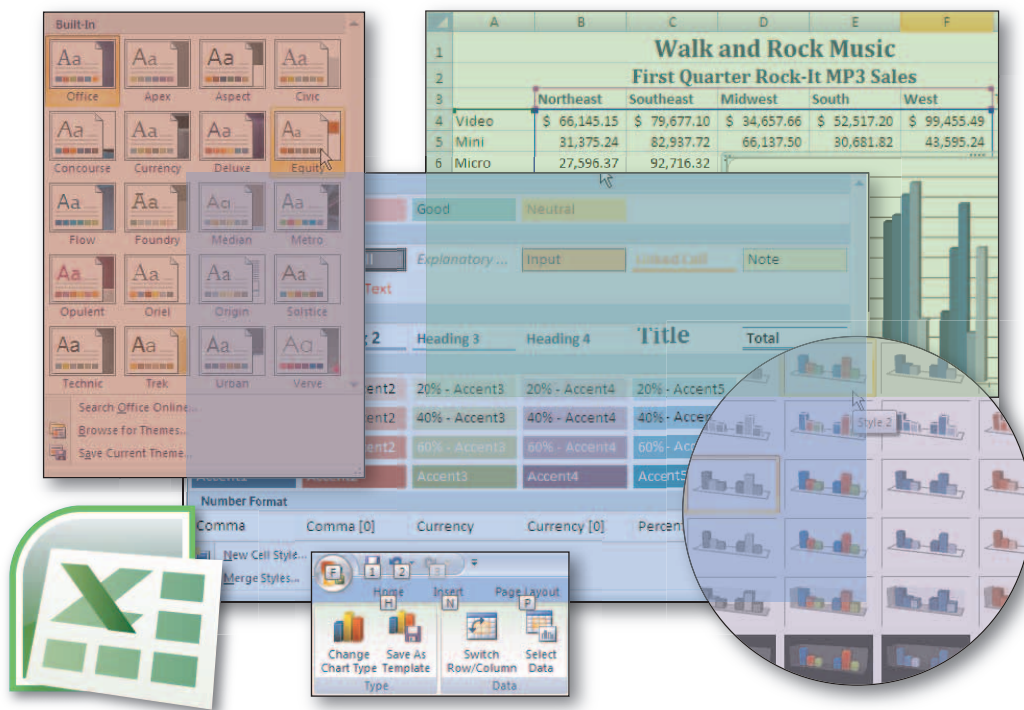


# 1 Creating a Worksheet and an Embedded Chart



## Objectives

You will have mastered the material in this chapter when you can:

- Start and quit Excel
- Describe the Excel worksheet
- Enter text and numbers
- Use the Sum button to sum a range of cells
- Copy the contents of a cell to a range of cells using the fill handle
- Save a workbook
- Format cells in a worksheet
- Create a 3-D Clustered Column chart
- Change document properties
- Save a workbook a second time using the same file name
- Print a worksheet
- Open a workbook
- Use the AutoCalculate area to determine statistics
- Correct errors on a worksheet
- Use Excel Help to answer questions

# 1 Creating a Worksheet and an Embedded Chart

## What Is Microsoft Office Excel 2007?

**Microsoft Office Excel 2007** is a powerful spreadsheet program that allows users to organize data, complete calculations, make decisions, graph data, develop professional looking reports (Figure 1–1), publish organized data to the Web, and access real-time data from Web sites. The four major parts of Excel are:

- **Workbooks and Worksheets** Workbooks are a collection of worksheets. Worksheets allow users to enter, calculate, manipulate, and analyze data such as numbers and text. The terms worksheet and spreadsheet are interchangeable.
- **Charts** Excel can draw a variety of charts.
- **Tables** Tables organize and store data within worksheets. For example, once a user enters data into a worksheet, an Excel table can sort the data, search for specific data, and select data that satisfies defined criteria.
- **Web Support** Web support allows users to save Excel worksheets or parts of a worksheet in HTML format, so a user can view and manipulate the worksheet using a browser. Excel Web support also provides access to real-time data, such as stock quotes, using Web queries.

