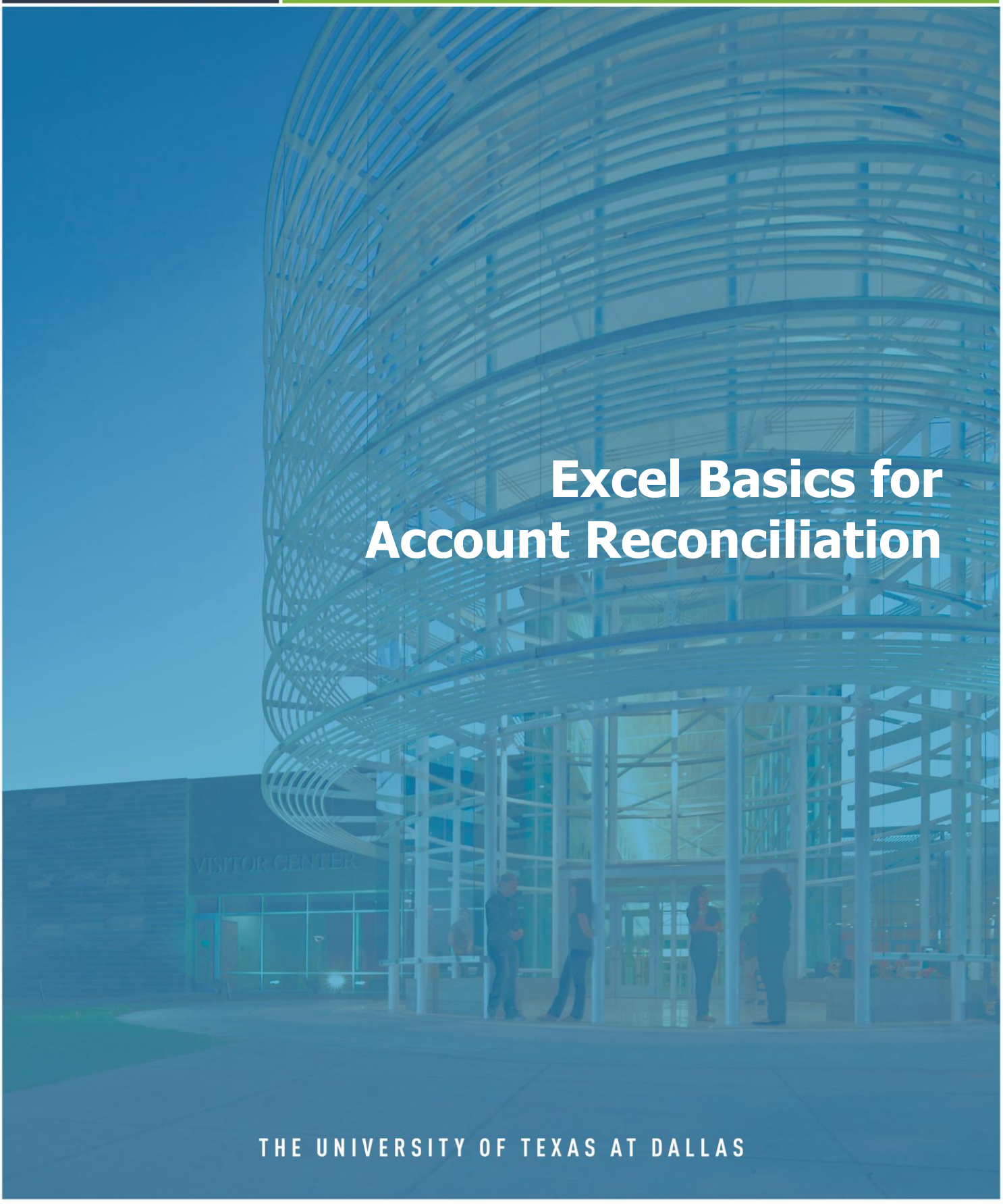
UT DALLAS

PeopleSoft and Related Training



Excel Basics for Account Reconciliation

THE UNIVERSITY OF TEXAS AT DALLAS

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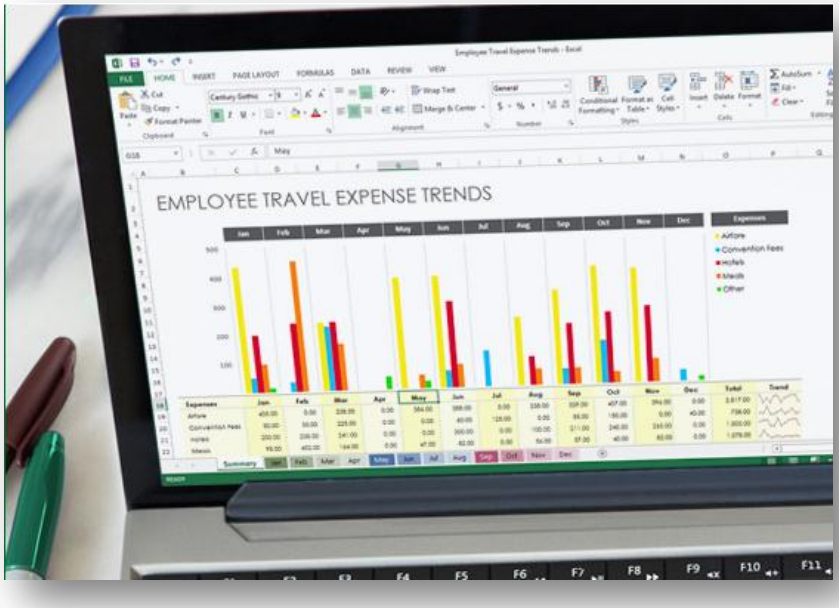
Introduction



Overview

Microsoft Excel is a spreadsheet program in the Microsoft Office system. The term "spread" comes from ledger sheets that spread across facing pages in a journal used many years ago by bookkeepers and accountants. These paper pages had rows and columns used for entering names and numbers that allowed the accountant to track, calculate and analyze business activities. The accountant used a separate calculator and manually entered arithmetic results when needed into a paper worksheet. If a letter, report, or presentation were needed, data might need to be copied or reentered somewhere else to prepare it.

You can use Excel to create and format workbooks (a collection of spreadsheets) in order to analyze data and make more informed business decisions. Specifically, you can use Excel to track data, build models for analyzing data, write formulas to perform calculations on that data, pivot the data in numerous ways, and present data in a variety of professional looking charts.

Course objectives

After completing this course, you'll know how to:

- Create and download a workbook from Account Reconciliation
- Navigate a worksheet
- Edit data in a worksheet
- Work with columns and rows
- Save workbook files
- Print Excel files
- Get acquainted with Excel functions
- Use alignment, borders and fill
- Get acquainted with an Excel chart

Lesson 1 Getting Started

Overview

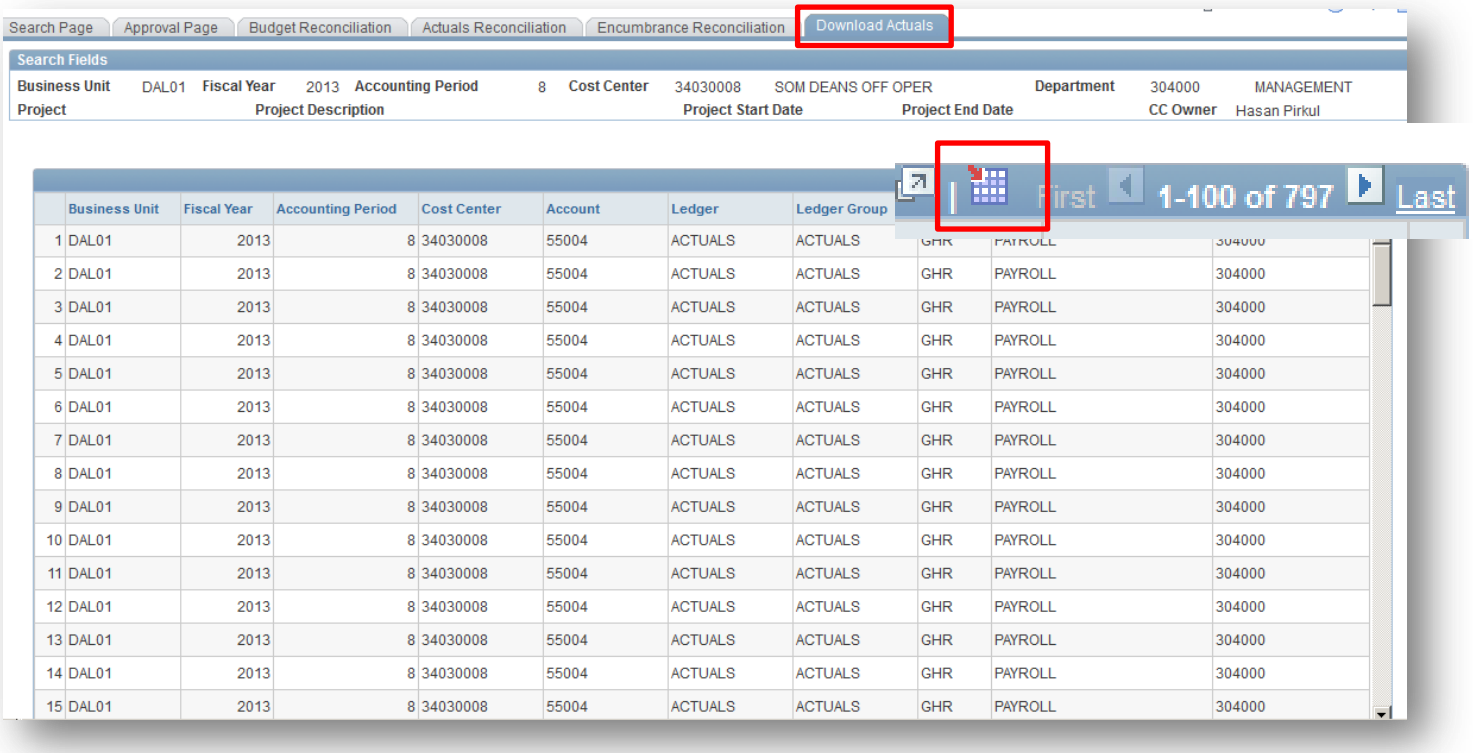
In this lesson, we'll get acquainted with the Excel worksheet and it's elements. After completing this lesson, you'll know how to:

- Download data from the Account Reconciliation tool
- Start Excel
- Open an Excel workbook
- Identify the elements of the Excel workbook and worksheet
- Navigate on the worksheet using a mouse and arrow keys
- Save a workbook

Downloading from Account Reconciliation

Using the Download Actuals page, you can make a spreadsheet of the entire set of transactions shown on the Actuals Reconciliation page. PeopleSoft copies the data from the displayed page onto a file compatible with Microsoft Excel.

- The Download Icon is used to initiate the download process.
- Once the file is built, you're able to manipulate the data using formulas and other features of Microsoft Excel.



	Business Unit	Fiscal Year	Accounting Period	Cost Center	Account	Ledger	Ledger Group			
1	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
2	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
3	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
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5	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
6	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
7	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
8	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
9	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
10	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
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12	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
13	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000
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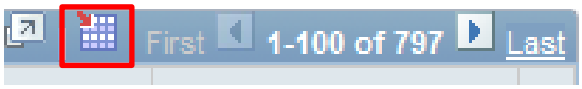
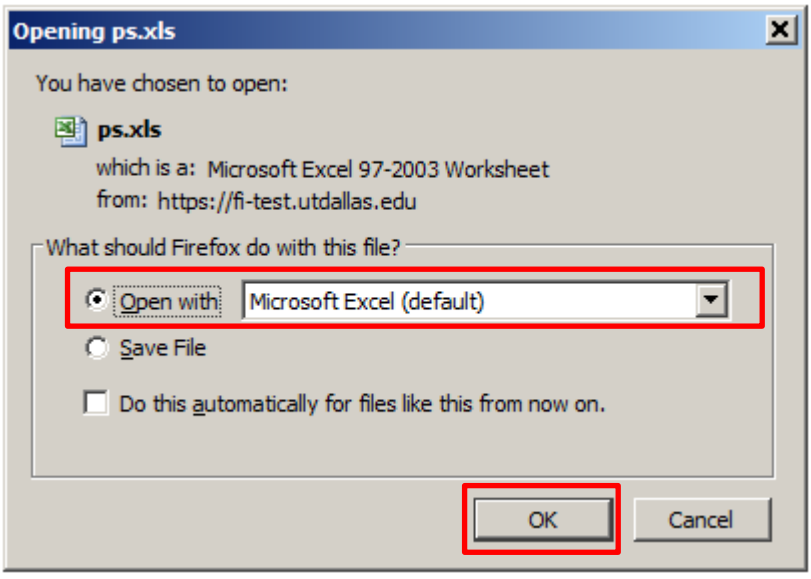
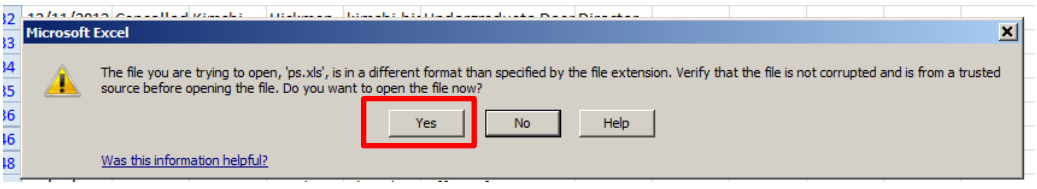
15	DAL01	2013	8	34030008	55004	ACTUALS	ACTUALS	GHR	PAYROLL	304000

To download to Excel, follow these steps:

Step	Action
1	Open the Account Reconciliation Download page.
2	Click Customize from the Account Reconciliation spreadsheet. Modify the columns you wish to download.
3	Click the **Download Icon**. 
4	Click **Open with Microsoft Excel (default)**.Click **OK**. 
5	Click **Yes**. Excel opens displaying the transactions selected from the Account Reconciliation Download page. 
6	You need to review, modify and save the Excel workbook.

Anatomy of a Spreadsheet

Directions: Take notes during this lesson describing each of the spreadsheet components listed below.

Component	Description
Workbook	
Spreadsheet	
Cell	
Cell address	
Cell range	
Column	
Row	

	A	B	C	D	E	F
1	INVOICE					
2						
3	Item Number	Quantity	Unit	Description	Unit Price	Amount
4	4376	11	Ea	PDA	129.99	
5	8976	4	Doz	Flash Drive	25.99	
6	8632	4	Ea	Scanner	99.99	
7	7793	8	Pkg	Web cam	35.00	

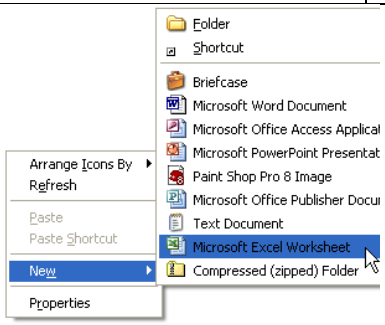
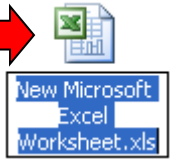
Directions: Use cell addresses from the Invoice spreadsheet above to identify examples of each component.

Component	**Description**
Cell	
Cell address	
Cell range	
Column	
Row	

Starting the Program

There are different ways to create a workbook. Normally you create a workbook within the Excel application. However, you can also create an Excel workbook without starting the Excel application.

To create a workbook from the windows desktop:

Right-click on the windows desktop, select New >> Microsoft Excel Workbook from the menu.	The Excel icon appears on the desktop.	**Type in the file name and press <Enter>.** *The workbook is created and saved in the desktop folder.*
		

Step	Action
To create workbook within Excel application, you can	
1	Create new default workbook.
2	Create a new workbook using a template. There are many built-in templates in Excel 2010. You can also create your own templates if you want.
3	Using any method, determine which contestant will make the first selection.

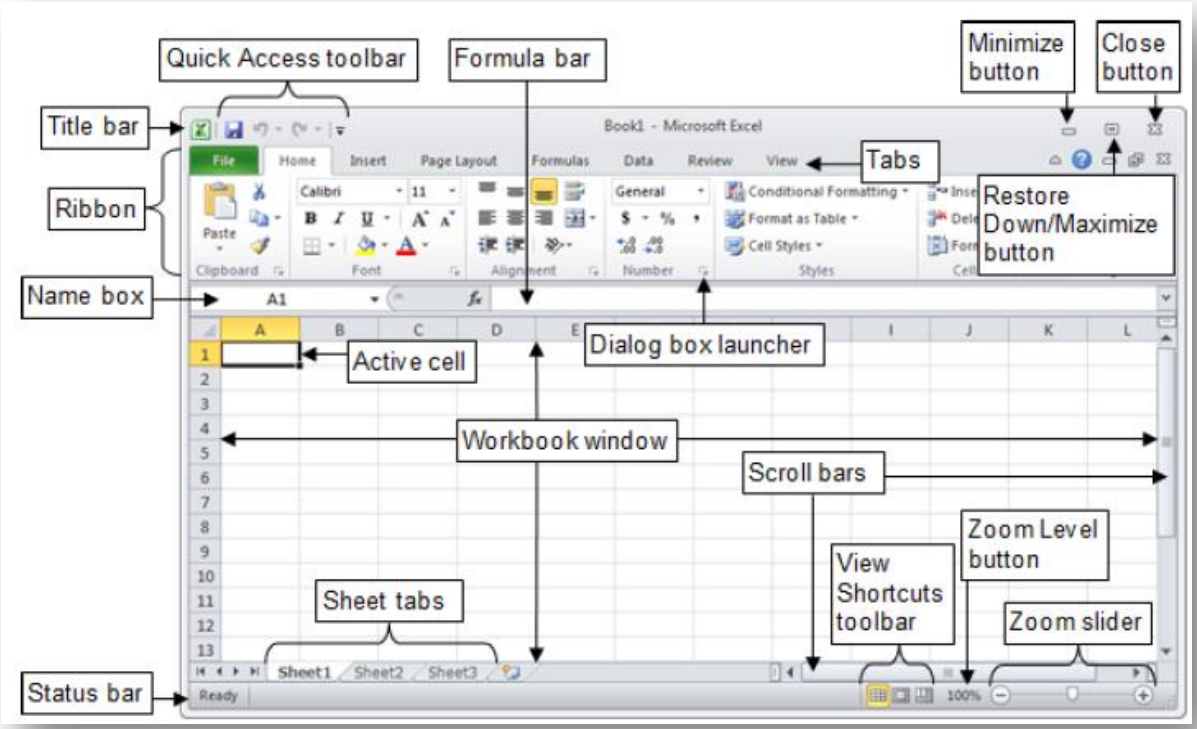
Navigating in a Workbook

The Excel 2010 program window is easy to navigate and simple to use. It is designed to help you quickly find the commands that you need to complete a task.

A *workbook* is the file Excel creates to store your data. Generally, a workbook should deal with related data. We use workbooks to store downloaded transactions for reports from Gemini Financials, capture timesheet details or track staff vacation and sick time. In your workbook, there might be a sheet for each employee in your department or cost center. The default new workbook in Excel 2010 has *three worksheets*; you can add more worksheets or delete existing worksheets as needed. Each worksheet consists of 1,048, 576 rows (numbered 1 through 1,048,576) and 16,384 columns (labeled A through XFD). The box formed by the intersection of a row and column is called a *cell*. Each cell is identified by its *address*, which consists of its column letter and row number (e.g. cell D1 is the cell in the fourth column and the first row).

Groups of cells are called a *range*. A range is identified by the *addresses* of the cells in the upper-left and lower-right corners of the selected block of cells, separated by a colon (e.g., A1:C10). Only one cell can be active at a time. The *active cell* as a thick black border around it and its address appears in the Name box on the left end of the Formula bar.

When you open a new workbook, the active cell is cell A1, the top-left cell in the worksheet. Cell A1 is referred to as "home". The mouse pointer displays as a thick white cross when you move it across the cells in worksheet. When you point at a Ribbon or worksheet tab, a command button or menu item, the pointer turns into a white arrow.



Element	Description
Title bar	Displays the name of the workbook and the program.
Minimize, Restore Down/Maximize and Close buttons	Controls the program window. Use the *Minimize* button to hide the window. Use the *Restore Down/Maximize* button to adjust the size of the window. Use the *Close* button to exit Excel.
Quick Access toolbar	Contains frequently used commands that are independent of the tab displayed on the Ribbon.
Ribbon	Contains all the commands related to managing workbooks and working with workbook content.
Formula bar	Displays the data or formula stored in the active cell. It can also be used to enter or edit a formula, a function, or data in a cell.
Name box	Displays the active cell address or the name of the selected cell, range, or object.
Workbook window	Displays a portion of the worksheet.
Sheet tabs	Each tab represents a different worksheet in the workbook. A workbook can have any number of sheets, and each sheet has its name displayed on its sheet tab.
Scroll bars	Used to move downard through a worksheet.

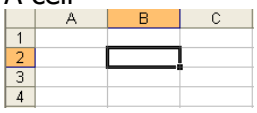
Element	Description
Status bar	Displays various messages as well as the status of the Num Lock, Caps Lock, and Scrool Lock keys on the keyboards.
View Shortcuts toolbar	Used to display the worksheet in a variety of views, each suited to a specific purpose.
Zoom Level button Zoom slider	Used to change the magnification of the worksheet.

Selecting Cells Range in Workbook

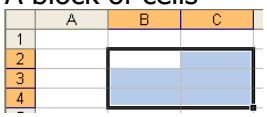
You must select the cell (activate the cell) before you add information to it. Once you have selected a cell or range, you may make changes to all selected cells simultaneously.

A group of selected cells is called a range. A range can contain a block of cells, a complete column, a complete row or a non-adjacent range. .

