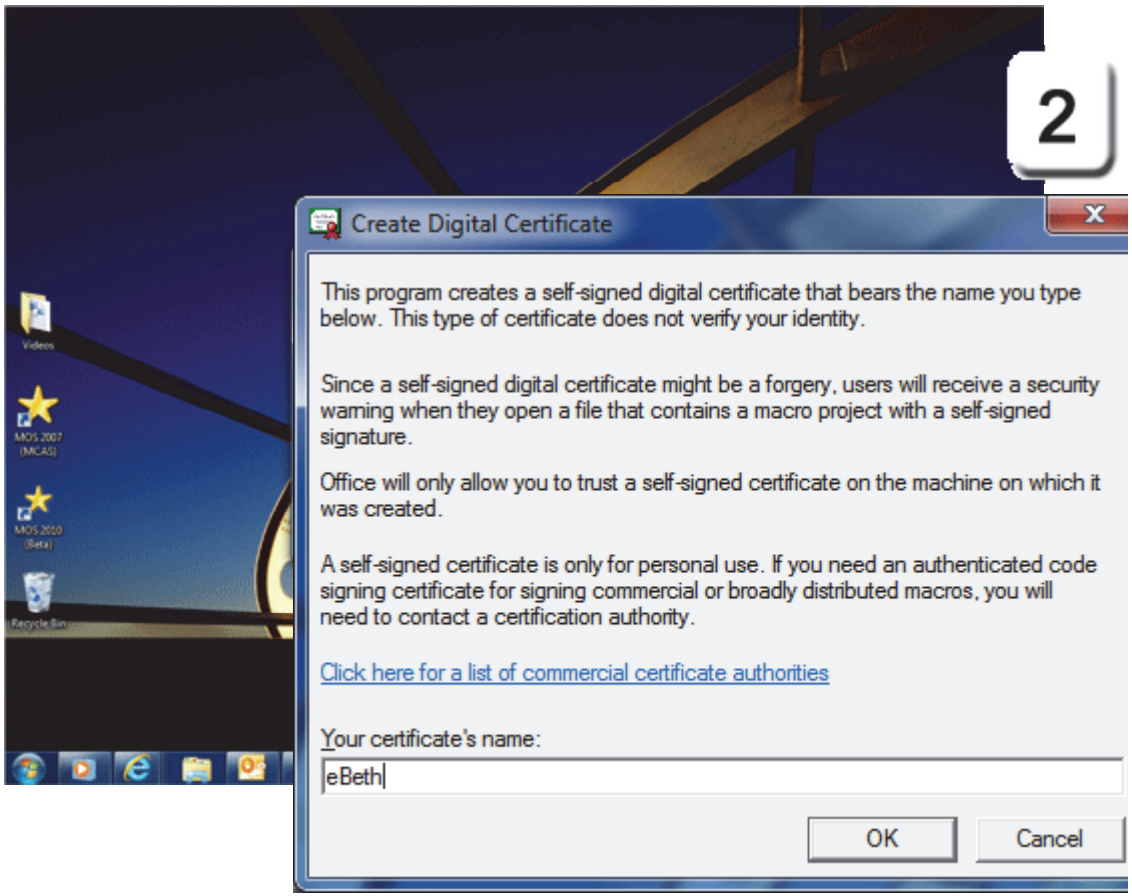
A **Digital Signature** can be created in Windows, not Word. The steps are given, below. The certificate created with this program is "self-signed," which means that it is not independently verified by a commercial signing server. So, this self-signed certificate is for personal use, only.

2. Try it: Add a Digital Signature
Go to **Start ->All Programs.**
Go to **Microsoft Office**.
Go to **Microsoft Office Tools.**
Click **Digital Certificate for VBA Projects**

You will be prompted to enter a **name** for your certificate. When you click **OK**, you should see a little window that confirms your signature was created successfully.

Please return to Excel and keep going.

Start ->All Programs->Microsoft Office->Microsoft Office Tools->Digital Certificate for VBA Projects



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Add a Digital Signature

Sign a Document

Here are the steps to add a Digital Signature to a spreadsheet. We'll go to the Backstage.

3. Try it: Add a Digital Signature
Go to **File ->Info->Permissions.**
Go to Protect Workbook.
Click on **Add a Digital Signature.**

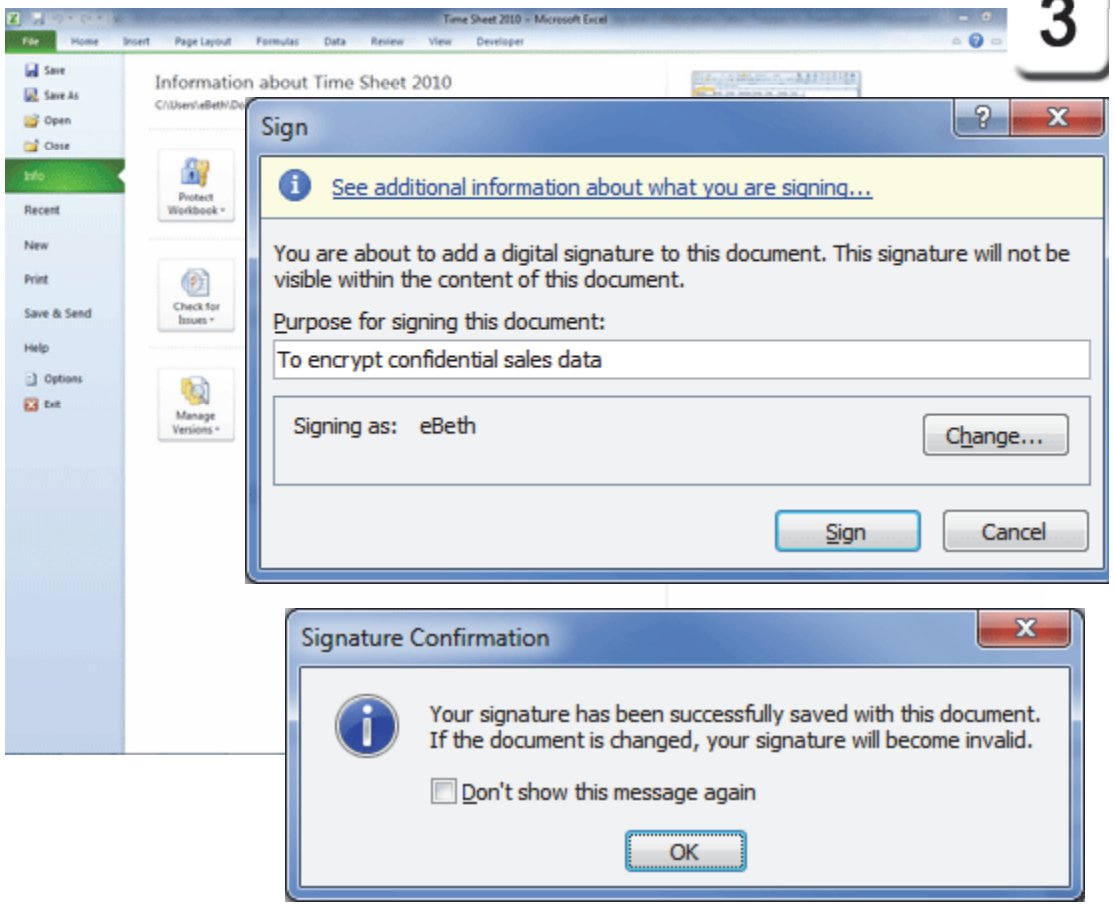
What Do You See? You will be prompted to enter the **Purpose for signing this document.** The notice also indicates that this signature will not be visible within the data.

Try This, Too: Type the Purpose
Purpose: To encrypt confidential sales data
Click on **Sign**.

You should see a Signature Confirmation.
Click **OK** and keep going...

File ->Info->Permissions->Protect Workbook->Add a Digital Signature

3



Signed Workbook Permissions

4. Try it: Review the Permissions

When you **Sign a Workbook** it will be marked as **Final** in the **Permissions**.

A **Signed Workbook** has a Digital Signature. It is an electronic seal, like a bee wax seal on letters. The bees wax would be imprinted with the ring of the man who signed and sealed the document.

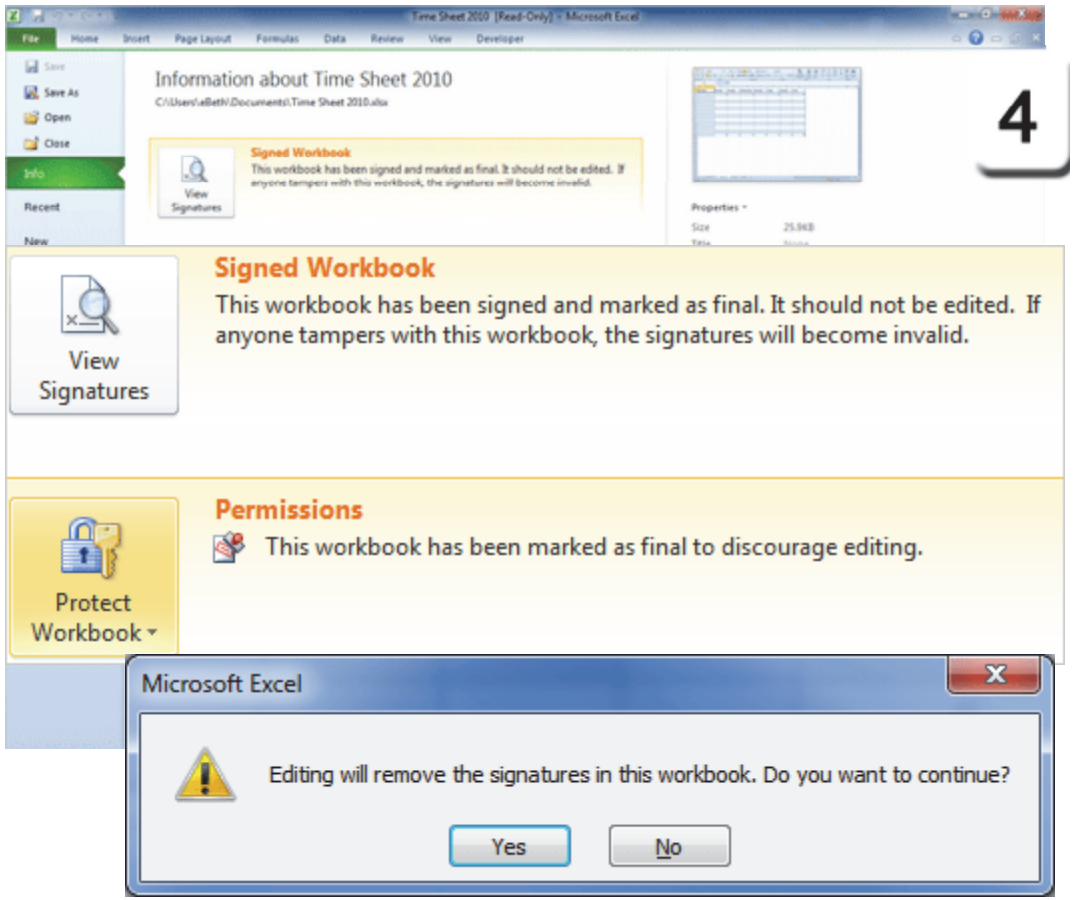
What Do You See from the Home Ribbon?

A Signed Document will have a security banner at the top under the Ribbons. There is a warning that the document has been **Marked As Final**. There is also a button to **Enable Editing**.

If anyone edits the Signed Document, the security banner will warn that the signature would be invalid and it will be removed.

Keep going...!

File ->Info->Permissions->Protect Workbook->Add a Digital Signature



Restricting Permissions

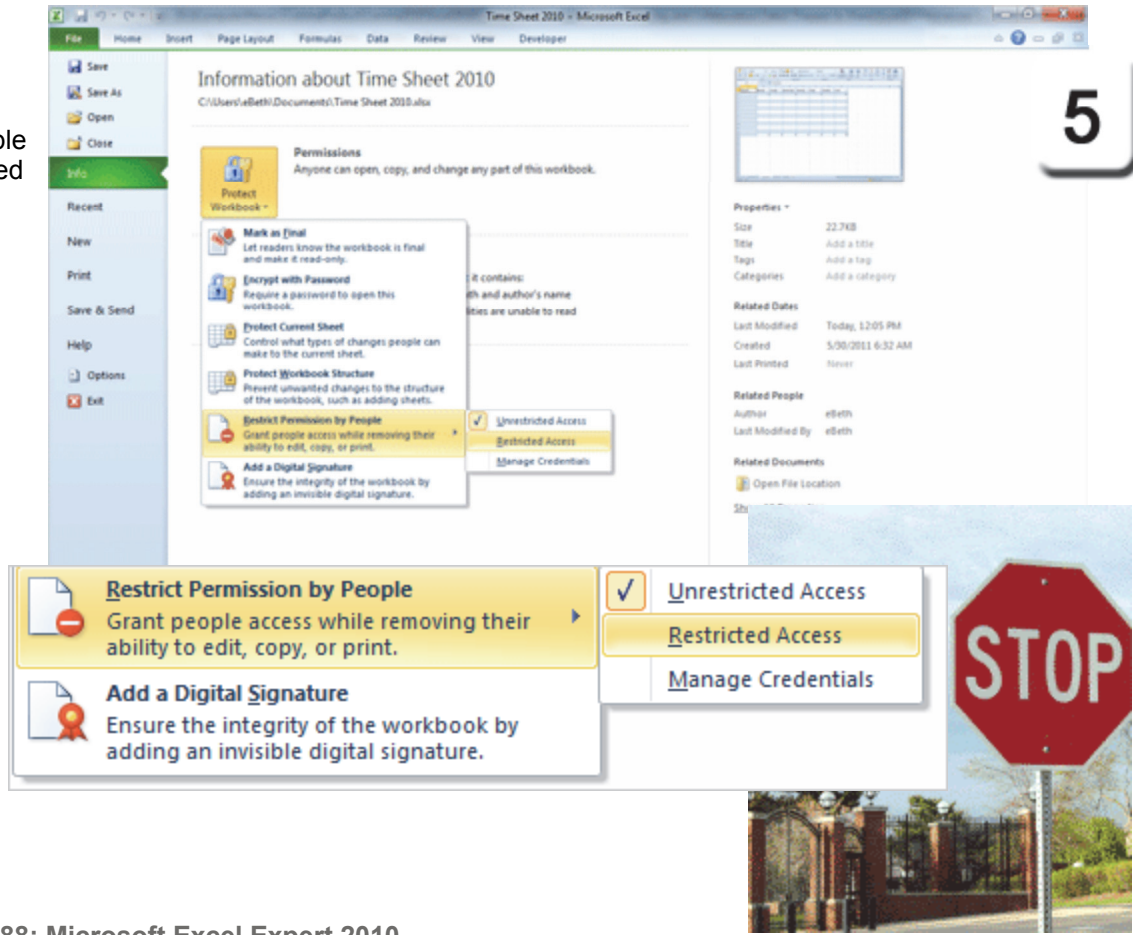
So far, so good. In the previous pages we created a Digital ID and signed a document. The next step is to restrict permission to people you trust. The people you trust will be identified by their Digital ID as well. Here are the steps.

5. Try it: Restrict Permission by People
Start the process by going to the Backstage**.**

Go to File ->Info->Permissions.
Go to **Protect Workbook.**
Go to **Restrict Permissions by People.**
Click on **Restricted Access.**

Keep going...

File ->Info->Permissions->Protect Workbook->Restrict Permissions by People.



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: restricting Permissions

Microsoft Information Rights Management Services

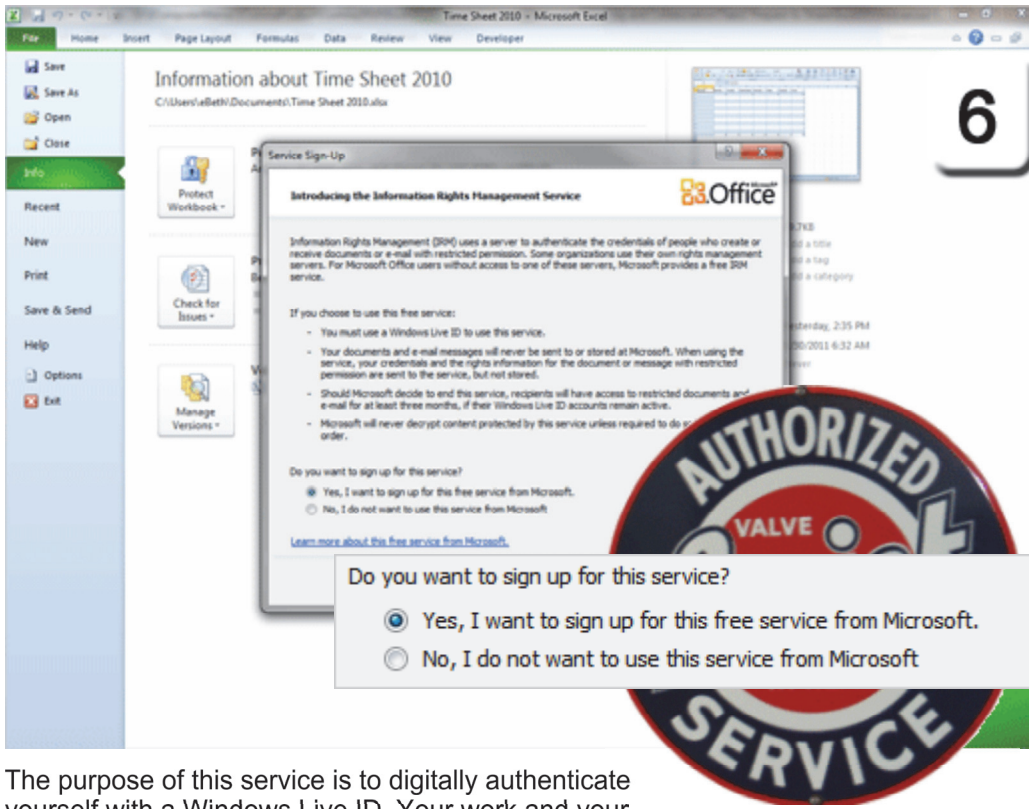
When you click on **Restrict Permissions by People** you will be prompted to sign up for a authentication servicer. You need a server to effectively manage Users, User Groups and Permissions. Some companies have their own sever that checks users credentials. Microsoft offers a free service online.

Information Rights Management Service
IRM is a licensing program, basically. You add a **Use License** to each file you want to restrict and indicate which people can use this file.

When you open a restricted file, you need to be online so that you can connect to a server, show your credentials, and download a use license. The use license say what permissions you are given: Read, Write, Edit, Save or Print.

6. Try it: Setup the IRM Service
Click on **Restrict Permissions by People.**
You will be prompted to sign up for the service.
Click **NEXT** and keep going...

File ->Info->Permissions->Protect Workbook->Restrict Permissions by People



The purpose of this service is to digitally authenticate yourself with a Windows Live ID. Your work and your emails are NOT stored on a server at Microsoft.

Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: restricting Permissions

File ->Info->Permissions->Protect Workbook->Restrict Permissions by People

Sign in to IRM

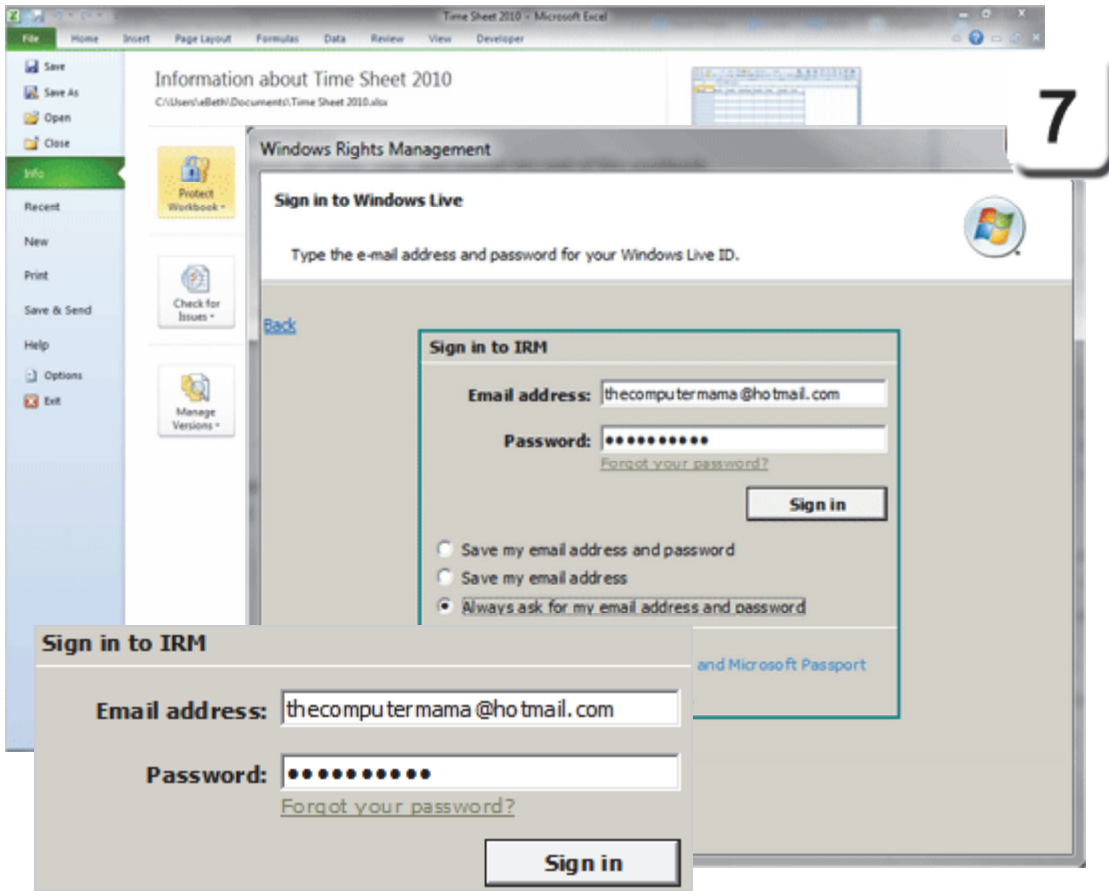
The IRM service uses a Windows Live ID to identify you. Getting a Windows Live ID is simple and free. Windows Live ID can be a Hotmail and MSN Email account. It can also be the same Live ID that you use to log into your online gaming.

As you walk through the IRM setup wizard, you will asked if you have a Windows Live ID or if you need to create a new one.

That's it. The next step is to log into the **Information Rights Management Service.** Enter you Email address and Password.

7. Try it: Sign in to the IRM Service
Enter your Windows Live Email address. Indicate if this is **Public** or **private** computer.

Click **Sign In** and keep going, please..



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: restricting Permissions

Take Two

File ->Info->Permissions->Protect Workbook->Restrict Permissions by People

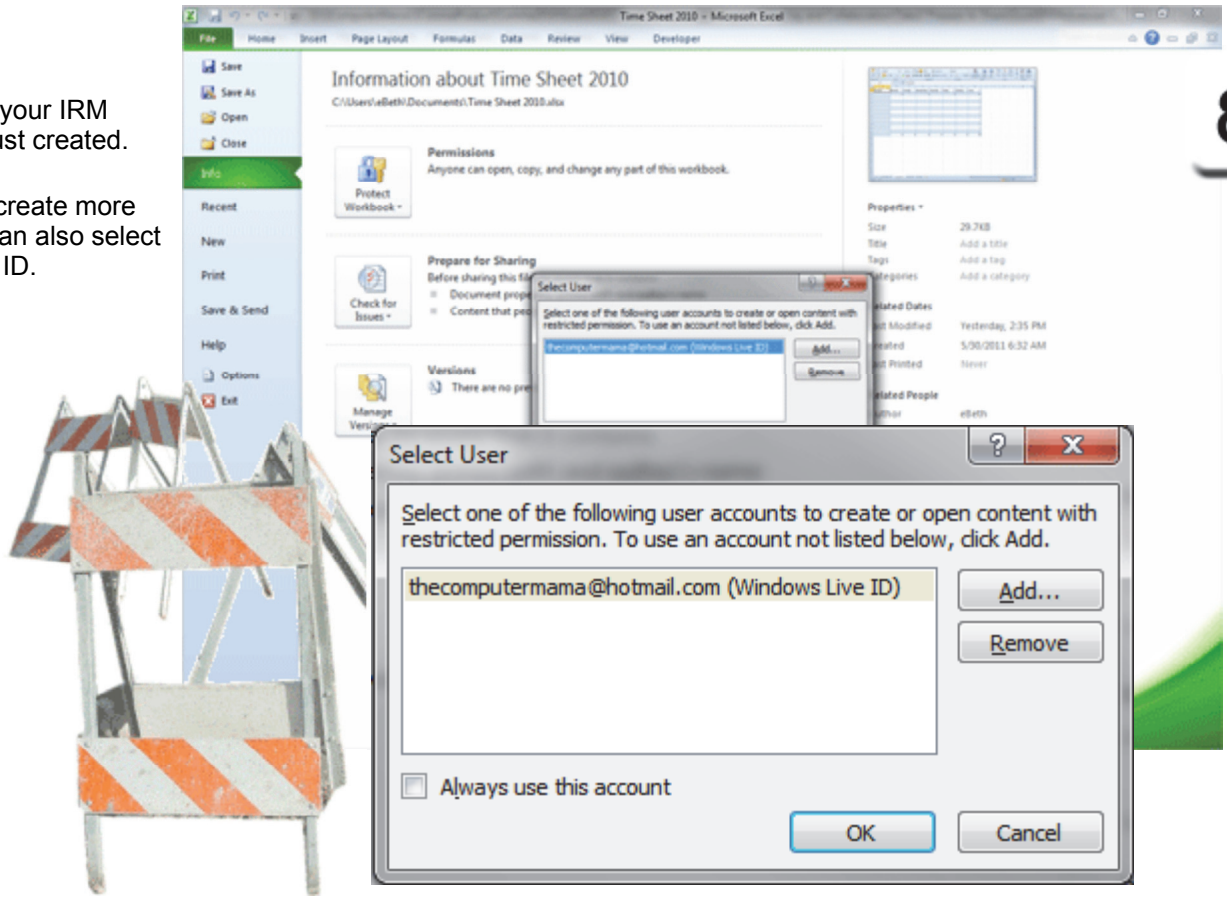
IRM: Select a User

8. Try it: Select a User

The first user you should see in your IRM account would be the one you just created.

You can click on **Add** to find or create more user accounts. Obviously, you can also select a user and Remove their Digital ID.

Click **OK** and keep going...
(We're almost done...really!)



8

IRM: Restrict Permissions

9. Try it: Restrict Permission by User

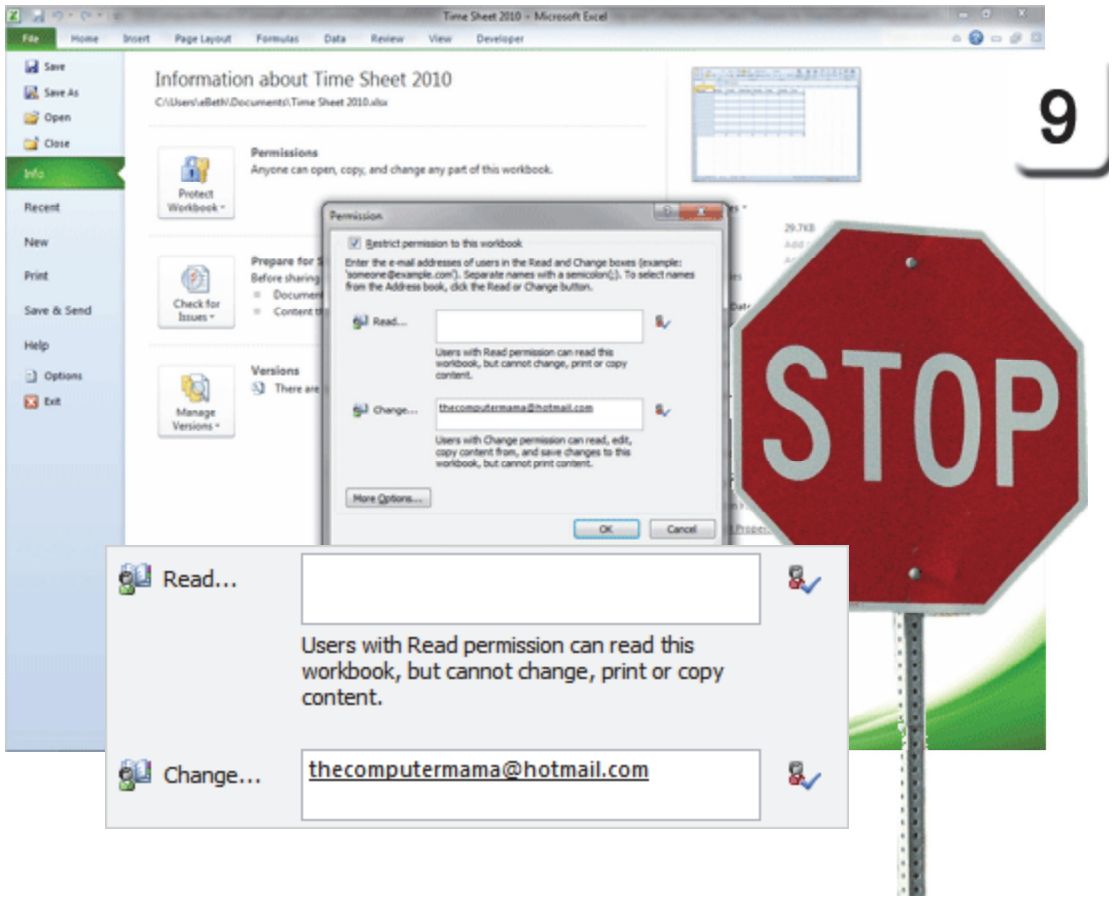
There are two levels of permission: **Read** and **Change**. A User with only Read access can "look but don't touch." Read access users can look, but they cannot edit, copy or print the information in your Microsoft Excel workbooks.