This latest version of Excel makes it much easier than in previous versions to perform common functions by introducing a new style of user interface. It also offers the capability of creating larger worksheets, improved formatting and printing, improved charting and table functionality, industry-standard XML support that simplifies the sharing of data within and outside an organization, improved business intelligence functionality, and the capability of performing complex tasks on a server.

In this chapter, you will create a worksheet that includes a chart. The data in the worksheet and chart includes sales data for several stores that a company owns and operates.

### Project Planning Guidelines

The process of developing a worksheet that communicates specific information requires careful analysis and planning. As a starting point, establish why the worksheet is needed. Once the purpose is determined, analyze the intended users of the worksheet and their unique needs. Then, gather information about the topic and decide what to include in the worksheet. Finally, determine the worksheet design and style that will be most successful at delivering the message. Details of these guidelines are provided in Appendix A. In addition, each project developed in this book provides practical applications of these planning considerations.

## Project — Worksheet with an Embedded Chart

The project in this chapter follows proper design guidelines and uses Excel to create the worksheet shown in Figure 1–1. The worksheet contains sales data for Walk and Rock Music stores. The Walk and Rock Music product line includes a variety of MP3 music players, called Rock-It MP3, including players that show pictures and video, as well as a complete line of headphones and other accessories. The company sells its products at kiosks in several malls throughout the United States. By concentrating its stores near

colleges and universities and keeping the newest items in stock, the Walk and Rock Music stores quickly became trendy. As sales continued to grow in the past year, senior management requested an easy-to-read worksheet that shows product sales for the first quarter by region. In addition, they asked for a chart showing first quarter sales, because the president of the company likes to have a graphical representation of sales that allows him quickly to identify stronger and weaker product types by region.