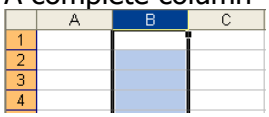
A cell



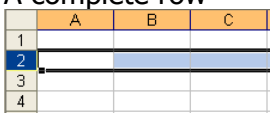
A block of cells



A complete column



A complete row

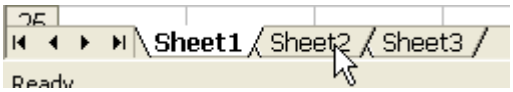


Moving around in a range of cells – shortcut keys

Press	Action:
<Tab>	Move one cell to the right
<Shift> + <Tab>	Move one cell to the left
<Enter>	Move one cell down
<Shift> + <Enter>	Move one cell up

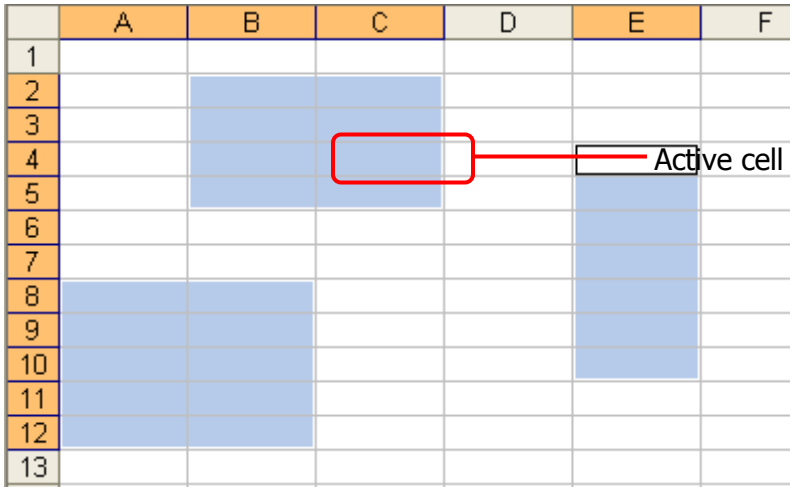
Move between worksheets

Use the shortcut keys <Ctrl>+<Page Down> to move to the next worksheet and press <Ctrl>+<Page Up> to move to the previous worksheet.



Selected non-adjacent cells range

A non-adjacent range consists of separate blocks of cells that are selected at the same time. A selected range is shaded except for the active cell, information appears in that active cell when you type.



Customizing the Quick Access Toolbar

By default, the Quick Access toolbar is located at the left end of the Title bar and displays the Save, Undo, and Redo button. You can change the location of the Quick Access toolbar and customize it to include commands that you use frequently.

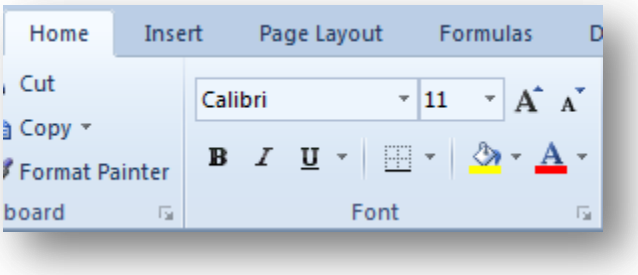
To add a command to the Quick Access toolbar:

Step	Action
1	On the **Ribbon**, click the appropriate tab or group to display the command that you want to add.
2	Right-click the command and select the **Add to Quick Access Toolbar** from the shortcut menu.

To remove a command to the Quick Access toolbar:

Step	Action
1	On the **Quick Access** toolbar, right-click the command that you want to remove and select **Remove form Quick Access Toolbar** from the shortcut menu.
2	Right-click the command and select the **Add to Quick Access Toolbar** from the shortcut menu.

Exploring the Ribbon

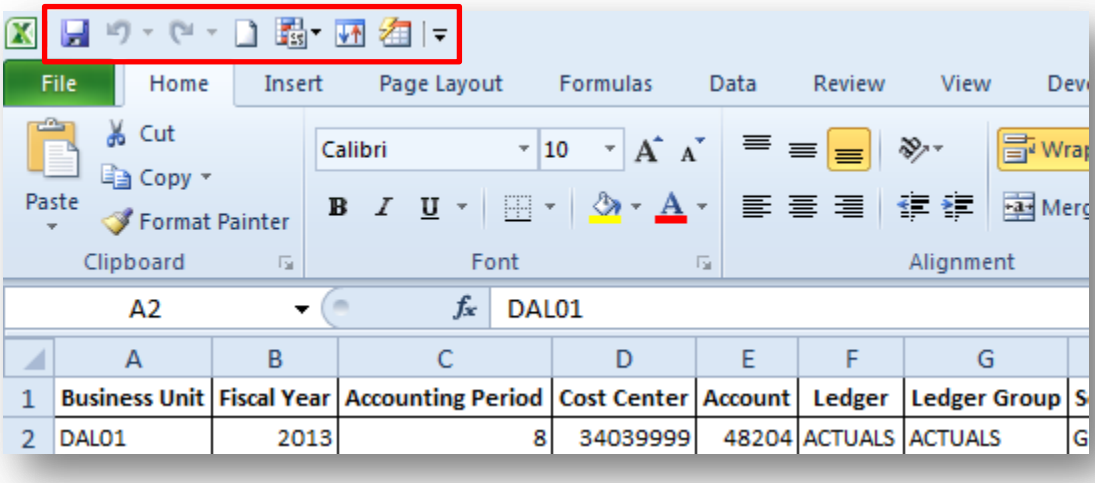


The Ribbon is located below the Title bar. Across the top of the Ribbon is a set of task-specific tabs. Some tabs, known as contextual tabs, appear only when you create or select certain types of objects (e.g., pictures, tables, charts). Clicking a tab displays an associated set of commands that are organized into logical groups. Commands generally take the forms of buttons an lists. Some commands appear in galleries. The appearance of the buttons and groups on the Ribbon changes depending on the width of the program window. A button representing a command that cannot be performed on the selected element is inactive (gray).

Element	Description
File	Displays the Backstage view containing commands related to managing files and customizing the program. The File tab replaces the Microsoft Office button and File menu used in earlier releases of Microsoft Office.
Home	Contains the basic Clipboard commands, formatting commands, style commands, commands used to insert and delete rows or columns, and various worksheet editing commands. The Home tab is active by deafult.
Insert	Contains commands related to all the items you can insert in a worksheet.
Page Layout	Contains commands that affect the overall appearnace of a worksheet, including some settings that deal with printing.
Formula	Contains commands used to insert a forum, name a cell or a rage, audit a formula, or control how Excel performs calculations.
Data	Contains Excel's data-related commands.
Review	Contains commands used to check spelling, translate words, add comments, or protext worksheets.
View	Contains commands that control various aspects of how a worksheet is viewed.

Using Dialog Box Launchers

Some groups on the Ribbon have related dialog boxes or task panes that contain additional commands. These commands are access by clicking the dialog box launcher.



Minimizing and Expanding the Ribbon

You can minimize the Ribbon to make more space available on the screen. When the Ribbon is minimized, only the tab names are visible.

To minimize the Ribbon:

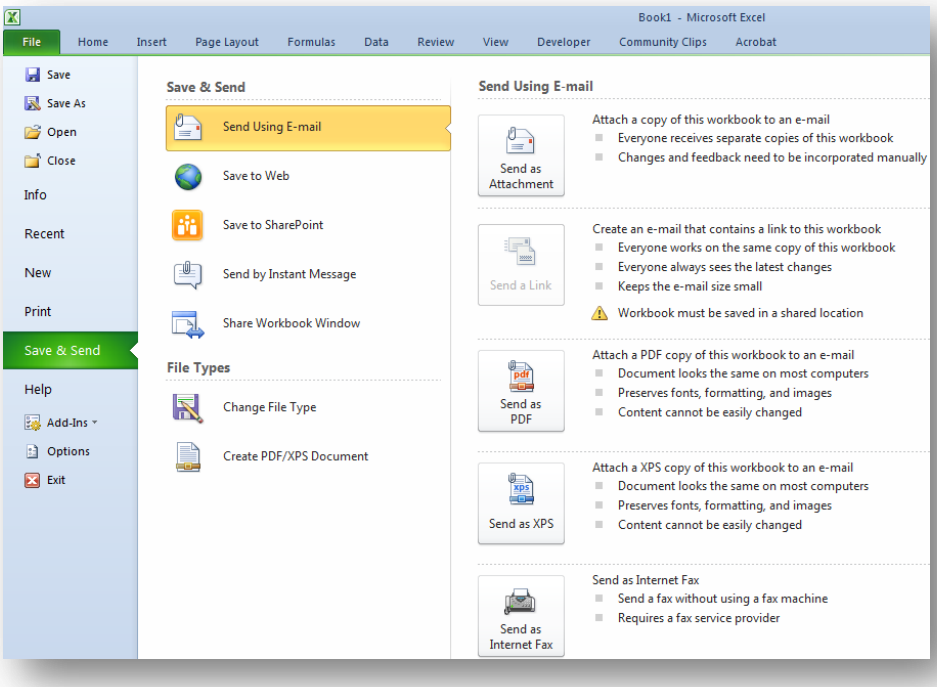
Click the Minimize the Ribbon button located at the right of the Ribbon. Or, press Crlt+F1.

To minimize the Ribbon:

Click the Minimize the Ribbon button located at the right of the Ribbon. Or, press Crlt+F1.

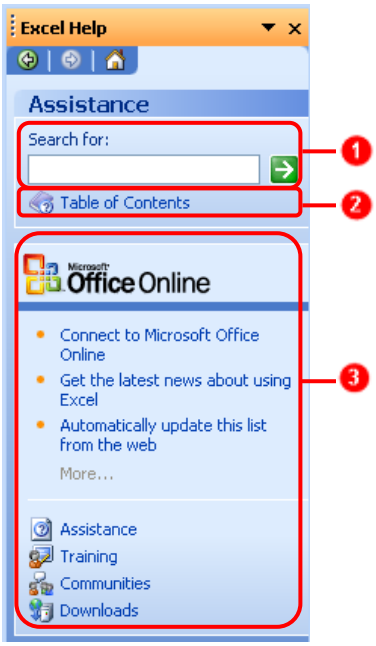
Exploring the Backstage View

The Backstage view contains all the commands related to managing files and customizing the program. It provides an easy way to create, open, save, print, share, and close files; find recently used files; view and update file properties; set permissions; set program options; get help; and exit the program.



Getting Help

1. You can type specific words or phrases in the **Search for** box to return a list of possible answers.
2. You can also click on the **Table of Contents** link to browse for the help you need.
3. If you are connected to the Internet, you can access the **Microsoft Office Online** web site, which offers online help documents, templates, add-ins, and online training.



You can type specific words or phrases in the Search for box to return a list of possible answers.

You can also click on the Table of Contents link to browse for the help you need.
If you are connected to the Internet, you can access the Microsoft Office Online web site, which offers online help documents, templates, add-ins, and online training.

Getting Help While You Work

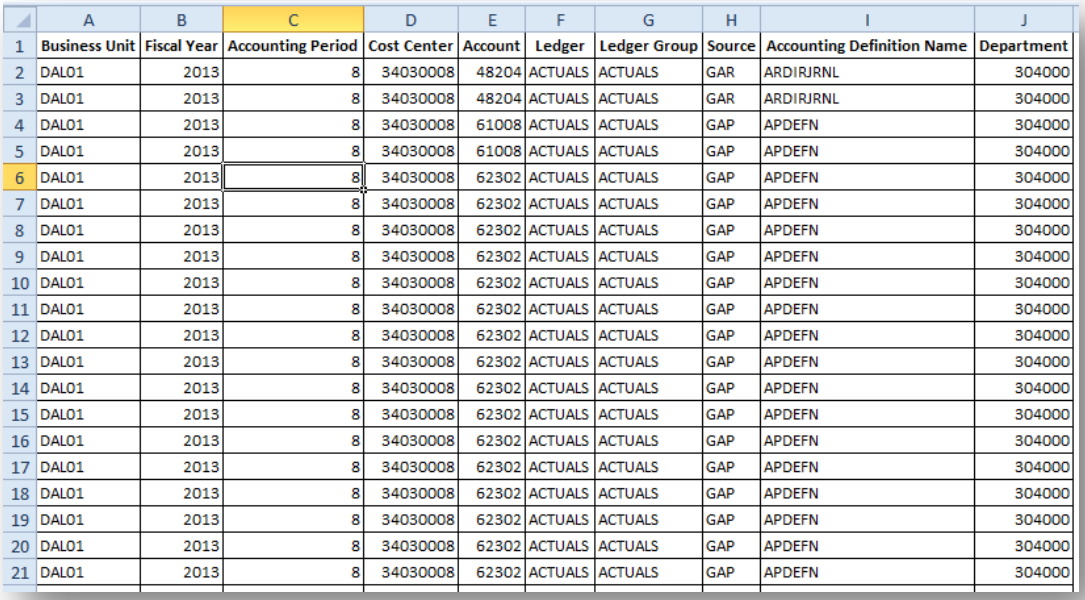
Type A Question For Help Box. You can type questions in this box to quickly find the answers you need. A very specific search with 2-7 words will return the most accurate results. The results of your search are returned in the Search Results task pane in the order of relevance.

Lesson 2: Basic Workbook Skills

Overview

In this lesson, we'll get acquainted with how to perform basic tasks such as moving around a worksheet, selecting cells, working with rows and columns, and entering and editing data. By the end of the lesson, you'll be able to:

- Navigate within the worksheet
- Identify the shortcut keys
- Add data to a worksheet
- Edit existing data on a worksheet
- Set a print area
- Update the column headings
- Add comments to a specific cell



	A	B	C	D	E	F	G	H	I	J
1	Business Unit	Fiscal Year	Accounting Period	Cost Center	Account	Ledger	Ledger Group	Source	Accounting Definition Name	Department
2	DAL01	2013	8	34030008	48204	ACTUALS	ACTUALS	GAR	ARDIRJRNL	304000
3	DAL01	2013	8	34030008	48204	ACTUALS	ACTUALS	GAR	ARDIRJRNL	304000
4	DAL01	2013	8	34030008	61008	ACTUALS	ACTUALS	GAP	APDEFN	304000
5	DAL01	2013	8	34030008	61008	ACTUALS	ACTUALS	GAP	APDEFN	304000
6	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
7	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
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16	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
17	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
18	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
19	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
20	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000
21	DAL01	2013	8	34030008	62302	ACTUALS	ACTUALS	GAP	APDEFN	304000

Moving around a worksheet

There are various ways to navigate through a worksheet. Using the mouse or keyboard, you can move from cell to cell, move up or down a page at a time, or move to the first or last used cell in the worksheet. You can also navigate to a specific cell in the worksheet by entering its address in the Name box.

Navigating with the mouse

Use the mouse to change the active cell. If the cell you want to select is not visible in the workbook window, you can use the scroll bars to scroll through the worksheet in any direction.

Scrolling with the mouse does not change the location of the active cell. To change the active cell, you must click a new cell after scrolling.

Navigating with the keyboard

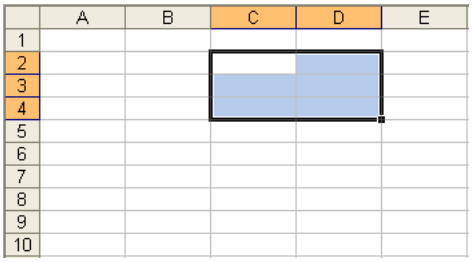
Use the navigational keys to move around a worksheet.

Key	Action
Down arrow or Enter	Moves the active cell one cell down.
Up arrow or Shift+Enter	Moves the active cell one cell up.
Right arrow or Tab	Moves the active cell one cell to the right.
Left arrow or Shift+Tab	Moves the active cell one cell to the left.
Page Down	Moves the active cell down one page.
Page Up	Moves the active cell up one page.
Alt+Page Down	Moves the active cell right one page.
Alt+Page Up	Moves the active cell left one page.
Ctrl+Home	Moves the active cell to cell A1.
Ctrl+End	Moves the active cell to the last used cell in the worksheet.

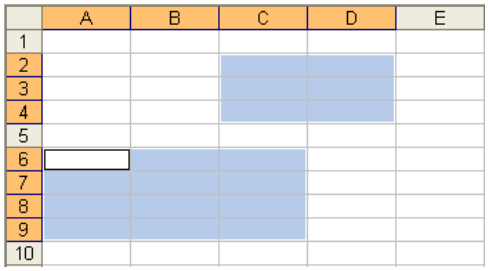
Selecting Ranges

In order to perform an operation on a range of cells in a worksheet, you need first select the range. When a range is selected, every cell in the range is highlighted, except for the active cell.

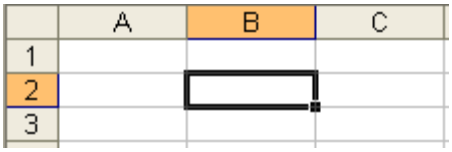
Step	Action
To select a range:	
1	Drag the mouse pointer from the first cell in the range to the last cell. Or, select the first cell in the rage, hold down the **Shift** key, and then select the last cell in the range.
To select non-adjacent ranges:	
2	Drag to select the first range, hold down the Ctrl key, and then drag to select the second range.
Note: To deselect a range, press any arrow key or click any cell in the worksheet.	



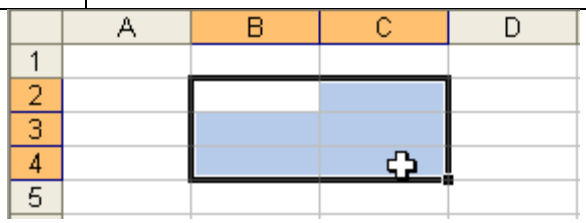
Adjacent Cells



Non Adjacent Cells

Step	Action
How to Select a Single Cell	
Click at the cell that you want to select. The Name box on the left of the formula bar shows which cell is active. 	
To Select a Range of Cells:	
Click the cell B2 and drag to the cell C4. (for example: Cell B2 is the first cell while the cell C4 is the last cell of the selection range. The range B2:C4 is then highlighted, as shown below.	

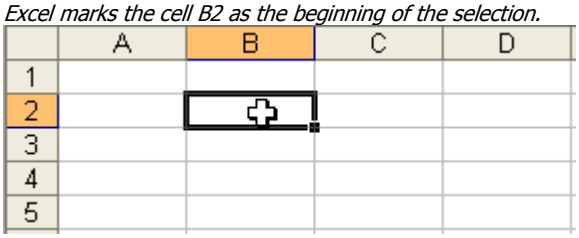
Step	Action



To select a range of cells using click and drag:

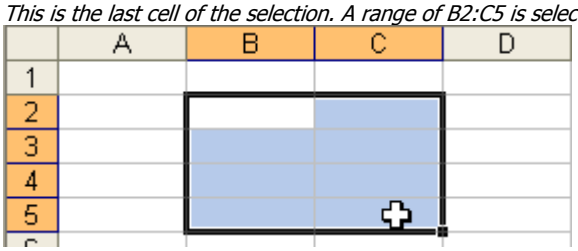
Hold down <Shift>.

Excel marks the cell B2 as the beginning of the selection.



Click the cell C5.

This is the last cell of the selection. A range of B2:C5 is selected, as shown below.



TIPS

You can also use the arrow keys (→,←,↑,↓) to select a range. Hold down <Shift> and press arrow key to select range.

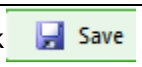
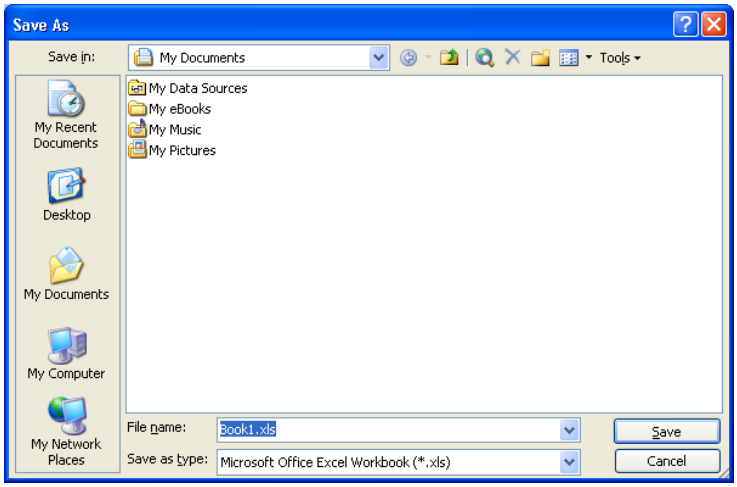
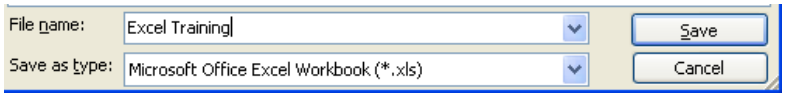
Do It! Examining Excel window components

Here's how	Here's why
Click Start and choose All Programs Microsoft Office Microsoft Excel 2010	To start Microsoft Excel
Choose Don't make changes. Click OK	(If necessary.) To close the Welcome to Microsoft Office 2010 dialog box.
Observe the title bar	Book 1 – Microsoft Excel The title bar shows the name of the current workbook, "Book1" and the name of the program.
Observe the Ribbon tabs Observe the Home tab	By default, Home is active. The Home tab contains the Clipboard, Font, Alignment, Number, Styles, Cells, and Editing groups.
Click the Insert tab In the Illustrations group, click Shapes	(Next to the Home tab.) To activate it, Commands related to the Insert command are displayed here. To display the Shapes gallery. You can select a shape and then click a cell to place the share there.
Click the Home tab	To display the Home tab's groups again.
In the Font group, point to B	(The Bold button.) A ScreenTip appears, showing the command name, its keyboard shortcut and a brief description.
Observe the formula bar	(The formula bar is below the Ribbon.) The formula bar displays the idea in the active cell. Currently, none of the cells contain data.
Observe the status bar	(At the bottom of the Excel window.) The status bar provides information about selected commands and the current status of the workbook. The status bar also contains tools for switching the view of the current document, zooming in and out on the current document, and switching to other documents.