To the left is a button to look up users who have a Windows Live ID.

Keep going...

Where Have You See This Before? Just like in Microsoft Outlook, an underline confirms that this is indeed a valid email address (It is spelled right.)

File ->Info->Permissions->Protect Workbook->Restrict Permissions by People



File ->Info->Permissions->Protect Workbook->Restrict Permissions by People

Restricted Permissions

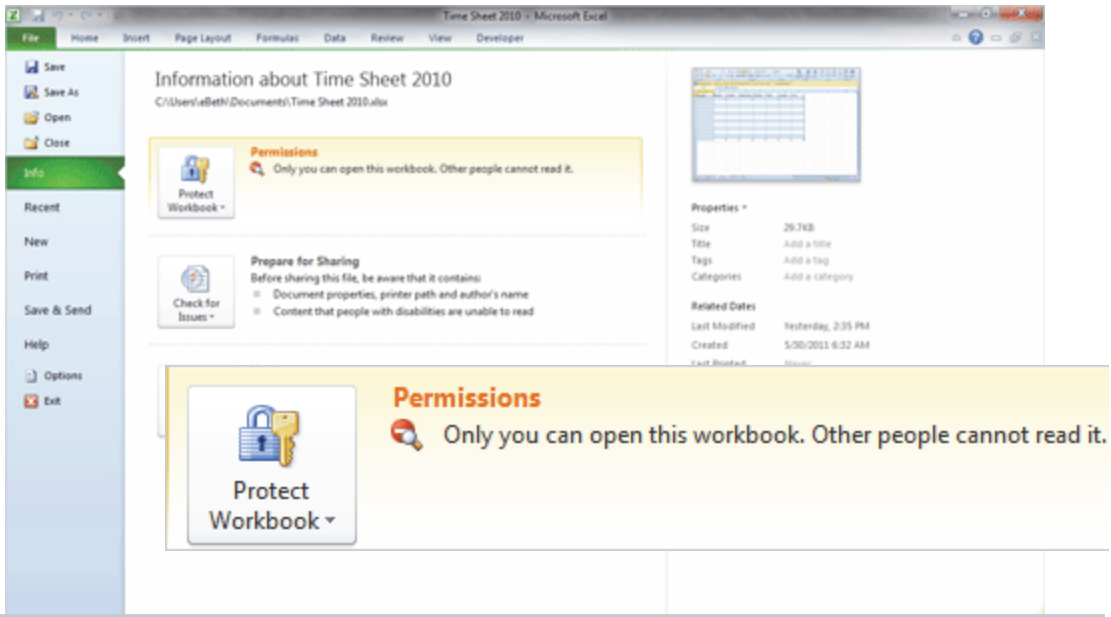
What Do You See? The **Permissions** shown in the **Backstage** view are **Exclusive**: no one else can open or read this file.

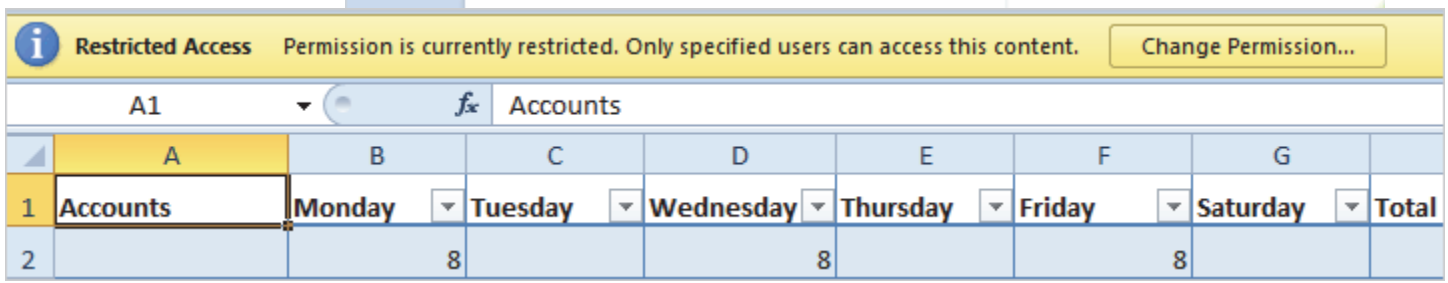
What Else Do You See? When you go to the **Home** view you should see a yellow security banner that indicates Restricted Access.

There is a button to **Change Permissions**. If you go to **More Options** you can set the expiration date for these permissions.

You can also include an email address so that someone can contact you regarding the permissions.

Very good!





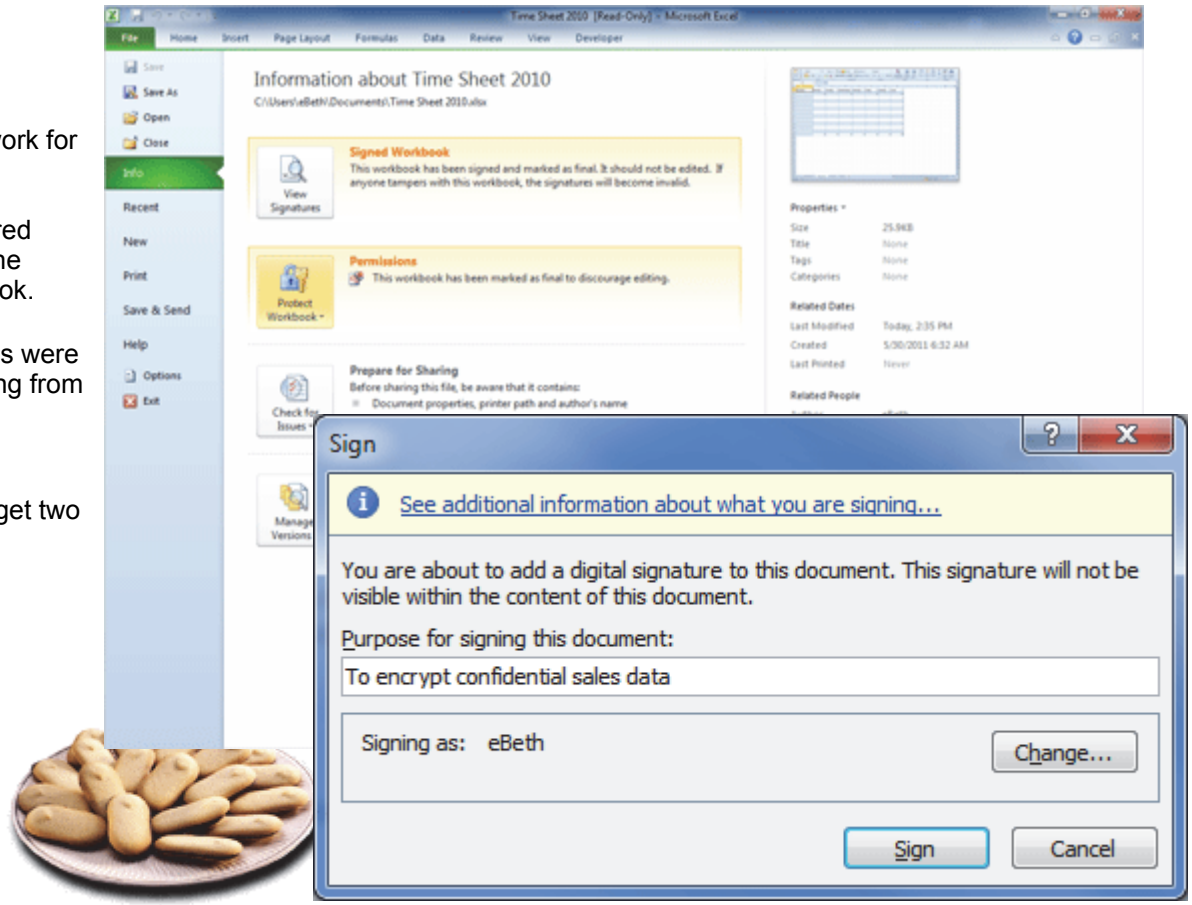
Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: restricting Permissions

Summary

This lesson began by preparing your work for distribution or publication. The **Review** options included Proofing, Tracking, Comments and Changes. We considered how to collaborate on a file and combine different versions into one final workbook.

Share or Protect? The security options were taken seriously. We looked at everything from Read Only to Restrictions based on a verifiable Digital User ID.

Well, you done good on this one. You get two cookies if you wish.



Test Yourself

1. Which Group(s) are on the Review Ribbon? (Select all correct answers.)
a. Proofing
b. Language
c. Comments
d. Changes
Tip: Advanced Excel, page 199

2. Spreadsheets can be spell-checked.
a. True
b. False
Tip: Advanced Excel, page 200

3. Which of the following actions can be restricted in the Protect Sheet command? (Select all correct answers.)
a. Format Cells
b. Format Columns
c. Format Rows
d. Insert Rows
e. Insert Columns
Tip: Advanced Excel, page 206

4. Which of the following are true about the Protect and Share options? (Select all correct answers.)
a. The Tracking is turned on
b. The Workbook is shared
c. A Password is required
Tip: Advanced Excel, page 210

5. Which of the following are Reviewing options? (Select all correct answers.)
a. Accept
b. Reject
c. Accept all
Tip: Advanced Excel, page 214

6. More than one person can add a comment on an Excel spreadsheet.
a. True
b. False
Tip: Advanced Excel, page 218

7. Which is true about Compare and Merge? (Select all correct answers.)
a. Only works on a Shared Workbook
b. Command is NOT available in Reviewing Ribbon by default
c. Works on any workbook
Tip: Advanced Excel, page 219

8. Which of the following are document properties? (Select all correct answers.)
a. Size
b. Title
c. Last Modified
d. Created
e. Author
f. Last Printed
Tip: Advanced Excel, 223

9. What is the new Excel file format used in Office 2007 and 2010?
a. .xls
b. xlsx
c. .xlst
d. .exl
Tip: Advanced Excel, page 227

10. Which of the following is true about the Mark as Final command? (Select all correct answers.)
a. It is to discourage editing
b. A file marked as Final has the ribbons removed
c. A file marked as Final cannot be edited
Tip: Advanced Excel, page 231



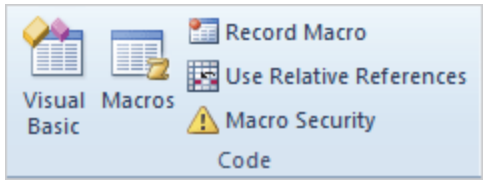
Excel 2010: Appendix

Introduction to Macros

Advanced Excel Objectives

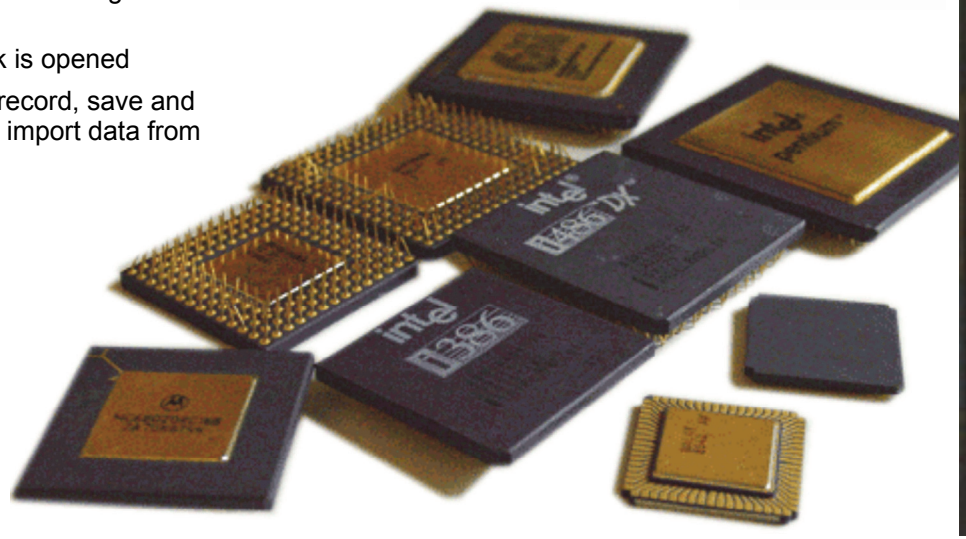
In this lesson, you will learn how to:

1. Use the **Developer** Ribbon to record, save and run a simple **Event Macro**
2. Modify a Macro with the Visual Basic Editor
3. Create a custom Macro Button and assign it to the Quick Access Toolbar
4. Run a Macro when a workbook is opened
5. Use the **Developer** Ribbon to record, save and run an **Action** Macro to export or import data from Excel





Legs Eggs Pigs with Macros 2010





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Lesson 7 : Introduction to Macros

1. Readings
Read Lesson 7 in the Advanced Excel guide, page 245-292.

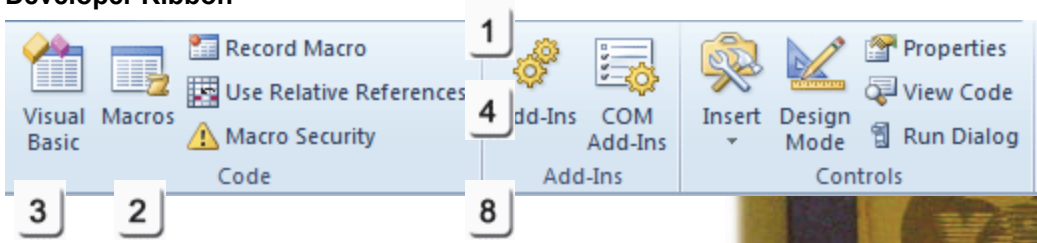
Project
This lesson provides an introduction into Visual Basic programming and Macros.

Downloads
Legs Eggs Pigs 2010.xlsx
Legs Eggs Pigs with Macros 2010.xlsm
tblCustomers.xml
Brown Bag Sales Team.xlsx

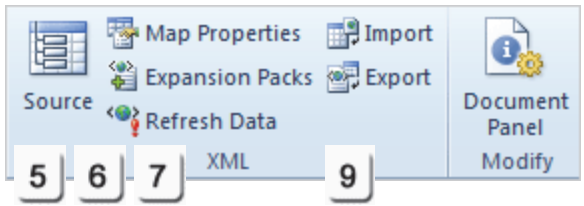
2. Practice
Do the Practice Activity on page 293.

3. Assessment
Review the Test questions on page 294.

Developer Ribbon



Review Ribbon





Menu Maps
From the **Developer Ribbon**.
1. Developer ->Code-> Record Macro, page 251
2. Developer ->Code-> Macro, page 254
3. Developer ->Code-> Visual Basic, page 255
4. Developer ->Code-> Relative References, page 257
5. Developer ->XML->Source, page 280
6. Developer ->XML->Map Properties, page 281
7. Developer ->XML->Refresh, page 282
8. Developer ->Add-Ins, page 285
9. Developer ->XML-> Export, page 290

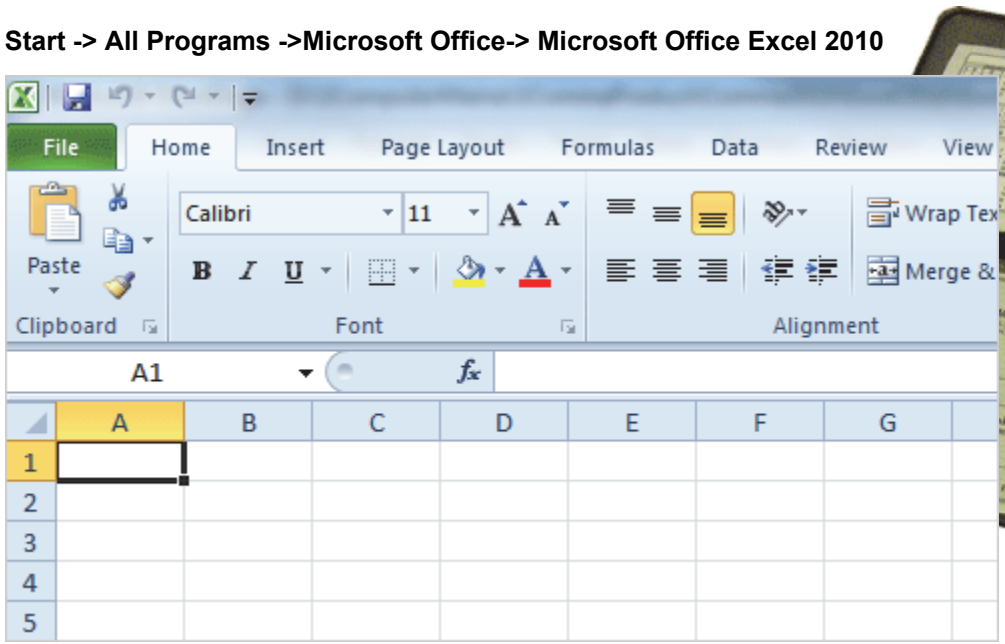
More Menu Maps
From the **Backstage**
1. File ->Options-> Customize Ribbon, page 262
2. File ->Save As Macro Enabled, page 269
3. File->Info->Enable Content, page 271
4. File ->Options->Trust Center, page 273

Working with Macros

A **Macro** is a series of steps that can be recorded and played back in order. A Macro can be created by recording your menu selections and clicks. There are several kinds of Macros, depending on the purpose and the actions. An **Event Macro** does something when you click on a button or a cell. A **User-Defined Macro** is programming that makes the computer do the work.

My mentor, Fr. Paul, wrote a financial database. He watched the church staff go through the process to create a new check entry: 8 steps. Count them again: 8 steps. So, he created a Macro that walked through the menus automatically.
That's what Macros do: **simplify the task**.

Start -> All Programs ->Microsoft Office-> Microsoft Office Excel 2010





Take Three

What is a Macro?

Creating a Macro can be as simple as recording your mouse clicks as you go through a process in Microsoft Excel, Word, PowerPoint or Access. The steps are named and saved so that you can repeat the process again with one click.

All of the Microsoft Office 2010 programs use **Visual Basic for Applications (VBA)** to create and edit **Macros**.

What Are We Going to Do?

This lesson is an introduction to Macros and Visual Basic for Applications. It is not a comprehensive demonstration on Macro programming.

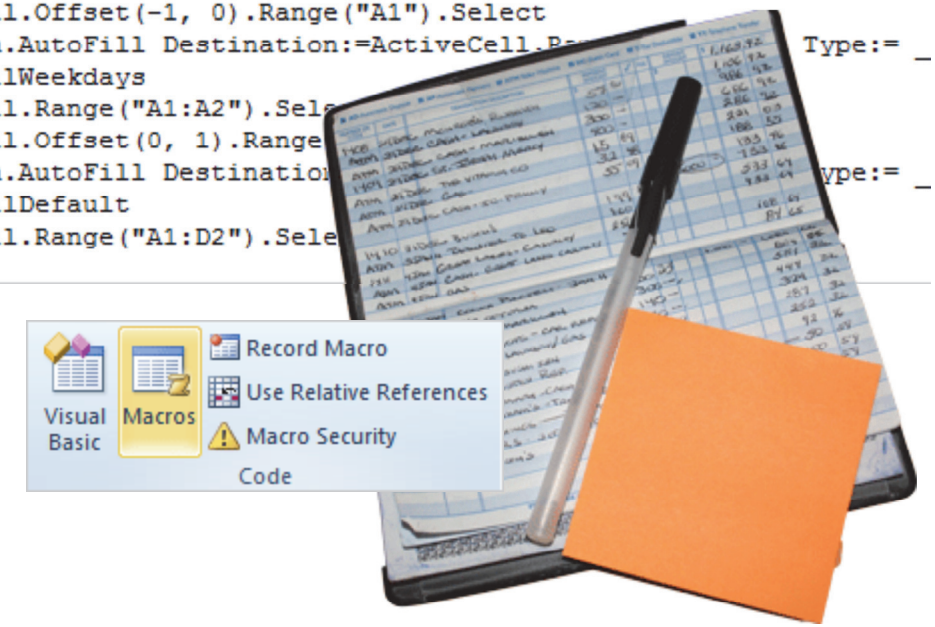
As you go through these simple examples consider how you can program Excel to make your tasks easier and efficient.

Please keep going...

AddNewRow2 Macro: This is a PREVIEW of the completed lesson

```
Sub AddNewRow2()
'
' AddNewRow2 Macro
' Another Macro that inserts a new row and formats it the Same as Above
'

'
    Selection.Insert Shift:=xlDown
    ActiveCell.Offset(-1, 0).Range("A1").Select
    Selection.AutoFill Destination:=ActiveCell.Ra                    Type:= _
        xlFillWeekdays
    ActiveCell.Range("A1:A2").Sel
    ActiveCell.Offset(0, 1).Range
    Selection.AutoFill Destinatio                                    ype:= _
        xlFillDefault
    ActiveCell.Range("A1:D2").Sele
End Sub
```



Before You Begin

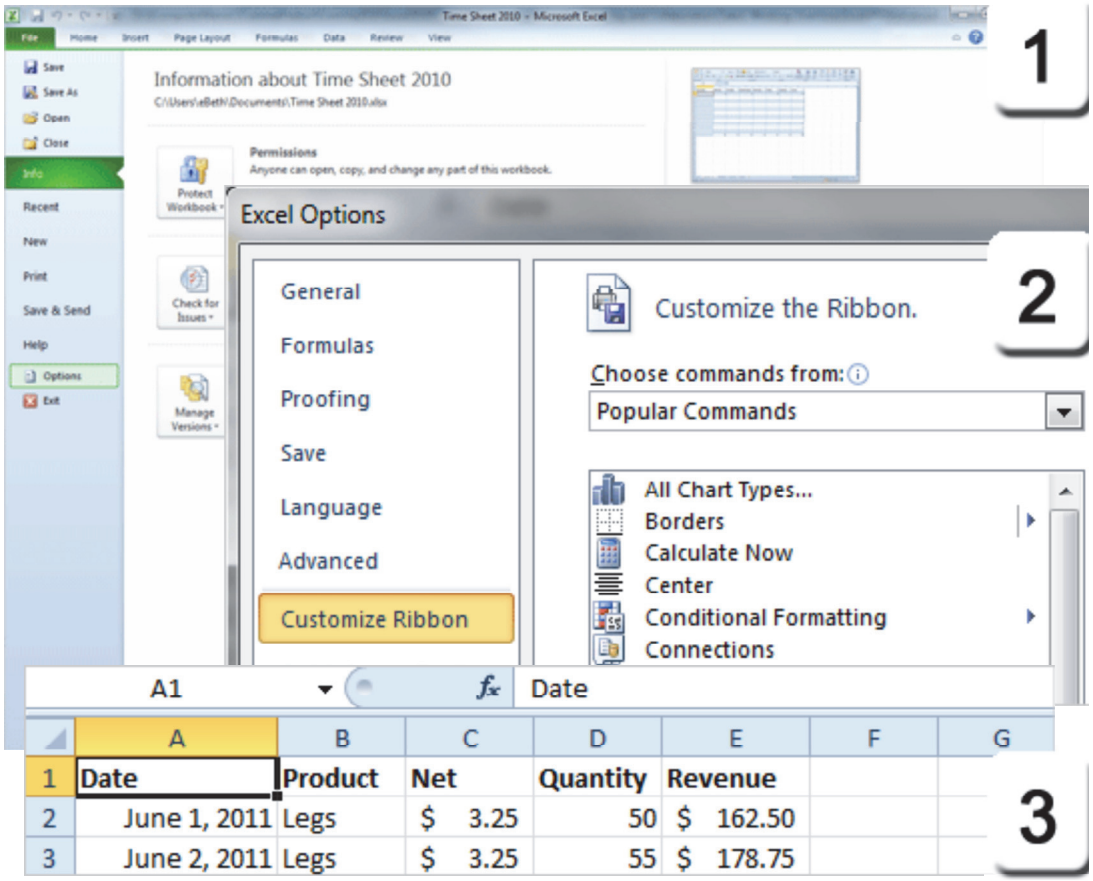
This lesson requires some preparation. Here is a **summary** of the requirements:

1. Enable the Developers Toolbar
The steps to enable the **Developers** toolbar can be found in the ***Advanced Guide to Excel 2010*** Page 184.

2**. Enable the Macros**
The steps to enable Macros can be found on ***Advanced Guide to Excel 2010*** Page 270. This lesson includes a discussion on macro security levels.

3. Download a Sample Spreadsheet
The lesson has a sample workbook online which you can download if you wish. You can also create your own data from the lesson in the ***Intermediate Guide to Excel 2010***, Page 11.

File ->Options->Customize Ribbon



Still Before You Begin...

Try it: Open the Sample Spreadsheet
Open the spreadsheet you downloaded:
Legs Eggs Pigs 2010.xlsx
Go to the **Legs** spreadsheet.

The **Developer** Ribbon is shown In the example on this page.

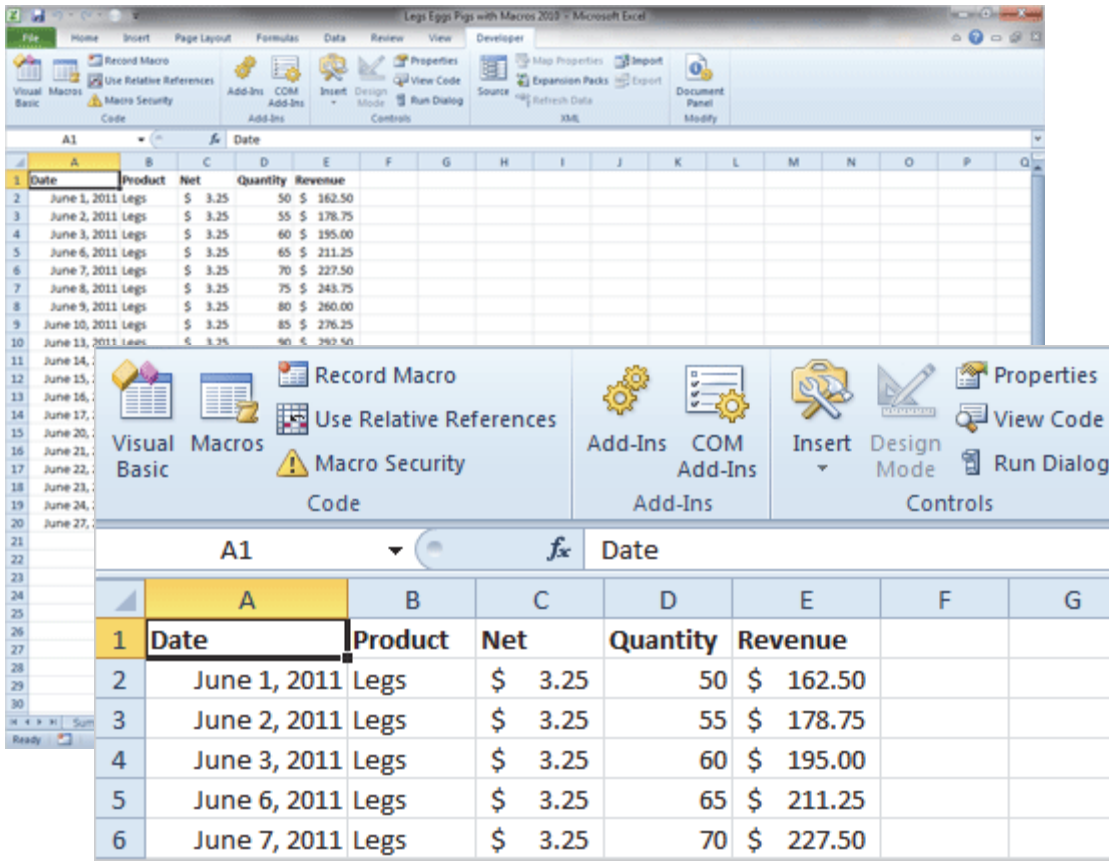
What Do You See? The fields in the Header Row are Date, Product, Net, Quantity and Revenue. The Columns are formatted for number: Column A is formatted for Date, Column C is formatted for currency.