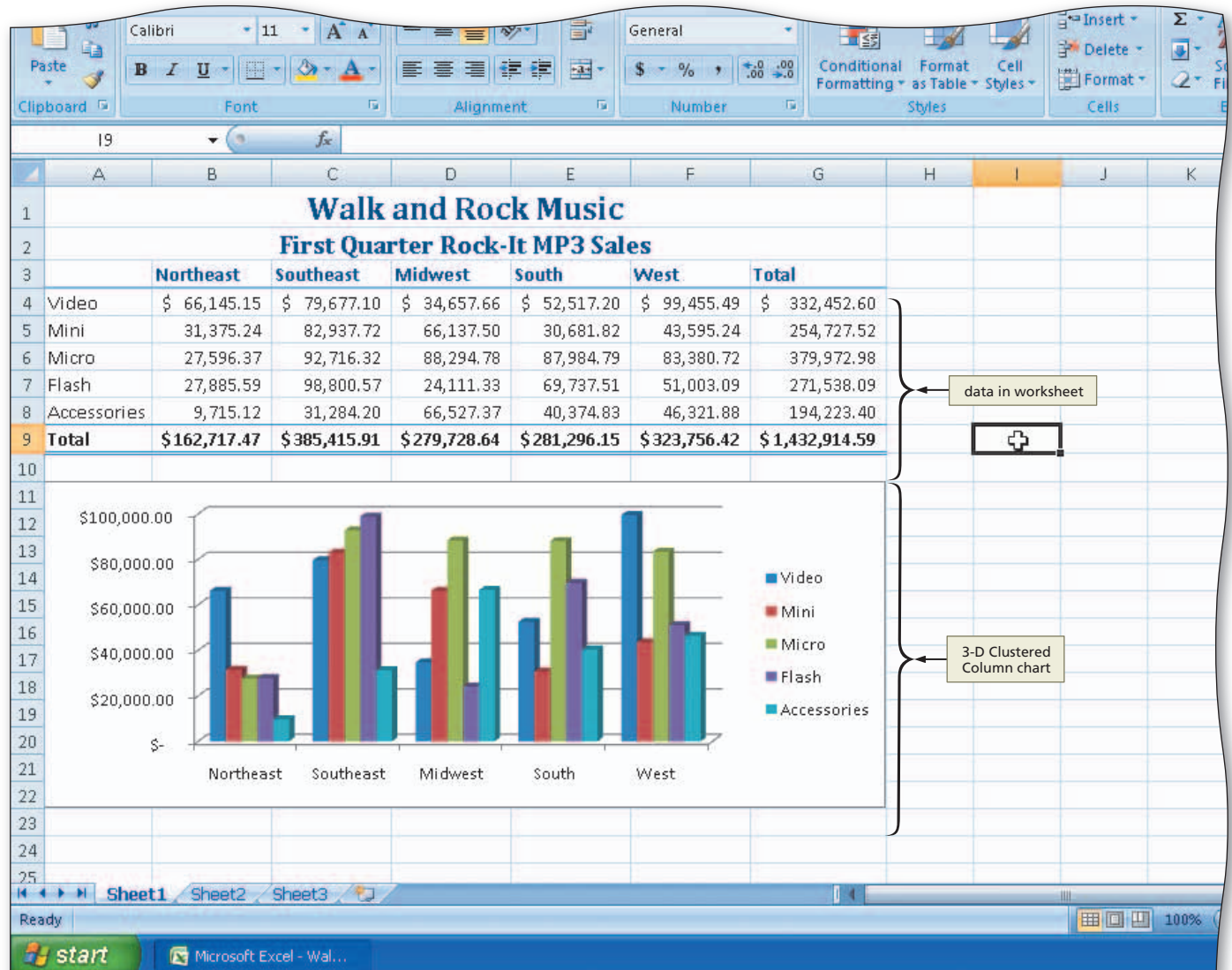


Figure 1-1

The first step in creating an effective worksheet is to make sure you understand what is required. The person or persons requesting the worksheet should supply their requirements in a requirements document. A **requirements document** includes a needs

BTW

**Excel 2007 Features**

With its what-if analysis tools, research capabilities, collaboration tools, streamlined user interface, smart tags, charting features, Web capabilities, hundreds of functions, and enhanced formatting capabilities, Excel 2007 is one of the easier and more powerful spreadsheet packages available.

requirements document

statement, source of data, summary of calculations, and any other special requirements for the worksheet, such as charting and Web support. Figure 1–2 shows the requirements document for the new workbook to be created in this chapter.

**REQUEST FOR NEW WORKBOOK**

<b>Date Submitted:</b>	April 15, 2008
<b>Submitted By:</b>	Trisha Samuels
<b>Worksheet Title:</b>	Walk and Rock Music First Quarter Sales
<b>Needs:</b>	An easy-to-read worksheet that shows Walk and Rock Music's first quarter sales for each of our sales regions in which we operate (Northeast, Southeast, Midwest, South, West). The worksheet also should include total sales for each region, total sales for each product type, and total company sales for the first quarter.
<b>Source of Data:</b>	The data for the worksheet is available for the end of the first quarter from the chief financial officer (CFO) of Walk and Rock Music.
<b>Calculations:</b>	The following calculations must be made for the worksheet: (a) total first quarter sales for each of the five regions; (b) total first quarter sales for each of the five product types; and (c) total first quarter sales for the company.
<b>Chart Requirements:</b>	Below the data in the worksheet, construct a 3-D Clustered Column chart that compares the total sales for each region within each type of product.

**Approvals**

<b>Approval Status:</b>	X	Approved
		Rejected
<b>Approved By:</b>	Stan Maderbek	
<b>Date:</b>	April 22, 2008	
<b>Assigned To:</b>	J. Quasney, Spreadsheet Specialist	

**Figure 1–2**

BTW

**Worksheet****Development Cycle**

Spreadsheet specialists do not sit down and start entering text, formulas, and data into a blank Excel worksheet as soon as they have a spreadsheet assignment. Instead, they follow an organized plan, or methodology, that breaks the development cycle into a series of tasks. The recommended methodology for creating worksheets includes:

- (1) analyze requirements (supplied in a requirements document);
- (2) design solution;
- (3) validate design;
- (4) implement design;
- (5) test solution; and
- (6) document solution.