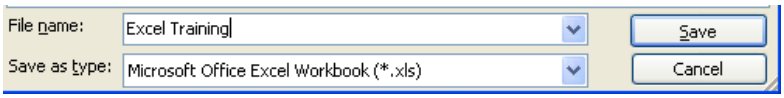
Saving and updating workbooks

When you save a file, you can save it to a folder on your hard disk drive, a network location, CD, DVD, the desktop, flash drive, or save as another file format. While you must identify the target location, if it is different than the default folder, the saving process is the same regardless of what location you choose.

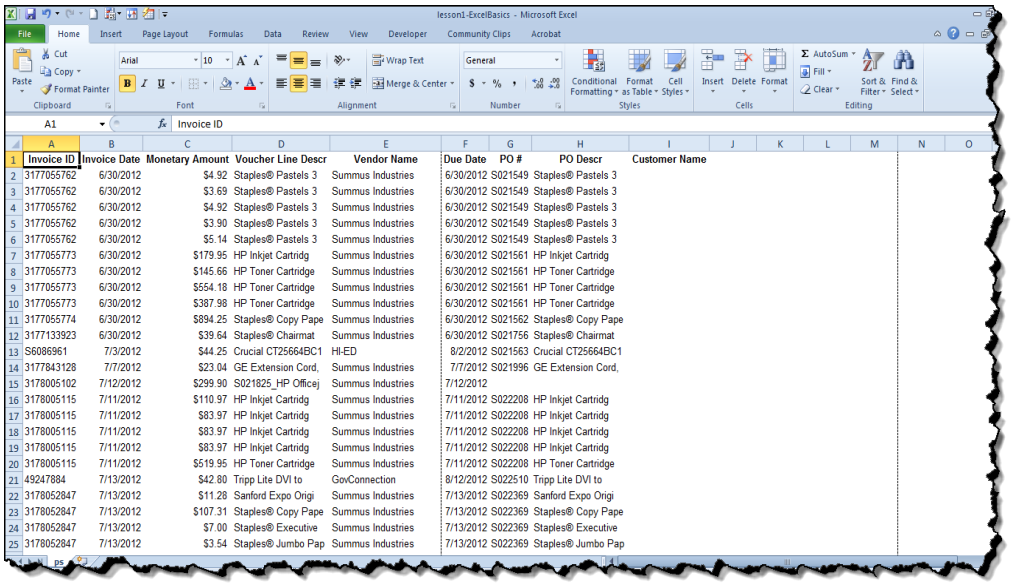
Saving a file

Step	Action
1	Click  From Ribbon.
2	Under Available Templates, click **Blank Workbook**. 
3	In the **File name** box, type *Name*. *Excel has already entered a placeholder name in the File name box before you type your own file name. Since the name is highlighted, you just need to type in the new file name to overwrite it without having to click in the box.* 
4	Click **Save** button.

Saving Workbook in a different format

Step	Action
1	Click File tab.
2	Click **Save As**.
3	In the **File name** box, type *Name*. *Excel has already entered a placeholder name in the File name box before you type your own file name. Since the name is highlighted, you just need to type in the new file name to overwrite it without having to click in the box.* 
4	In the **Save as type** list, click the format that you want to save the file in. For example, click PDF, or Comma Delimited (.csv).
5	Click **Save** button.

Do It! Discussing spreadsheet basics



Invoice ID	Invoice Date	Monetary Amount	Voucher Line Descr	Vendor Name	Due Date	PO #	PO Descr	Customer Name
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.69	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.90	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$5.14	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055773	6/30/2012	$179.95	HP Inkjet Cartridg	Summus Industries	6/30/2012	S021561	HP Inkjet Cartridg	
3177055773	6/30/2012	$145.66	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$554.18	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$387.98	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055774	6/30/2012	$894.25	Staples® Copy Pape	Summus Industries	6/30/2012	S021562	Staples® Copy Pape	
3177133923	6/30/2012	$39.64	Staples® Chairmat	Summus Industries	6/30/2012	S021756	Staples® Chairmat	
S6086961	7/3/2012	$44.25	Crucial CT25664BC1	HI-ED	8/2/2012	S021563	Crucial CT25664BC1	
3177843128	7/7/2012	$23.04	GE Extension Cord,	Summus Industries	7/7/2012	S021996	GE Extension Cord,	
3178005102	7/12/2012	$299.90	S021825_HP Officej	Summus Industries	7/12/2012			
3178005115	7/11/2012	$110.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$519.95	HP Toner Cartridge	Summus Industries	7/11/2012	S022208	HP Toner Cartridge	
49247884	7/13/2012	$42.80	Tripp Lite DVI to	GovConnection	8/12/2012	S022510	Tripp Lite DVI to	
3178052847	7/13/2012	$11.28	Sanford Expo Origi	Summus Industries	7/13/2012	S022369	Sanford Expo Origi	
3178052847	7/13/2012	$107.31	Staples® Copy Pape	Summus Industries	7/13/2012	S022369	Staples® Copy Pape	
3178052847	7/13/2012	$7.00	Staples® Executive	Summus Industries	7/13/2012	S022369	Staples® Executive	
3178052847	7/13/2012	$3.54	Staples® Jumbo Pap	Summus Industries	7/13/2012	S022369	Staples® Jumbo Pap	

Exhibit 1-1

Here's how	Here's why
Observe the spreadsheet shown in Exhibit 1-1	This is a list of M&O transactions for Cost Center 34039033 for period 12.
Locate the column letters	They appear across the top of the spreadsheet and identify the columns below them.
Located the rows numbers	They appear on the left side of the spreadsheet and identify rows to the right of them.
Identify the cells	Each cell occurs at the intersection of a column and a row. Cell A1, for example, contains the text "Name".
Locate cell D4	Cell D4 is the active cell, where the insertion point is located. The column letter and row number are highlighted, and box appears around the cell Column and row labels identify information in the spreadsheet. The labels in cells A1 through G1 identify information such as Cost Center, Account and Amount.
Locate the labels	Values are the raw data in a spreadsheet.
Locate the totals	Totals are calculations based on other values in the spreadsheet. For example, cell C25 contains the total all M&O transactions. You use formulas to perform calculations.

Summary Notes

- You learned that **spreadsheets** can help you organize, calculate and analyze data. You also learned about the common features of all spreadsheets, which include rows, columns, cells, values, labels and formulas.
- You identified components of the Excel interface, and you learned how to work with tools on the **Ribbon**, which is divided into tabs and groups. You learned that you can get information about a command by pointing to it.
- You learned how to open an Excel file, identify the **active cell** and navigate through a worksheet by using the keyboard and the mouse.
- You learned how to use the **Help** system to get information about Excel tools and techniques.

Review Questions

1. What is the difference between a worksheet and a workbook?

2. What is a Ribbon group?

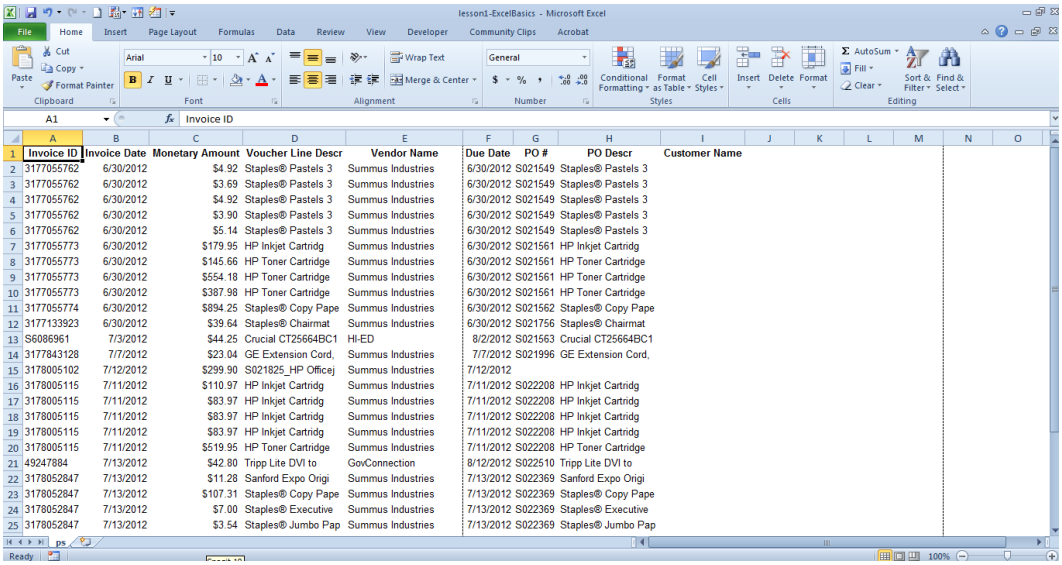
3. What is an active cell?

4. What key combination would you use to return to cell A1?

5. What key combination would you use to go directly to the last row of data in a worksheet?

6. What menu command or key combination would you use to move to a specific cell that is at the far end of the current worksheet?

Case Study – Create Worksheet from Actuals transactions



Invoice ID	Invoice Date	Monetary Amount	Voucher Line Descr	Vendor Name	Due Date	PO #	PO Descr	Customer Name
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.69	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.90	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$5.14	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055773	6/30/2012	$179.95	HP Inkjet Cartridg	Summus Industries	6/30/2012	S021561	HP Inkjet Cartridg	
3177055773	6/30/2012	$145.66	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$554.18	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$387.98	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055774	6/30/2012	$894.25	Staples® Copy Pape	Summus Industries	6/30/2012	S021562	Staples® Copy Pape	
3177133923	6/30/2012	$39.64	Staples® Chairmat	Summus Industries	6/30/2012	S021756	Staples® Chairmat	
S6086961	7/3/2012	$44.25	Crucial CT25664BC1	HI-ED	8/2/2012	S021563	Crucial CT25664BC1	
3177843128	7/7/2012	$23.04	GE Extension Cord,	Summus Industries	7/7/2012	S021996	GE Extension Cord,	
3178005102	7/12/2012	$299.90	S021825_HP Officej	Summus Industries	7/12/2012			
3178005115	7/11/2012	$110.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$519.95	HP Toner Cartridge	Summus Industries	7/11/2012	S022208	HP Toner Cartridge	
49247884	7/13/2012	$42.80	Tripp Lite DVI to	GovConnection	8/12/2012	S022510	Tripp Lite DVI to	
3178052847	7/13/2012	$11.28	Sanford Expo Origi	Summus Industries	7/13/2012	S022369	Sanford Expo Origi	
3178052847	7/13/2012	$107.31	Staples® Copy Pape	Summus Industries	7/13/2012	S022369	Staples® Copy Pape	
3178052847	7/13/2012	$7.00	Staples® Executive	Summus Industries	7/13/2012	S022369	Staples® Executive	
3178052847	7/13/2012	$3.54	Staples® Jumbo Pap	Summus Industries	7/13/2012	S022369	Staples® Jumbo Pap	

Introduction

You've downloaded and saved the transactions from Account Reconciliation. You now need to add some formatting to the Worksheet.

Instructions

Refer to the first two sections of your student guide to complete the tasks outlined in Lesson 1. You will need to:

- Add data to a worksheet
- Edit existing data on a worksheet
- Add comments to a specific cell
- Set a print area

Step	Action
1	Open Actuals_Transactions_June.xls.
2	Save the file as Actual_Transactions_June-2.xls
3	Rename Monetary Amount to Transaction Total.
4	Move Transaction Total to column I.
5	Move PO ID and PO Descr to column C.
6	Save as .pdf file.

Lesson 3: Modifying a worksheet

Overview

In this lesson, we'll get acquainted with how to perform basic tasks such as moving around a worksheet, selecting cells, working with rows and columns, and entering and editing data. After completing this lesson, you'll know how to:

- Navigate within the worksheet
- Edit existing data on a worksheet
- Using AutoFill
- Set a print area
- Update the column headings
- Add comments to a specific cell

Text in cells can be any length, and you can change the text's formatting, such as its font and size. By default, text in a cell is left-aligned.

Text and values

As soon as you create a workbook, you can start entering data in cells. Cell entries can include many types of data, including text and values. When you type, data is entered in the active cell.

Use any length of text in cells and change the text's formatting, such as its font and size. By default, text in a cell is left-aligned (See below).

	A	B	C	D	E	F	G	H
1	Invoice ID	Invoice Date	Monetary Amount	Voucher Line Descr	Vendor Name	Due Date	PO #	PO Descr
2	3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3
3	3177055762	6/30/2012	$3.69	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3
4	3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3
5	3177055762	6/30/2012	$3.90	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3
6	3177055762	6/30/2012	$5.14	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3
7	3177055773	6/30/2012	$179.95	HP Inkjet Cartridg	Summus Industries	6/30/2012	S021561	HP Inkjet Cartridg
8	3177055773	6/30/2012	$145.66	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge

Values can include numbers, formulas and functions. Excel recognizes cell data as a value when it's number or when it begins with +, -, =, @, #, or $. By default, a value in a cell is right-aligned.

Cell Data is classified according to its intended purpose.

Overflow text and values

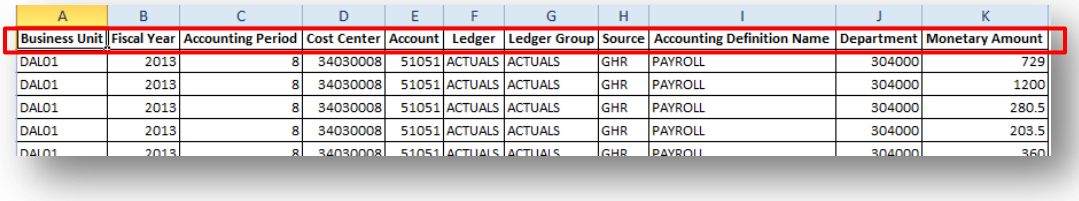
If your text doesn't fit in a cell, it appears to go into the next cell if that adjacent cell is empty. The text isn't actually in that adjacent cell, however-if there is data in the adjacent cell, the overflowing text is truncated to fit the width of its cell.

If a long value doesn't fit in a cell. Excel displays a row of # characters. This indicates that the cell is too narrow to display the value in full.

The Num Lock key (for desktop computers)

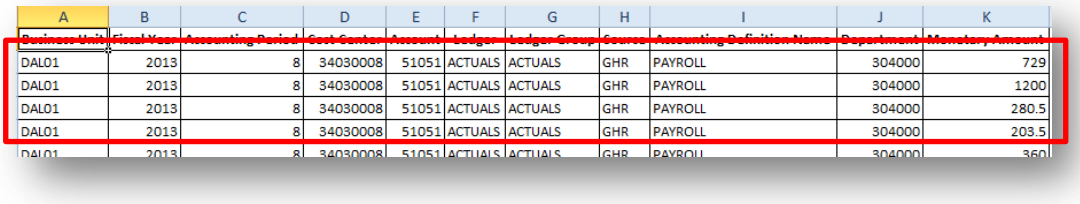
Many desktop keyboards have a numeric keypad, which is enabled and disabled by a NUm Lock key in the upper-left corner of the keyboard. Press Num Lock once to switch the keypad from functioning as numeric keys to functioning as navigation keys. Press Num Lock again to return to number entry. When number entry is active, a Num Lock light typically lights on the keyboard.

The **label** classification is used for cells that contain text or for numbers that will not be used in calculations.



A	B	C	D	E	F	G	H	I	J	K
Business Unit	Fiscal Year	Accounting Period	Cost Center	Account	Ledger	Ledger Group	Source	Accounting Definition Name	Department	Monetary Amount
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	729
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	1200
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	280.5
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	203.5
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	360

A **value** classification indicates that the data has the potential to be used in calculations.

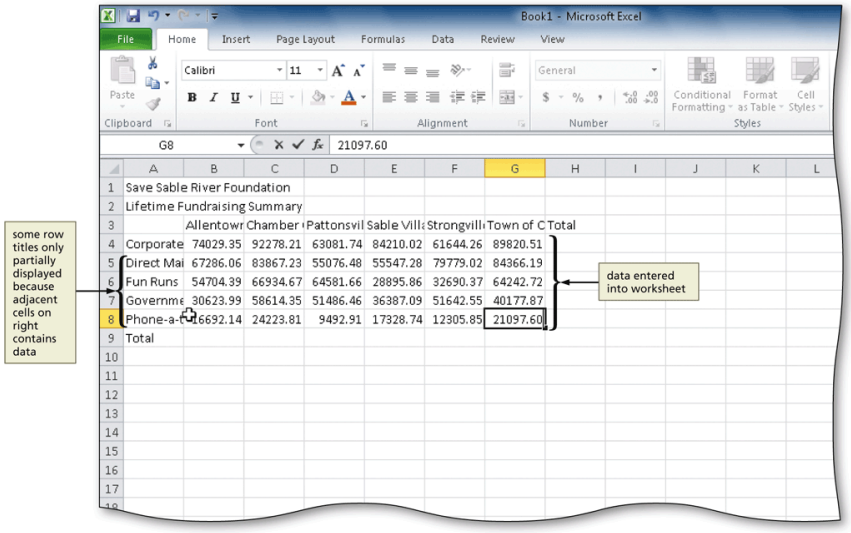


A	B	C	D	E	F	G	H	I	J	K
Business Unit	Fiscal Year	Accounting Period	Cost Center	Account	Ledger	Ledger Group	Source	Accounting Definition Name	Department	Monetary Amount
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	729
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	1200
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	280.5
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	203.5
DAL01	2013	8	34030008	51051	ACTUALS	ACTUALS	GHR	PAYROLL	304000	360

Editing text and values

If you make a mistake while entering data in a cell, you can correct it at any time. To make edits, do any of the following:

- Select the cell and type the new data
- Click the formula bar, make the edits and press Enter.
- Double-click the cell to place the insertion point in it, make the desired edits and press Enter.



AutoFill

When you want to enter a series of numbers, days of the week, or other sequential data, you can use the AutoFill feature to complete the list. The fill handle is a small square in the lower-right corner of a selected cell or range of cells. When you point to the fill handle, the pointer changes to a plus sign (+). You can then drag the pointer downward to fill a range with data.

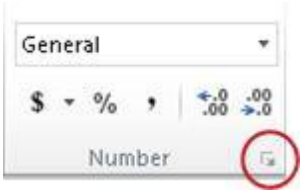
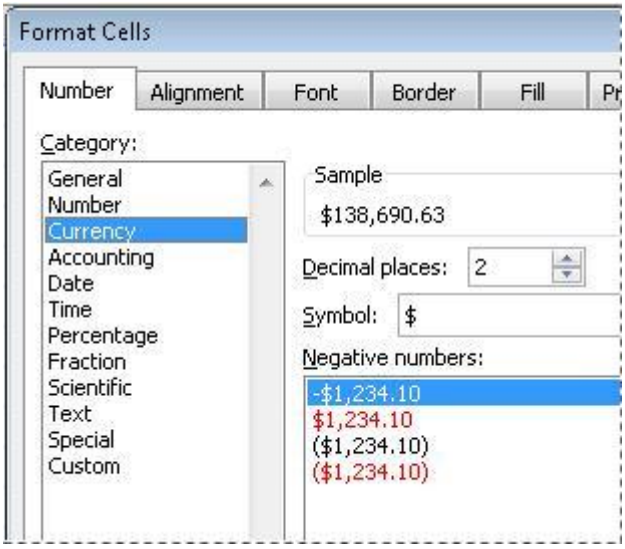
To use AutoFill:

1. Select the cell containing the value that starts the list or series.
2. Point to the fill handle until the pointer changes to a + symbol.
3. Drag the fill handle over the adjacent cells that you want to fill.

For numbers or dates, select two cells with a desired range, and AutoFill continues with the same increments. For example, you could use this technique to fill a range by 10s or to fill a range with dates a week apart.

Formatting Cells

Formatting is applied to spreadsheet components for the purpose of organizing and clarifying information. Data that is presented in a uniform and consistent format is much easier to understand than data presented with random formats. Formatting can be applied to pages, columns, rows, cell ranges, and cells. Formatting features include:

Step	Action
1	Select the cells that you want to format.
2	On the Home tab, in the Number group, click the Dialog Box Launcher next to Number (or just press CTRL+1). 
3	In the Category list, click the format that you want to use, and then adjust settings, if necessary. For example, if you're using the Currency format, you can select a different currency symbol, show more or fewer decimal places, or change the way negative numbers are displayed. 

Borders and Shading

Step	Action
1	Select the cell or range of cells that you want to add a border to.

Step	Action
2	On the Home tab, in the Font group, click the arrow next to Borders, and then click the border style that you want.

Apply Font Shading

Step	Action
1	Select the cell or range of cells that you want to apply cell shading to.
2	On the Home tab, in the Font group, click the arrow next to Fill Color Button image, and then under Theme Colors or Standard Colors, click the color that you want.