What Else Do You See? The dates in Column A are a series. This series shows the workdays and skips the weekends.

Keep going...

Memo to Self: You do not have to MATCH the numbers shown on these pages. It is more important that you begin with some data and understand the options.

File ->Open



	A	B	C	D	E	F	G
1	Date	Product	Net	Quantity	Revenue		
2	June 1, 2011	Legs	$ 3.25	50	$ 162.50		
3	June 2, 2011	Legs	$ 3.25	55	$ 178.75		
4	June 3, 2011	Legs	$ 3.25	60	$ 195.00		
5	June 6, 2011	Legs	$ 3.25	65	$ 211.25		
6	June 7, 2011	Legs	$ 3.25	70	$ 227.50		

Take Three

Record a Macro

The **Macro Recorder** follows your actions as you go through a process. Let's start with a simple Macro that inserts a Row and formats the Cells the 'Same as the Row Above.'

What are the steps to add a row?
Select a Cell
Use the Home Ribbon to Insert a Row
Use the Format Painter to format the new Row the same as the Row Above.

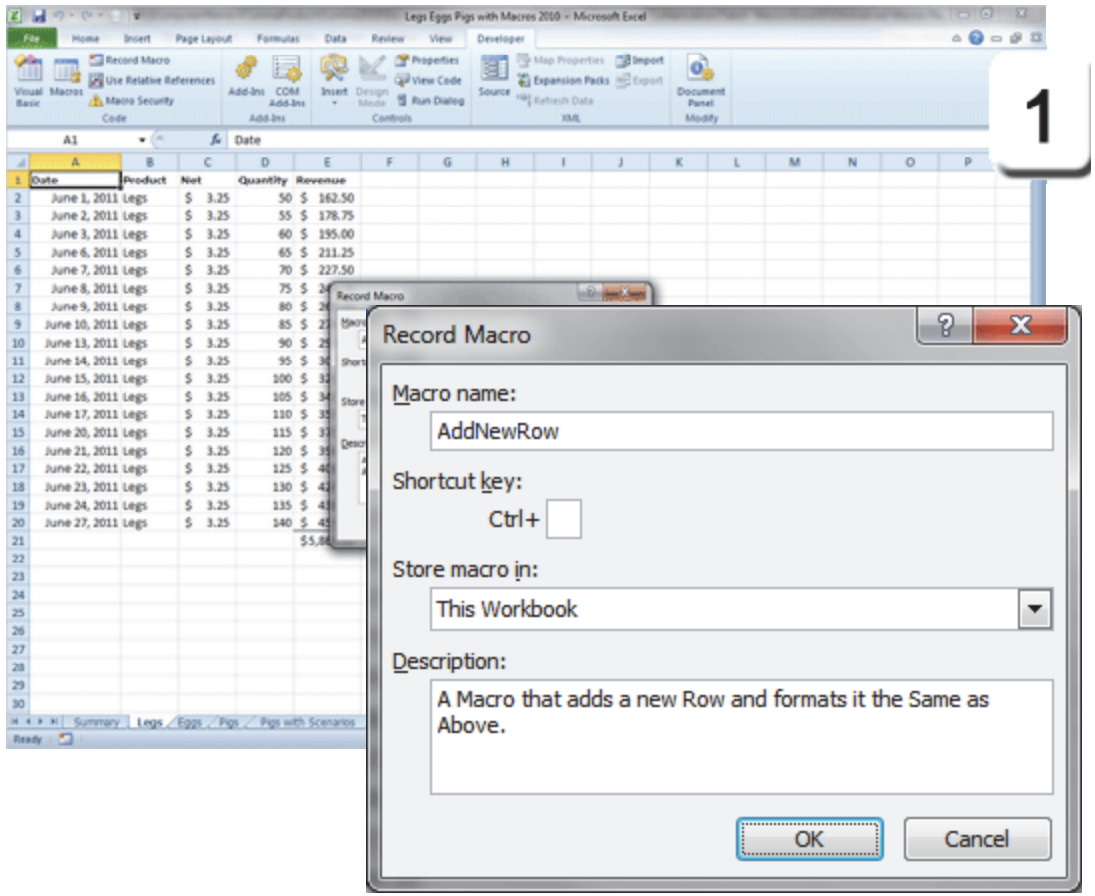
1. Try it: Record a Macro
Go to **Developer ->Code.**
Click on **Record Macro.**

What Do You See? You will be prompted to type a name for your Macro.
Type: AddNewRow
(No spaces, please)

What Else Do You See? Your new Macro will be stored in **This Workbook.** Enter the description shown on this page if you wish.

Keep going...

Developer ->Code-> Record Macro



Take Three

Record the Steps

The Macro Recorder is ready, although you will not see a little media player or device.

Go through the process of selecting a cell and adding a new row. The Macro Recorder will follow your actions.

2. Try it: Add a Row
Go to the **Legs** spreadsheet.
Select Row 21.
Go to **Home->Cells->Insert Sheet Row.**

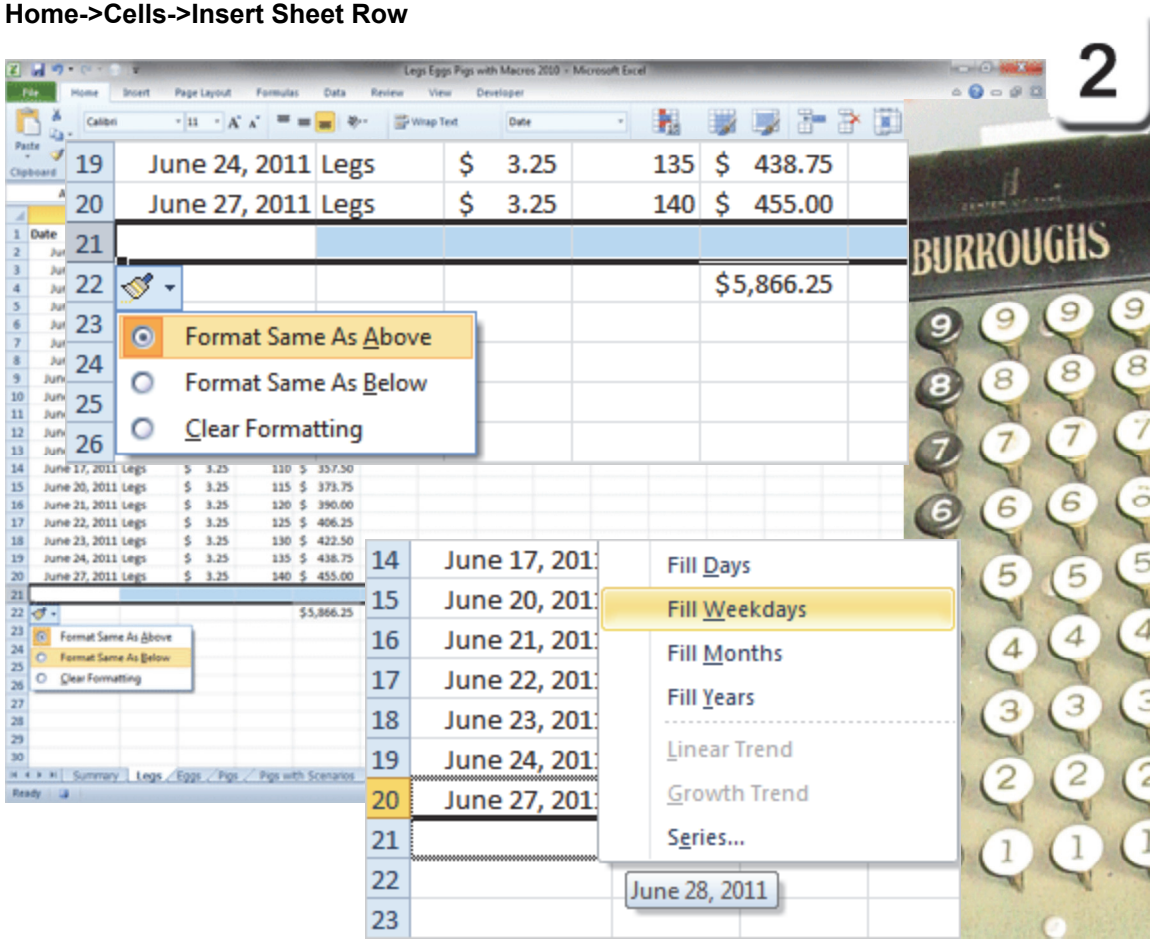
Use the Format Painter:
Format Same As Above.

Select Cell A21.
Use the AutoFill: **Fill Weekdays**.

Keep going...

Memo to Self: The Macro Recorder tracks when the steps are right as well as when you make a mistake. You may wish to practice the steps a couple of times before you start the Macro Recorder.

Home->Cells->Insert Sheet Row



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Record a Macro

Take Three

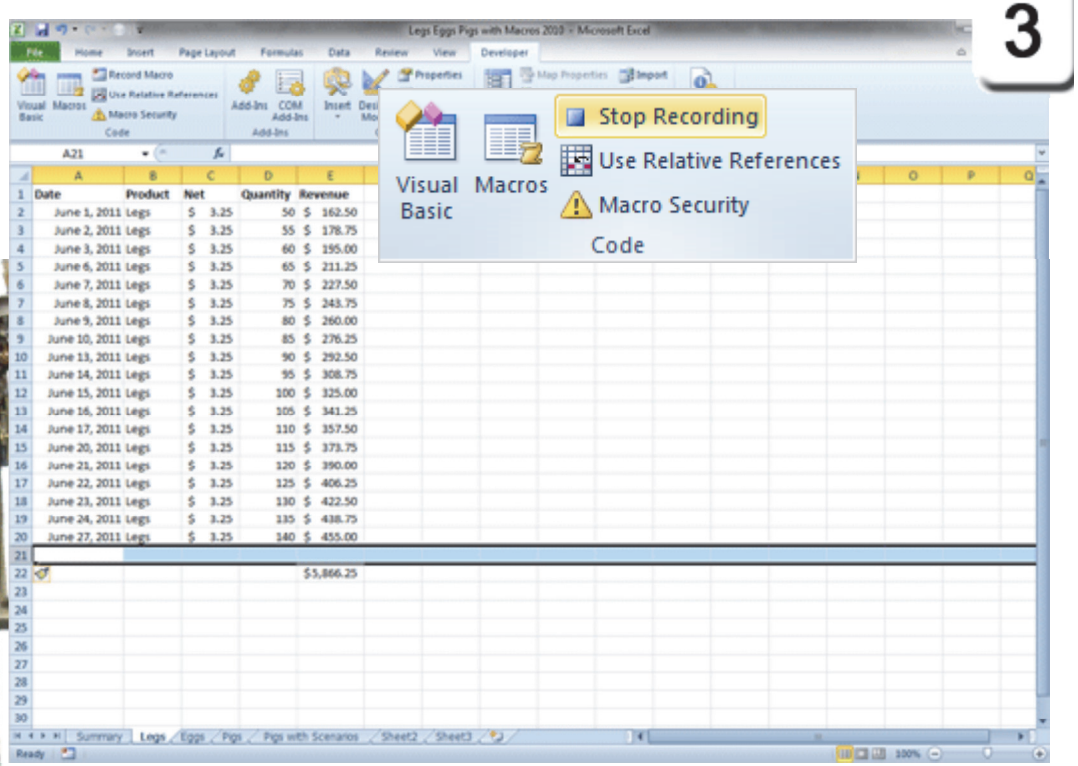
Stop the Recording

After you insert and format the new row, you need to **Stop Recording.**

3. Try This, Too: Stop the Recording
Go to **Developer ->Code.**
Click on **Stop Recording**

Keep going...

Developer ->Code-> Stop Recording





3

Find the Macro

Where is the Macro? You can manage your Macros with the **Macros** button.

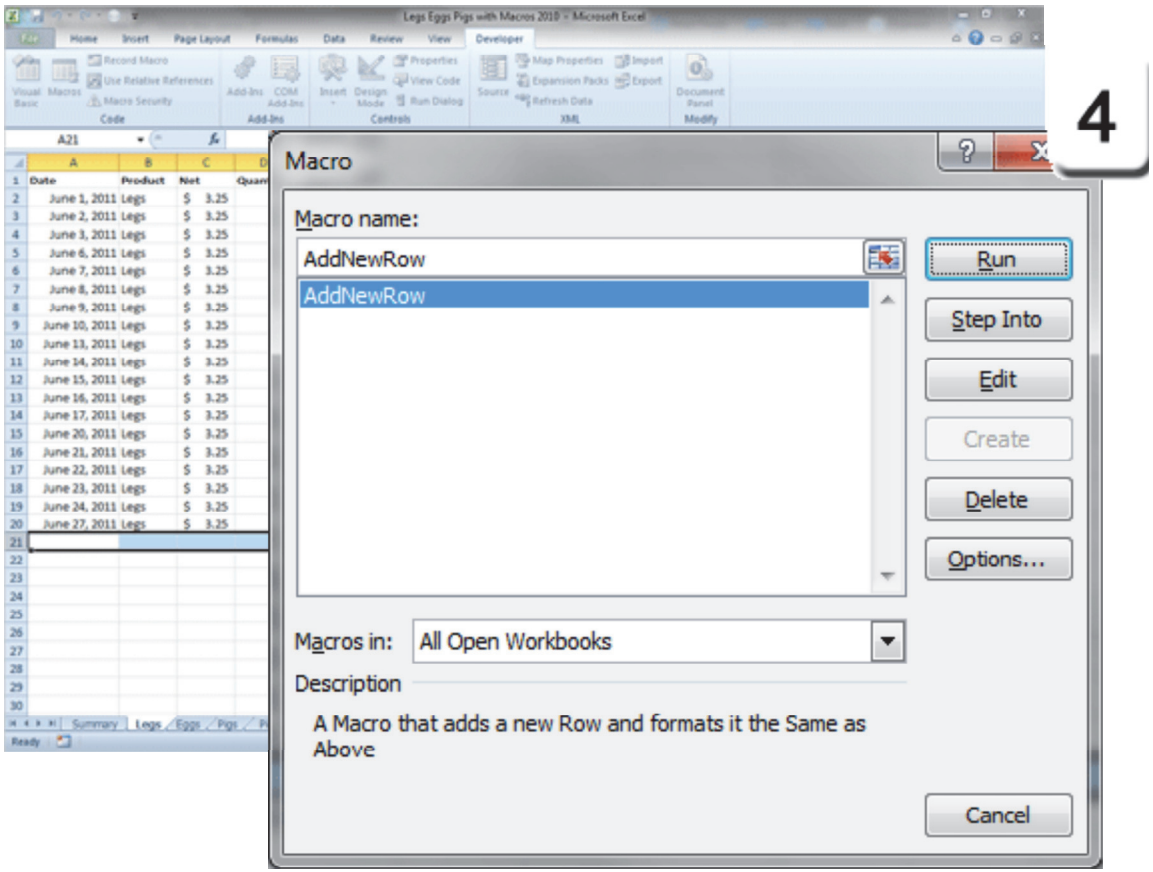
4. Try This: Find the Macro
Go to **Developer ->Code-> Macros**.

What Do You See? You should see AddNewRow listed in the Macro names. The Macro options include:
Run
Step Into
Edit
Create
Delete
Options

The **Description** at the bottom of this example was added when the Macro was created and named. You can edit the description if you click on **Options..**

What Else Do You See? You can review the **Macros in** All Open Workbooks or This Workbook. Keep going...

Developer ->Code-> Macros



Take Three

Hello, Visual Basic!

The Macros are written in Microsoft's **Visual Basic for Applications** (VBA) programming language. Here are the steps to **Edit** a Macro in VBA.

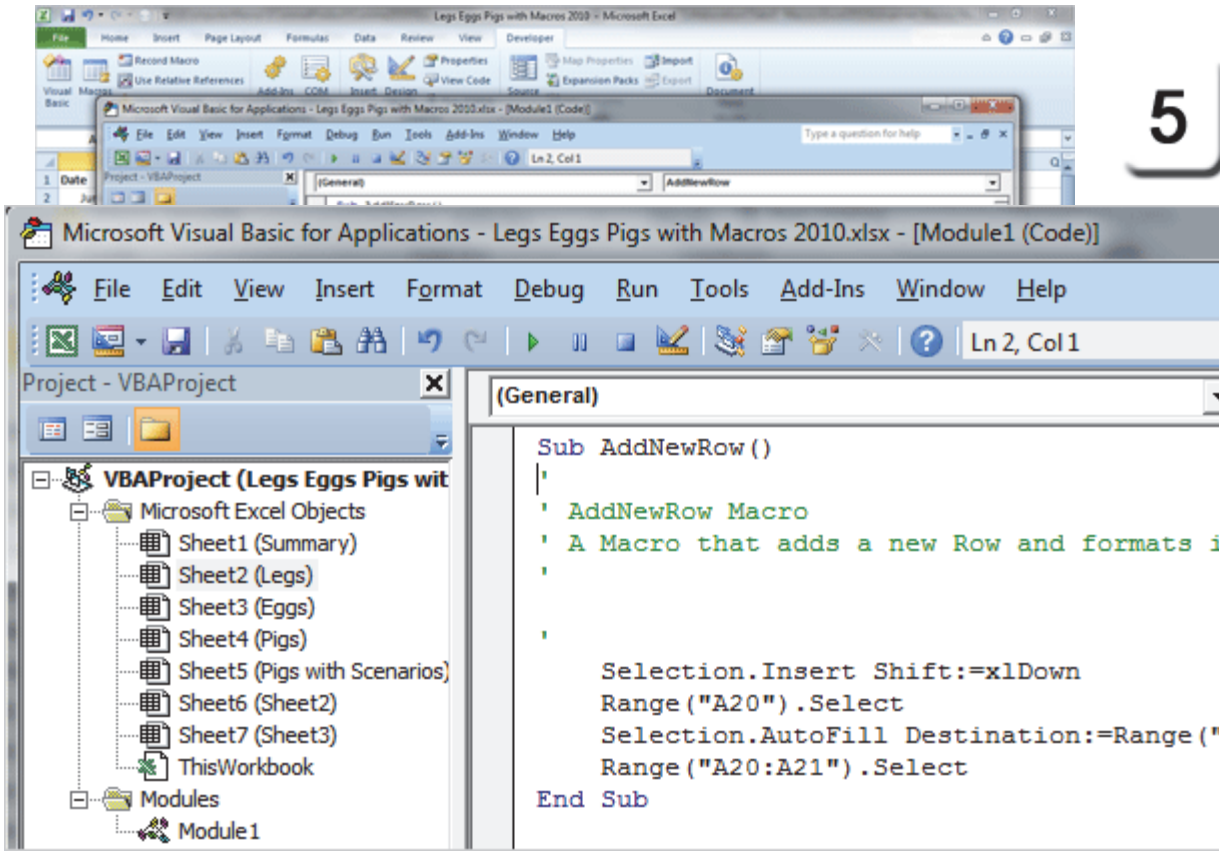
5. Try it: Edit the Macro
Go to **Developer ->Code.**
Click on **Macros.**
Select a Macro: AddNewRow.
Click on **Edit**.

What Do You See? The VBA Editor should open in a new window. On the left side should be a **VBAProject**. Each sheet, and the tab name, is listed in the Excel Objects.

Keep going...!

Memo to Self: This is the same VBA editor that you can use in Microsoft Access, Outlook, PowerPoint and Word to program Macros.

Developer ->Code->Macros-> Edit



5

Take Three

Review the Code

6. Try it: Review the Code
The Macro Code begins with:
Sub AddNewRow()
Where Sub means Subroutine.

The next six lines are **Comments**. The Comments start with a quote mark. These Comments include the name and description for the Macro.

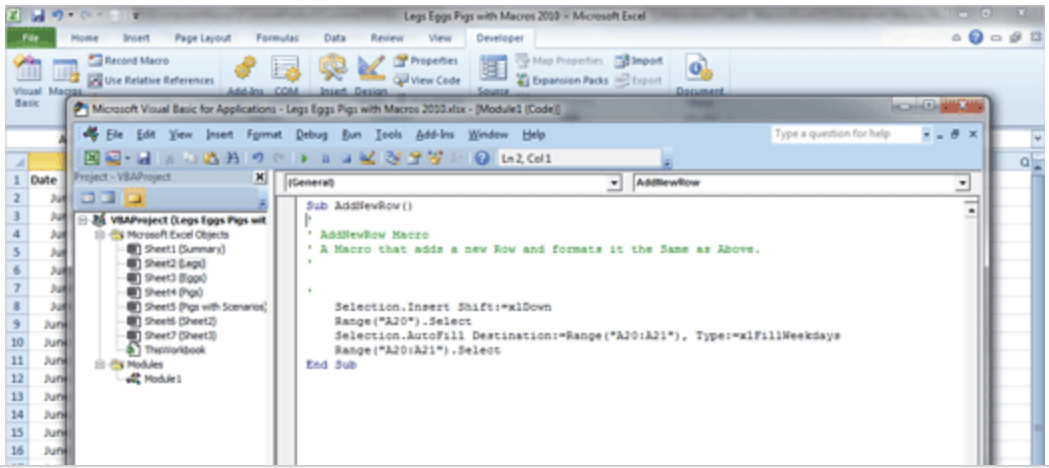
Selection.Insert Shift:=xlDown
This shifts the Rows down (x1Down).

The **AutoFill** is programmed for **Weekdays** (x1FillWeekdays)

What Else Do You See? Look at the **Range** for this Macro. There is a specific Cell selected **("A20")** and a specific Range for the Destination: **("A20:A21").**

That means our Macro adds a new Row at Cell A20. We can do better...

Developer ->Code->Macros-> Edit



```
Sub AddNewRow()
'
' AddNewRow Macro
' A Macro that adds a new Row and formats it the Same as Above.
'

'
    Selection.Insert Shift:=xlDown
    Range("A20").Select
    Selection.AutoFill Destination:=Range("A20:A21"), Type:=xlFillWeekdays
    Range("A20:A21").Select
End Sub
```



Create Another Macro

The first macro used **Absolute** Cell References. You can also use **Relative Cell References** when you record your Macro. **Relative References** means the new Row will be added below any Cell that is selected when you run the Macro.

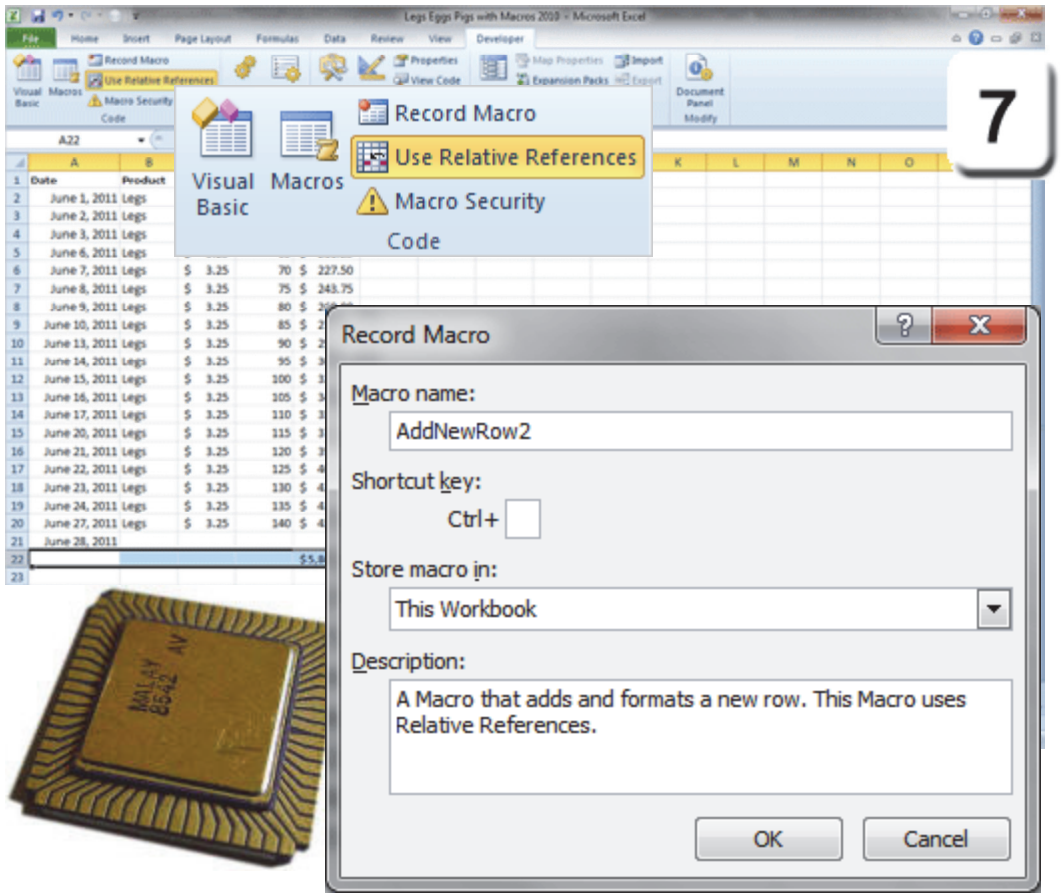
Before You Begin: Minimize Visual Basic.
You should see your spreadsheet.

Delete the Sample Rows
Go to the Legs spreadsheet.
Delete Row 21 and 22 (the new rows).

Use Relative References
Go to **Developer->Code**.
Click on **Use Relative References**.

7. Try it: Create Another Macro
Go to **Developer ->Code.**
Click on **Record Macro.**
Type a **Macro Name**: AddNewRow2
Store macro in: This Workbook.
Description: Type a sample description.
Click **OK**. Keep going...

Developer ->Code-> Relative References



Take Three

Record the Steps

8. Try it: Record the Macro
Select Row 21 (the one with the Sum).
Go to **Home->Cells->Insert Sheet Row.**

Use the Format Painter:
Format Same As Above.

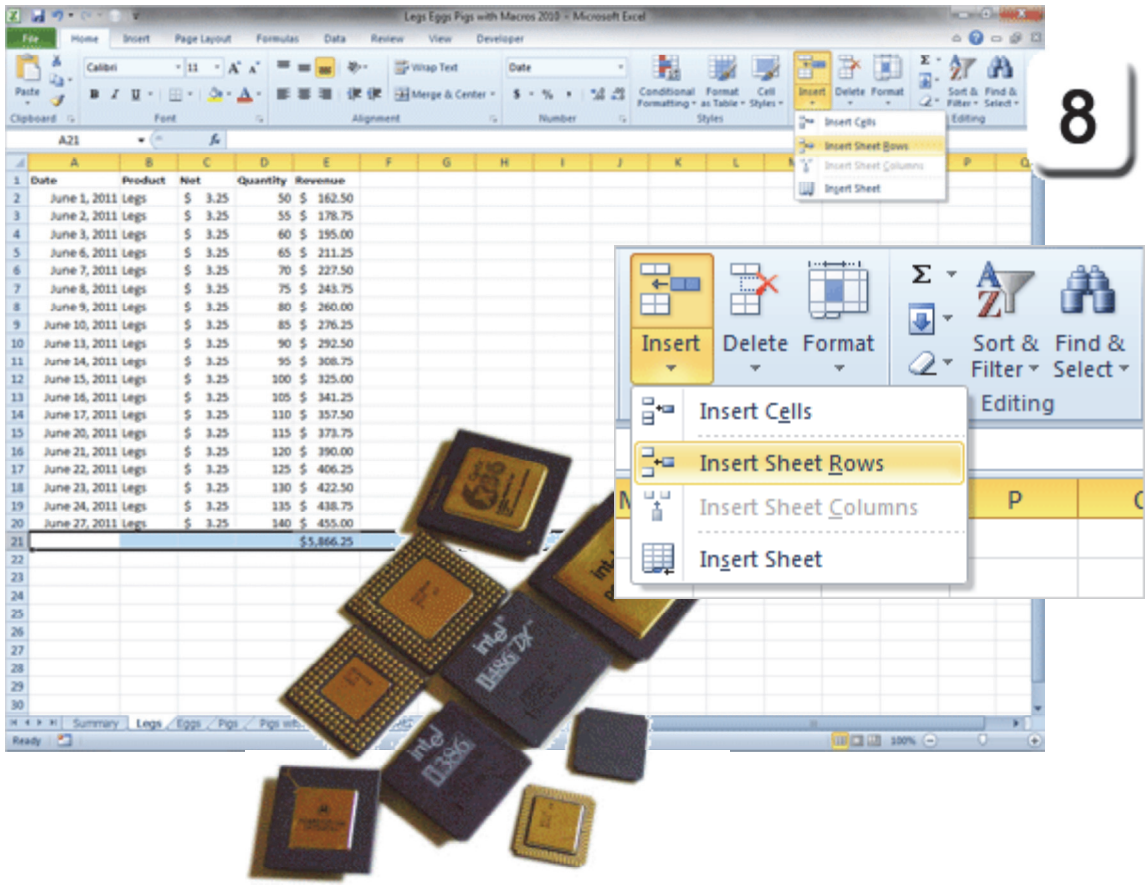
Select **Cell A22.**
AutoFill to A23: **Fill Weekdays.**

Select **Cells B22:E22.**
AutoFill the values to B23:E23

Go to **Developer ->Code.**
Click on **Stop Recording.**

Keep going, please...