**Plan Ahead****Overview**

As you read this chapter, you will learn how to create the worksheet shown in Figure 1–1 by performing these general tasks:

- Enter text in the worksheet
- Add totals to the worksheet
- Save the workbook that contains the worksheet
- Format the text in the worksheet
- Insert a chart in the worksheet
- Save the workbook a second time using the same file name
- Print the worksheet

**General Project Guidelines**

While creating an Excel worksheet, you need to make several decisions that will determine the appearance and characteristics of the finished worksheet. As you create the worksheet shown in Figure 1–1, you should follow these general guidelines:

1. **Select titles and subtitles for the worksheet.** Follow the *less is more* guideline. The less text in the titles and subtitles, the more impact the titles and subtitles will have. Use the fewest words possible to specify the information presented in the worksheet to the intended audience.

(continued)



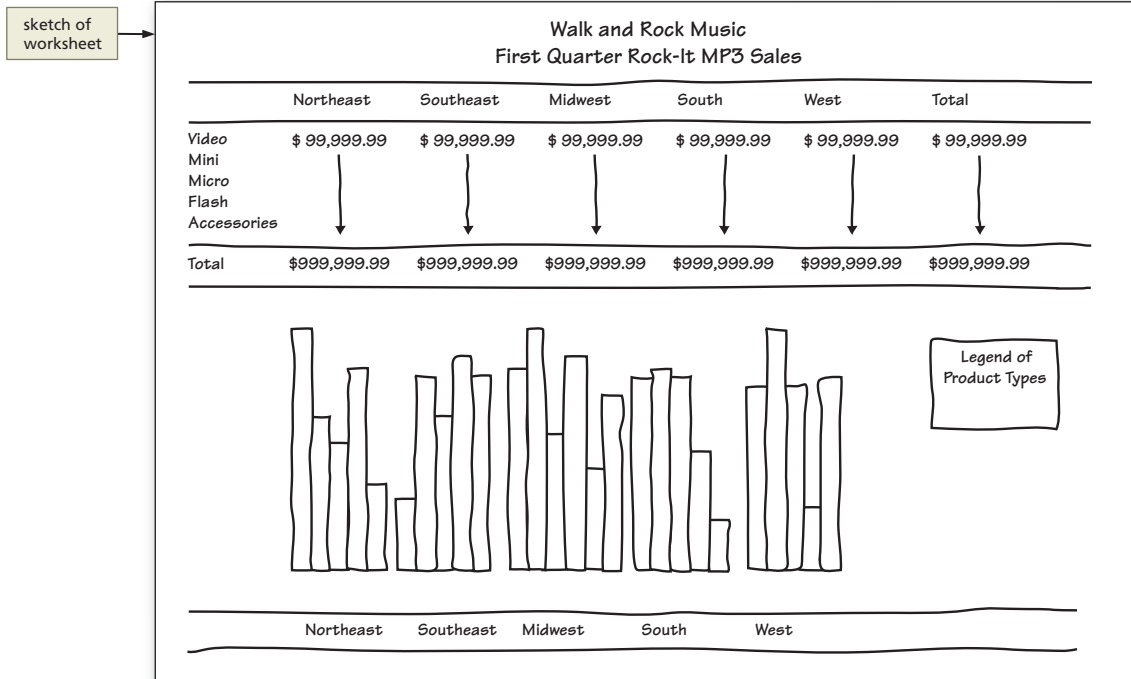


Figure 1-3

*(continued)*

2. **Determine the contents for rows and columns.** Rows typically contain information that is analogous to items in a list, such as the products sold by a company. Columns typically contain descriptive information about items in rows or contain information that helps to group the data in the worksheet, such as company regions.
3. **Determine the calculations that are needed.** You can decide to total data in a variety of ways, such as across rows or in columns. You also can include a grand total.
4. **Determine where to save the workbook.** You can store a workbook permanently, or **save** it, on a variety of storage media including a hard disk, USB flash drive, or CD. You also can indicate a specific location on the storage media for saving the workbook.
5. **Identify how to format various elements of the worksheet.** The overall appearance of a worksheet significantly affects its ability to communicate clearly. Examples of how you can modify the appearance, or **format**, of text include changing its shape, size, color, and position on the worksheet.
6. **Decide on the type of chart needed.** Excel includes the capability of creating many different types of charts, such as bar charts and pie charts. Each chart type relays a different message about the data in the worksheet. Choose a chart type that relays the message that you want to convey.
7. **Establish where to position and how to format the chart.** The position and format of the chart should command the attention of the intended audience. If possible, position the chart so that it prints with the worksheet data on a single page.