Filter your data

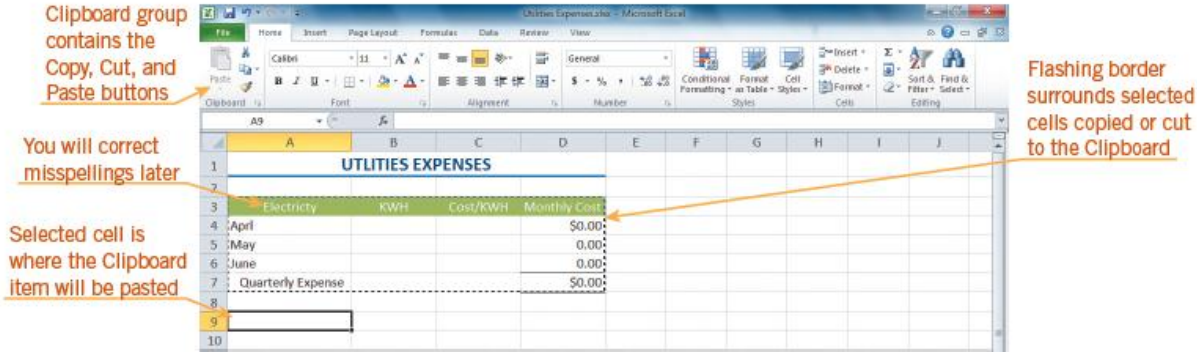
Step	Action
1	Select the data that you want to filter.
2	On the Data tab, in the Sort & Filter group, click Filter.
3	Click the arrow in the column header to display a list in which you can make filter choices.
4	To select by values, in the list, clear the (Select All) check box. This removes the check marks from all the check boxes. Then, select only the values you want to see, and click OK to see the results.

Moving and copying data

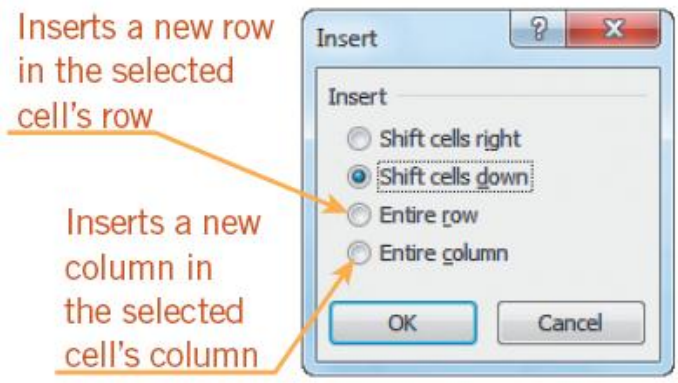
Copying duplicates the cell or range in another location, while also leaving the cell in its original location.

Cutting removes a cell or range from its original location in the worksheet.
Pasting places the cell or range in another location.

- To copy a cell or range, use buttons in the Clipboard group on the Home tab.
- The copied data is placed on the Office Clipboard. The Office Clipboard (or Clipboard) is a temporary storage area for up to 24 selections you copy or cut.
- To move a cell or range, you use the Cut button, followed by the Paste button.



Inserting and Deleting Rows, Columns and Cells



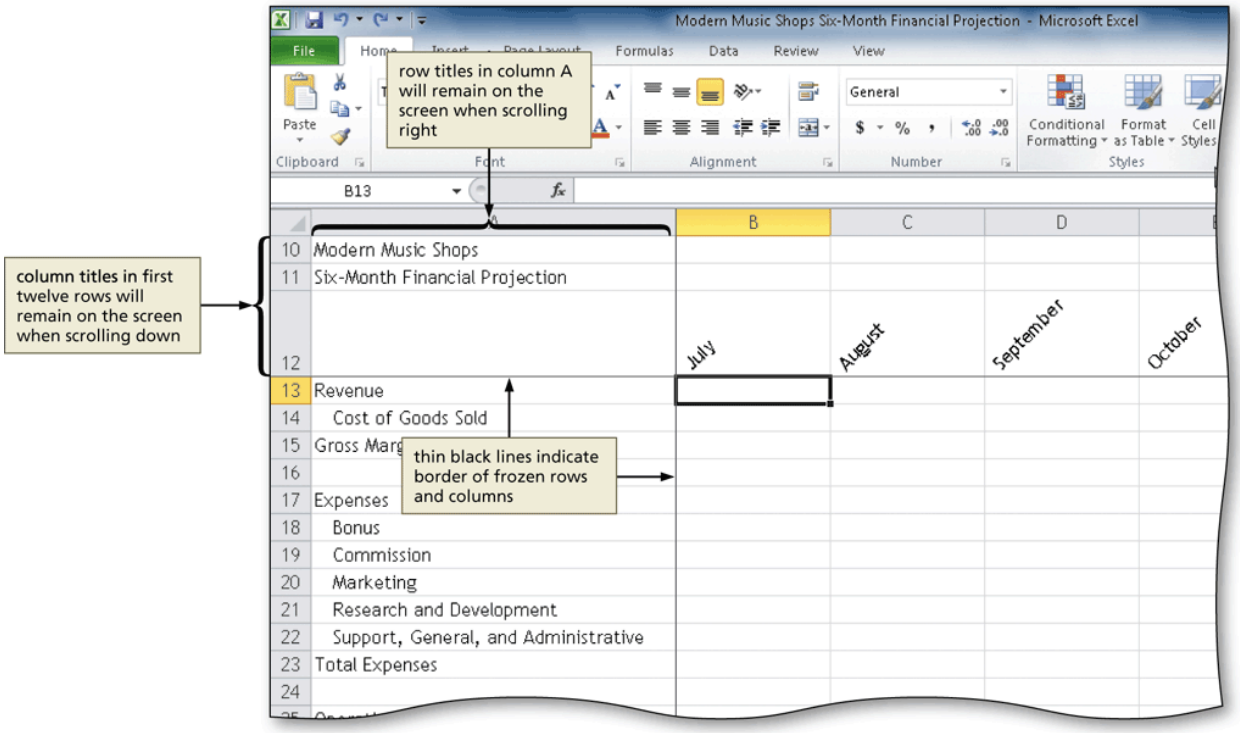
To insert a row, click the row heading to select the row where you want the new row to appear. Then, click the Insert button on the Home tab.

To insert a column, click the column heading to select the column where you want the new column to appear. Then, click the Insert button.

To delete a row or column, click the appropriate row or column heading and then click the Delete button on the Home tab.

Use the buttons in the Cells group on the Home tab to insert and delete cells.

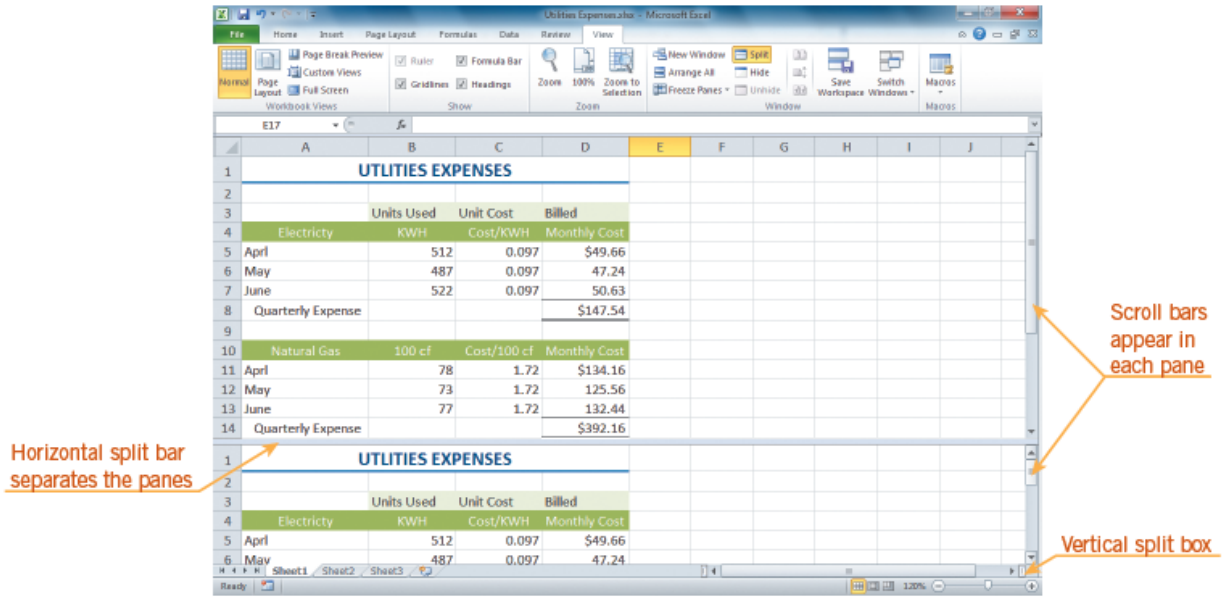
Freezing Panes in a Worksheet



You can view two parts of a worksheet at once by freezing panes. When you freeze panes, you select which rows and/or columns of the worksheet remain visible on the screen as the rest of the worksheet scrolls.

Splitting a Worksheet window

Splitting divides the worksheet window into two or four panes that you can scroll independently. This enables you to see different parts of a worksheet at the same time.



Create a table

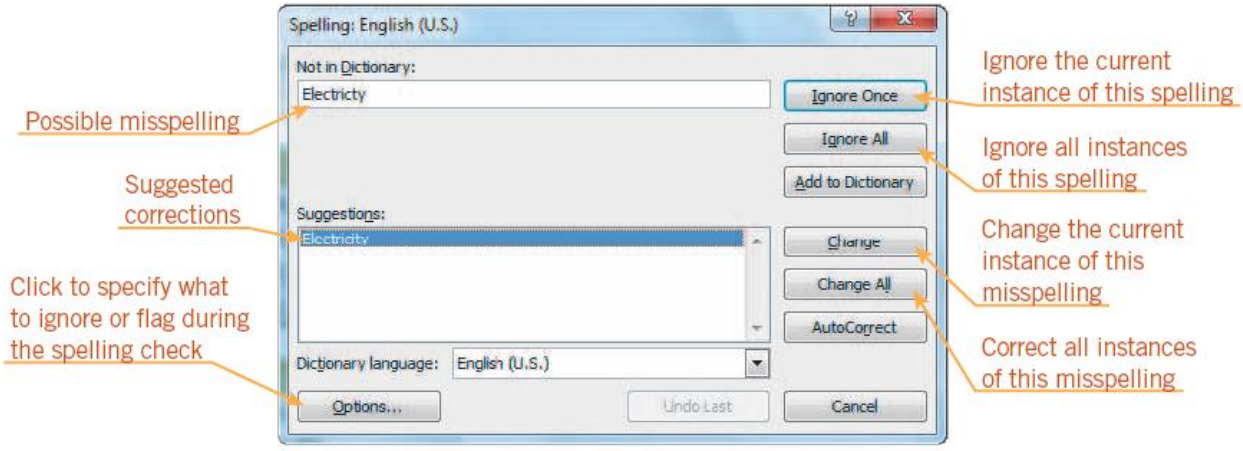
Step	Action
1	On a worksheet, select the range of cells that you want to include in the table. The cells can be empty or can contain data.
2	On the **Home** tab, in the **Styles** group, click **Format as Table**, and then click the table style that you want.
3	If the selected range contains data that you want to display as table headers, select the My table has headers check box in the Format as Table dialog box.

Sort your data

Step	Action
1	To quickly sort your data, do the following: Select a range of data, such as A1:L5 (multiple rows and columns) or C1:C80 (a single column). The range can include titles that you created to identify columns or rows.
2	Select a single cell in the column on which you want to sort.
3	Click to perform an ascending sort (A to Z or smallest number to largest).
4	Click to perform a descending sort (Z to A or largest number to smallest).
To sort by specific criteria, do the following:	
5	Select a single cell anywhere in the range that you want to sort.
6	On the **Data** tab, in the **Sort & Filter** group, click **Sort**. The **Sort** dialog box appears.
7	In the Sort by list, select the first column on which you want to sort.
8	In the Sort On list, select either Values, Cell Color, Font Color, or Cell Icon.
9	In the **Order** list, select the order that you want to apply to the sort operation — alphabetically or numerically ascending or descending (that is, A to Z or Z to A for text or lower to higher or higher to lower for numbers).

Checking Spelling in a Worksheet

To find and correct spelling errors, use the Spelling command on the Review ribbon.



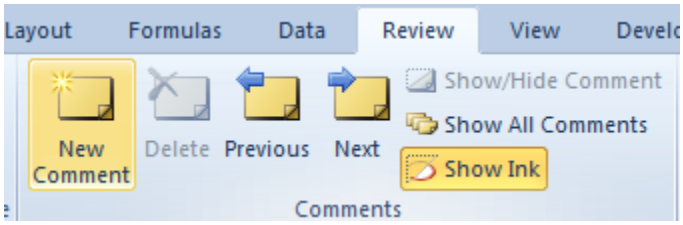
Reordering of spreadsheets

Spreadsheet Operations increase the efficiency of data entry, the performing of calculations, and the presentation of information.

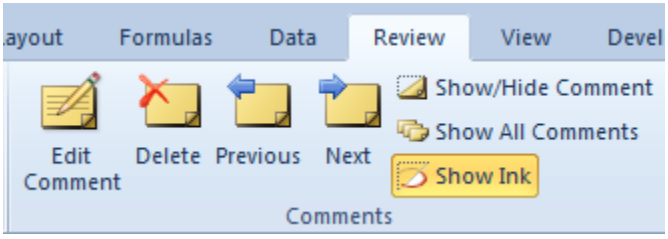
Spreadsheet operations

- **Sort** is used to arrange data in alphabetical or chronological order.
- A **primary sort** indicates the primary sort range of data.
- A **secondary sort** indicates the next range.
- **Freeze panes** allows the user to work in multiple areas of a large spreadsheet and focus the view on specific cell ranges
- **Fill Series** is used to fill a column or row with consecutive data

Adding cell comments



New Comment Ribbon



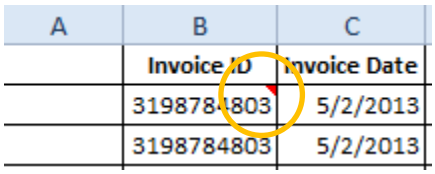
Existing Comment Ribbon

You can add notes to a worksheet by using comments. Using comments can help you make a worksheet easier to understand by providing additional context for the data it contains. For example, you can use a comment as a note that provides information about data in an individual cell. You can also add a comment to a column heading to provide guidance on data that a user should enter.

Comments stay hidden until you want to read them. This helps to keep your spreadsheet looking neat and professional and it makes it easier to find and understand specific information contained in the sheet.

Comments can also be added by more than one person, so co-workers can use them to share ideas and information with others while a spreadsheet is being created.

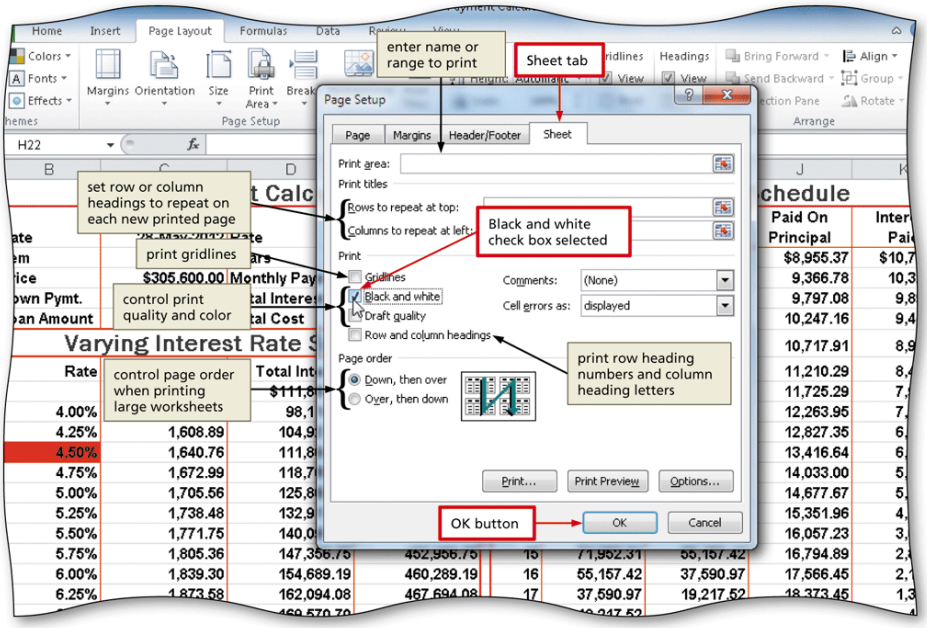
When a cell has a comment, a red indicator appears in the corner of the cell. When you rest the pointer on the cell, the comment appears.



Step	Action
1	Click on a cell (i.e., B7 or C14), right click and choose 'Insert Comment.' A small box appears with the name of your computer.
2	This is where you can type your comment. Type the comment(s). Click 'off' the cell (click on any other cell of the worksheet). You can see a little colored triangle in the corner of the cell.

Step	Action
3	Move the mouse over the cell and hover to make the comment appear.

Printing



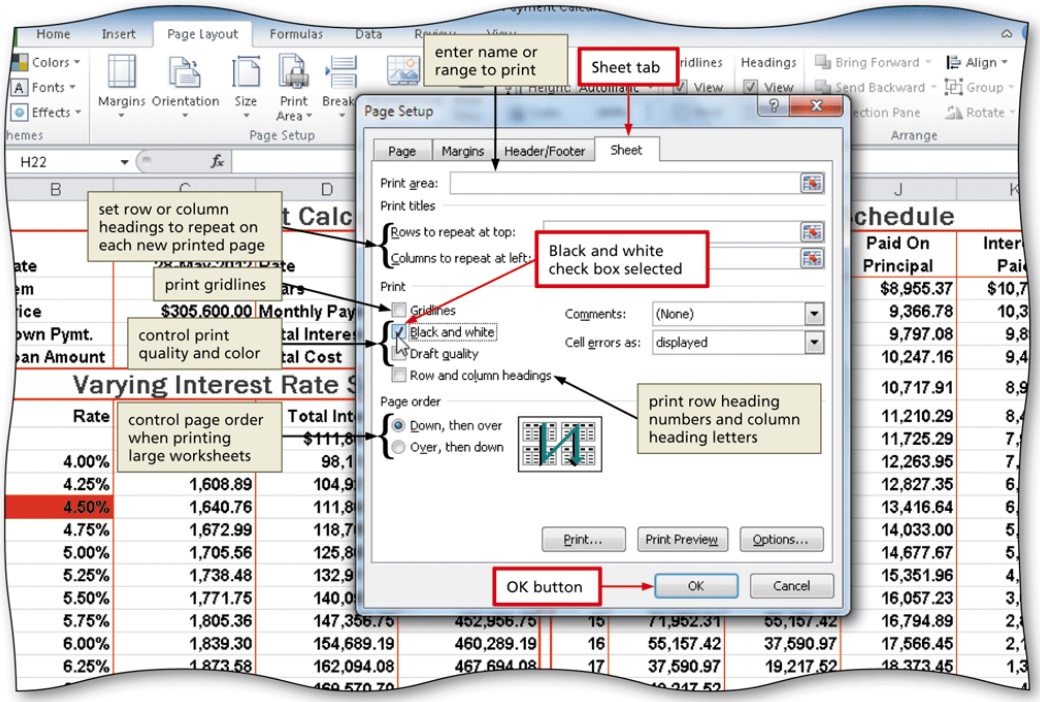
- **Print** is used to provide a hard copy
- **Print preview** – used to view how data is represented on paper
- **Print a selection** – used to print a portion of a spreadsheet

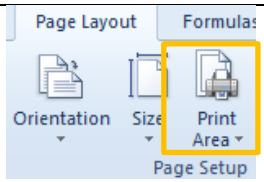
Select the range to set as the print area, and then click the Print Area button (Page Layout tab | Page Setup group) to display the Print Area menu.

Click Set Print Area on the Print Area menu to set the range of the worksheet which Excel should print.

To clear the print area, click the Print Area button (Page Layout tab | Page Setup group) to display the Print Area list and then click the Clear Print Area command on the Print Area list to reset the print area to the entire worksheet.

Printing a portion of worksheet



Step	Action
1	Select the area to print.
2	Click Page Layout. Click Print Area drop down arrow. 
3	Click the Page Setup Dialog Box Launcher (Page Layout tab | Page Setup group) to display the Page Setup dialog box.
4	If necessary, click the Page tab (Page Setup dialog box) to display the Page sheet and then click Fit to in the Scaling area to set the worksheet to print on one page
5	Click the Sheet tab to display the tab and then click 'Black and white' in the Print area to select the check box.
6	Click the OK button to close the Page Setup dialog box.

End of Lesson Summary

- You learned that Basic **Formulas** can add, subtract, divide or multiply a group of numbers either in a row or column.
- You identified data types and used those types to setup a worksheet with text and numbers.
- You learned how to format cells for text and numbers using the Font and Paragraph functions on the Home tab.
- You learned how to setup a worksheet to print a specific section of a worksheet.

Lesson 3 Review Questions

1. Which of the following would you use to enter, calculate, manipulate, and analyze data such as numbers and text in Excel?