Developer ->Code-> Stop Recording



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros.

Take Three

Compare the Code

9. Try it: Review the Code
Go to **Developer ->Code-> Macros.**
Select a Macro**: AddNewRow2.**
Click on **Edit.**

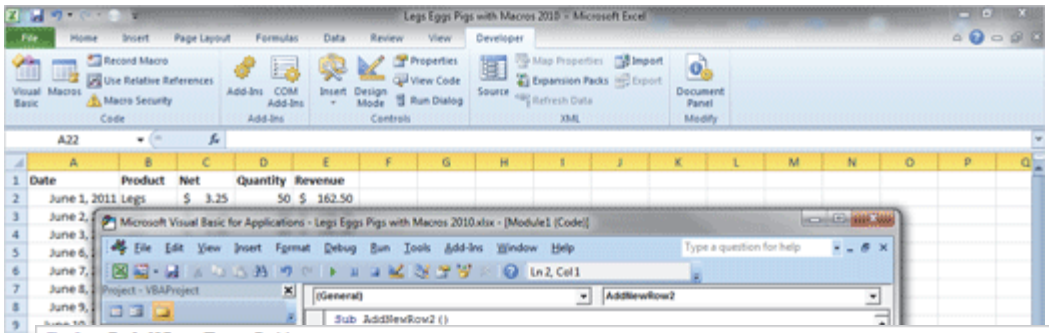
What Do You See? The VBA Editor should open in a new window. There should be two Subroutines: AddNewRows () and AddNewRows2 ().

What Else Do You See? In this code **ActiveCell** is used to create a Relative Reference.

Try This As Well: Close the Editor
Go to **File->Close and Return to Excel**.

Very good.

File->Close and Return to Excel



```
Sub AddNewRow2()
'
' AddNewRow2 Macro
' Another Macro that inserts a new row and formats it the Same as Above
'

'
    Selection.Insert Shift:=xlDown
    ActiveCell.Offset(-1, 0).Range("A1").Select
    Selection.AutoFill Destination:=ActiveCell.Range("A1:A2"), Type:= _
        xlFillWeekdays
    ActiveCell.Range("A1:A2").Select
    ActiveCell.Offset(0, 1).Range("A1:D1").Select
    Selection.AutoFill Destination:=ActiveCell.Range("A1:D2"), Type:= _
        xlFillDefault
    ActiveCell.Range("A1:D2").Select
End Sub
```

Take Three

Run the Macro

A good programmer tests every step. This is a good place to **Run** the Macro.

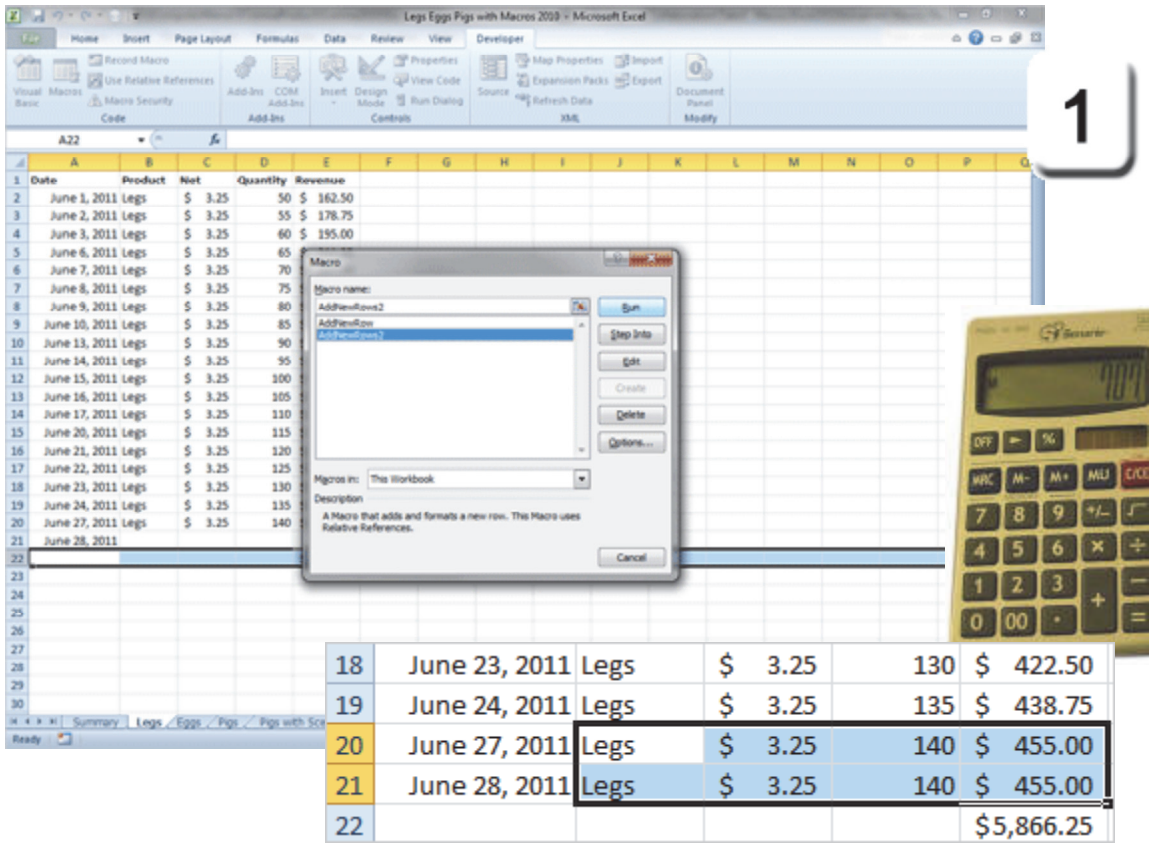
Before You Begin: The Legs spreadsheet is open. Row 22 is **Selected** .

1. Try it: Run the Macro
Go to **Developer ->Code->Macros.**
Select a Macro: AddNewRow2
Click on **Run**.

What Do You See? A new Row has been added to the spreadsheet. It is formatted the same as the row above it and the date is the next weekday.

This could be easier. Keep going...

Developer ->Code->Macros-> Run



18	June 23, 2011	Legs	$ 3.25	130	$ 422.50
19	June 24, 2011	Legs	$ 3.25	135	$ 438.75
20	June 27, 2011	Legs	$ 3.25	140	$ 455.00
21	June 28, 2011	Legs	$ 3.25	140	$ 455.00
22					$5,866.25

Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Run a Macro from a button



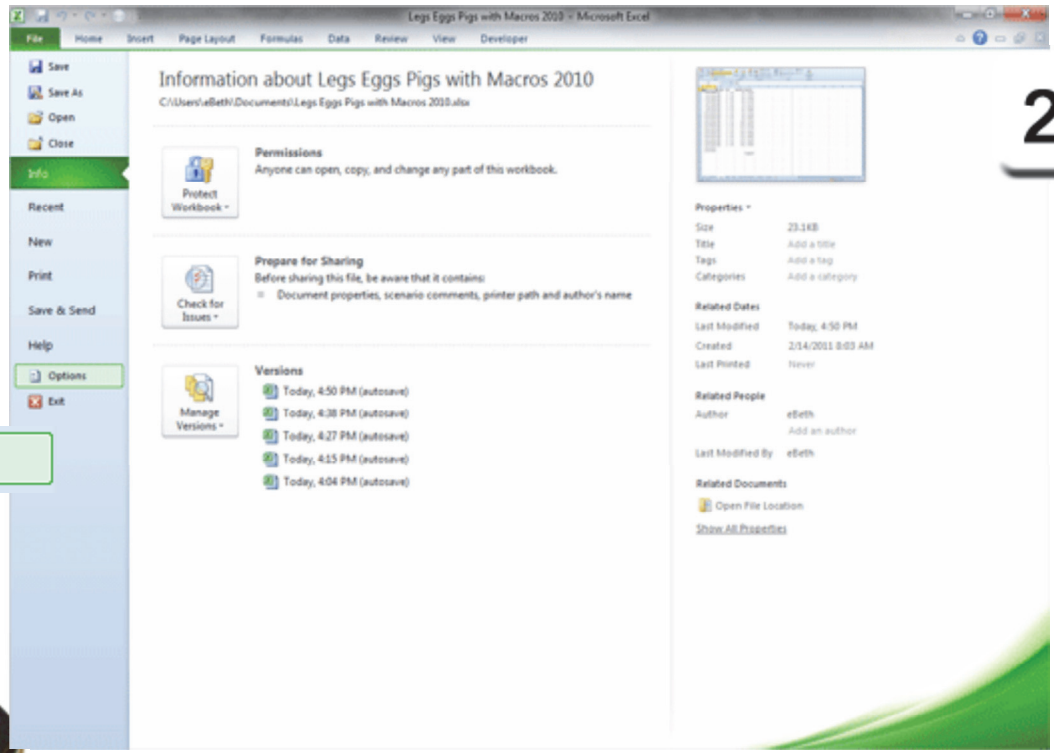
Add the Macro to a Button

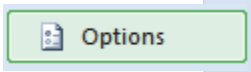
Macros are more User Friendly if they can be found on a button. The quickest way to add a Macro to a button is with the Backstage Options. On the following pages, we will create a new Group on the Home Ribbon, then add the Macro to the Group.

2. Try it: Go to the Backstage
Go to **File ->Options**

Keep going...!

File ->Options







2

Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Run a Macro from a button

Take Three

Customize the Ribbon

What Do You See? The Backstage will list the Excel Options. **Customize Ribbo**n is the one we are looking for.

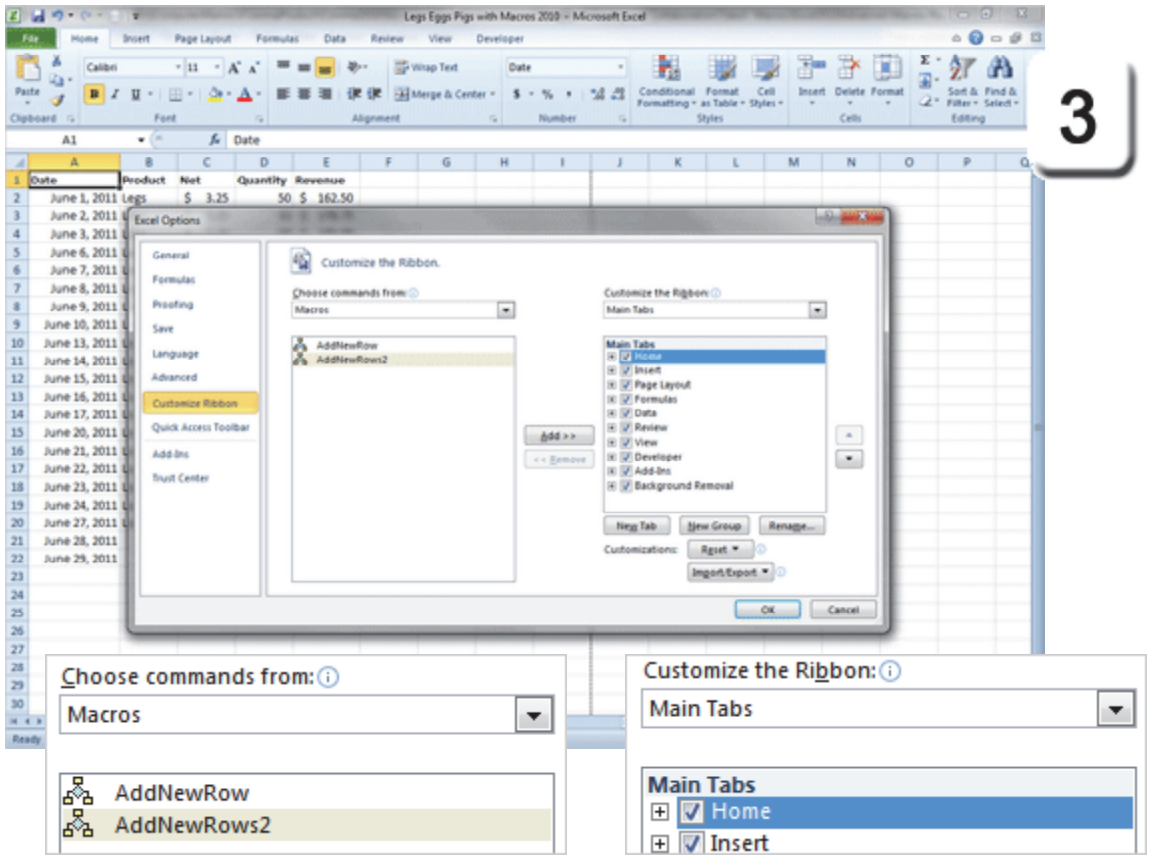
3. Try it: Customize the Ribbon
Click on **Customize Ribbon**.
Choose commands from: Macros.

What Else Do You See? In the example on this page there are two Macros:
AddNewRow
AddNewRow2

Keep Looking: On the right side you will see a list of the Main Tabs: Home, Insert, Page Layout, Formula, Data.

So far, so good. We found the Macros. Keep going...

File ->Options-> Customize Ribbon



Take Three

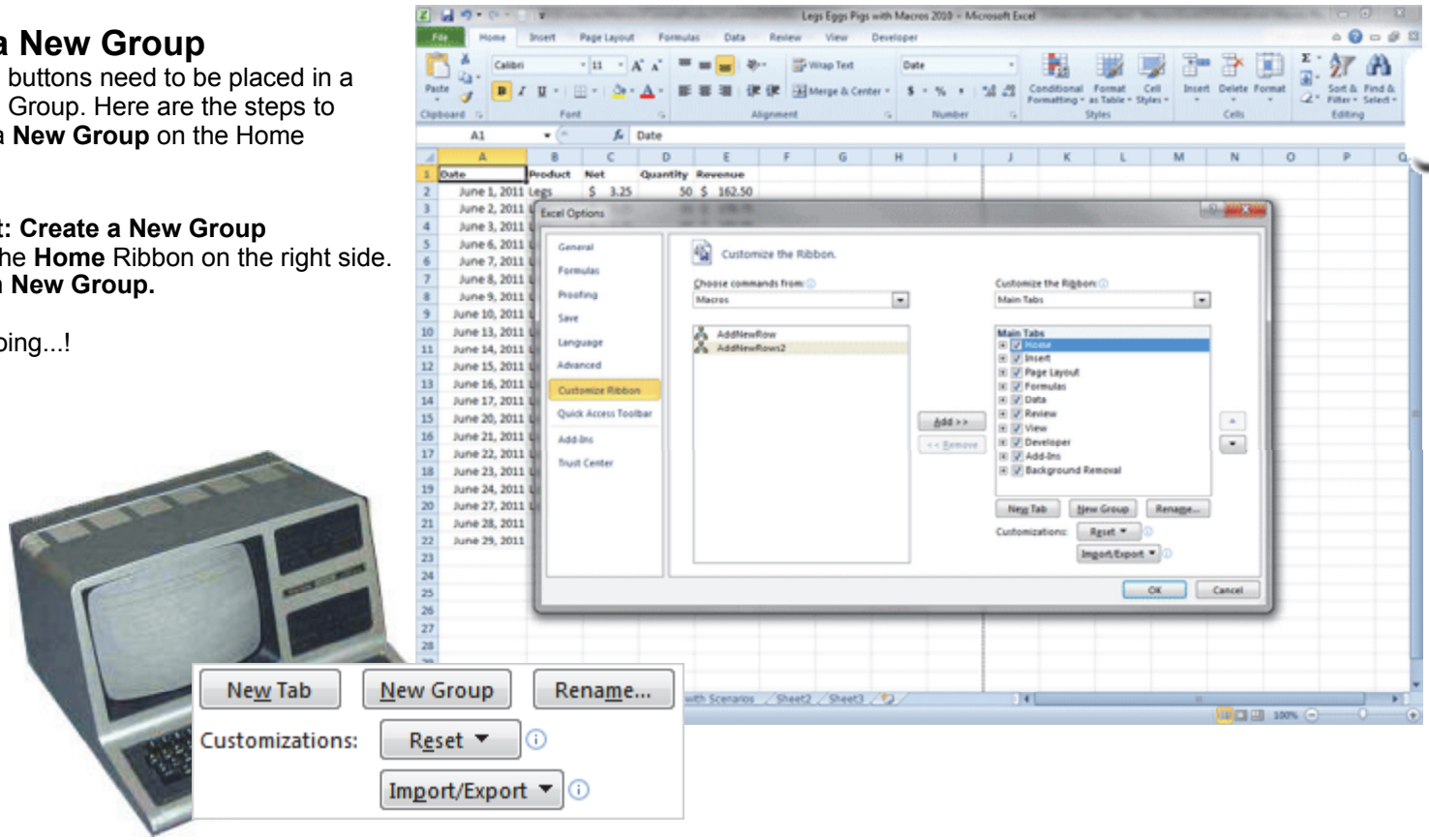
File ->Options-> Customize Ribbon-> New Group

Add a New Group

Custom buttons need to be placed in a Custom Group. Here are the steps to create a **New Group** on the Home Ribbon.

4. Try it: Create a New Group
Select the **Home** Ribbon on the right side.
Click on **New Group.**

Keep going...!



Take Three

Hello, New Group

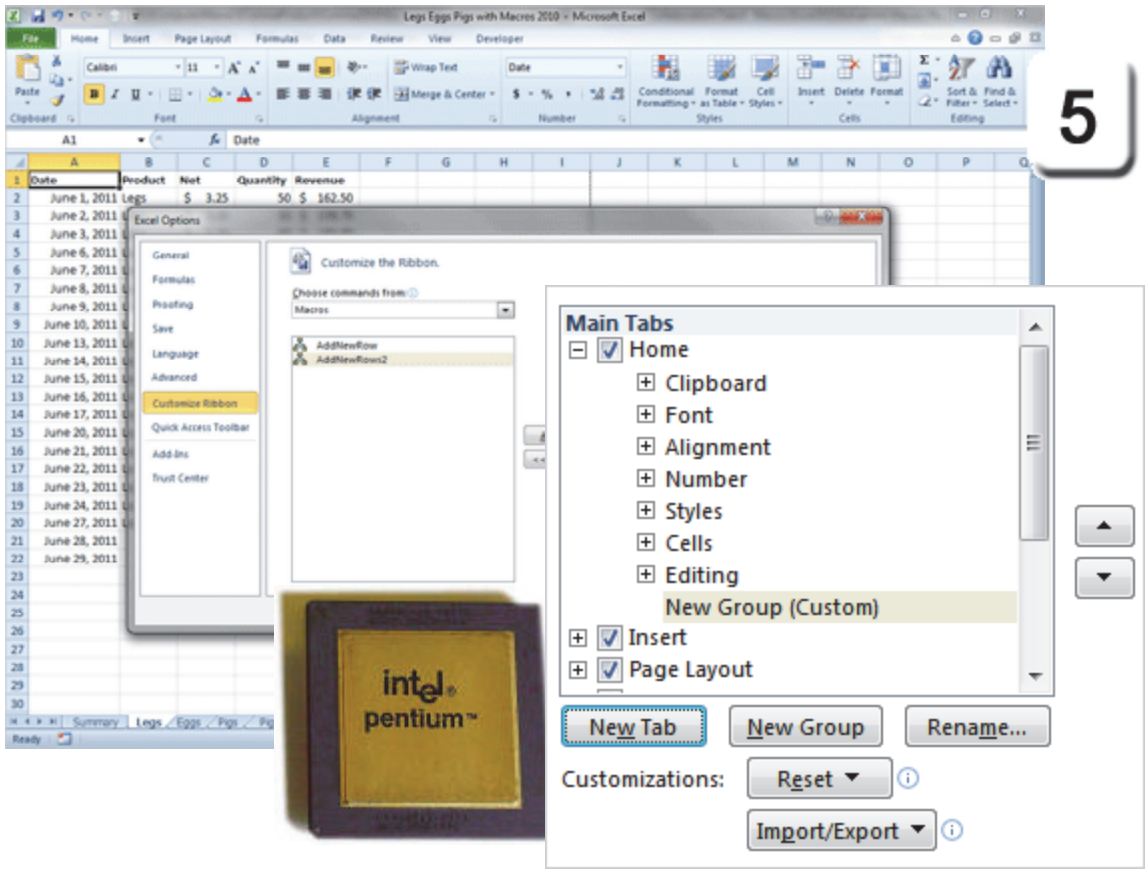
5. What Do You See? A **New Group (Custom)** has been placed on the right side on the Home Ribbon. By default, the New Group has been placed last on the list, under the Editing group. You can use the Up and Down arrows to reorganize the Main Tab if you wish.

Keep going...

Memo to Self: Say you changed the order of the Groups on the Home Ribbon but that made it more difficult to find anything.

You can **Reset** the Main Tabs and return the Home Ribbon to the way it is by Default in Excel 2010.

File ->Options-> Customize Ribbon-> New Group



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Run a Macro from a button

Take Three

File ->Options-> Customize Ribbon-> New Group

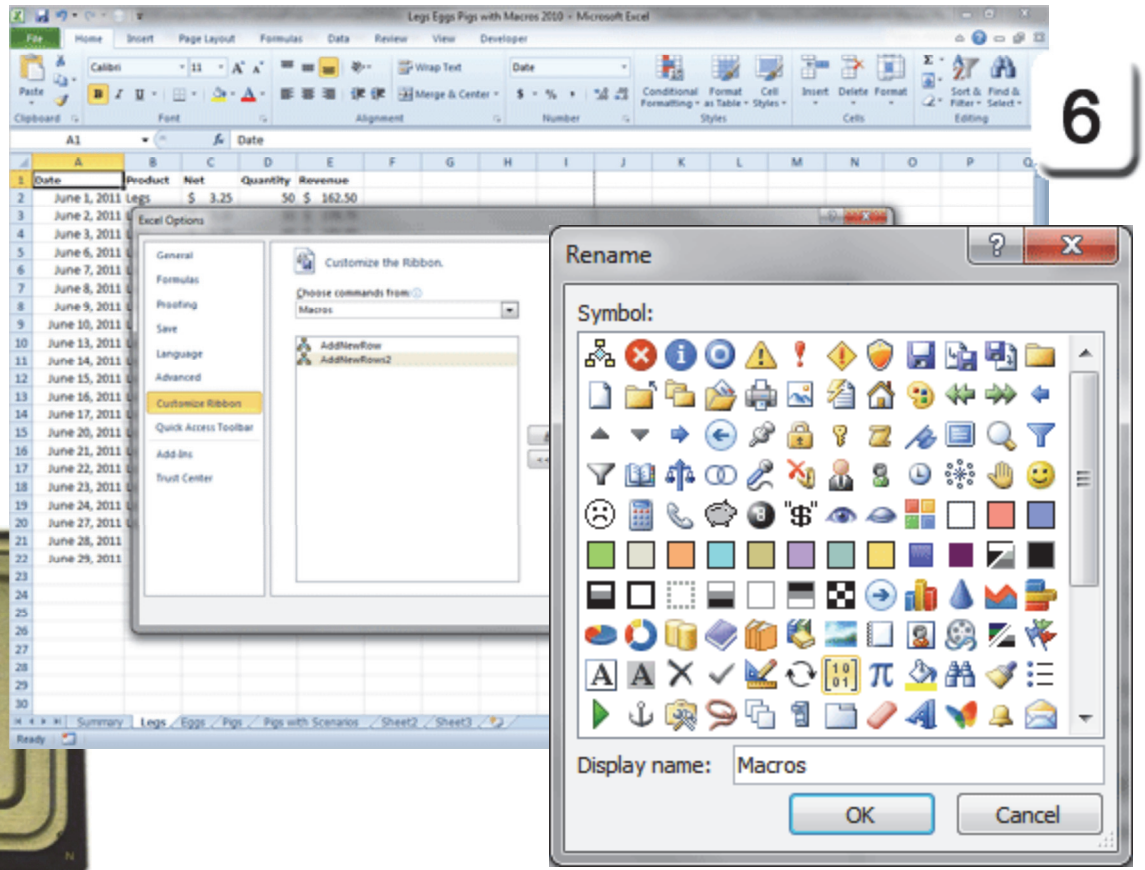
Edit the New Group

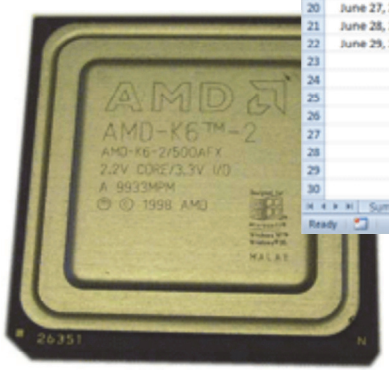
New Group (Custom) doesn't really mean a whole lot to my users. Let's rename this Group. When you **Rename** a Group you can choose a Symbol to help Users find a Group as well as a Display Name.

6. Try This: Rename the Group
Select **New Group (Custom).**
Click on **Rename.**

Whet Do You See? A new window will prompt you to select a **Symbol.**
Type a Display Name: Macros.

Keep going...!





6

Take Three

Add the Macro to the Group

Here are the steps to add the Macro to your new Macro group on the Home Ribbon.

7. Try This: Add a Macro to a Group
Choose Commands From: Macros.
Click on AddNewRow2

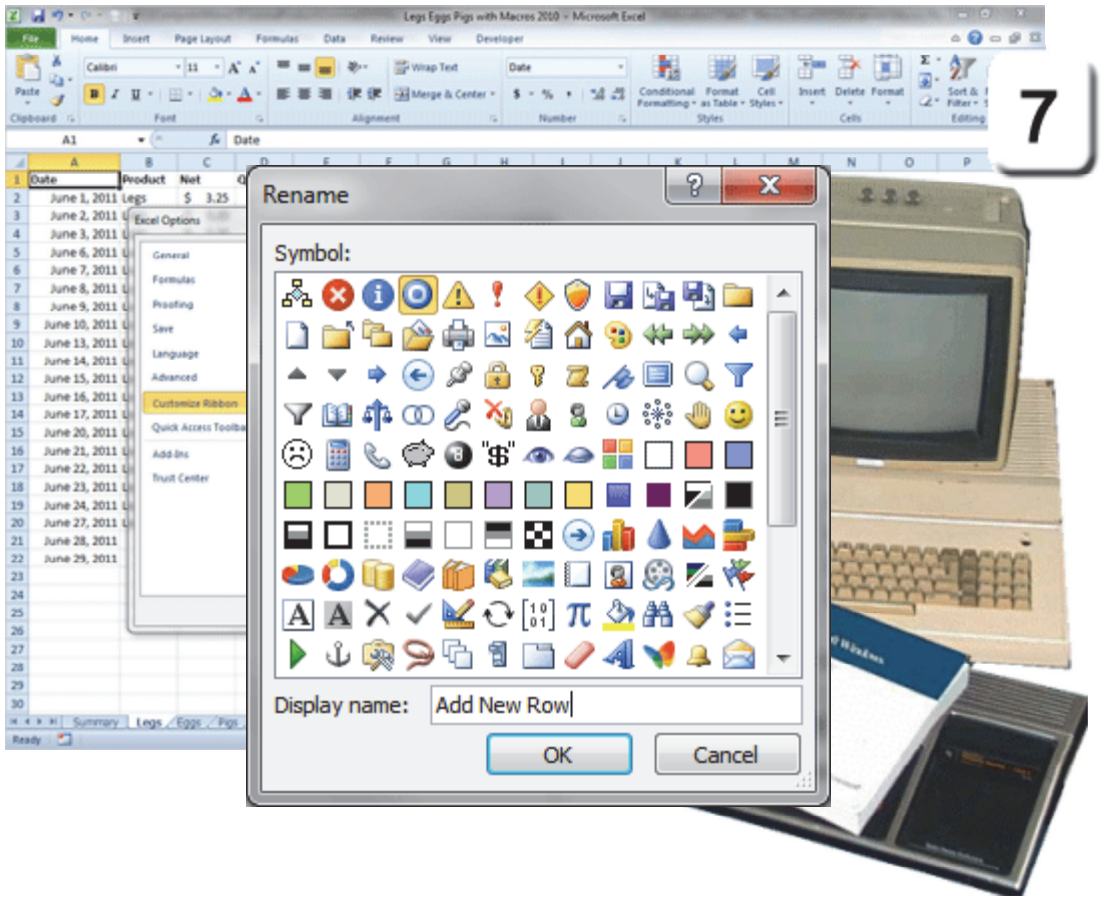
Customize the Ribbon: Main Tabs
Select the new Macro Group.
Click on **Add**.