When necessary, more specific details concerning the above guidelines are presented at appropriate points in the chapter. The chapter also will identify the actions performed and decisions made regarding these guidelines during the creation of the worksheet shown in Figure 1-1 on page EX 2.

**Plan  
Ahead**

After carefully reviewing the requirements document (Figure 1–2 on page EX 4) and necessary decisions, the next step is to design a solution or draw a sketch of the worksheet based on the requirements, including titles, column and row headings, location of data values, and the 3-D Clustered Column chart, as shown in Figure 1–3 on page EX 5. The dollar signs, 9s, and commas that you see in the sketch of the worksheet indicate formatted numeric values.

With a good understanding of the requirements document, an understanding of the necessary decisions, and a sketch of the worksheet, the next step is to use Excel to create the worksheet and chart.

## Starting Excel

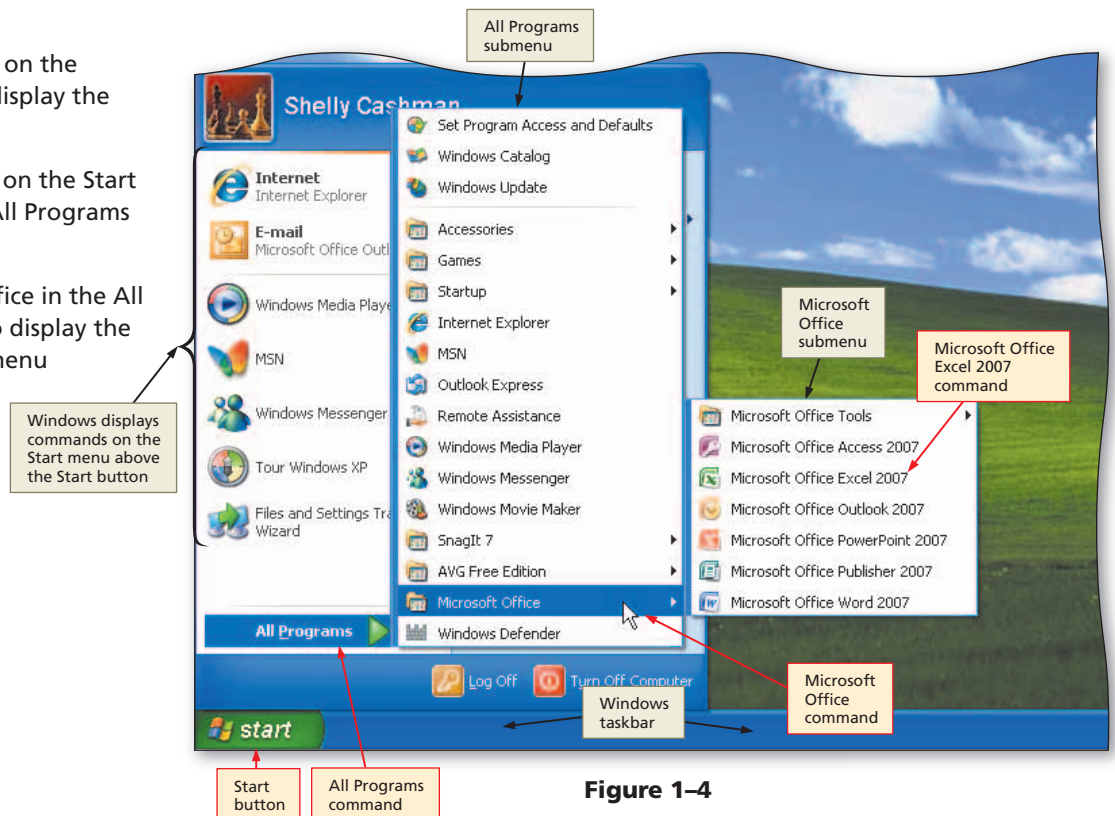
If you are using a computer to step through the project in this chapter and you want your screen to match the figures in this book, you should change your computer's resolution to 1024 × 768. For information about how to change a computer's resolution, read Appendix E.