2. What do you use to place worksheet titles, column titles, and row titles in a worksheet?

3. When you enter text into a cell, which Excel feature works behind the scenes to recognize and correct common mistakes?
   A. AutoChange
   B. AutoText
   C. Spelling & Grammar Check
   D. AutoCorrect

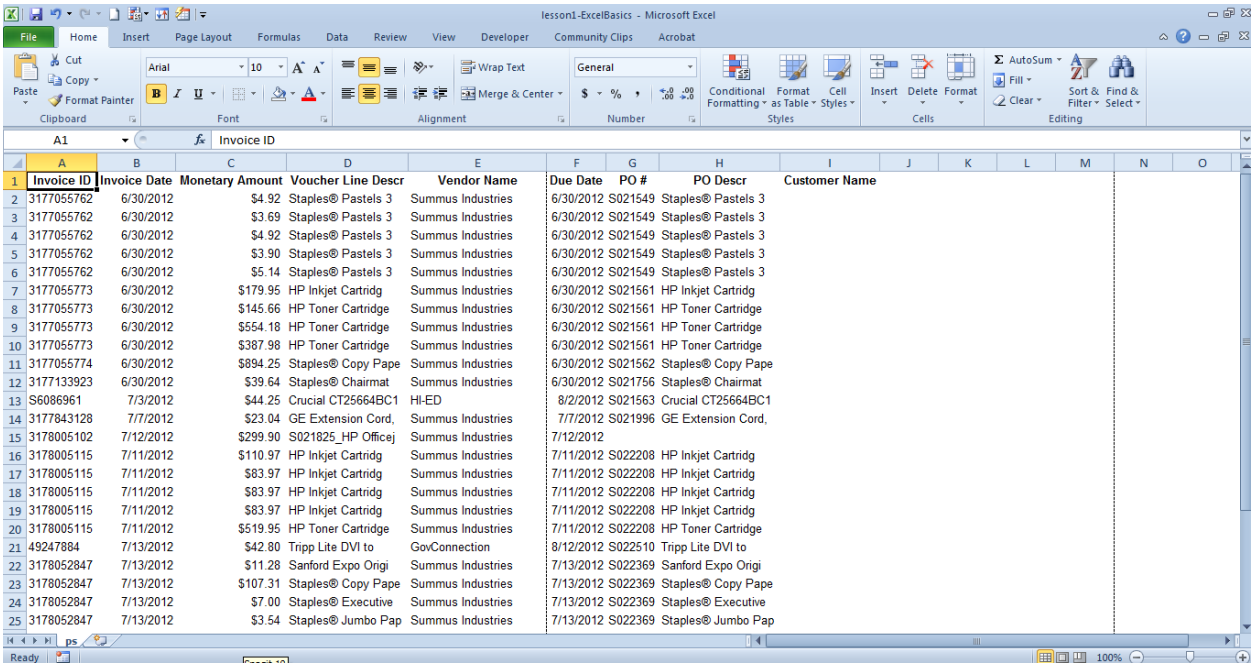
4. Which of the following do you use to move down one cell in an Excel 2010 worksheet?
   A. Right arrow key
   B. Enter key
   C. Page Up key
   D. Home key

5. Which of the following causes Excel 2010 to recognize data entered into a cell as text rather than number format?

   A. Parentheses ( )
   B. Forward Slash (/)
   C. A space
   D. Percent sign (%)

6. What function adds all of the numbers in a range of cells?
   A. Calculate
   B. Sum
   C. Compute
   D. Add

Case Study – Reformat Worksheet from Actuals transactions



Invoice ID	Invoice Date	Monetary Amount	Voucher Line Descr	Vendor Name	Due Date	PO #	PO Descr	Customer Name
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.69	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.90	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$5.14	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055773	6/30/2012	$179.95	HP Inkjet Cartridg	Summus Industries	6/30/2012	S021561	HP Inkjet Cartridg	
3177055773	6/30/2012	$145.66	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$554.18	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$387.98	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055774	6/30/2012	$894.25	Staples® Copy Pape	Summus Industries	6/30/2012	S021562	Staples® Copy Pape	
3177133923	6/30/2012	$39.64	Staples® Chairmat	Summus Industries	6/30/2012	S021756	Staples® Chairmat	
S6086961	7/3/2012	$44.25	Crucial CT25664BC1	HI-ED	8/2/2012	S021563	Crucial CT25664BC1	
3177843128	7/7/2012	$23.04	GE Extension Cord,	Summus Industries	7/7/2012	S021996	GE Extension Cord,	
3178005102	7/12/2012	$299.90	S021825_HP Officej	Summus Industries	7/12/2012			
3178005115	7/11/2012	$110.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$519.95	HP Toner Cartridge	Summus Industries	7/11/2012	S022208	HP Toner Cartridge	
49247884	7/13/2012	$42.80	Tripp Lite DVI to	GovConnection	8/12/2012	S022510	Tripp Lite DVI to	
3178052847	7/13/2012	$11.28	Sanford Expo Origi	Summus Industries	7/13/2012	S022369	Sanford Expo Origi	
3178052847	7/13/2012	$107.31	Staples® Copy Pape	Summus Industries	7/13/2012	S022369	Staples® Copy Pape	
3178052847	7/13/2012	$7.00	Staples® Executive	Summus Industries	7/13/2012	S022369	Staples® Executive	
3178052847	7/13/2012	$3.54	Staples® Jumbo Pap	Summus Industries	7/13/2012	S022369	Staples® Jumbo Pap	

Introduction

You've downloaded and saved the transactions from Account Reconciliation. You now need to reformat to the Worksheet.

Instructions

Refer to the first two sections of your student guide to complete the tasks outlined in Lesson 3. You will need to use the tasks including:

- Navigate within the worksheet
- Edit existing data on a worksheet
- Using AutoFill
- Set a print area
- Update the column headings
- Add comments to a specific cell

Step	Action
1	Open Actuals_Transactions_June.xls.
2	Click Column named Monetary Amount. Click double digit from Number format.
3	Delete column titled Customer Name.
4	Change the format of Monetary Amount. Remove the dollar symbol ($) from each row.

Step	Action
5	Change the format of Invoice Date and Due Date to display Day-Month format. It currently shows day/month/year.
6	Complete the questions from the Review in Lesson 1.

Lesson 4: Using Formulas and Functions

Overview

This is section discusses the how to construct formulas to perform addition, subtraction, multiplication or division as well as Functions used in Excel like the AutoSum or AVG (average).

After completing this lesson, you'll know how to:

- Enter formulas using the keyboard
- Enter formulas using Point mode
- Apply the AVERAGE, MAX, and MIN functions
- Verify a formula using Range Finder
- Apply a theme to a workbook
- Apply a date format to a cell or range
- Add conditional formatting to cells

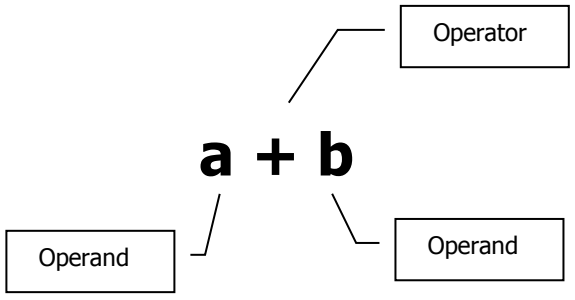
Formulas

Formulas helps you to calculate and analyze data on your worksheet. Formulas contain operands and operators as illustrated below. By default, when a formula is created, references to cells or ranges are usually based on their position relative to the cell that contains the formula.

When you copy the formula, Excel will automatically paste the adjusted references in the destination cells relative to the position of the formula. Before you begin, type in the data for the Feb column, as shown below.

1. In a cell, type an equal sign (=) to start the formula.
2. Type a combination of numbers and operators; for example, 3+7.
3. Use the mouse to select other cells (inserting an operator between them). For example, select B1 and then type a plus sign (+), select C1 and type +, and then select D1.
4. Press ENTER when you finish typing to complete the formula.

Formula:



Operand	Example

Constant value	2
Cell reference	A1
Range reference	A1:B2
Label	Jan Sales
Range name	Revenue
Function	Sum(A1:B4)

Operators:	Symbols
Addition	+
Subtraction	-
Multiplication	*
Division	/
Percent	%
Exponential	^

The Excel syntax includes an **equal sign (=)** followed by the operands and the operators such as

= 2 + 3
= A1 - B6
=3 * A5
=Sales / Months
=5 ^ 4

The order of the elements in a formula determines the final result of the calculation. Excel performs the operations from **left to right** according to the **order of operator precedence.**

Operator precedence

Operator	Description
: (colon) (single space) , (comma)	Reference operators
–	Negation (as in –1)
%	Percent
^	Exponentiation
* and /	Multiplication and division
+ and –	Addition and subtraction
&	Connects two strings of text (concatenation)
= < > <= >= <>	Comparison

For example:

= 2 + 3 * 2 equals to 8
Not 10 because Excel calculates multiplication before addition.
You can control the order of calculation by using parentheses to group operations that should be performed first.
For example:
= (2 + 3) * 2
equals to 10

Entering functions

A **basic function** is a shortcut for a formula. Formulas and functions are a primary reason for using Excel, and it is essential that you start learning how easy they are to master. Although there are some subtle differences between a formula and a function, many people use the words interchangeably.

The Excel Account Reconciliation worksheet you are using has a formula in column G that adds the values in each of the cells indicated in the formula. A formula is an equation that performs a calculation. You enter a formula in a cell at a location when some arithmetic is required.

When you press Enter, the results are displayed in the cell. A function is a built-in Excel formula. These built-in formulas cover many categories of commonly used mathematical, statistical, financial, and scientific operations.

An Excel function has syntax, which defines the necessary parts of the formula and the order of those parts. The syntax consists of an equal sign and the name of the function, followed by parentheses. Inside the parentheses, you place arguments. An argument is the information the function needs to complete its calculation, usually one or more values or cell addresses. Many functions use a cell range as an argument, a group of cells with a single address. A cell-range address includes the first cell, a colon, and the last cell.

The *Components* of a function include:

- Cell reference – indicates a cell's location and provides instructions for how cell data is copied or used in calculations.
- Relative - cell value changes as the formula is copied
- Absolute - cell value remains static when copied to other locations
- Mixed - combination of an absolute and a relative cell
- Parentheses – control the Order of Operations
- Conditions or criteria tell the function how to calculate the results and what data to use.

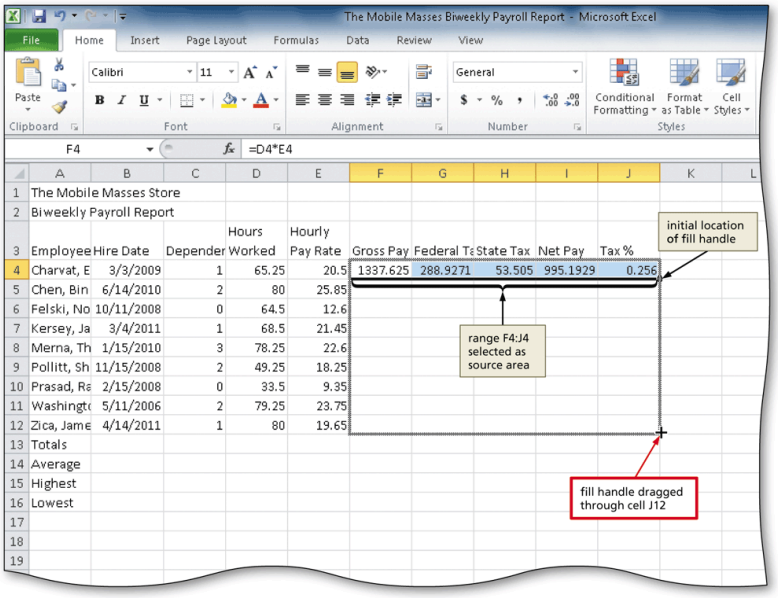
Other commonly used functions are shown in the following table.

Function Name	Description	Result
MAX()	Finds the largest number from the arguments	=MAX(20,25,15) Result: 25
MIN()	Finds the smallest number from the arguments	=MIN(20,25,15) Result: 15
SUM()	Adds the range of cells	=SUM(A1:A35) Result: 115
AVERAGE()	Finds the average for the arguments	=MIN(20,25,15) Result: 15
COUNT()	Counts number of cells that contains number from the arguments	=COUNT(1,4,B,3,20) Result: 4
COUNTA()	Counts number of cells that are not empty from the arguments	=COUNTA(1,4,B,3,20) Result: 5

Some functions do not need an argument in the parenthesis.

Function Name	Description	Result
Today()	Returns current date	=Today() Result: 9/4/03
Now()	Returns current date and time	=Now() Result: 9/4/03 12:20

Copy a Function

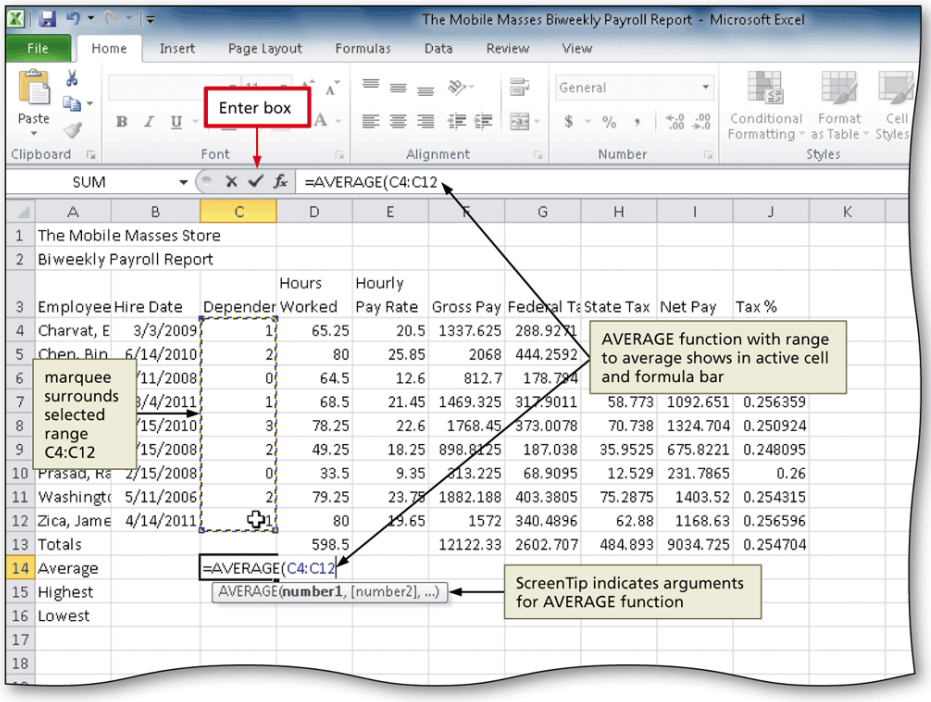


When a cell contains a function or a formula, the Fill handle acts as a copy tool. It copies the formula across the dragged range, adjusting the cell references as needed.

The SUM function in cell B18, when copied to column C, should be =SUM(C4:C17). This concept is known as relative reference. It means that, when copying a formula, Excel knows to change it to reflect the row and/or column in which the copy is located.

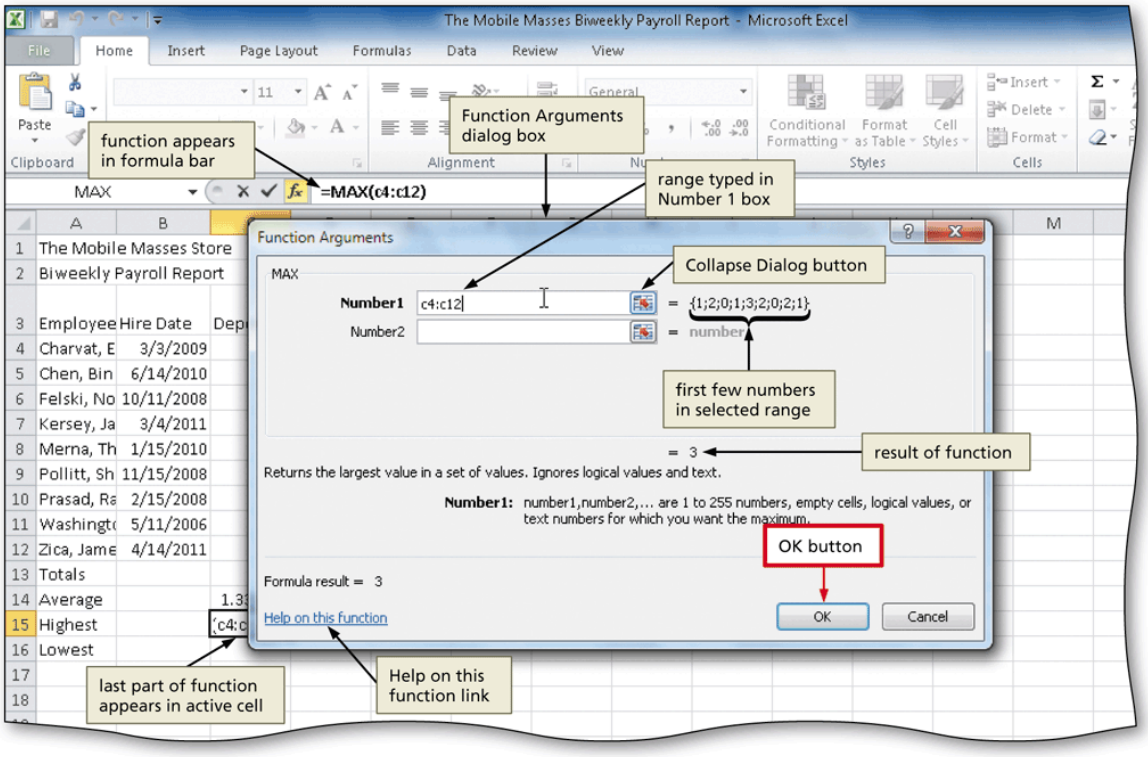
The Average Function

You can use either your mouse or the keyboard to determine the Average of a range from a worksheet. The method you're most comfort using is the best choice. Below are the steps used to add the AVG function to a worksheet.



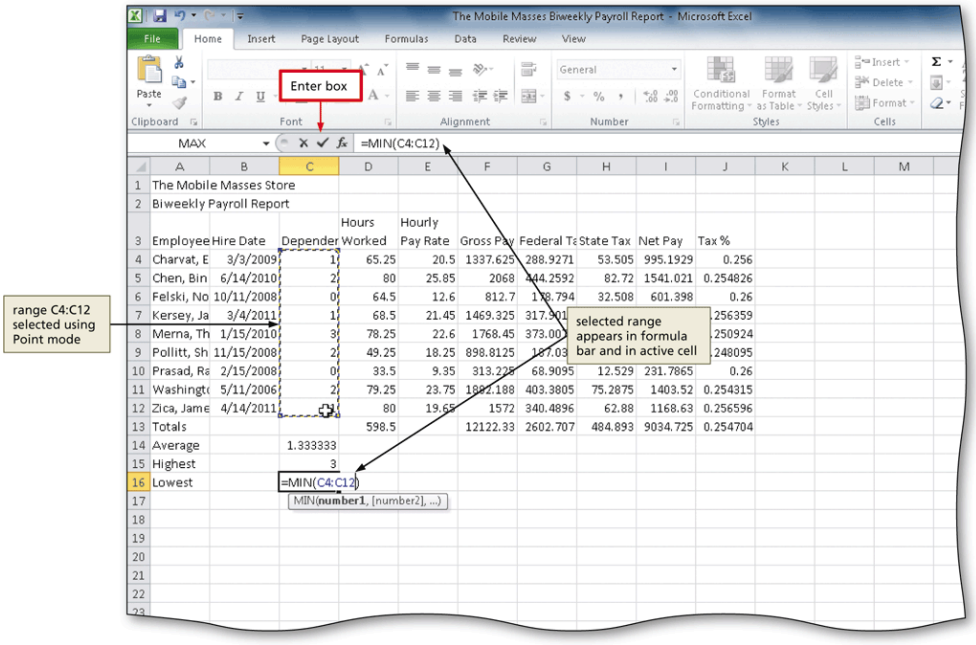
Step	Action
1	Select the cell to contain the average.
2	Type =av in the cell to display the Formula AutoComplete list. Press the DOWN ARROW key to highlight the required formula.
3	Double-click AVERAGE in the Formula AutoComplete list to select the function.
4	Select the range to be averaged to insert the range as the argument to the function.
5	Click the Enter box to compute the average of the numbers in the selected range and display the result in the selected cell.