Try This, Too: Change the Display Name
Select **AddNewRow2.**
Click on **Rename.**

What Do You See? A new window will prompt you to select a **Symbol**.
Type a Display Name: Add New Row.

Click OK. Keep going...!

File ->Options-> Customize Ribbon-> New Group



Take Three

Run the Macro

What Do You See? There should be a new **Macro** Group on the **Home** Ribbon. The **Add New Rows** button should be in this Group.

So, Try It: Click the Button
Select Row 22.(the one with the SUM)
Go to **Home->Macros**.
Click on **Add New Row.**

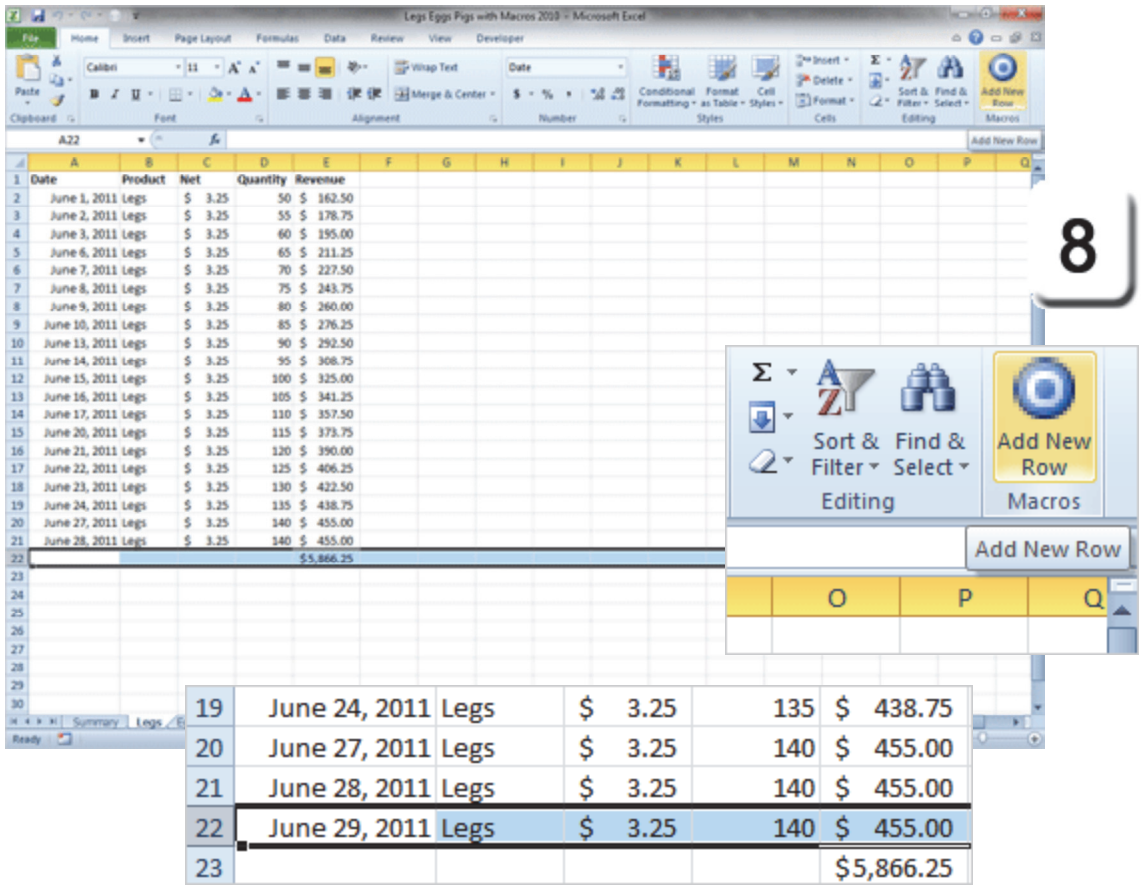
Did It Work? You should see a new Row that includes date, product name, price and quantity. The formula in the Revenue column should be there as well.

What if it Doesn't Work? You may receive a message about Macro security.

First, save this spreadsheet as a Macro-enabled workbook. Here are the steps: page 269

Second, edit the Macro Security. Here are the step: page 270.

Home ->Macros-> Add New Row



8

Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros.

Take Three

Add the New Macro to the Quick Access Toolbar

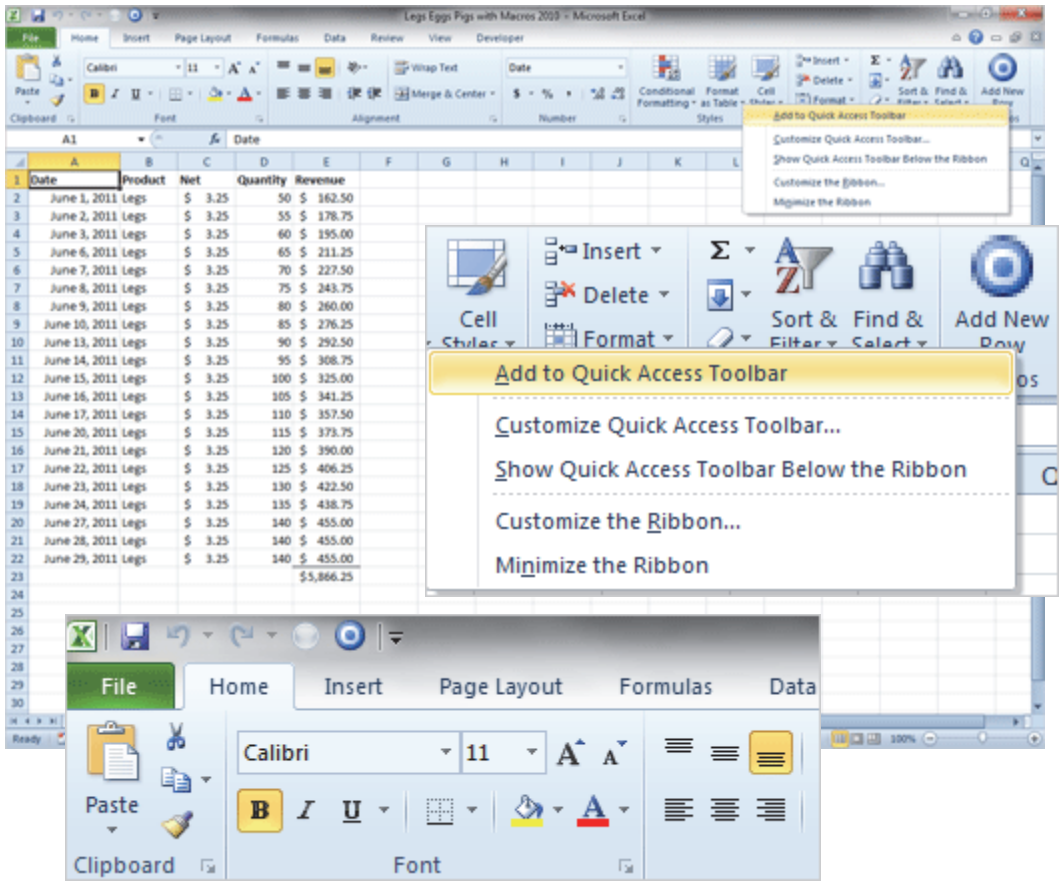
You can add your mighty Macro to the **Quick Access Toolbar** if you wish.

Try it: Add a Macro to the Toolbar
Right-click the Add New Row Macro.
Click on **Add to the Quick Access Toolbar**.

What Do You See? In the example on this page, the Macro is shown as a round, blue icon on the Quick Access Toolbar, to the right of the Undo and Redo arrows.

Memo to Self: If you choose the other option, **Customize the Quick Access Toolbar,** the steps will be similar to the ones we just walked through for the Home Ribbon.

Home ->Macros



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros.

Take Three

Save the Macro

When you complete the Macro recordings you need to save your work as a **Macro-Enabled** file. **Macros are code.** It is different than the default Excel file format. This page shows how to save your work. The next couple of pages discuss the security issues.

Try it: Save the Macro
Go to **File->Save As**.

What Do You See? The **Save As** window will prompt you to fill in the following:

Location: Your Documents library

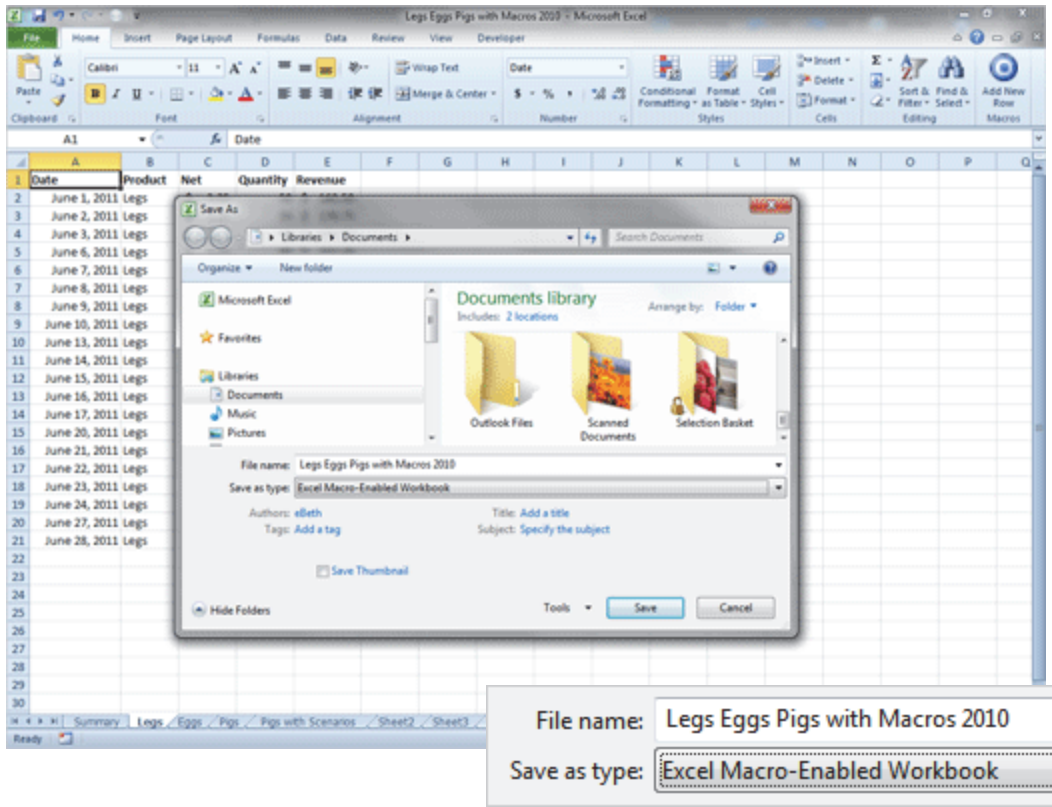
File name: Legs Eggs Pigs with Macros 2010

Save as type: Excel Macro-Enabled Workbook

Click on **Save**.

Then **Close** the Macro-Enabled file Legs Eggs Pigs with Macros 2010.

File ->Save As

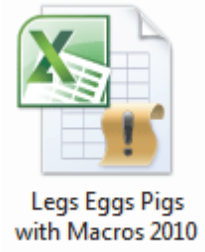


Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Save as Macro Enabled

Take Three

Enable Macros in a Workbook

The Macro Enable workbook icon has a security warning: an exclamation point. What happens when you open a file that has Macros?



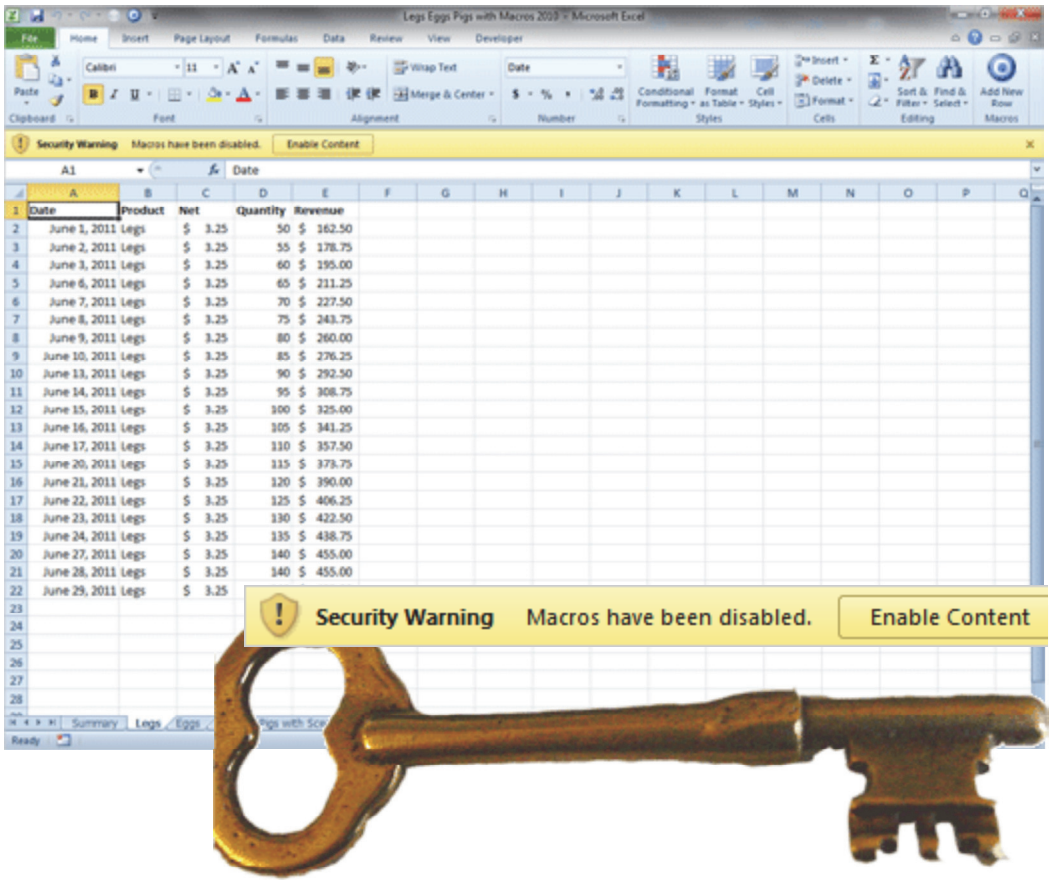
Try This: Enable Content
Open the file you created in the previous lesson: **Legs Eggs Pigs with Macros 2010.**

What Do You See? There should be a yellow security banned at the top of the spreadsheet. By default, all Macros are disabled in Excel.

Who Do You Trust? Macros are code: code can be programmed to run viruses or malware that can compromise your security and your privacy.

Only **Enable Content** from trusted sources!

File ->Info



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Enable Macros in a spreadsheet

Take Three

Security Warnings

Macros are a security risk. Microsoft Excel also displays the security warning in the Backstage View of the workbook.

1. Try it: View the Security Information
Open our macro-enabled workbook.
Go to **File->Info**.
Click on **Enable Content**.

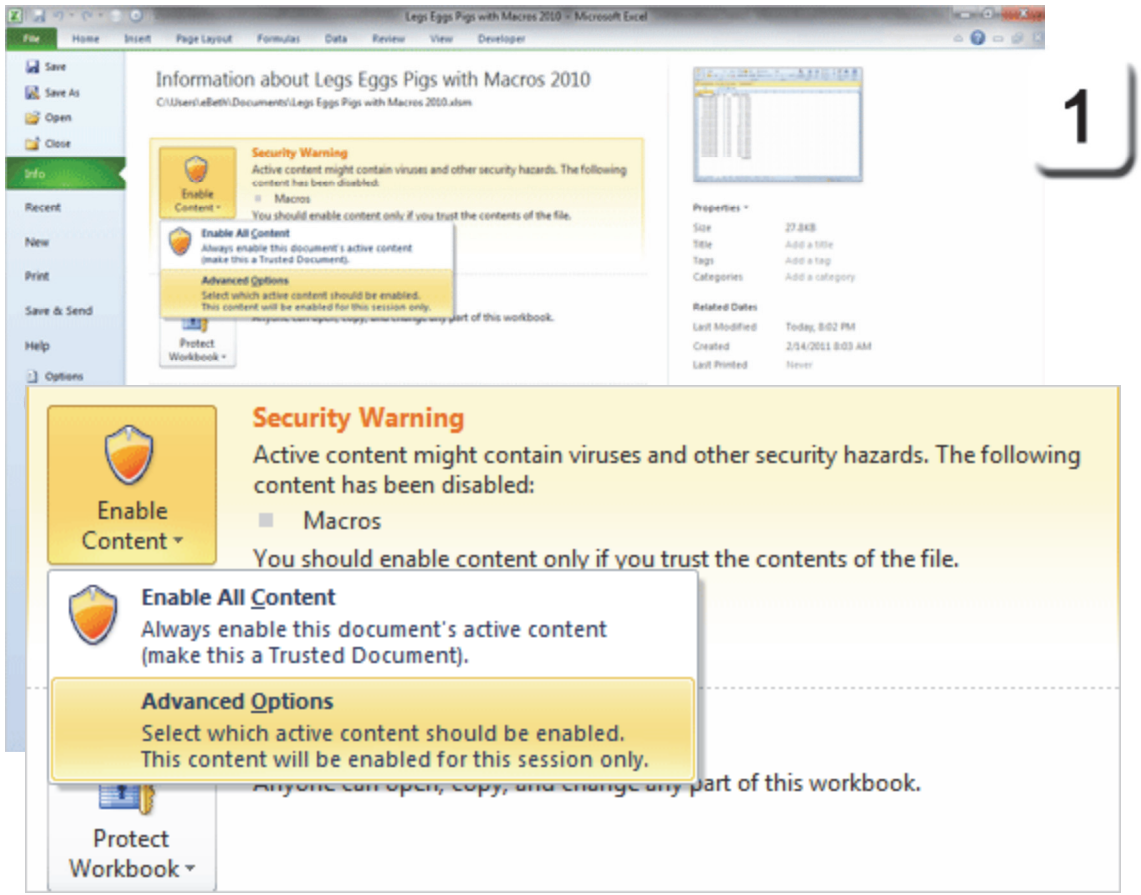
What Do You See? By default, Active Content, including Macros, are disabled because of the potential hazards.

You can **Enable All Content** and make this workbook a Trusted Document.

The **Advanced Options** allows you to enable the macro for this session, only.

Click on **Advanced Options** and keep going, please...

File->Info->Enable Content-> Advanced Options



1

Take Three

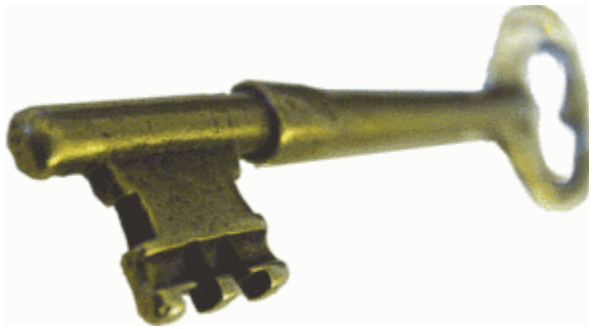
Security Alert-Macros

2. What Do You See? The Macros in the workbook are disabled. When you click on Advanced Options you will be notified with a **Security Alert** for Macros.

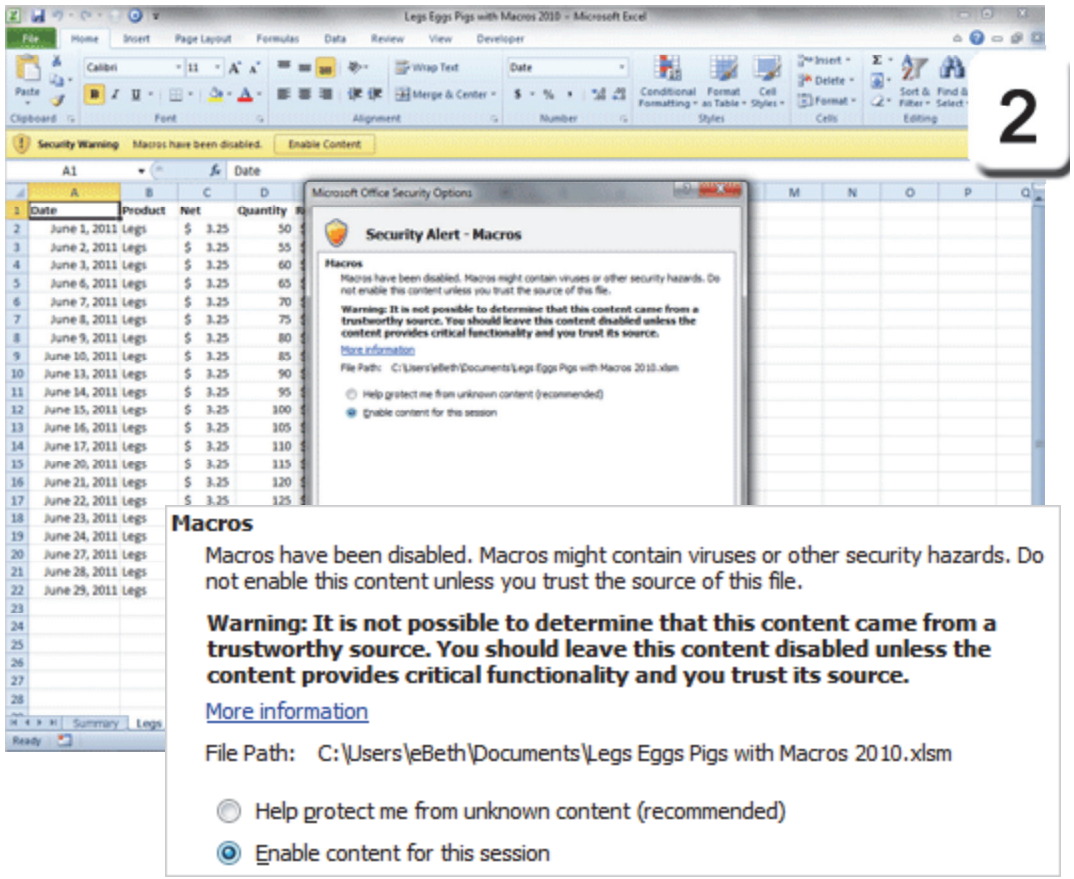
What Are the Options? One of the Advanced Options is to **Enable content for this session**, only. That means the permissions are revoked and the Macros are disabled when you close the workbook

Click on: **Enable content for this session.**

Click **OK**, Keep going.



File->Info->Enable Content-> Advanced Options



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Enable Macros in a spreadsheet

Take Three

Macro Security

The example on the previous pages showed the options for enabling Macros when you open a workbook.

Macro Security does not have to be "all or nothing." Some Macros may be quite useful while others are risky.

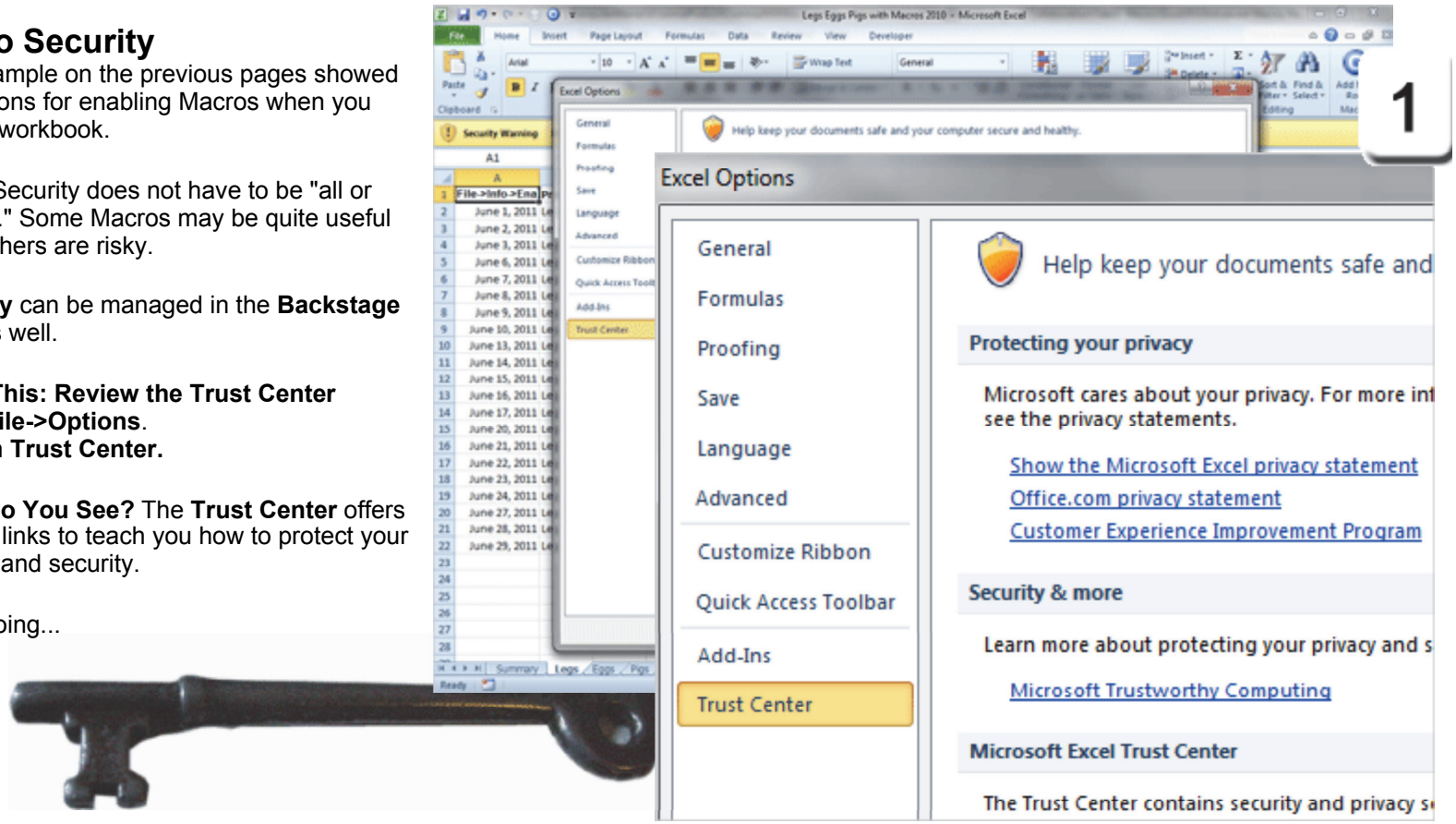
Security can be managed in the **Backstage** View as well.

1. Try This: Review the Trust Center
Go to **File->Options**.
Click on **Trust Center.**

What Do You See? The **Trust Center** offers several links to teach you how to protect your privacy and security.

Keep going...