### To Start Excel

The following steps, which assume Windows is running, start Excel based on a typical installation of Microsoft Office on your computer. You may need to ask your instructor how to start Excel for your computer.

**1**

- Click the Start button on the Windows taskbar to display the Start menu.
- Point to All Programs on the Start menu to display the All Programs submenu.
- Point to Microsoft Office in the All Programs submenu to display the Microsoft Office submenu (Figure 1–4).



**Figure 1–4**

2

- Click Microsoft Office Excel 2007 to start Excel and display a new blank workbook titled Book1 in the Excel window (Figure 1–5).
- If the Excel window is not maximized, click the Maximize button next to the Close button on its title bar to maximize the window.
- If the worksheet window in Excel is not maximized, click the Maximize button next to the Close button on its title bar to maximize the worksheet window within Excel.

## Q&amp;A

What is a maximized window?

A maximized window fills the entire screen. When you maximize a window, the Maximize button changes to a Restore Down button. When you restore a maximized window, the window returns to its previous size and the Restore Down button changes to a Maximize button.

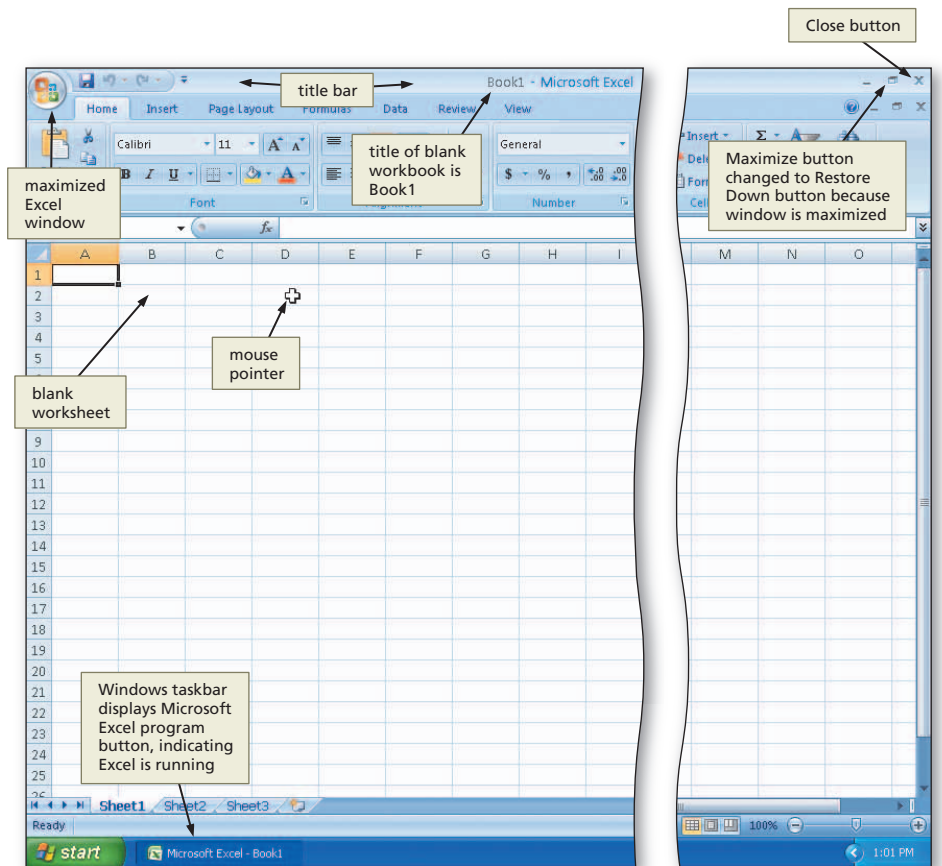


Figure 1–5

## Other Ways

- Double-click Excel 2007 icon on desktop, if one is present
- Click Microsoft Office Excel 2007 on Start menu

## The Excel Workbook

The Excel window consists of a variety of components to make your work more efficient and worksheets more professional. These include the document window, Ribbon, Mini toolbar and shortcut menus, Quick Access Toolbar, and Office Button. Some of these components are common to other Microsoft Office 2007 programs; others are unique to Excel.