The MAX Function



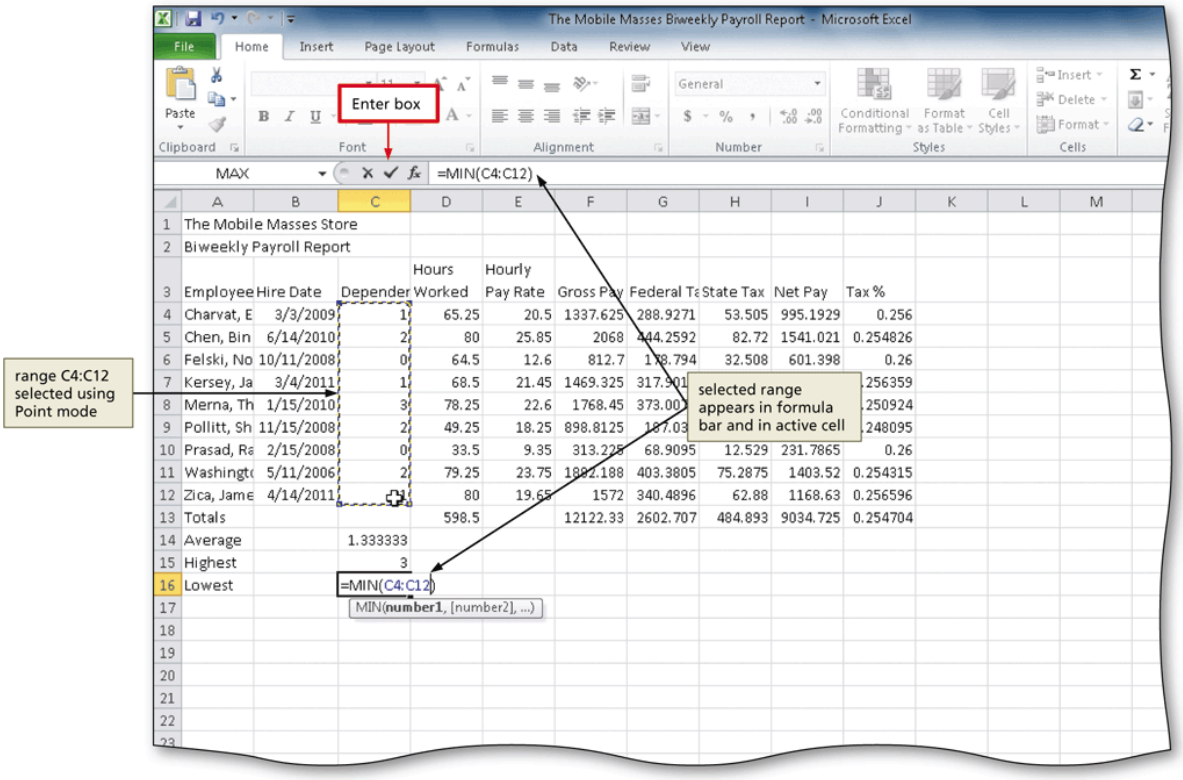
Step	Action
1	Select the cell to contain the maximum number.
2	Click the Insert Function box in the formula bar to display the Insert Function dialog box.
3	Click MAX in the 'Select a function' list to select it.
4	Click the OK button to display the Function arguments dialog box.
5	Type the range in the Number1 box to enter the first argument of the function.
6	Click the OK button to display the highest value in the chosen range in the selected cell

The MIN Function



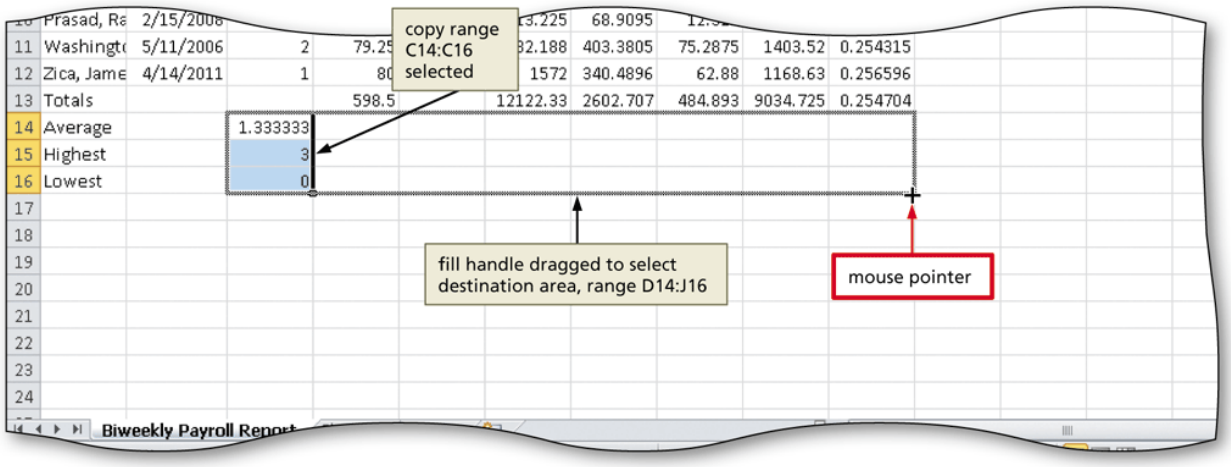
Step	Action
1	Select the cell to contain the lowest number.
2	Click the Sum button arrow on the Home tab to display the Sum button menu.
3	Click Min to display the MIN function in the formula bar and in the active cell.
4	Drag through the range of values of which you want to determine the lowest number
5	Click the Enter box to determine the lowest value in the range and display the result in the formula bar and in the selected cell.

The MIN Function



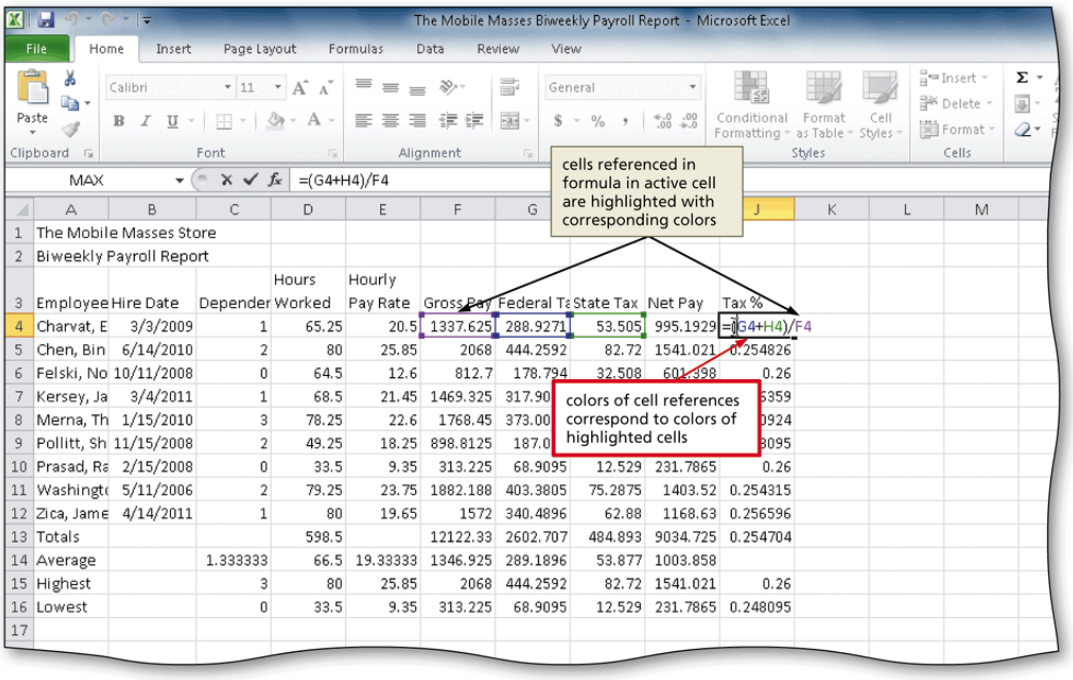
Step	Action
1	Select the cell to contain the average.
2	Type =av in the cell to display the Formula AutoComplete list. Press the DOWN ARROW key to highlight the required formula.
3	Double-click AVERAGE in the Formula AutoComplete list to select the function.
4	Select the range to be averaged to insert the range as the argument to the function.
5	Click the Enter box to compute the average of the numbers in the selected range and display the result in the selected cell.

Copying Formulas



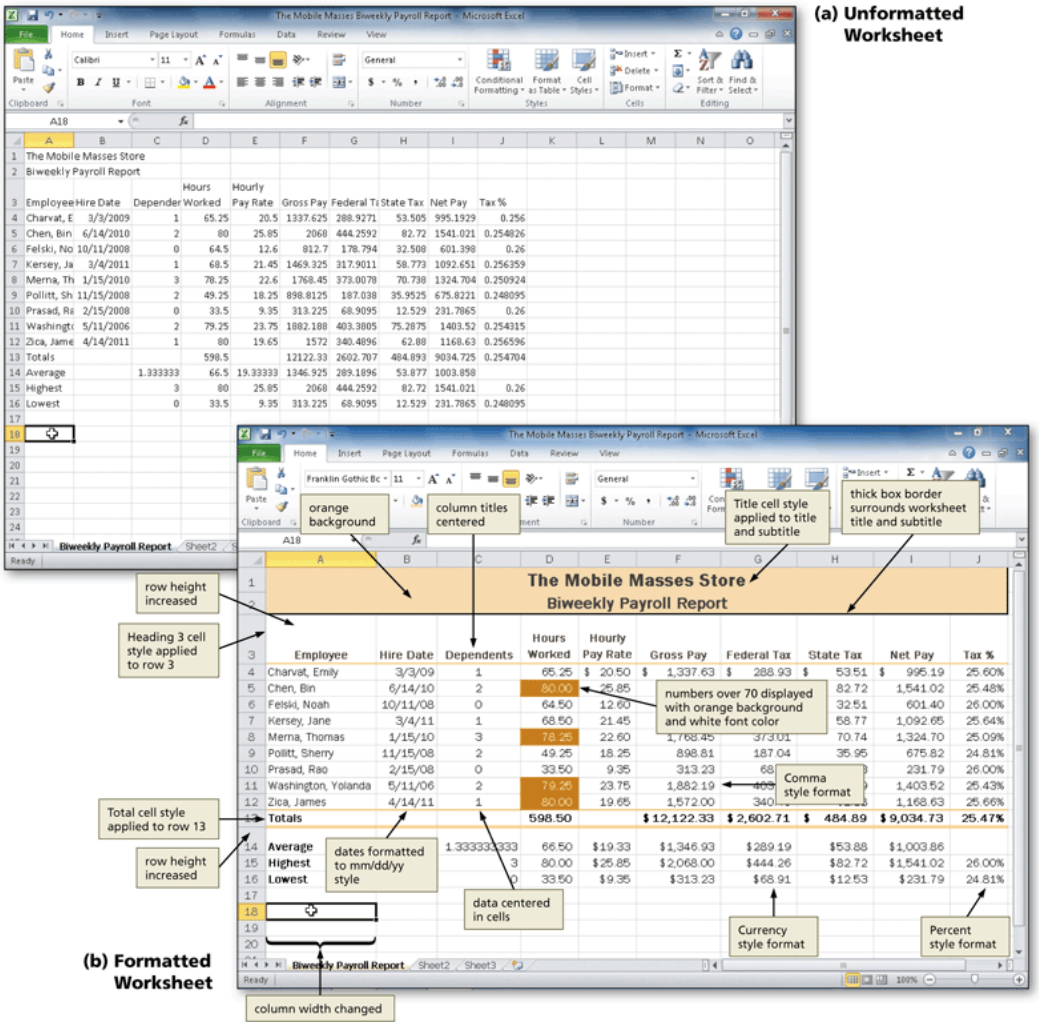
Step	Action
1	Select the source range from which to copy
2	Drag the fill handle in the lower-right corner of the selected range through the end of the destination area, and then release the mouse button.

Verifying a Formula Using Range Finder

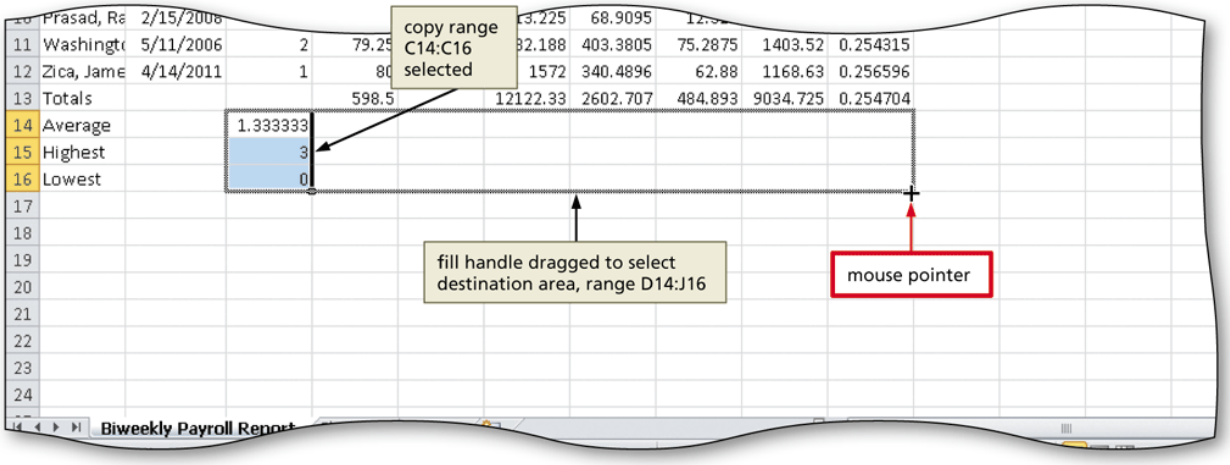


Step	Action
1	Double-click a cell containing a formula to activate Range Finder.
2	Press the ESC key to quit.

Formatting a Worksheet


(a) Unformatted Worksheet
orange background
column titles centered
Title cell style applied to title and subtitle
thick box border surrounds worksheet title and subtitle
row height increased
Heading 3 cell style applied to row 3
The Mobile Masses Store
Biweekly Payroll Report
numbers over 70 displayed with orange background and white font color
Comma style format
Total cell style applied to row 13
row height increased
dates formatted to mm/dd/yy style
data centered in cells
Currency style format
Percent style format
(b) Formatted Worksheet
column width changed

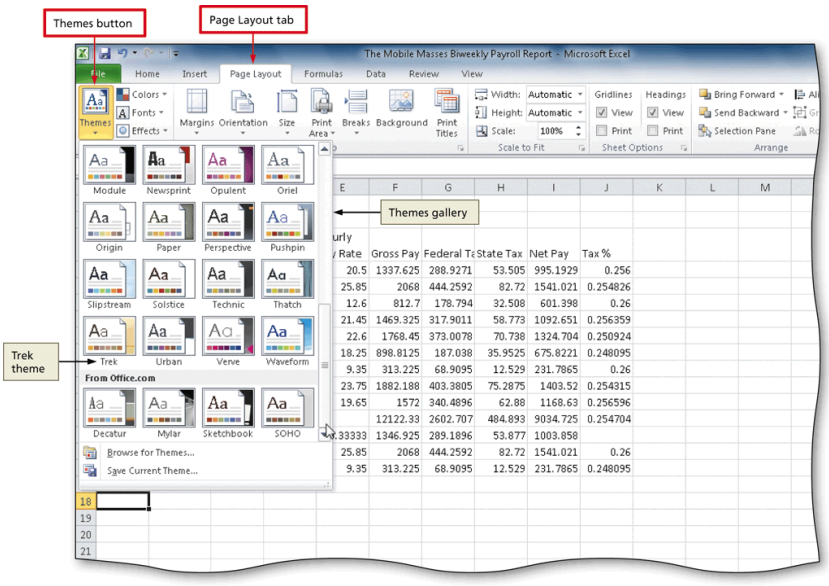
Copying a Range of Cells Across Columns to an Adjacent Range Using the Fill Handle



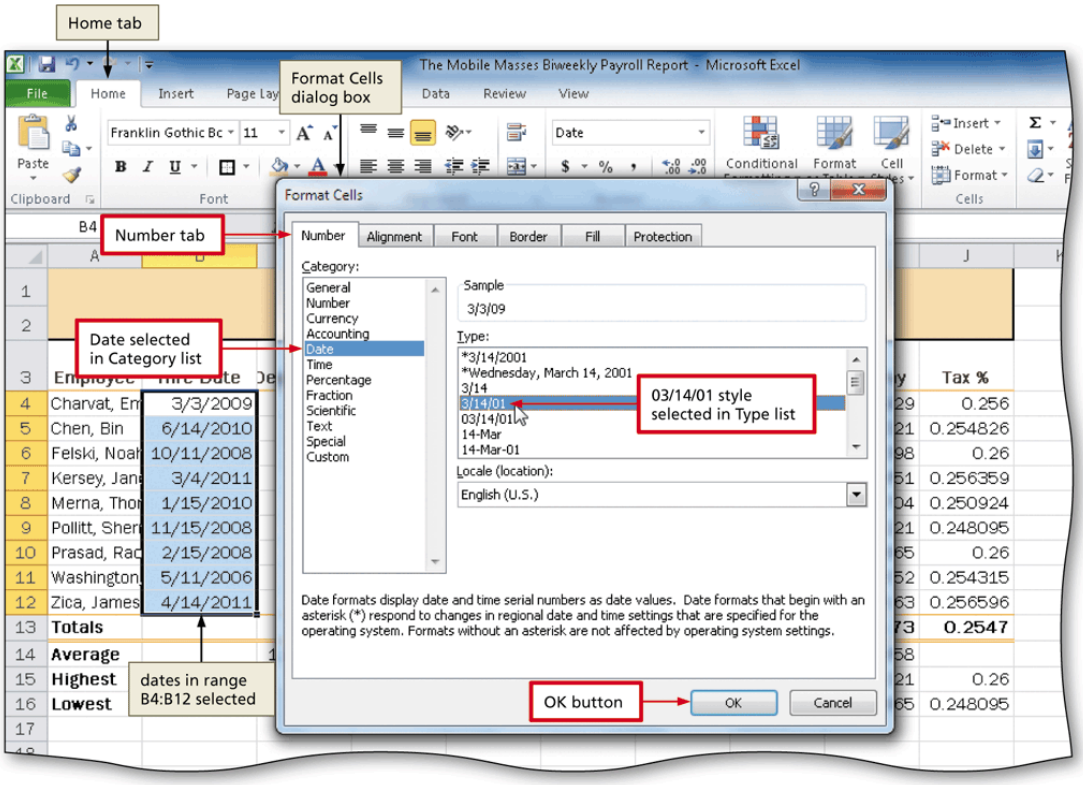
Select the source range from which to copy
Drag the fill handle in the lower-right corner of the selected range through the end of the destination area, and then release the mouse button

Changing the Workbook Theme

- Click the Themes button on the Page Layout tab to display the Themes gallery
- Click the desired theme in the Themes gallery to change the workbook theme

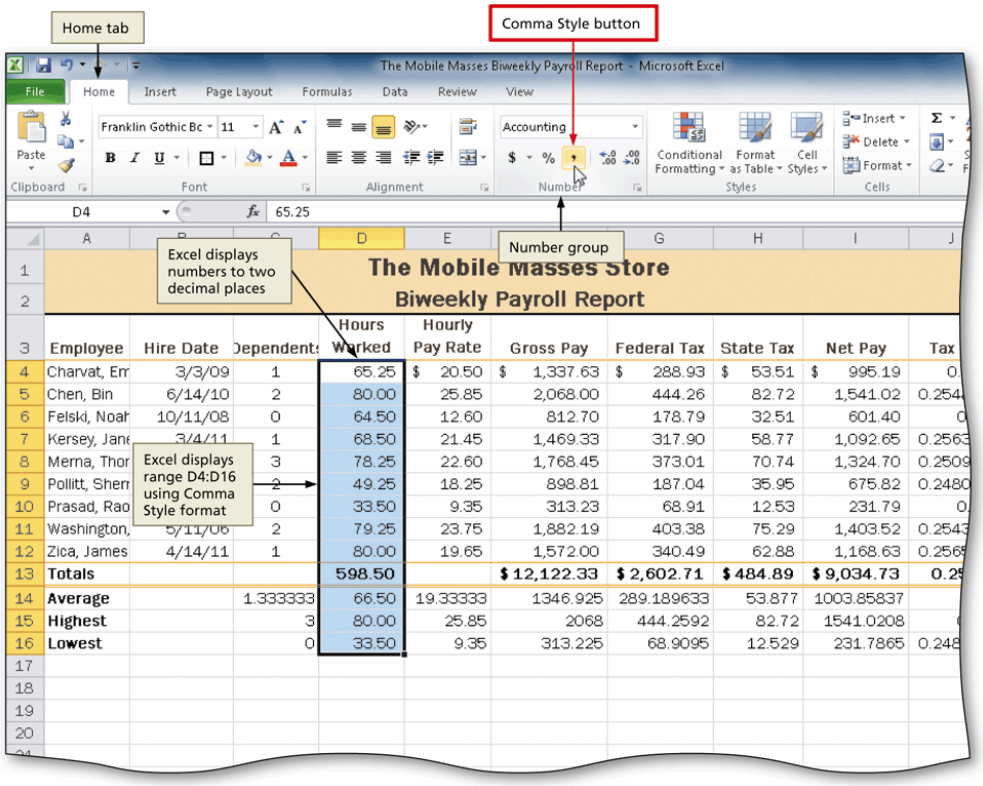


Formatting Dates and Centering Data in Cells



1. Select the range to contain the new date format
2. Click the Format Cells: Number Dialog Box Launcher on the Home tab to display the Format Cells dialog box
3. If necessary, click the Number tab, click Date in the Category list, and then click the desired date type in the Type list to choose the format for the selected range
4. Click the OK button to format the dates in the selected range using the selected date format style
5. Select the range containing data to center, and then click the Center button on the Home tab to center the data in the selected range