File ->Options->Trust Center

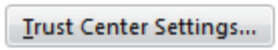


Take Three

Trust Center Settings

2. Try This: Edit the Trust Center Settings for Macros

Go to **File ->Options.**
Click on **Trust Center.**
Click on **Trust Center Settings.**

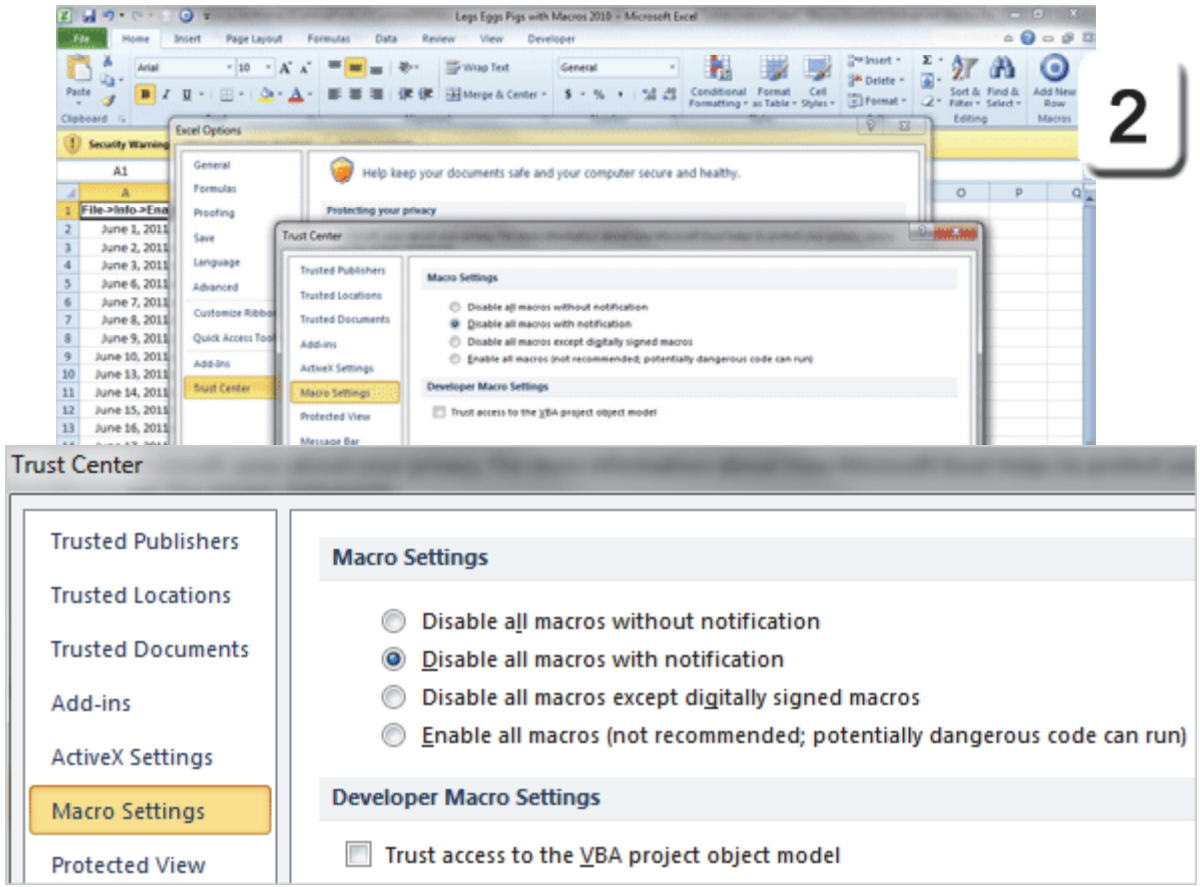


What Do You See? The **Trust Center** lets you review and edit the settings for accepting macros from **Trusted Publishers, Trusted Locations,** and **Trusted Documents.** Microsoft, for example, is a Trusted Publisher with thousands of macro enabled templates on their websites.

The **Macro Settings** by default **Disable all macros with notification**. You can also choose to trust macros that have been digitally signed.

Microsoft does NOT recommend that you **Enable all macros.**

File ->Options->Trust Center-> Trust Center Settings



2

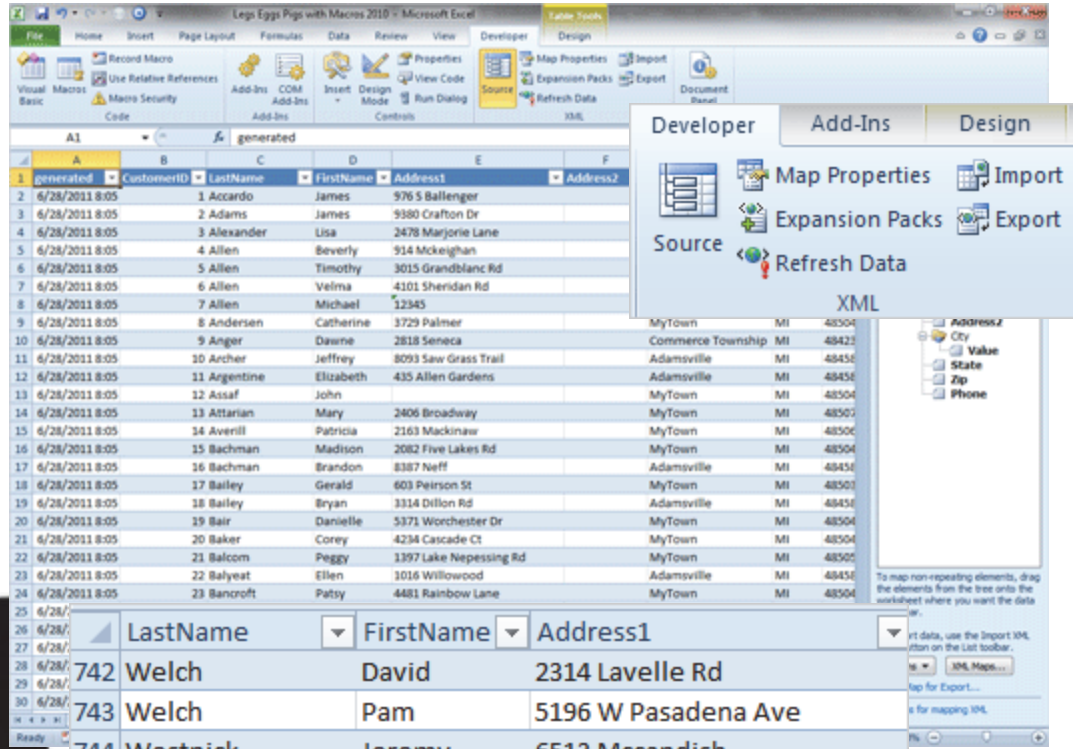
Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros: Enable Macros in a spreadsheet

Take Three

Run a Macro On Open

Microsoft Excel can be programmed to function as an application. The spreadsheet can open **automatically** to a form for data entry. Another import function is to **refresh (import) data** from an **external data connection**, such as a database or XML.

The example on the following pages will illustrate the steps needed to connect to an external source, an XML file, and examines the tools for working with external data. We will also create a macro that updates the connection automatically when the workbook is opened.





	LastName	FirstName	Address1
742	Welch	David	2314 Lavelle Rd
743	Welch	Pam	5196 W Pasadena Ave
744	Westnick	Jeremy	6513 Mccandish
745	Wheeler	Brandi	307 Chamberlain St
746	Whitcomb	Jeremy	2563 Lisa Dr

Before You Begin: Get the Data

You can connect Excel to many other sources including an SQL Server, an SQL Analysis Service (such as the traffic data available from your commercial website.)

An XML file is data table of information. It is a table so there is a table structure (the fields and the relationships) as well as the data.

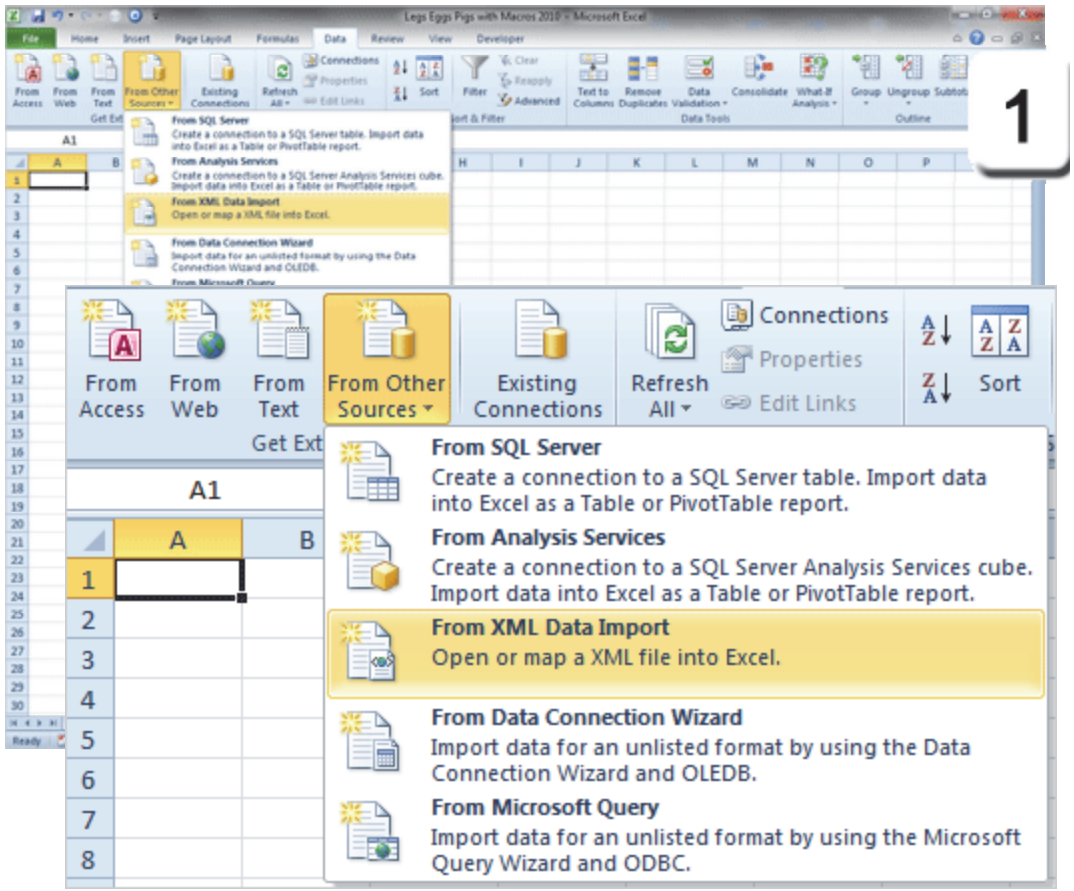
Before You Begin: Open **Legs Eggs Pigs with Macros 2010.xlsm** Macro-enabled spreadsheet. Download the **tblCustomers.xml** as well.

The example in the lesson uses a customer table that was created from a table in Access.

1. Try This: Get External Data
Go to a blank sheet and select on Cell A1.
Go to **Data ->Get External Data.**
Click on **From Other Sources.**
Click on **From XML Data Import**.

This will **Open** or **map** an XML file into Excel.
Keep going...

Data ->Get External Data->From Other Sources



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Import XML data

Take Three

Select the Data Source

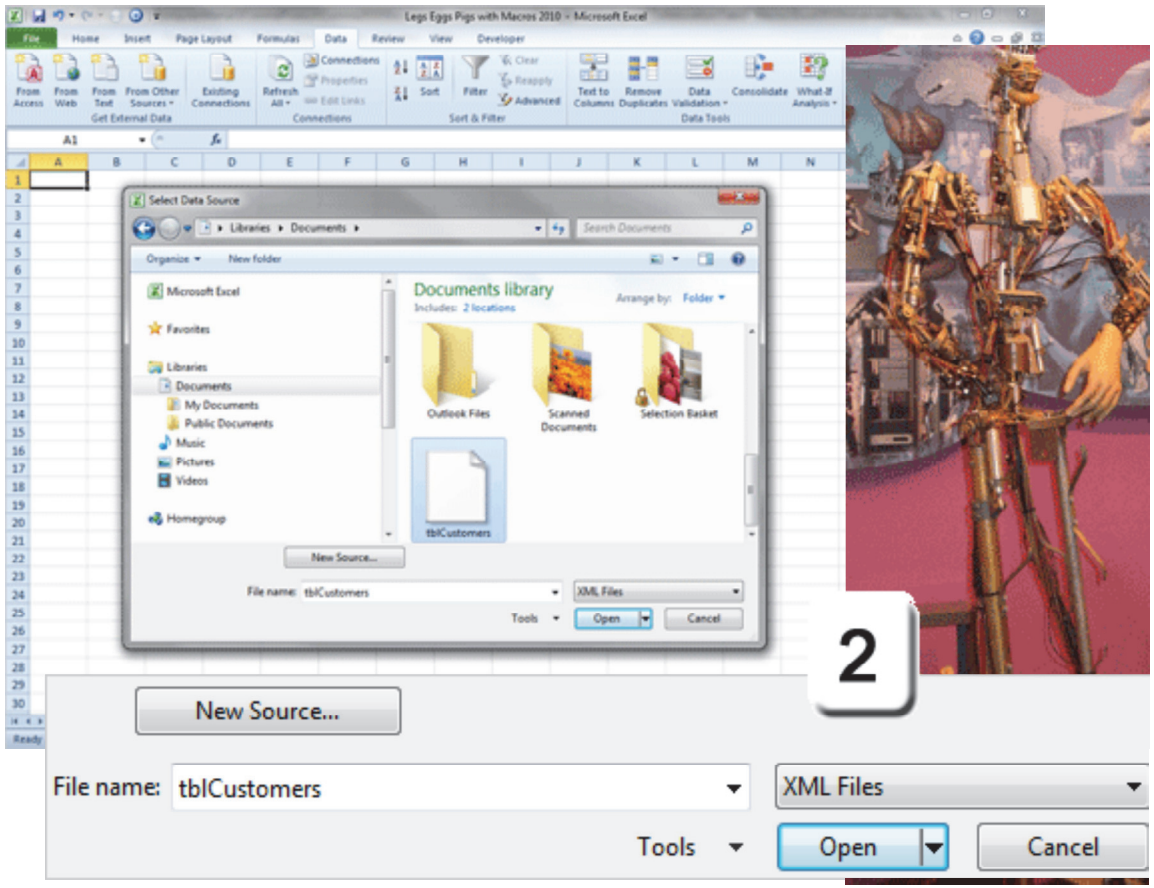
2. Try This: Select the XML File

The next step in the process is to **Browse** for the XML file. This screen shot shows the XML file in the Documents folder.

When you are prompted, find and select the sample XML file.
Click **Open**. Keep going...

Thoughts to Consider: Macro security is managed by Trust: Trusted Publisher, Location, or Trusted Document. Microsoft recommends that the XML file should be saved in a **Trusted Location**.

Data ->Get External Data->From Other Sources



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Import XML data



Get External Data

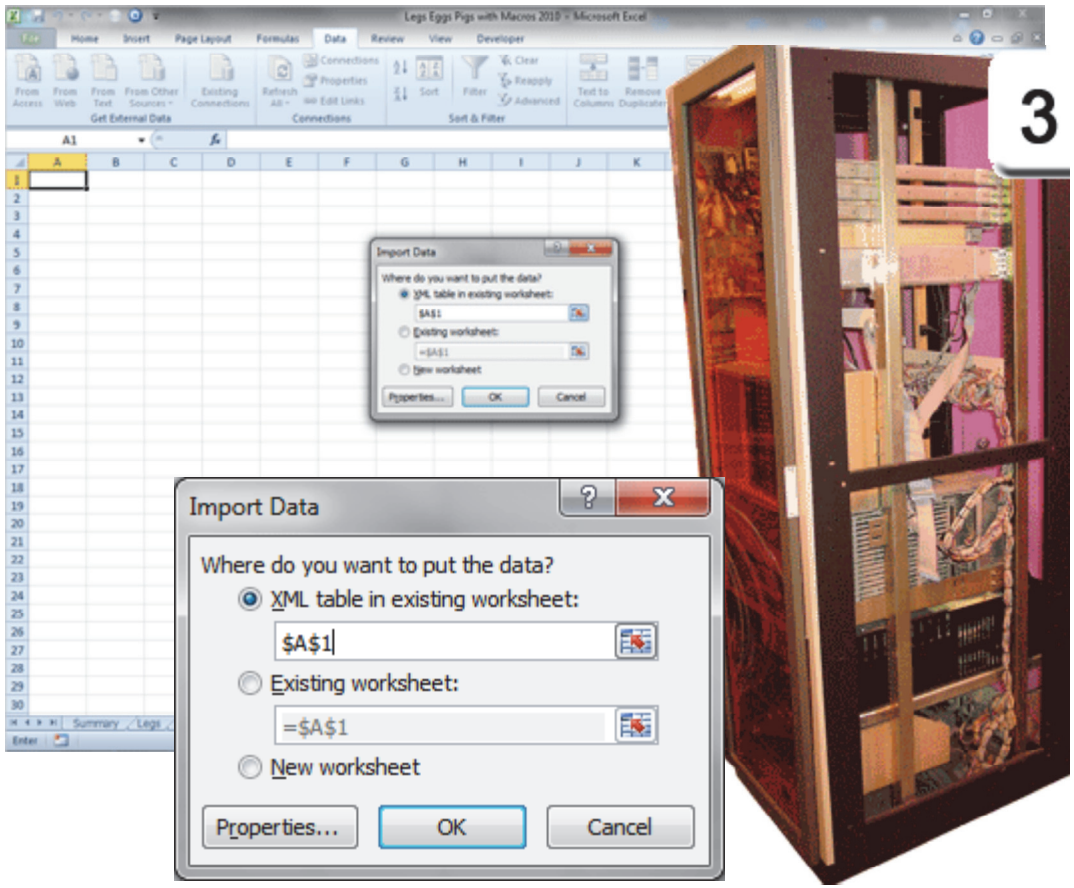
Where do you want to put the imported data?
When you click on Get External Data you will be prompted to choose a worksheet.

3. This This: Choose a Worksheet
Go to the new, blank worksheet.
Select Cell $A$1.

What Else Do You See? The other options include adding the data to an existing worksheet. This option would **append** the data: add to the existing rows. You can also put the data in a new worksheet.

Click **OK**. Keep going...

Data ->Get External Data->From Other Sources



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Import XML data

Take Three

Hello, XML Data Table

4. What Do You See? The XML data will be displayed as a Table in Microsoft Excel. There are filters in the top row on the fields.

What Else Do You See? The **Table Tools** should be available. On the **Design** Ribbon you should see two useful Groups:

Tools: for PivotTables or Remove Duplicates
External Table Data: to Export or Refresh the External Data.

Keep going...

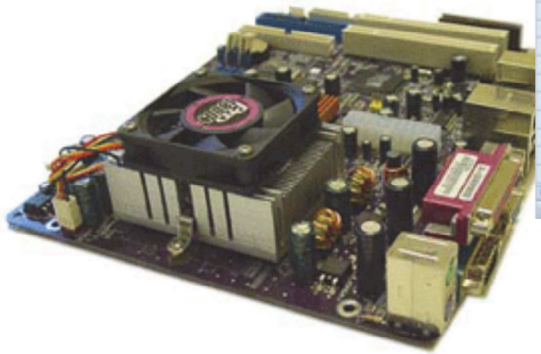
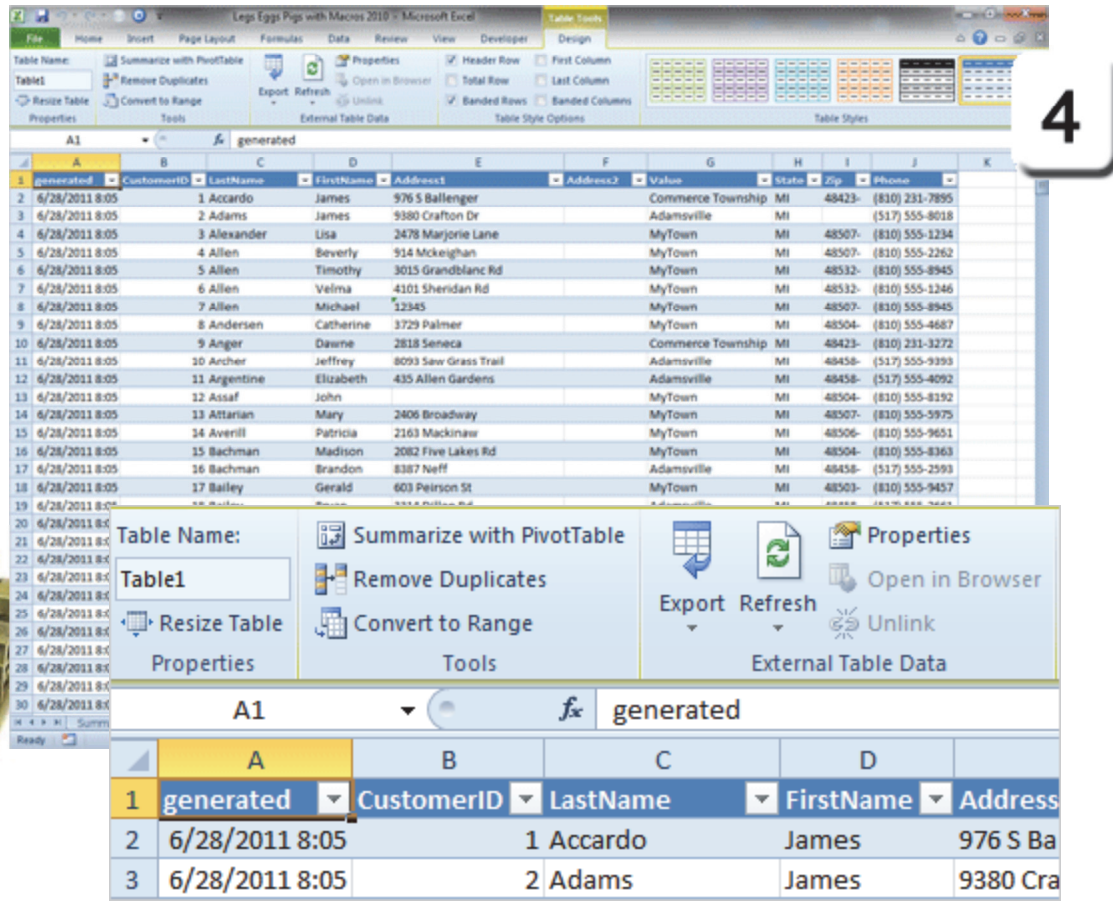


Table Tools ->Design



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Import XML data

Take Three

Show the XML Source

Let's use the **Developer Toolbar** to show the **XML** maps in our workbook.

5. Try it: Display the XML Source
Go to **Developer ->XML**.
Click on **Source**.

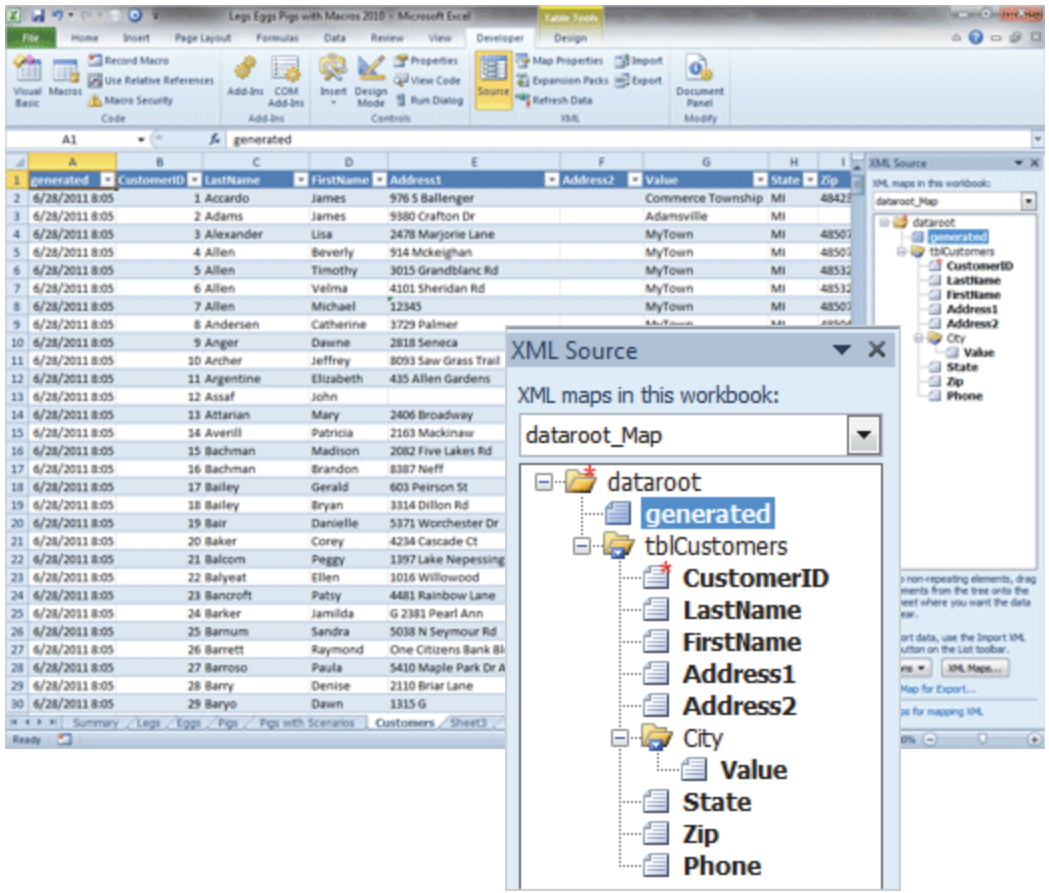
What Do You See? The **XML Source** will be displayed on the right of your XML table. This XML Source is similar to the Field List in a PivotTable or PivotChart.

When we imported the XML file, Microsoft Excel creates a map of the table structure and, by default, named it dataroot_Map.

The XML map includes all of the fields in the table. You can drag and drop the fields to the spreadsheet as you would to create a PivotTable.

Keep going...

Developer ->XML->Source



5

Take Three

XML Map Properties

6. Try This: Find the Map Properties
Go to **Developer ->XML.**
Click on **Map Properties.**

What Do You See? The **XML Map Properties** include the following:
Name
XML schema validation
Data Source: this option lets you Save the data source definition in the workbook.
Data formatting and layout

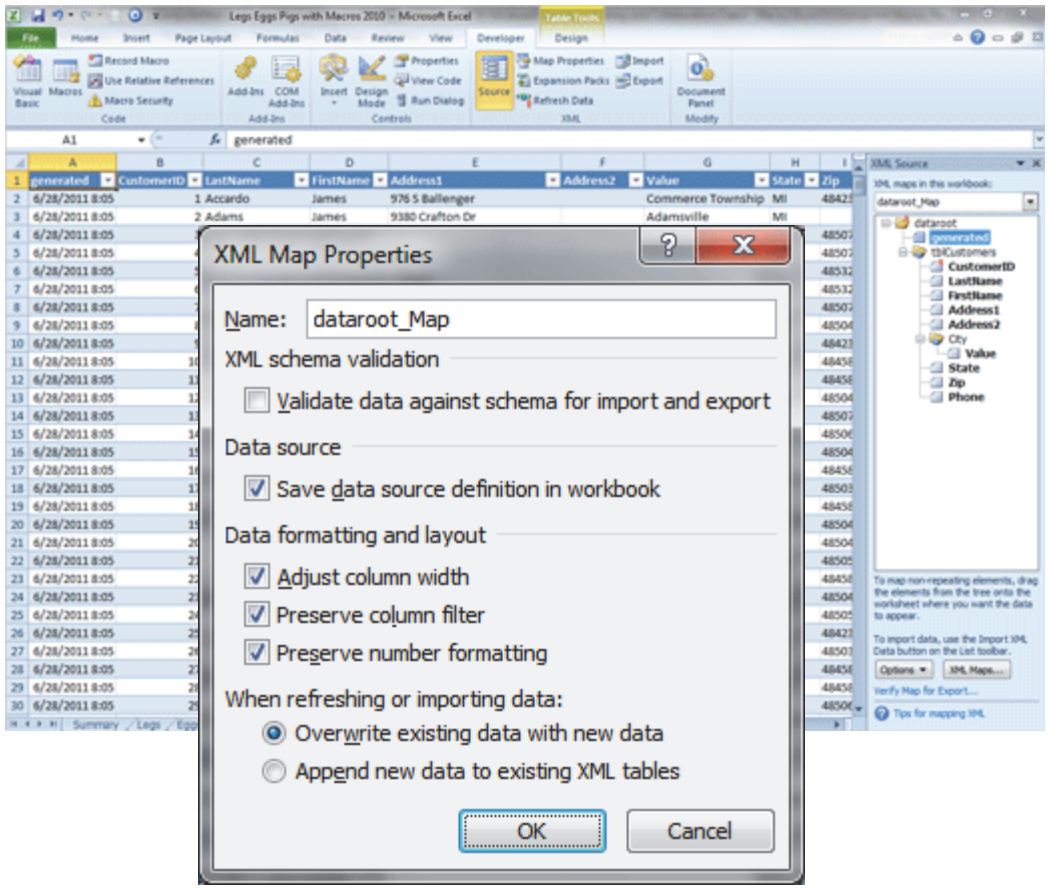
What Else Do You See? The **XML Map Properties** determines what happens when the data is refreshed or imported.