When Excel starts, it creates a new blank workbook, called Book1. The **workbook** (Figure 1–6) is like a notebook. Inside the workbook are sheets, each of which is called a **worksheet**. Excel opens a new workbook with three worksheets.

If necessary, you can add additional worksheets as long as your computer has enough memory to accommodate them. Each worksheet has a sheet name that appears on a **sheet tab** at the bottom of the workbook. For example, Sheet1 is the name of the active worksheet displayed in the Book1 workbook. If you click the sheet tab labeled Sheet2, Excel displays the Sheet2 worksheet. The project in this chapter uses only the Sheet1 worksheet.

## The Worksheet

The worksheet is organized into a rectangular grid containing vertical columns and horizontal rows. A column letter above the grid, also called the **column heading**, identifies each column. A row number on the left side of the grid, also called the **row heading**, identifies

## BTW

## Excel Help

Help with Excel is no further away than the Help button on the right side of the Ribbon. Click the Help button, type help in the 'Type words to search for' box, and then press the ENTER key. Excel responds with a list of topics you can click to learn about obtaining Help on any Excel-related topic. To find out what is new in Excel 2007, type what is new in Excel in the 'Type words to search for' box.

each row. With the screen resolution set to  $1024 \times 768$  and the Excel window maximized, Excel displays 15 columns (A through O) and 25 rows (1 through 25) of the worksheet on the screen, as shown in Figure 1–6.