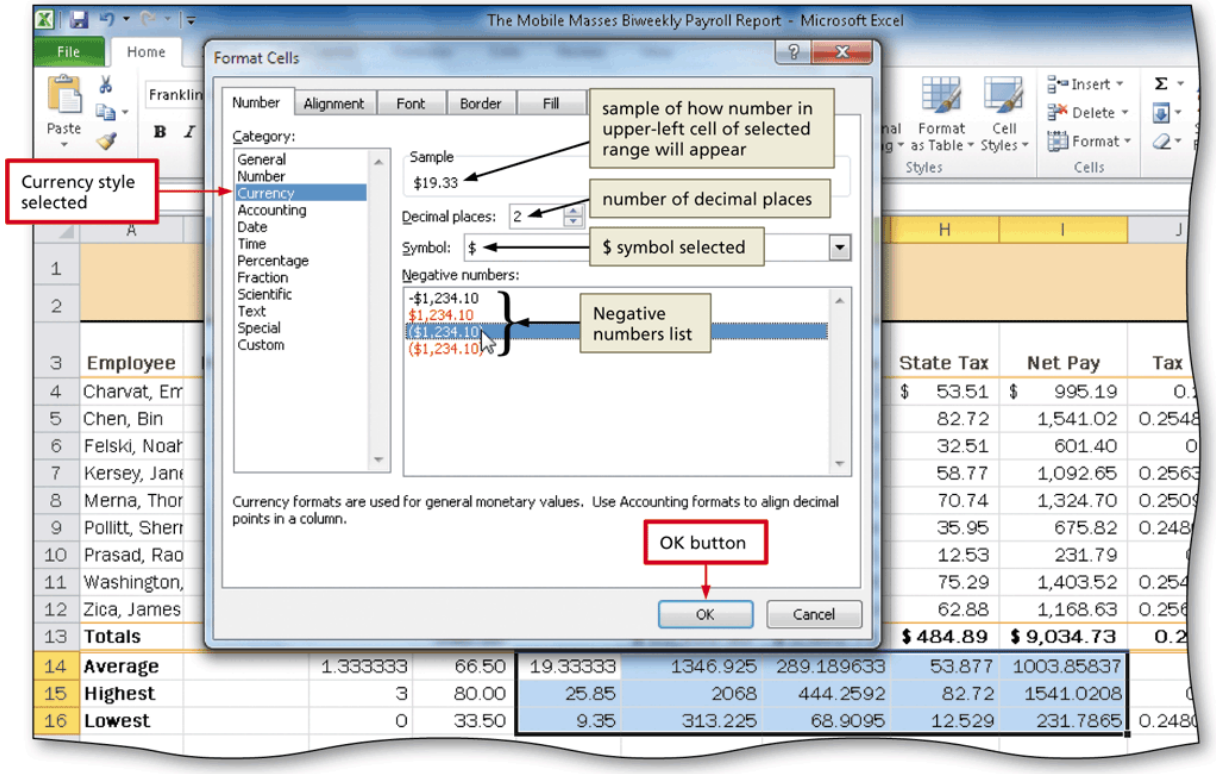
Accounting Number Format



Applying an Accounting Number Format and Comma Style Format Using the Ribbon

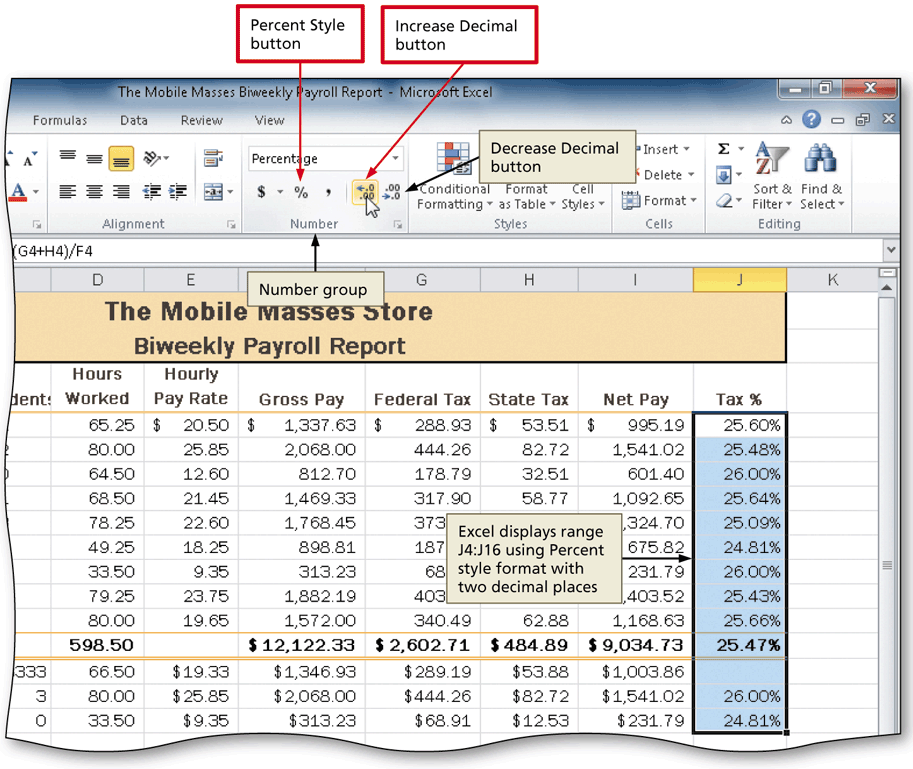
1. Select the range to contain the Accounting number format
2. Click the Accounting Number Format button on the Home tab to apply the Accounting number format to the selected range
3. Select the range to contain the Comma style format
4. Click the Comma Style button on the Home tab to assign the Comma style format to the selected range

Applying a Currency Style Format with a Floating Dollar Sign Using the Format Cells Dialog Box



1. Select the range to format, and then click the Format Cells: Number Dialog Box Launcher on the Home tab to display the Format Cells dialog box
2. If necessary, click the Number tab to display the Number tab
3. Click Currency in the Category list to select the necessary number format category, and then click the desired style to select the desired currency format
4. Click the OK button to assign the Currency style format to the selected range

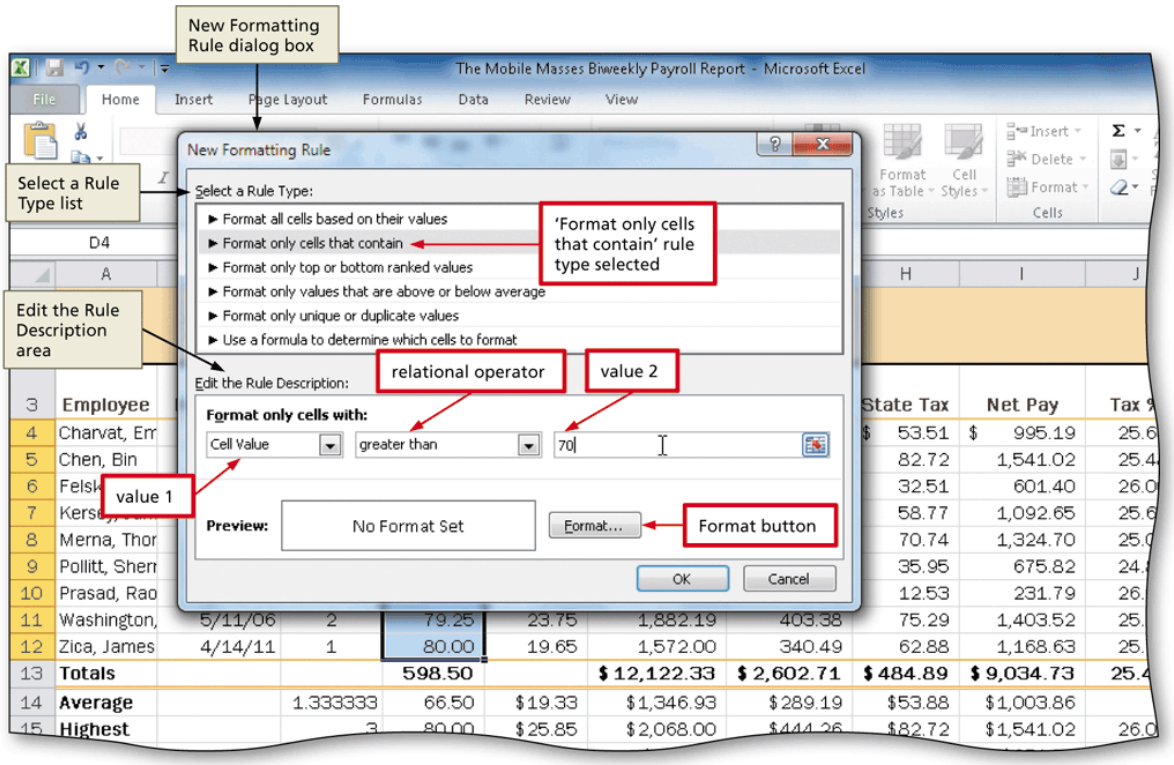
Percent Style Format



Hours Worked	Hourly Pay Rate	Gross Pay	Federal Tax	State Tax	Net Pay	Tax %
65.25	$ 20.50	$ 1,337.63	$ 288.93	$ 53.51	$ 995.19	25.60%
80.00	25.85	2,068.00	444.26	82.72	1,541.02	25.48%
64.50	12.60	812.70	178.79	32.51	601.40	26.00%
68.50	21.45	1,469.33	317.90	58.77	1,092.65	25.64%
78.25	22.60	1,768.45	373		,324.70	25.09%
49.25	18.25	898.81	187		675.82	24.81%
33.50	9.35	313.23	68		231.79	26.00%
79.25	23.75	1,882.19	403		,403.52	25.43%
80.00	19.65	1,572.00	340.49	62.88	1,168.63	25.66%
598.50		**$ 12,122.33**	**$ 2,602.71**	**$ 484.89**	**$ 9,034.73**	**25.47%**
66.50	$19.33	$1,346.93	$289.19	$53.88	$1,003.86	
80.00	$25.85	$2,068.00	$444.26	$82.72	$1,541.02	26.00%
33.50	$9.35	$313.23	$68.91	$12.53	$231.79	24.81%

1. Select the range to format
2. Click the Percent Style button on the Home tab to display the numbers in the selected range as a rounded whole percent
3. Click the Increase Decimal button on the Home tab two times to display the numbers in the selected range with two decimal places

Applying Conditional Formatting



1. Select the range to which you wish to apply conditional formatting
2. Click the Conditional Formatting button on the Home tab to display the Conditional Formatting list
3. Click New Rule in the Conditional Formatting list to display the New Formatting Rule dialog box
4. Click the desired rule type in the Select a Rule Type area
5. Select and type the desired values in the Edit the Rule Description area

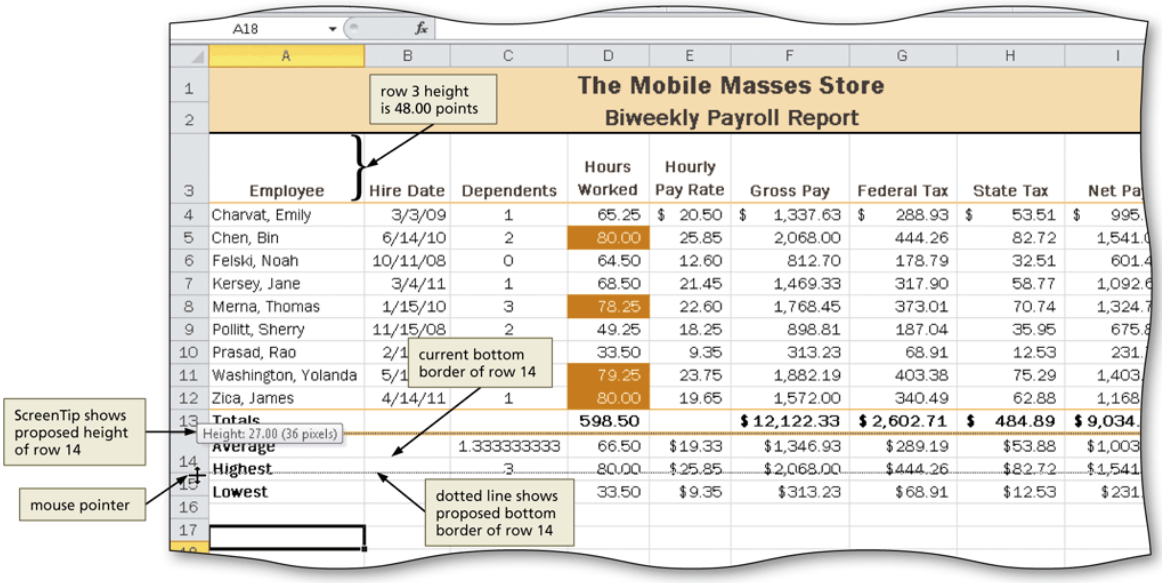
Conditional Formatting

Relational Operator	Description
between	Cell value is between two numbers.
not between	Cell value is not between two numbers.
equal to	Cell value is equal to a number.
not equal to	Cell value is not equal to a number.
greater than	Cell value is greater than a number.
less than	Cell value is less than a number.
greater than or equal to	Cell value is greater than or equal to a number.
less than or equal to	Cell value is less than or equal to a number.

Applying Conditional Formatting

1. Click the Format button to display the Format Cells dialog box
2. If necessary, click the Font tab. Click the Color box arrow to display the Color gallery and then click the desired font color
3. Click the Fill tab to display the Fill sheet and then click the desired background color
4. Click the OK button to close the Format Cells dialog box with the desired font and background colors displayed in the Preview box
5. Click the OK button to assign the conditional format to the selected range

Changing Row and Column Width and Height



Step	Action
Changing Column Width	
1	Drag through the column headings for the columns you wish to resize.
2	Point to the boundary on the right side of the rightmost column to cause the mouse pointer to become a split double arrow.
3	Double-click the right boundary of the column to change the width of the selected columns to best fit.
4	To resize a column by dragging, point to the boundary of the right side of the column heading. When the mouse pointer changes to a split double arrow, drag to the desired width, and then release the mouse button.
Changing Row Height	
1	Point to the boundary below the row heading to resize
2	Drag the boundary to the desired row height and then release the mouse button

Formula and Basic Function Notes

Directions: Record notes below during the discussion on formulas and basic functions.

Cell data is classified according to its intended purpose Describe each:

Label:

Value:

Formula:

What symbol prepares a cell for entry of a formula?

What symbol tells spreadsheet software **not** to treat cell data as a value?

Use the spreadsheet below to answer questions 4 and 5

	A	B	C	D	E
1	2	3	4	5	
2	2	3	4	5	
3	2	3	4	5	
4	2	3	4	5	
5					

Write a formula to add the numbers in Row 3, Columns A, C, and D:

Write a formula that will add all of the numbers in Column B

What are the four operators? List the name of the operator and its symbol.

Operator	Symbol	Operator	Symbol

What is the Order of Operations

Which operation would be performed first in the following equation?
=(A8+C9)/(H8-L9)?

The value for C7 is 2; C8 is 4; and F4 is 2,
What is the result of the equation =C7+C8*F4? Why?

What is the result of the equation =(C7+C8)*F4? Why?

What is a **function**?

What is a cell reference?

Give an example of and explain a **relative cell reference**

Give an example of and explain an **absolute cell reference**

Give an example of and explain a **mixed cell reference**

What is the **addition function** and why is it used? Give an example

What is the **average function** and why is it used? Give an example

What is the **maximum function** and why is it used? Give an example

What is the **minimum function** and why is it used? Give an example

Use the spreadsheet below to answer questions 4 and 5

	A	B	C	D	E
1	2	3	4	5	
2	2	3	4	5	
3	2	3	4	5	
4	2	3	4	5	
5					

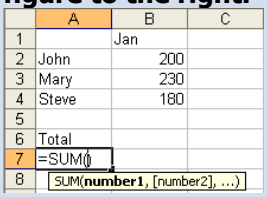
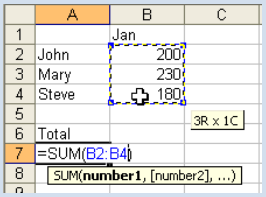
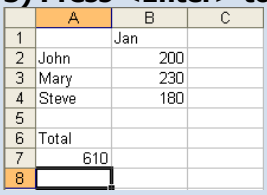
Use a function to write a formula that will add all values in Column A

Use a function to write a formula that will find the average of all of the values in Row 4

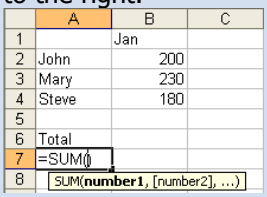
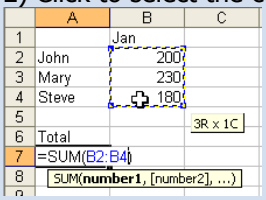
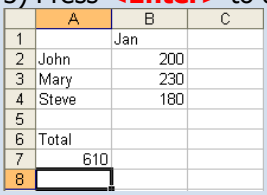
Use a function to write a formula that will find the highest number in Row 1

Use a function to write a formula that will find the lowest number in Row 3

Do It! **Using Formulas**

Here's how	Here's why
Click Ctrl+End.	You need to add the formula to the end of the column.
Click in the first blank cell.	
Click AutoSum **button on the Standard toolbar.**	**1) If the active cell is not located at the bottom or on the right of a list of numbers, you can still use the AutoSum button to calculate the total.** **Click on the cell and click the AutoSum button.** **Formula appears as displayed in the figure to the right.**  **2) Click to select the cells to be calculated.**  **3) Press <Enter> to display the total.** 
Press Enter.	

Do It! **Using Formulas**

Here's how	Here's why
Click Ctrl+End.	You need to add the formula to the end of the column.
Click in the first blank cell.	
Click **AutoSum** button on the Standard toolbar.	1) If the active cell is not located at the bottom or on the right of a list of numbers, you can still use the AutoSum button to calculate the total. Click on the cell and click the **AutoSum** button. Formula appears as displayed in the figure to the right.  2) Click to select the cells to be calculated.  3) Press **<Enter>** to display the total. 
Press Enter.	

Do It!

Use Basic Formulas & Functions

In this exercise, you'll follow along with your teacher to enter data into a spreadsheet and perform simple calculations. You use the operations and functions listed below.

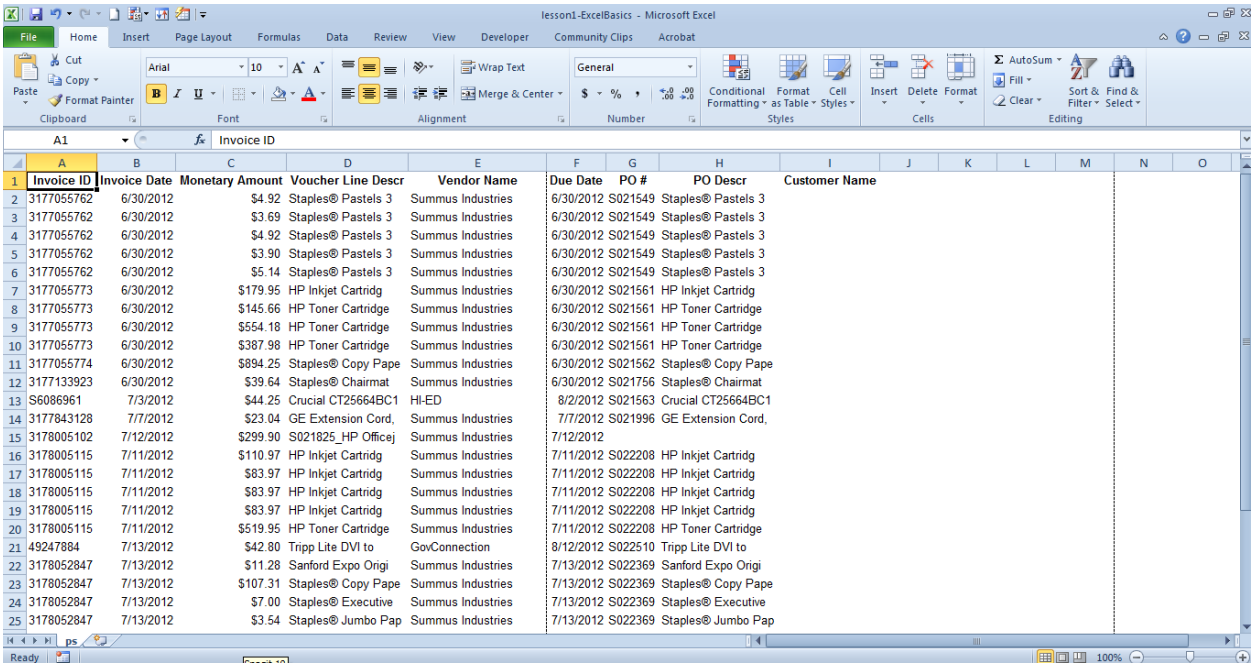
- Addition
- Division
- Multiplication
- Subtraction
- Average
- Sum
- Maximum
- Minimum

Here's how	Here's why
Retrieve the spreadsheet from UTD Center 1 spreadsheet.	
Delete Columns G, I, H, J.	These are extra columns that came over from Account Reconciliation Download page. We don't need the columns.
Use a function to write a formula in Cell C12 that calculates the total for the range of cells C5:C11 and format the data as currency. **Notes:**	
Copy the formula to Column D.	
Apply an accounting border to C12 and D12	
Apply a single line bottom border to Cell F4.	
Enter a formula to calculate the total Expenses for the Period. **Notes:** **Should you use the a function or arithmetic.**	
Enter the row heading Average in bold in Column A below the word Total and enter a formula in the same row in Column C to calculate the average price of the items	
Insert 4 rows about A1.	
Readjust the title and subtitle to center across Columns A-I.	
Preview the worksheet.	

End of Lesson Summary

- You can copy or move data to another part of the worksheet. You can use the Copy, Cut, and Paste buttons, the drag-and-drop method, and the fill handle to copy and move data in a worksheet. These tools save time by eliminating the need to retype data.
- As you build a worksheet, you may need to insert a row or column to enter more data, or delete a row or column of unnecessary data. You can also insert or delete specific cells within a worksheet.
- When a worksheet becomes large, the column or row labels can scroll out of view as you work on other parts of the worksheet. To keep selected rows and columns on the screen as the rest of the worksheet scrolls, you can freeze panes.
- Splitting a large worksheet enables you to view and work in different parts of a worksheet at once, in two or four panes that you can scroll independently.
- You can check a worksheet for possible misspellings and correct them using the Spelling dialog box.
- When you are ready to print a worksheet, switching from Normal view to Page Layout view can be helpful. You can modify how a worksheet appears on the printed page by increasing or decreasing the margins, changing the page orientation, designating a print area, inserting page breaks, scaling, showing or hiding gridlines and headings, and specifying print titles.
- Headers and footers are useful for adding identifying text at the top and bottom of the printed page. Common elements include your name, the page number, the current date, the workbook file name, and the worksheet name.