There are two very different choices:
Overwrite the existing data with new data
Append new data to an existing XML table

The default is to overwrite (replace) the data when you refresh or import.

So far so good. Click **OK**!

Developer ->XML->Map Properties



Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: XML Map Properties

Automate the Update

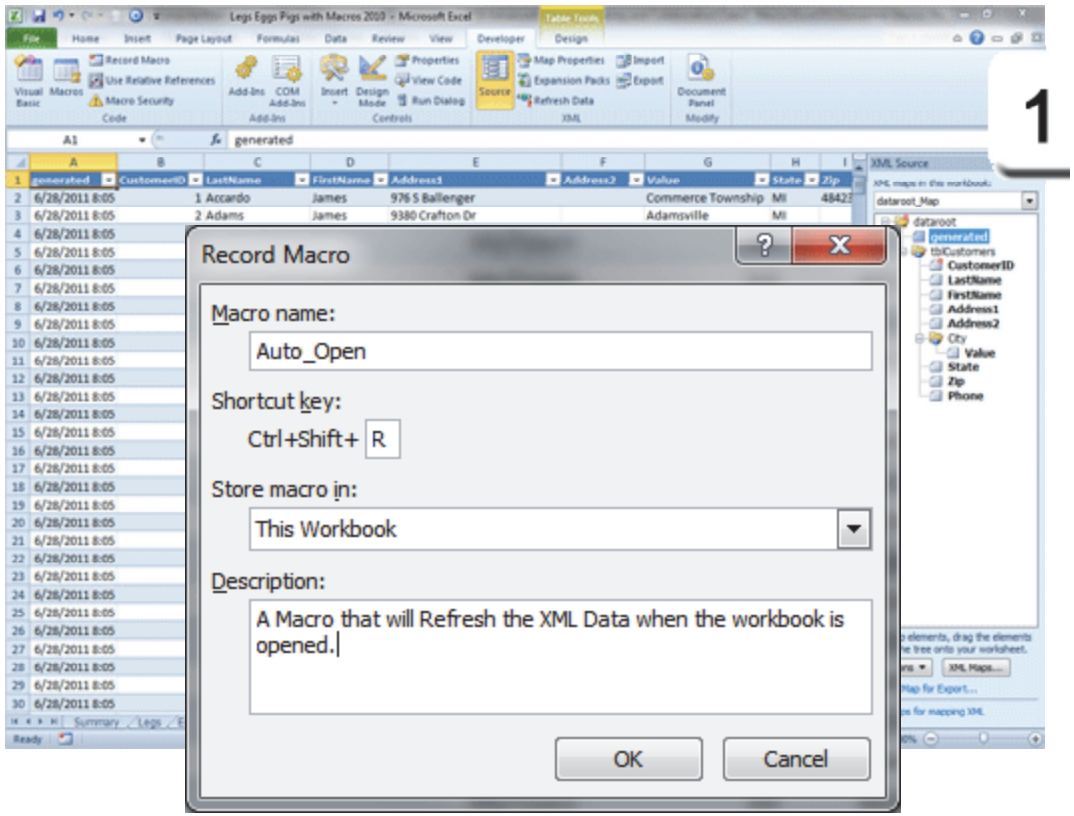
The next step will create an **Auto_Open** Macro that will **Refresh** the XML data automatically when the workbook is opened.

1. Try This: Create a Refresh Macro
Go to **Developer ->Code**.
Click on **Record Macro**.
Enter the following when you are prompted:
Name: Auto_Open
Short Cut Key: Control+Shift+**R**
Click **OK** to start the recording.

Try This, Too: Record the Steps
Go to **Developer->XML**.
Click on **Refresh**.
Go to **Developer->Code**.
Click on **Stop Recording**.

Keep going...!

Developer ->Code->Record Macro



Take Three

Test the Macro

In the previous step, we created a new Macro and assigned a **Shortcut Key**. A Shortcut Key lets you run the Macro from the keyboard. Let's test the new Macro.

Before You Begin: Set up an experiment
Go to the Customer Table.
Select Rows 4 through Row 771.
Delete the data.

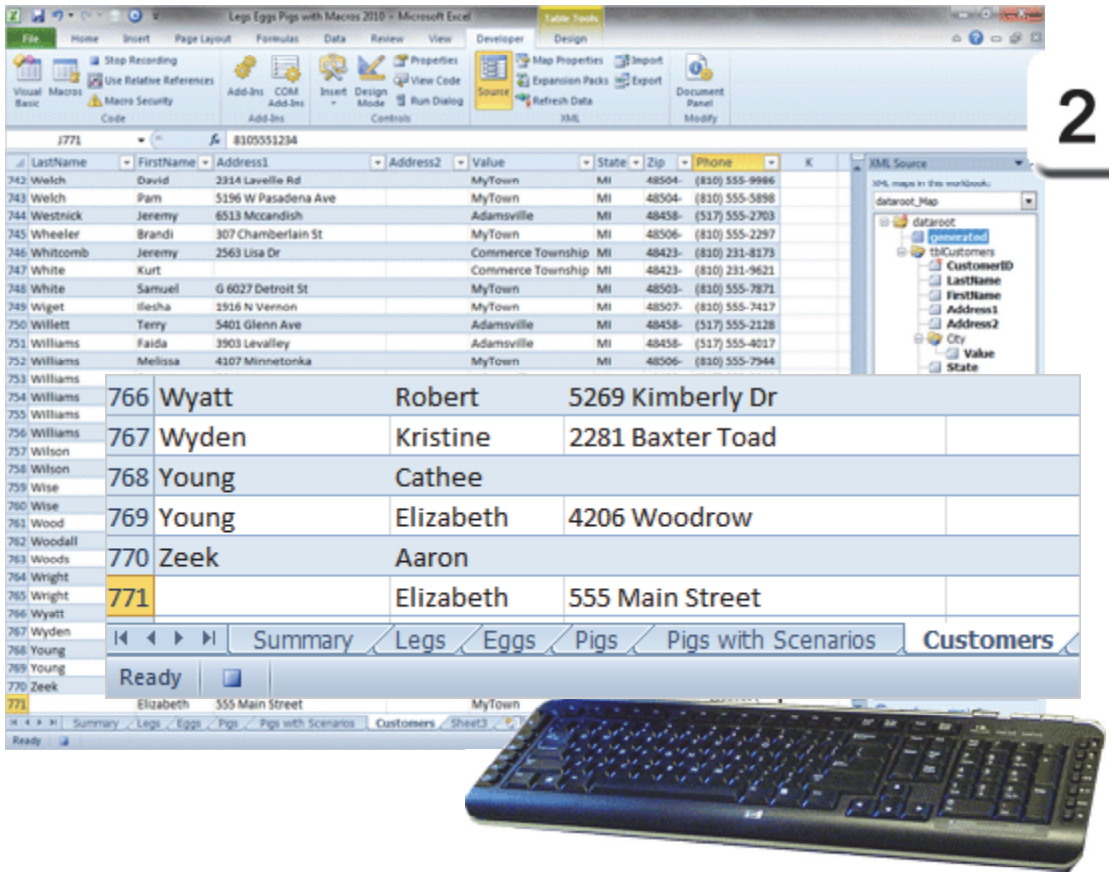
2. Try it: Run a Macro with a Shortcut Key
Type: Control+Shift+R.

What Do You See? By default, the data was replaced when it was updated, not added. This spreadsheet had 770 customers before the data was deleted. There was 770 customers after the Refresh, not 774.

Save your changes.Keep going...

Memo to Self: Remember, the first Row is the Header Row. So, there are 771 Rows in the Customer table when you include the Header Row.

Developer ->Code-> Macros



Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros.

Take Three

Run a Macro On Open

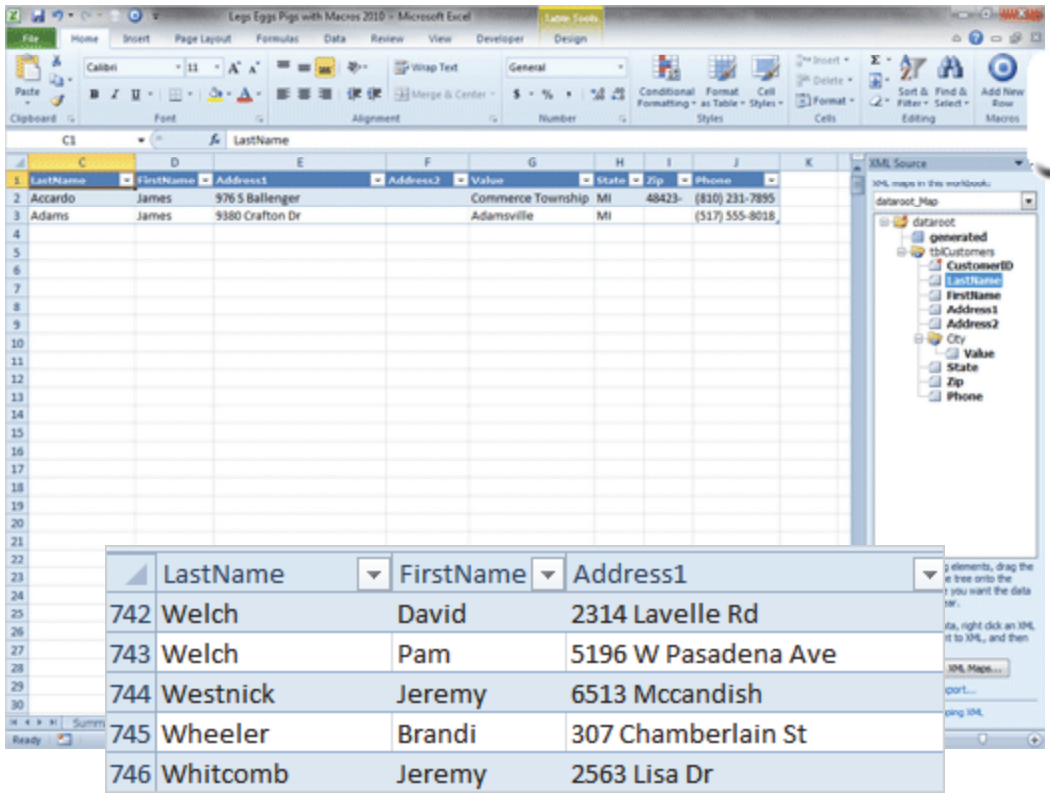
When Microsoft Excel opens a workbook, it looks at the code in a file called **Auto_Open**. There are some limitations to using this method. The **Auto_Open** Macro runs before any spreadsheets are opened or created, so you might see an error.

Before You Begin: Delete the XML Data
Go to the Customer Table.
Select Rows 4 through Row 771.
Delete the data.
Go to **File->Close**.
Save your changes if you are asked.

3. Try This: Test the Auto_Open
Go to **File->Open**.
Find and select the Legs Eggs Pigs 2010.xlsx spreadsheet

What Did You See? The data in the Customer Table has been refreshed.

File ->Open



3

Take Three

Adding the Export Tools

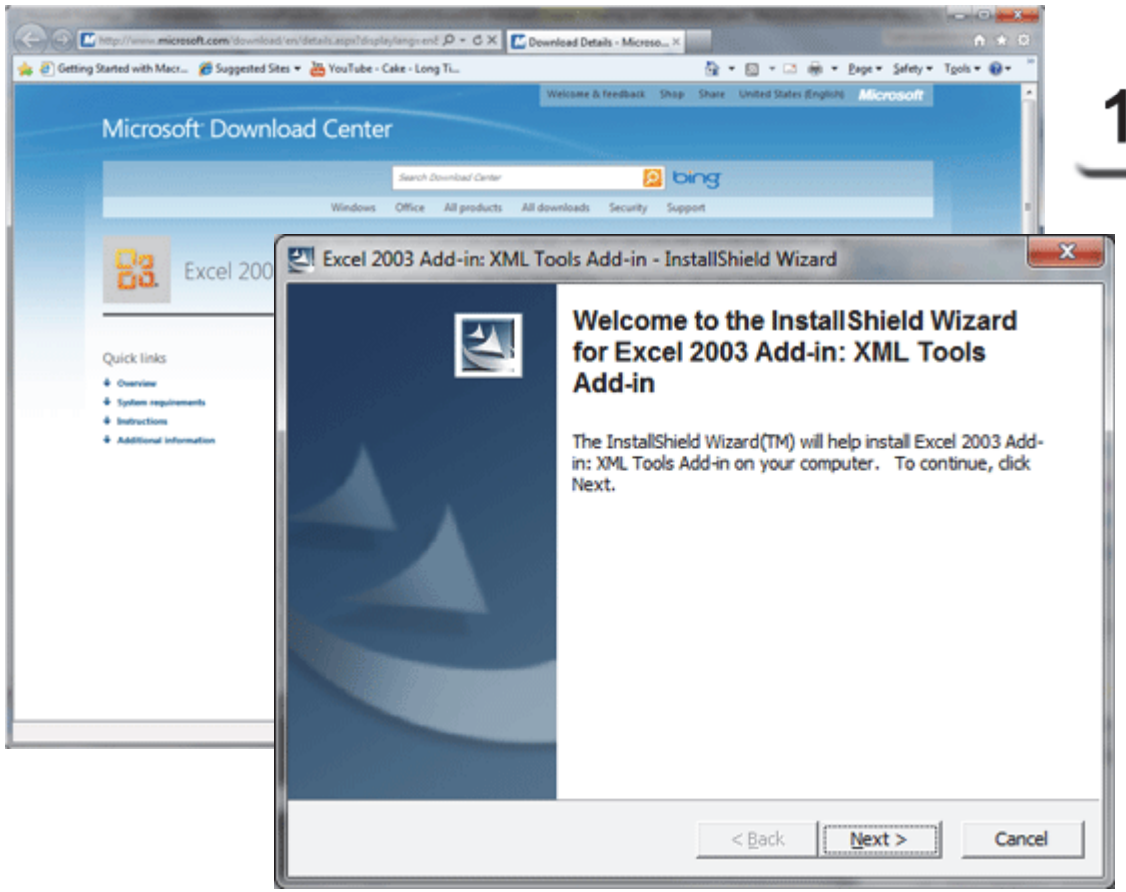
Consider This: The previous lessons focused on importing data into Excel and managing it with the Developer Tools.

Exporting XML data requires downloading a set of tools: the **XML Tools Add-in.** The Add-in is available from the Microsoft Download Center.

When you click **Download**, you will be asked to walk through the installation Wizard. You will also be prompted for your Administrator password.

Getting the XML Tools Add-in is the first step. Keep going...

Developer ->Add-Ins-> Add-Ins



1

Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros.

Take Three

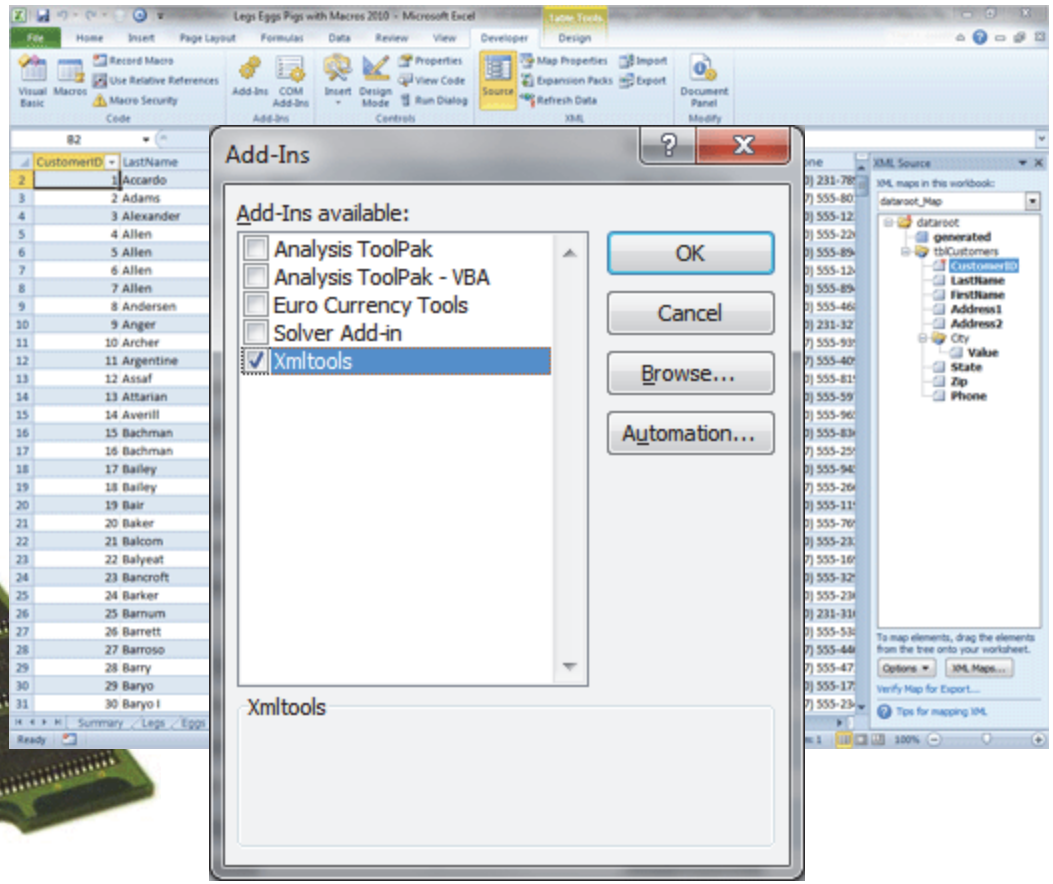
Add the XML Tools

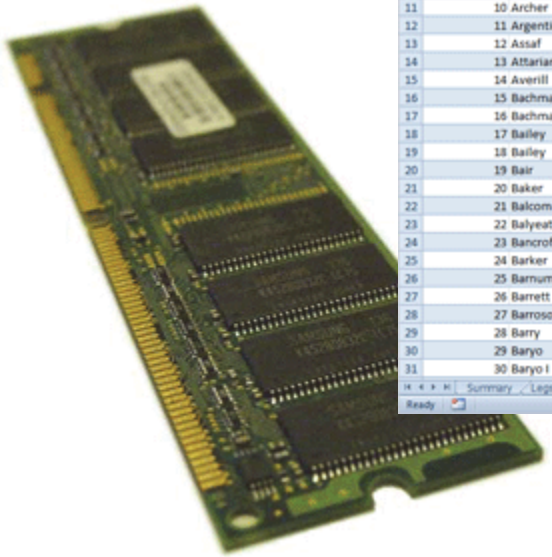
2. Try it: Install the Add-Ins

Go to **Developer ->Add-Ins-> Add-Ins.**
Browse for the **XmlTools.xla.**
Click **OK**.

Keep going...!

Developer ->Add-Ins-> Add-Ins



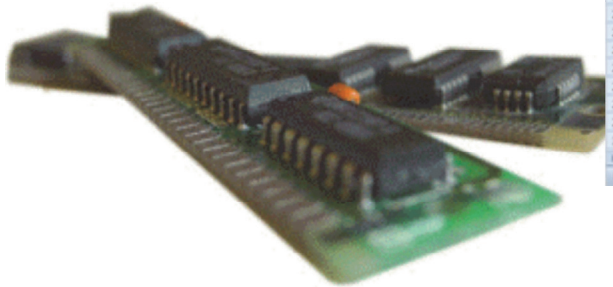


Take Three

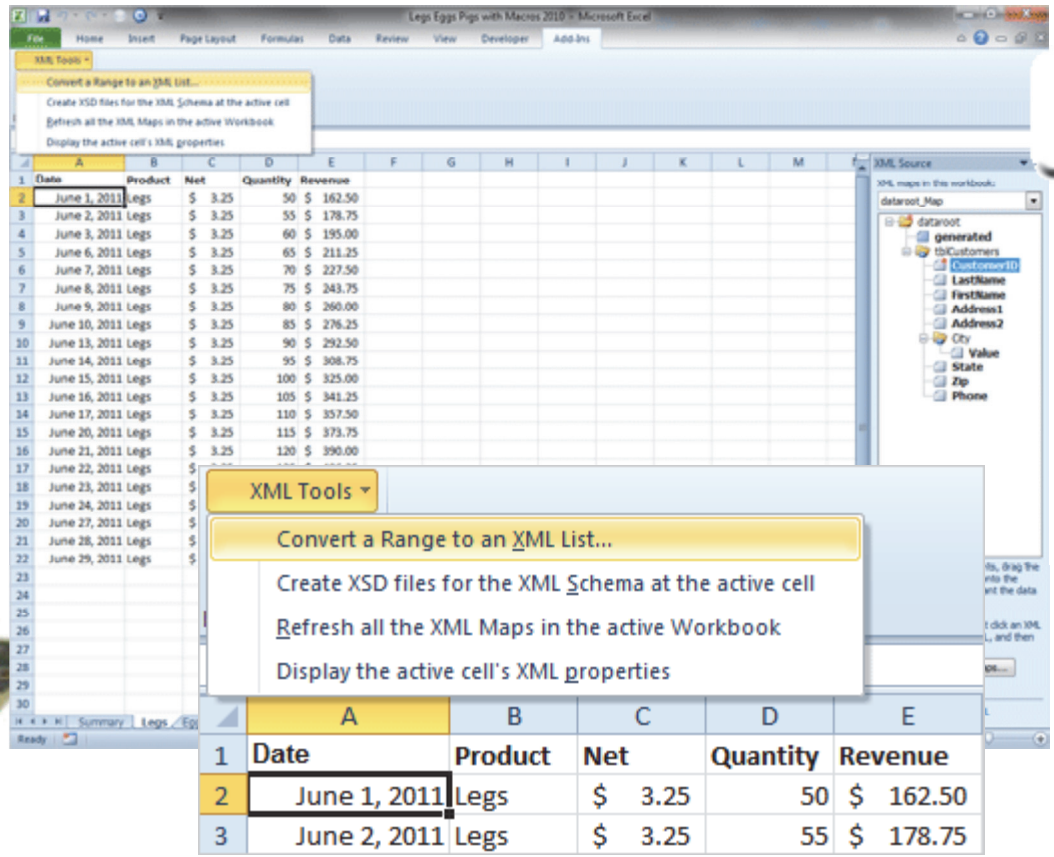
Hello, XML Tools

Look for the **Add-Ins** Ribbon to the right of the Developer Ribbon. You can use the **XML Tools** to **Convert a Range** of data into an XML List.

3. Try it: Convert a Range to an XML List
Go to the **Legs** spreadsheet.
Select Cell A1.
Go to **Add-Ins-> XML Tools**.
Click on **Convert a Range to an XML List...**
Keep going...



Add-Ins-> XML Tools ->Convert a Range to an XML List...



3

Take Three

Convert Range to XML List

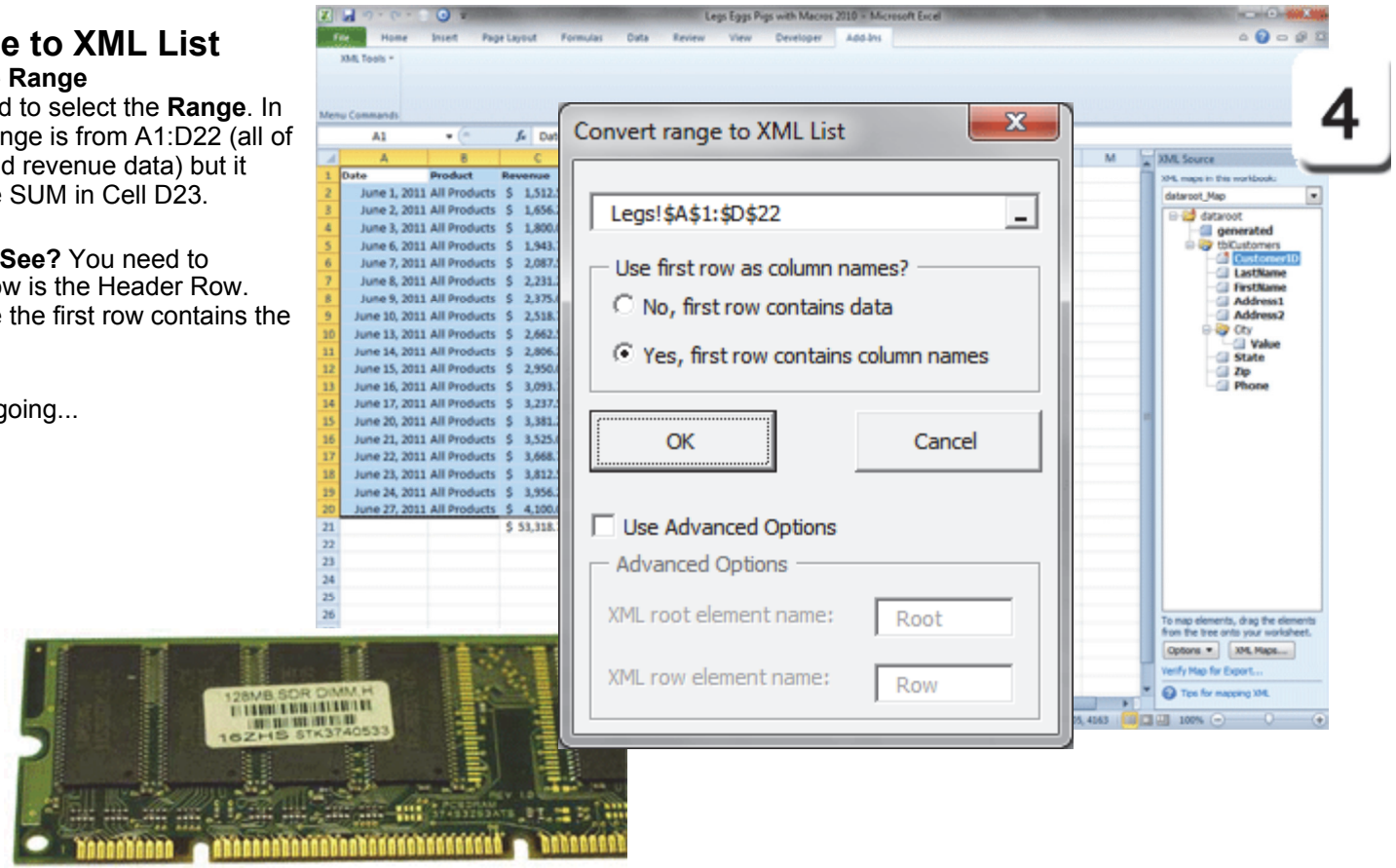
4. Try it: Select the Range

You will be prompted to select the **Range**. In this example the Range is from A1:D22 (all of the date, product and revenue data) but it does not include the SUM in Cell D23.

What Else Do You See? You need to indicate if the first row is the Header Row. Yes, in this example the first row contains the column names.

Click **OK** and keep going...

Add-Ins-> XML Tools ->Convert a Range to an XML List...



Take Three

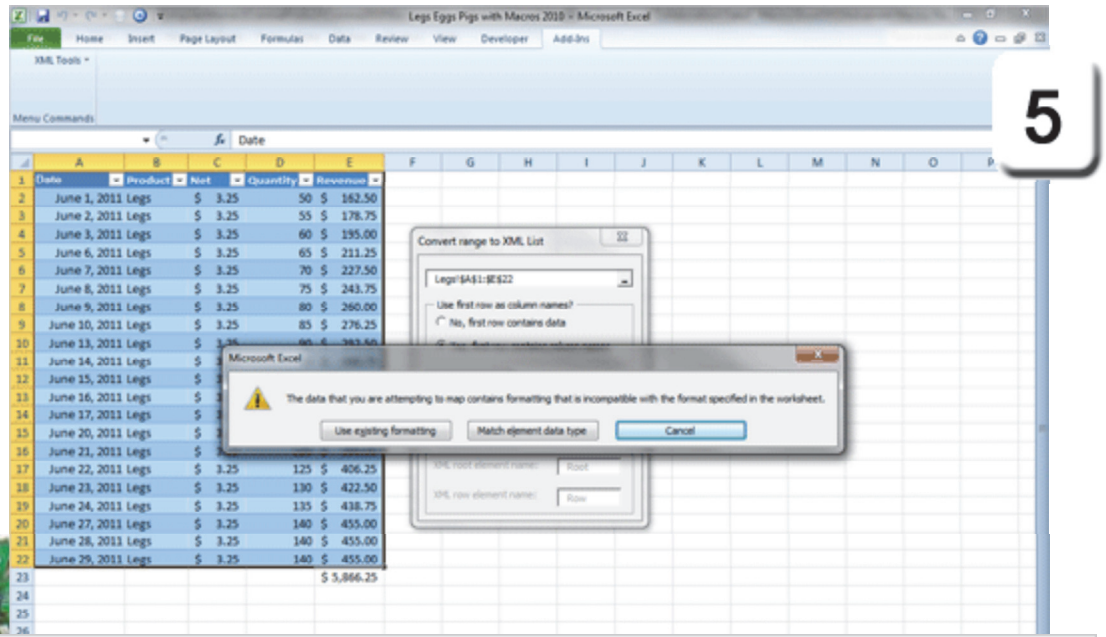
Data Formatting

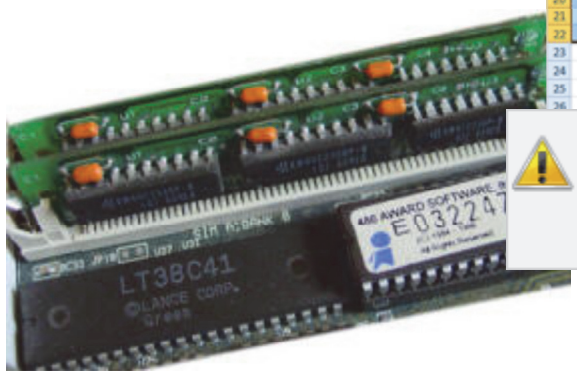
5. What Do You See? You may see an error message that the data contains formatting that is incompatible with the format specified.

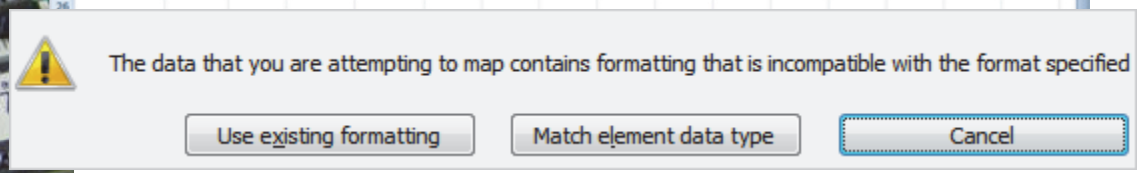
The conversion options are:
Use exiting formatting
Match element data type
Cancel.

Click: **Use existing formatting**. Keep going...

Add-Ins-> XML Tools ->Convert a Range to an XML List...







Exam 77-888: Microsoft Excel Expert 2010
4. Working with Macros and Forms
4.1. Create and manipulate macros.

Take Three

Export the XML

Now that the Range has been converted to XML, you can export the data as an XML file.

6. Try it: Export the XML
Go to **Developer ->XML.**
Click on **Export.**

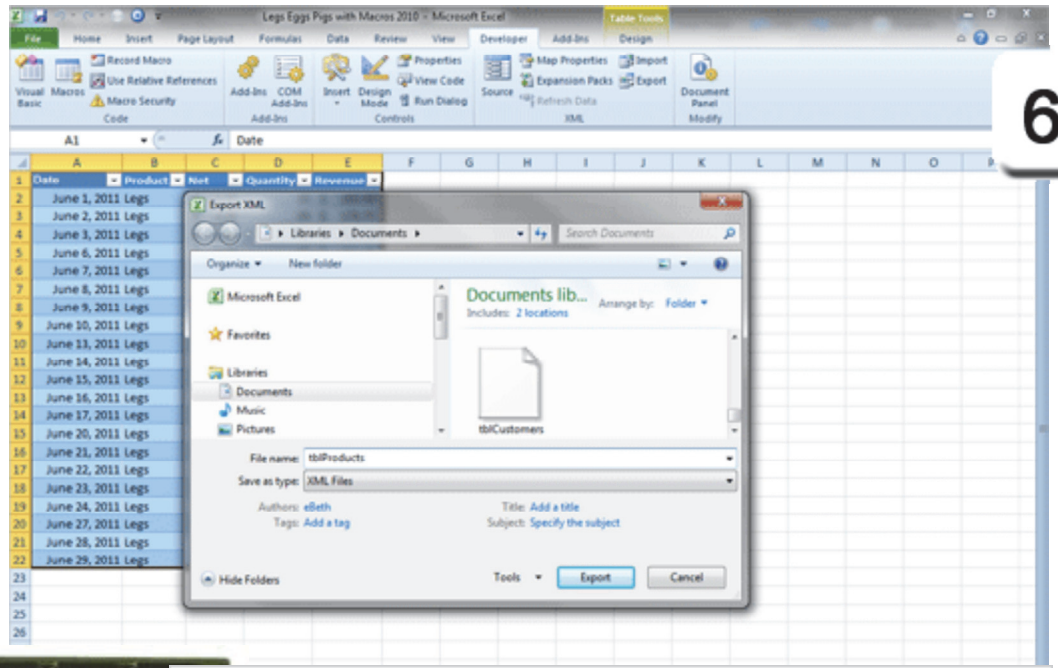
Location: In this example the XML file will be saved to the Documents folder.

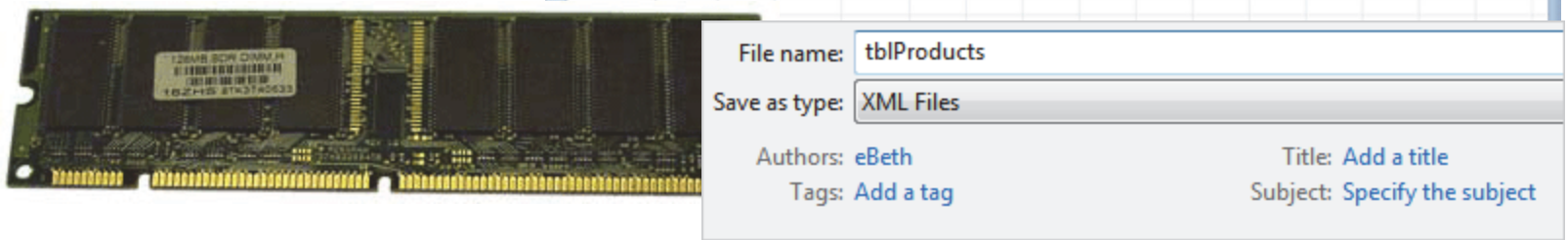
File Name: tblProducts
Save as type: XML Files

Click **Export**.

Done and done...sooooo.....

Developer ->XML-> Export





Exam 77-888: Microsoft Excel Expert 2010
1. Sharing and Maintaining Workbooks
1.1. Apply workbook settings, properties, and data options: Export data as XML

Take Three

Hello, XML

So, what does XML look like?

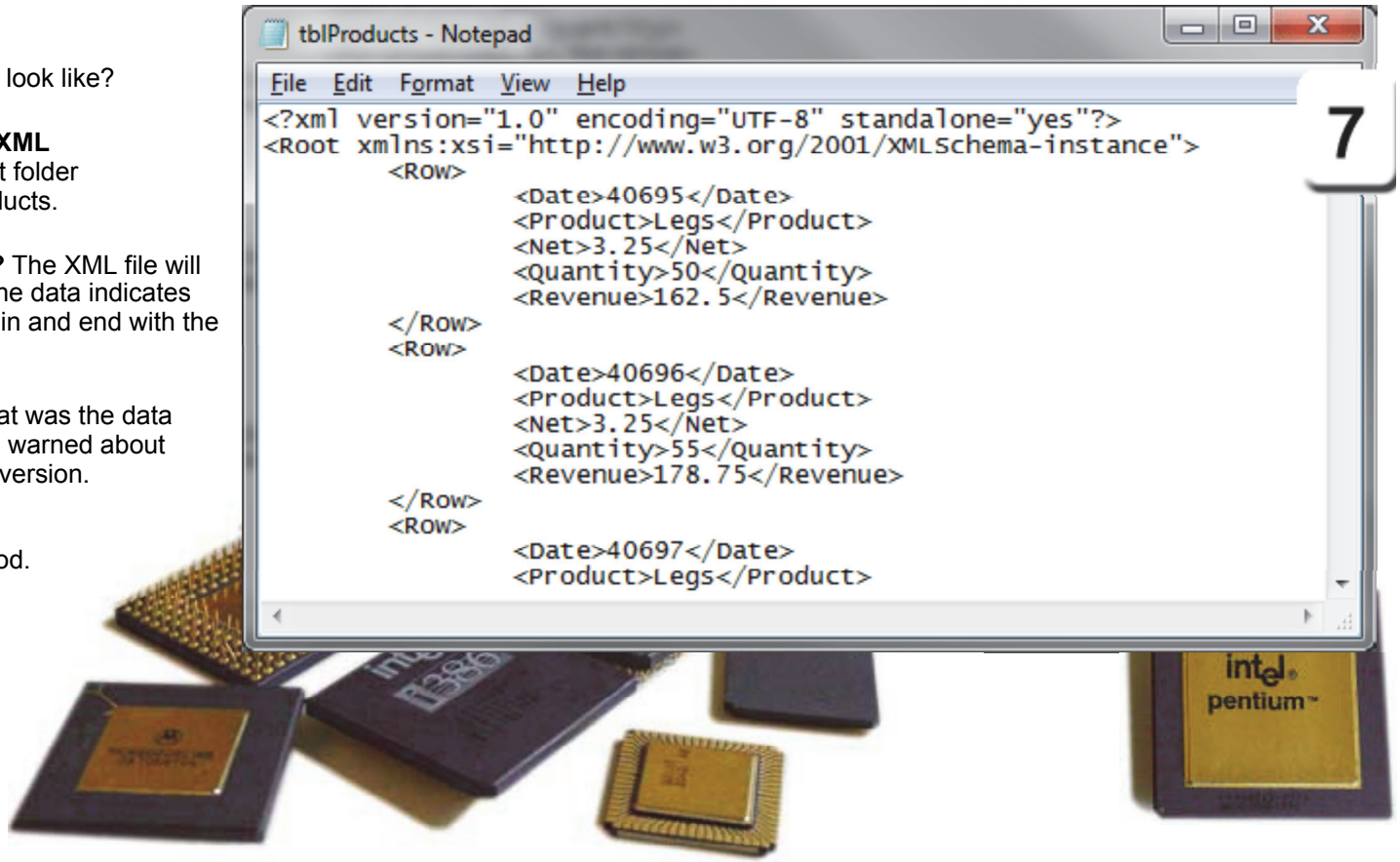
7. Try it: View the XML
Go to the Document folder
Double click tblProducts.

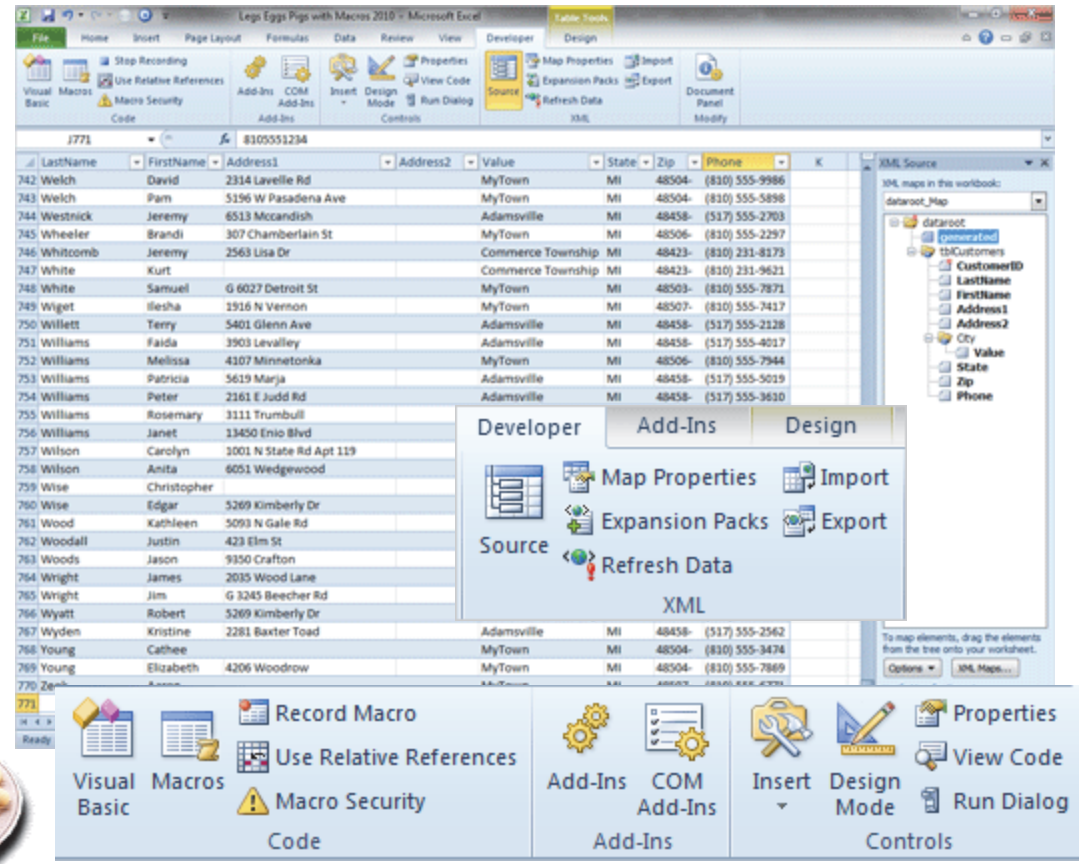
What Do You See? The XML file will open in Notepad. The data indicates where the rows begin and end with the **<Row>** tags .

Look at the date: that was the data that Microsoft Excel warned about during the XML conversion.

Alright, that was good.

Developer ->XML-> Export





Summary

This discussion began with a brief introduction to Macros. **Macros** automate many steps into a simple program that runs Automatically, say when a spreadsheet opens, or On Event, when a user clicks on a button.

Our discussion continued with a review of the steps to Import and Export data in Extended Markup Language (XML.)

This is the beginning, rather than the end of the options for customizing and programming Microsoft Excel. And, this completes our study for the Microsoft Excel certification exam.

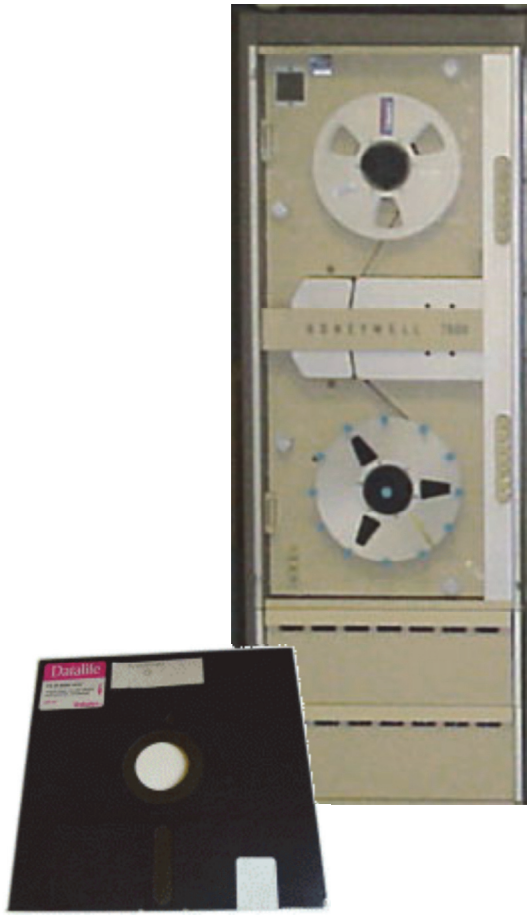
You done good. You can get a whole row of cookies if you wish.



Practice Activities

Lesson 7: Working with Macros

Before You Begin: Download the sample spreadsheet: Brown Bag Sales Team.xlsx.



Try This: Do the following steps

1. Open the spreadsheet: **Brown Bag Sales Team.xlsx.**
2. Use the Excel Backstage Options to show the Developer Ribbon.
3. Record a new Macro:
   Macro Name: GoBlue
   Store macro in: This Worksheet
4. Record the following steps:
   Select Column C (Product)
   Sort: Product
   Select Column D (Sales)
   Apply Conditional Formatting: Light Blue Data Bar
5. Stop Recording.
6. Test the Macro.
7. Add the GoBlue Macro to the Quick Access Bar.
8. Save this as a Macro-Enabled Worksheet: YOUR NAME My Macro Practice.

Test Yourself

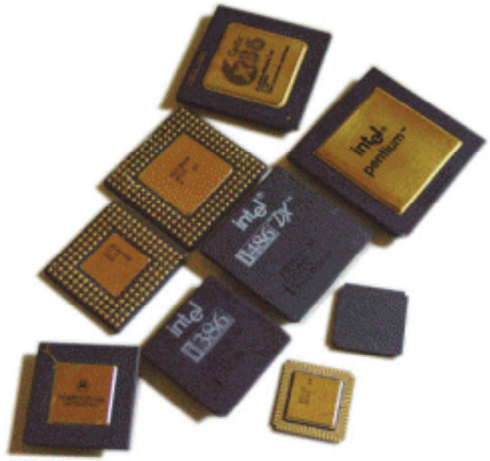
1. Which of the following is true about Macros? (Select all correct answers)
a. Macros record actions as you complete a task
b. The user must specify the start and stop to a macro recording
c. Macros will record mistakes
Tip: Advanced Excel, page 248, 252, 253

2. Which Ribbon has the command for Macros?
a. Home
b. Review
c. Developer
d. Tools
Tip: Advanced Excel, 250

3. Office 2010 allows users to do what with Macros? (Select all correct answers)
a. Add macros to the Ribbon
b. Create a new group to put a user created macro into
c. Use a custom icon for a user created macro
Tip: Advanced Excel, page 263, 264, 265

4. Which of the following is true about Macro Security?
a. Macros are disabled by default because they are a security risk
b. Macros can be permanently enabled in a spreadsheet
c. Macros can be temporarily enabled in a spreadsheet for only the current session
d. The settings for Macros are found in the Trust Center
Tip: Advanced Excel, page 271, 272, 274

5. Which of the following can be customized in Excel 2010? (Select all correct answers)
a. Ribbons
b. Quick Access Toolbar
c. Document Properties
Tip: Advanced Excel, page 268



Advanced Excel Skill Test

Before You Begin: Open a new, blank Spreadsheet in Excel 2010. Please do the following steps:

1.Create a new spreadsheet for Computers Are Us.
Add the following labels:
A1=Date
B1=Product
C1=Price
D1=Quantity
E1=Total

Add the following data:
A2=January 5, 2006;
A3=January 6, 2006
B2=Budgie,
B3=Budgie,
C2=$350,
C3=$350
D2=10,
D3=5
Format Column C for currency

2. Select E2 and calculate the Total of the Price times the Quantity.
3. Select Row 2, copy it, and paste it to Rows 3 through 13.

4. Insert two new Rows above Row 1. Add the following labels:
A1=Start
A2=Increment

Add the following data:
B1=10
B2=2

5. Create a formula in Cell D4: =B1.

6. Create a formula in Cell D5 that adds the first day's quantity to the increment in Cell B2. Select Cell D5 and create an Absolute cell reference. Autofill the formula to all of the rows that have dates.

7. Rename the spreadsheet to "Budgie." Make a copy of the Budgie spreadsheet and name it Expert.

Change the Product in cell B4 to Expert. Autofill it down to B6 (Change all of the Budgies to Expert)
Change the Price in cell C4 to $450.00. Autofill it down to C6
Change the Start in B1=5
Change in Increment in B2=3

Keep going...

Advanced Excel Skill Test, continued

8. Make a copy of the Budgie spreadsheet and name it Summary.
Delete Columns C and D
Change the Product in Cell B4=All Computers

Create an equation in Cell C4 that adds the Total from the Budgie spreadsheet and the Total from the Expert Spreadsheet.

9. Start a new spreadsheet in this workbook.
Create the following labels:
Enter the Labels
In Cell A1 type: Present Value
In Cell A2 type: Interest
In Cell A3 type: Months
In Cell A4 type: Payment

In Cell B1=$20,000
Cell B2=4%
Cell B3=48

10. Select Cell B4 and use the Function Wizard (fX) to calculate the Payment using the PMT function. Remember, the Rate (Cell B2) is divided by 12 to get a monthly payment.

11. Select Cell B4 and Goal seek to get the payment under $400 by changing the number of payments in Cell B3. Remember the payment in the Goal Seek is a NEGATIVE number.

12. Create a Best Case and a Worst Case scenario for the car payment.
The Best Case changes the Present Value to $20,000 and the numbe of payments to 48.
The Worst Case changes the Present Value to $16,000 and the number of payments to 60.

13. Create a new spreadsheet in this workbook.
Add the Label: Sales Rep, Total Sold, Sales Goals and Bonus.
Add the names of three Sales reps
Add the amount they sold: $1,000, $2,500, and $4,600.

14. Create a Lookup table with two columns: Sales Goals and Bonus.
The Sales Goals is formatted in currency.
The Bonus is formatted in percent.
The Sales Goals are $500, $1,000, $2,500, and $4,000.
The Bonuses are 5%, 10%, 15% and 20% of the Total Sold.

15. Calculate each Sales Rep's Bonus.

16. Save the file as Your Name Excel Advanced Bonus.
Please submit the Advanced Excel Skill Test to your instructor.

Microsoft Excel 2010: Index

Microsoft Office Specialist (MOS): Exam 77-882 and 77-888 for Excel 2010

AutoFill: Copy the Data, Pg 20
AutoFill: Drop Down List Options, Pg 19
AutoFill: Fill a Series, Pg 18
Cell Data: Paste Special, Pg 57
Cell Data: Paste Special, Pg 57
Cell References: Absolute, Pg 37
Format Cells: Issues with Merge, Pg 45
Format Cells: Unmerge Cells, Pg 44
Formula Auditing: Find Invalid Data, Pg 137
Formula Auditing: Find Invalid Formulas, Pg 45
Formula Auditing: Trace Dependents, Pg 41
Formula Auditing: Trace Errors, Pg 45
Formula Auditing: Trace Precedents, Pg 42
Formulas: CONCATENATE (Text), Pg 62
Formulas: Correct Errors in Formulas, Pg 39
Formulas: COUNTIF (Statistical), Pg 101
Formulas: Define a Named Range, Pg 89
  Define a Range with the Formula Bar, Pg 88
  Define a Range with the Mouse, Pg 89
  Define Range with the Keyboard, Pg 224
Formulas: Edit a Named Range, Pg 95
Formulas: Edit Defined Conditions, Pg 100
Formulas: Automatic Calculations, Pg 221
Formulas: Error Checking, Pg 45
Formulas: Evaluating Formulas, Pg 220
Formulas: Iterative Calculations, Pg 222
Formulas: MONTH (Date), Pg 69
Formulas: Order of evaluation, Pg 218
Formulas: PMT (Financial), Pg 77
Formulas: Precedence (Parenthesis), Pg 219
Formulas: Rename a Named Range, Pg 89
Formulas: SUMIFS, Pg 99
Formulas: Time (Numbers), Pg 74
Formulas: Series of Conditional Logic Pg 102
Formulas: Use Arrays (Hlookup)Pg 125
Formulas: Using Lookup Functions, Pg 115
Header/Footer: Scale and Align, Pg 161
Headers/Footers: Different First Page, Pg 161
Headers/Footers: Odd or Even Pages, Pg 164
Hyperlink: Create a Hyperlink, Pg 198
Hyperlink: Modify Hyperlink in a Cell, Pg 193
Hyperlink: Modify Hyperlink Options, Pg 195
Hyperlink: Remove a Hyperlink, Pg 199
Navigate with Named Ranges, Pg 88
Page Layout: Page Scaling, Pg 166
Page Layout: Sheet Options, Pg 165
Page Setup: Headers and Footers, Pg 159
Page Setup: Margins, Pg 150
Page Setup: Orientation, Pg 149
Page Setup: Print Columns that Repeat, Pg 156
Page Setup: Print Rows that Repeat, Pg 156
Page Setup: Print Titles, Pg 156
Print: Print Entire Workbook, Pg 167
Print: Print Preview, Pg 157
Print: Print Selected Worksheets, Pg 168
Save and Send: Change File Type, Pg 214
Save and Send: Create PDF, Pg 215
Save and Send: Save to Web (SkyDrive), Pg 212
Save and Send: Send as XPS, Pg 217
Save and Send: Send Using Email, Pg 208
Save: Save As Template, Pg 203
Sparkline: Change Type, Pg 180
Sparkline: Customize the Axis, Pg 184
Sparkline: Format Styles, Pg 181
Sparkline: Insert a Sparkline, Pg 178
Sparkline: Show or Hide Data Markers, Pg 182
Sparkline: Use Trendlines, Pg 182
Sparklines: Use Sparklines, Pg 178
View: Normal, Pg 148
View: Page Layout, Pg 147
What If Anaysis: Goal Seek, Pg 69
What If Anaysis: Scenario Manager, Pg 71
Worksheet: Tab Color, Pg 187
Worksheets: Copy, Pg 25
Worksheets: Group, Pg 192
Worksheets: Hide Tab, Pg 188
Worksheets: Hide Tab, Pg 188
Worksheets: Insert Sheet, Pg 190
Worksheets: Move or Copy, Pg 186
Worksheets: Move or Copy, Pg 186
Worksheets: Rename Sheet, Pg. 185
Worksheets: Unhide Tab, Pg 189

Advanced Microsoft Excel 2010: Glossary

Microsoft Office Specialist (MOS): Exam 77-882 and 77-888 Excel 2010

AutoFill— function that fills data, usually in a series such as predefined increments or months *pg.169*

Banded rows— alternating color or shading of rows to make reading easier *pg.22*

Combo box—a drop-down list of options created using the form controls *pg.187*

Comment—little notes added to a spreadsheet in Excel that are indicated by a mark in the corner of the cell and out of sight until selected *pg.215*

Conditional formatting—the color or icon displayed depends on whether the cell values match certain criteria *pg.30*

Data validation—tool that compares the user input for match with predefined settings and supplies alerts for incorrect input. Also can be used to create drop-down lists *pg.171*

Digital signature—digital coding that is intended to validate the integrity of a filea single command that represents a set or sequence of commandsa single command that represents a set or sequence of commands *pg.233*



Document Inspector—allows user to review the document for personal or sensitive information before sharing*pg.226*

Drop down list—a list of options that opens when clicked, usually opening down. In Excel, it is created using data validation *pg.175*

Goal Seek— a what-if analysis tool that allows a user to find the input value necessary to achieve a desired result *pg.68*

Grand total—a total for all subgroups and subtotals *pg.106*

Headers—material separate from the document contents that appears at the top of the page *pg.14*

Macros— a single command that represents a set or sequence of commands *pg.247*

Object— any item other than text used in a file, such as a shape, picture, Clip Art, etc *pg.139*

Pivot Chart—chart created from the reconfigured data summarized in a Pivot Chart*pg.123*

Pivot Table—a tool that allows for summary and analysis of large data sets by reconfiguring (ie, pivoting) the data, often used for summary reports *pg.87*

Quick Access Toolbar—customizable toolbar at the top of Microsoft Word *pg.220*

Range— a group of cells *pg.21*

Slicers—filters for Pivot Table data *pg.147*

Styles— collection of preset formatting to be applied to text or objects *pg.21*

Subtotal—a total for a given section or category that is later included in a Grand Total *pg.56*

Table properties—includes name, range, and other information about the table *pg.41*

Title bar—the bar at the top of a program that includes the program name and, if applicable, the current file name *pg.13*

Track Changes— when enabled, marks all additions, deletions, and formatting made to the text. Also allows reversion to original text *pg.211*

Trust Center—contains privacy and security settings for that Microsoft Office program *pg.274*

What If Scenario—a prediction tool that uses the data in the spreadsheet without making permanent changes to the original data *pg.71*