Case Study – Calculating Totals and Adding Functions



Invoice ID	Invoice Date	Monetary Amount	Voucher Line Descr	Vendor Name	Due Date	PO #	PO Descr	Customer Name
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.69	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$4.92	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$3.90	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055762	6/30/2012	$5.14	Staples® Pastels 3	Summus Industries	6/30/2012	S021549	Staples® Pastels 3	
3177055773	6/30/2012	$179.95	HP Inkjet Cartridg	Summus Industries	6/30/2012	S021561	HP Inkjet Cartridg	
3177055773	6/30/2012	$145.66	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$554.18	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055773	6/30/2012	$387.98	HP Toner Cartridge	Summus Industries	6/30/2012	S021561	HP Toner Cartridge	
3177055774	6/30/2012	$894.25	Staples® Copy Pape	Summus Industries	6/30/2012	S021562	Staples® Copy Pape	
3177133923	6/30/2012	$39.64	Staples® Chairmat	Summus Industries	6/30/2012	S021756	Staples® Chairmat	
S6086961	7/3/2012	$44.25	Crucial CT25664BC1	HI-ED	8/2/2012	S021563	Crucial CT25664BC1	
3177843128	7/7/2012	$23.04	GE Extension Cord,	Summus Industries	7/7/2012	S021996	GE Extension Cord,	
3178005102	7/12/2012	$299.90	S021825_HP Officej	Summus Industries	7/12/2012			
3178005115	7/11/2012	$110.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$83.97	HP Inkjet Cartridg	Summus Industries	7/11/2012	S022208	HP Inkjet Cartridg	
3178005115	7/11/2012	$519.95	HP Toner Cartridge	Summus Industries	7/11/2012	S022208	HP Toner Cartridge	
49247884	7/13/2012	$42.80	Tripp Lite DVI to	GovConnection	8/12/2012	S022510	Tripp Lite DVI to	
3178052847	7/13/2012	$11.28	Sanford Expo Origi	Summus Industries	7/13/2012	S022369	Sanford Expo Origi	
3178052847	7/13/2012	$107.31	Staples® Copy Pape	Summus Industries	7/13/2012	S022369	Staples® Copy Pape	
3178052847	7/13/2012	$7.00	Staples® Executive	Summus Industries	7/13/2012	S022369	Staples® Executive	
3178052847	7/13/2012	$3.54	Staples® Jumbo Pap	Summus Industries	7/13/2012	S022369	Staples® Jumbo Pap	

Introduction

You've downloaded and saved the transactions from Account Reconciliation. You now need to reformat to the Worksheet.

Instructions

Refer to the first two sections of your student guide to complete the tasks outlined in Lesson 4. You will need to use the tasks including:

- Enter formulas using the keyboard
- Enter formulas using Point mode
- Apply the AVERAGE, MAX, and MIN functions
- Verify a formula using Range Finder
- Apply a theme to a workbook
- Apply a date format to a cell or range
- Add conditional formatting to cells

Step	Action
1	Open Actuals_Transactions_June.xls.
2	Click Insert Worksheet. (Shortcut –
3	Delete column titled Customer Name.

Step	Action
4	Change the format of Monetary Amount. Remove the dollar symbol ($) from each row.
5	Change the format of Invoice Date and Due Date to display Day-Month format. It currently shows day/month/year.
6	Complete the questions from the Review in Lesson 1.

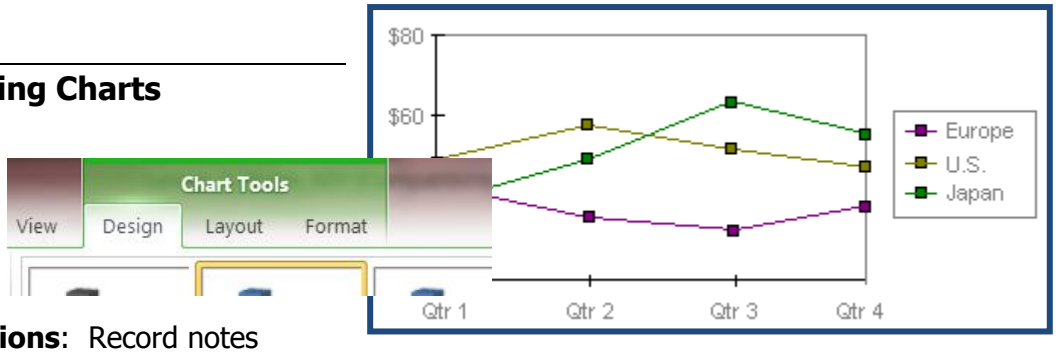
Lesson 5: Charts

Overview

Creating **charts** is a powerful feature in Excel. A chart uses values in a worksheet to create a graphical representation of their relationship. With Excel charts, you can summarize, highlight, or reveal trends in the data that might not be obvious when simply looking at the numbers. When creating a chart, each column of data on the worksheet is part of the **data series**. Each individual value within the row or column is called a **data point**.

To create a chart:
1. Highlight the data that will be charted. The highlighted area is shaded.
2. Select the Insert tab on the Ribbon.
3. Click the chart category drop-down arrow for the appropriate chart sub-type in the *Charts* group.
4. Select the chart sub-type from the drop-down menu. The chart is created and embedded in the active worksheet.

Creating Charts



Directions: Record notes below during the discussion on formulas and basic functions.

Microsoft Excel enables users to create _____ of _____ using _____. Charts make data _____. Data can be _____ to show comparisons, patterns, and trends.

Before creating a chart, you must decide if the _____ is _____ for a chart and then decide which _____ of chart will best display the data.

There are several types of charts to choose from, but the chart you choose depends on the message you are trying to _____.

The _____ types of charts include the _____, bar, and ____ .

Chart Objects

Object	Description
Chart Area	The entire area within the chart borders including the chart and all related elements.
Plot Area	*The area in which Excel plots data.*
Category Axis (x-axis)	The axis that contains the categories being plotted. It is usually the horizontal axis.
Value Axis (y-axis)	The axis that contains the values being plotted. It is usually the vertical axis.
Chart Title	Text describing the chart that is automatically centered and placed at the top of the chart.
Legend	Describves the data series being plotted.
Gridlines	Lines that extend from an axis across the plot area to help guide the eye from the data point to its corresponding value.

Chart Tools Contextual Tabs

You can modify a chart any time after it's created. The chart must be activated by clicking or selecting it before attempting modifications. The three Chart Tools contextual tabs contain the tools necessary to modify and enhance the chart. Contextual tabs are not visible or activated until the chart is activated.

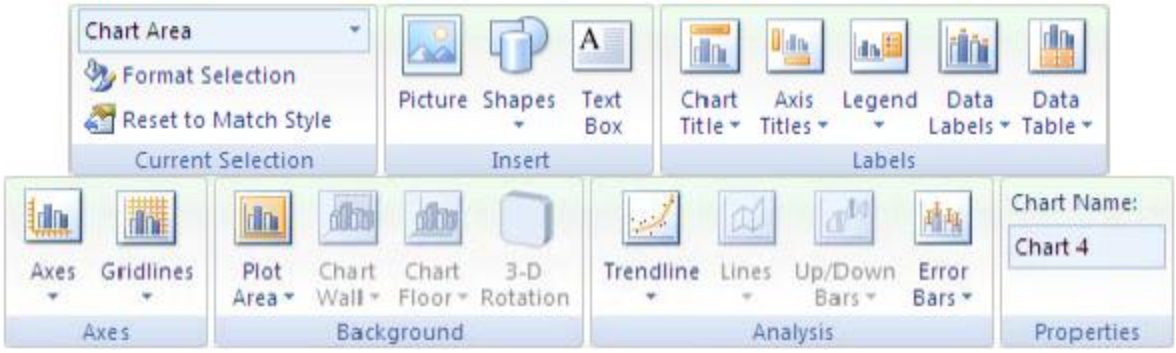
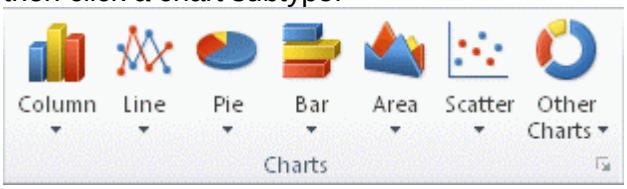
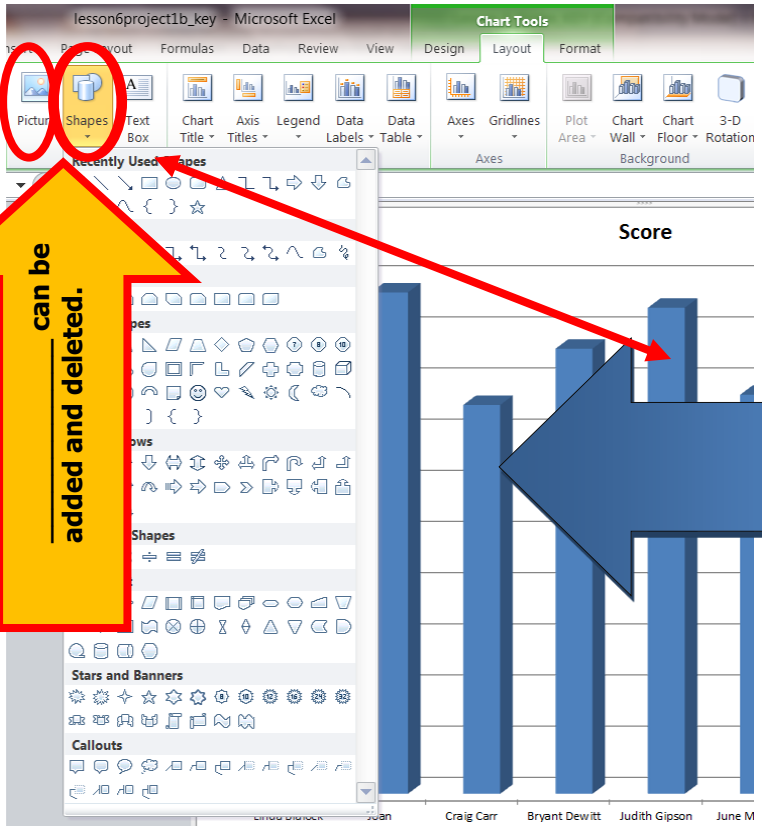


Chart your data

1. Select the data that you want to chart.
2. On the **Insert** tab, in the **Charts** group, click the chart type that you want to use, and then click a chart subtype.

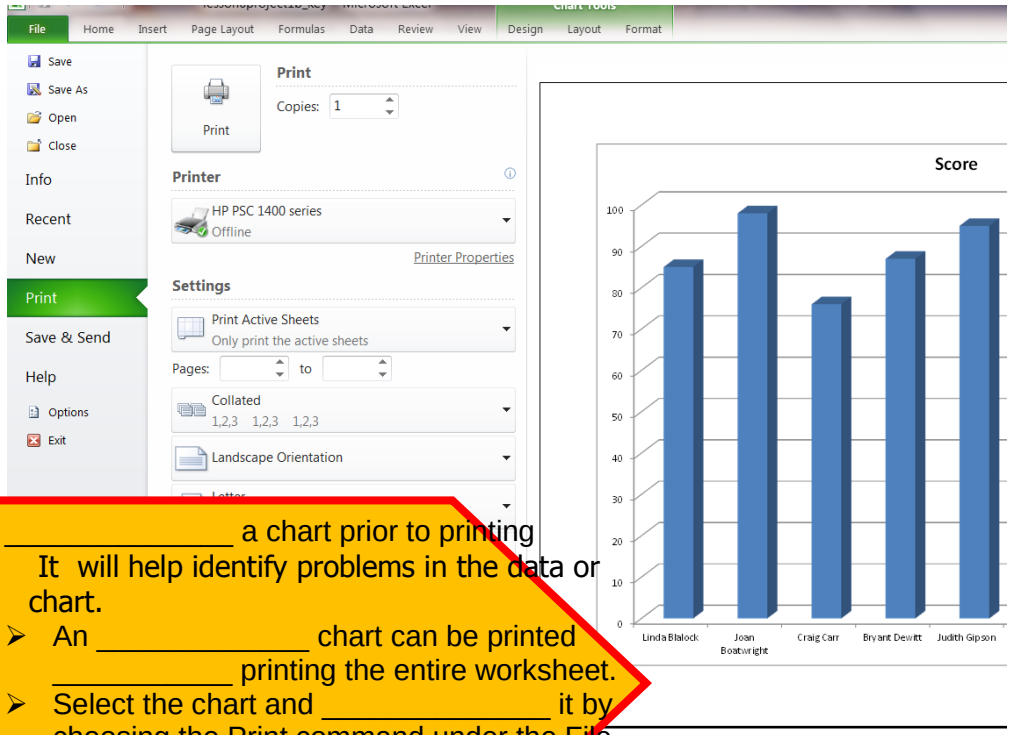


3. Use the **Chart Tools** to add chart elements such as titles and data labels, and to change the design, layout, or format of your chart.
   Using Chart Wizard



- To _____ using the Chart Tools Ribbon, select the _____ Tab, drop down the Shapes menu.
- Choose the shape you think _____ works with your Chart.
- Add _____ if you think it will enhance the information. To _____ SHAPES, select the shape and press the _____ key.

Previewing and Printing Charts



- _____ a chart prior to printing It will help identify problems in the data or chart.
- An _____ chart can be printed _____ printing the entire worksheet.
- Select the chart and _____ it by choosing the Print command under the File Tab.

Do It!

Create a Chart

In this exercise, you'll follow along with your teacher to create a simple bar chart. You use the operations and functions listed below.

Here's how	Here's why
Retrieve the spreadsheet from UTD Center 1 spreadsheet.	
Highlight A1:J25 from your worksheet.	This selects the area that we need for the chart.
Click Insert tab.	This tab displays the Chart types.
Click the Stacked Bar from the 2-D section.	This drop-down menu lets you find the correct chart type. In our case, we're choosing the Stacked Bar.
Resize the chart.	Changes the displayed chart so that it's readable.

End of Lesson Summary

To create a Chart, you need to:

1. Highlight the data that will be charted. The highlighted area is shaded.
2. Select the Insert tab on the Ribbon.
3. Click the chart category drop-down arrow for the appropriate chart sub-type in the *Charts* group.
4. Select the chart sub-type from the drop-down menu. The chart is created and embedded in the active worksheet.

Review Questions

1. What do menu lets you print to a .pdf format?

2. How can you set the page orientation?

3. What keyboard shortcut lets you print a workbook?

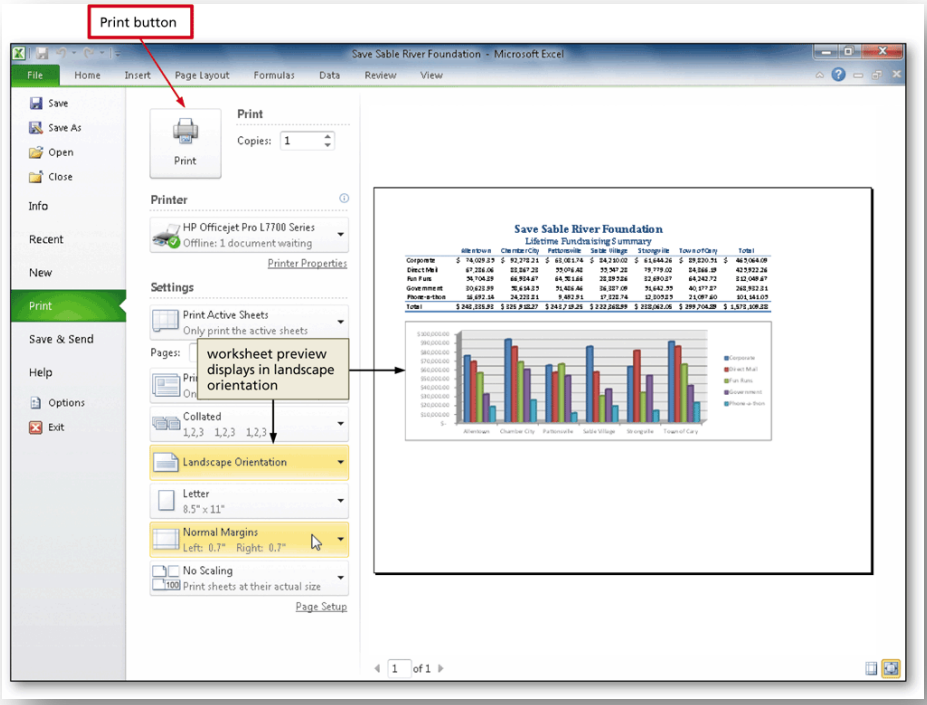
4. What keyboard shortcut automatically saves a worksheet with the current name and in the current location?

5. How would you hide a row or column from view without permanently deleting the information?

6. What ribbon contains the commands for creating charts in Excel 2010?

Lesson 6: Printing

Overview



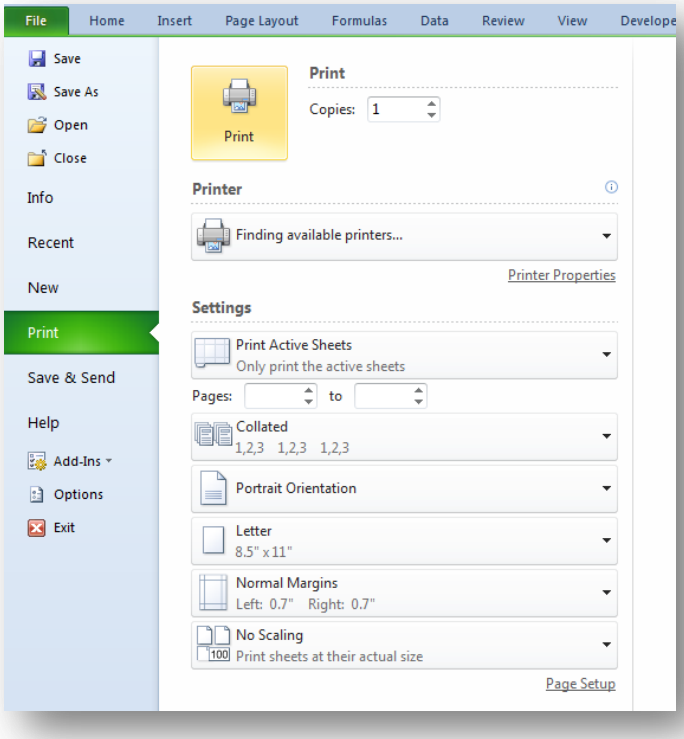
Keyboard shortcut You can also press CTRL+P.

The preview window will display in black and white, regardless of whether your worksheet(s) includes color, unless you are configured to print on a color printer.

Previewing the workbook

1. Click the worksheet or select the worksheets that you want to preview.
2. Click **File** and then click **Print**.
3. To preview the next and previous pages, at the bottom of the Print Preview window, click **Next Page** and **Previous Page**.
4. To change the printer, click the drop-down box under **Printer**, and select the printer that you want.

Sending Workbook to Printer



- To print a portion of a worksheet, click the worksheet, and then select the range of data that you want to print.
- To print the entire worksheet, click the worksheet to activate it.

Step	Action
1	To print the workbook, do one of the following:

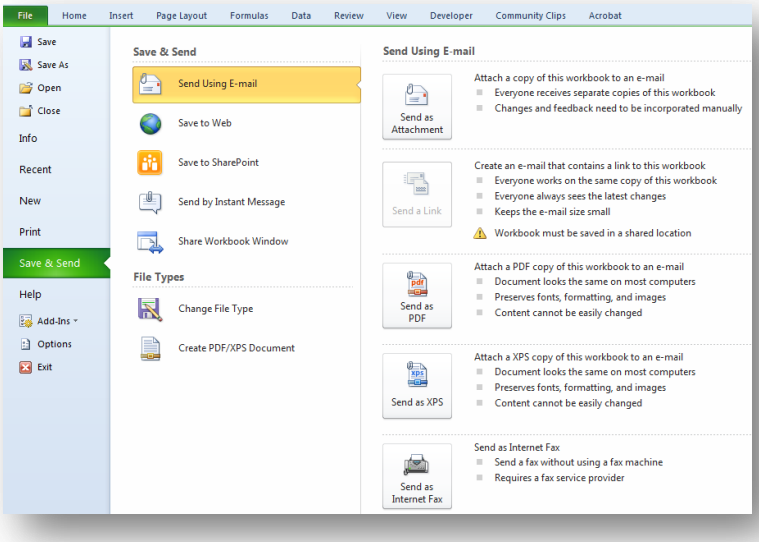
If you want to:	Then
Print a portion of the worksheet	Click the worksheet. Select the range of data. Click **File tab** from the Ribbon. Click **Print** from File menu. Choose other Print options such as copies, name of printer, or duplex settings. Click .
Print the entire worksheet.	Click **File tab** from the Ribbon.

Step	Action	
		Click **Print** from File menu. Choose *Printer*. Choose other Print options such as copies, name of printer, or duplex settings. Click .

Setting Page Setup Options

- To make page setup changes, including changing page orientation, paper size, and page margins, select the options that you want under **Settings**.
- To scale the entire worksheet to fit on a single printed page, under **Settings**, click the option that you want in the scale options drop-down box.

Printing to PDF and emailing a workbook



Step	Action
1	With the workbook open, Click on the File tab of the ribbon to view the available options.
2	Click **Save and Send** in the menu to view the available options.
3	Click **Send Using E-mail** from available options.
4	Click button on the right hand side of the window to open the Publish
5	Add mail recipents to address line of email message.
6	Click **Send**.

Appendix A: Shortcut Keys

Press the key on the keyboard as shown in the table below:

Press	Move to:
→	One cell to the right
←	One cell to the left
↓	One cell to the down
↑	One cell to the up
<Ctrl> + →	Last cell to the right of the current region
<Ctrl> + ←	First cell to the left of the current region
<Ctrl> + ↓	Last cell to the bottom of the current region
<Ctrl> + ↑	First cell to the top of the current region
<Home>	First cell in the row
<Ctrl> + <Home>	First cell in the worksheet
<Ctrl> + <End>	Last cell in the worksheet which contains data
Page Down	One screen down
Page Up	One screen up
<Alt> + Page Down	One screen right
<Alt> + Page Up	One screen up

Press the following key to control your active cell.

Press	Action:
<Tab>	Move one cell to the right
<Shift> + <Tab>	Move one cell to the left
<Enter>	Move one cell down
<Shift> + <Enter>	Move one cell up