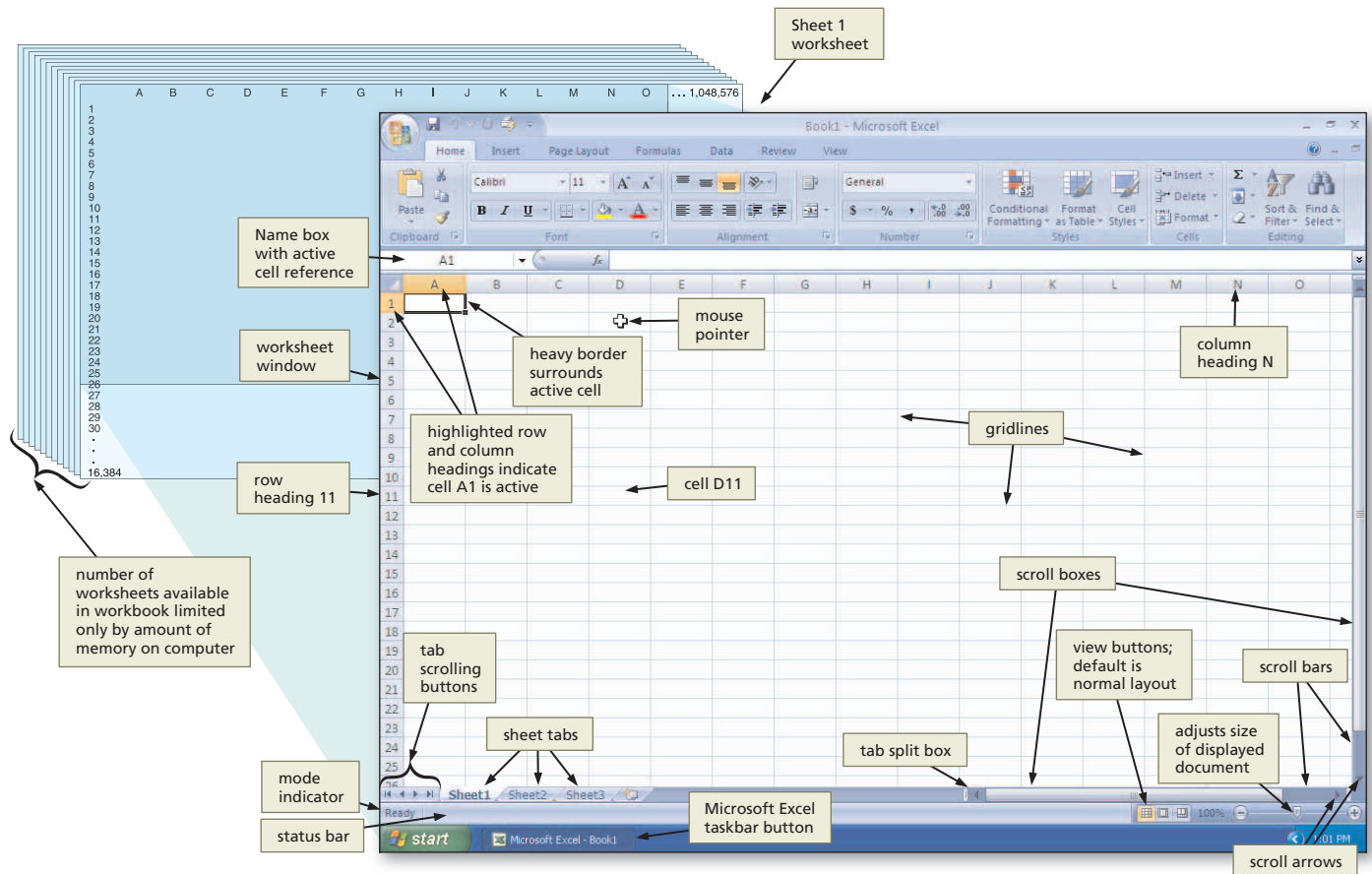


Figure 1–6

### BTW Worksheet Development

The key to developing a useful worksheet is careful planning. Careful planning can reduce your effort significantly and result in a worksheet that is accurate, easy to read, flexible, and useful. When analyzing a problem and designing a worksheet solution, you should follow these steps: (1) define the problem, including need, source of data, calculations, charting, and Web or special requirements; (2) design the worksheet; (3) enter the data and formulas; and (4) test the worksheet.

The intersection of each column and row is a cell. A **cell** is the basic unit of a worksheet into which you enter data. Each worksheet in a workbook has 16,384 columns and 1,048,576 rows for a total of 17,179,869,180 cells. Only a small fraction of the active worksheet appears on the screen at one time.

A cell is referred to by its unique address, or **cell reference**, which is the coordinates of the intersection of a column and a row. To identify a cell, specify the column letter first, followed by the row number. For example, cell reference D11 refers to the cell located at the intersection of column D and row 11 (Figure 1–6).

One cell on the worksheet, designated the **active cell**, is the one into which you can enter data. The active cell in Figure 1–6 is A1. The active cell is identified in three ways. First, a heavy border surrounds the cell; second, the active cell reference shows immediately above column A in the Name box; and third, the column heading A and row heading 1 are highlighted so it is easy to see which cell is active (Figure 1–6).

The horizontal and vertical lines on the worksheet itself are called **gridlines**. Gridlines make it easier to see and identify each cell in the worksheet. If desired, you can turn the gridlines off so they do not show on the worksheet, but it is recommended that you leave them on for now.

The mouse pointer in Figure 1–6 has the shape of a block plus sign. The mouse pointer appears as a block plus sign whenever it is located in a cell on the worksheet. Another common shape of the mouse pointer is the block arrow. The mouse pointer turns into the block arrow whenever you move it outside the worksheet or when you drag cell contents between rows or columns. The other mouse pointer shapes are described when they appear on the screen.



## Worksheet Window

You view the portion of the worksheet displayed on the screen through a **worksheet window** (Figure 1–6). The default (preset) view is **normal view**. Below and to the right of the worksheet window are **scroll bars**, **scroll arrows**, and **scroll boxes** that you can use to move the worksheet window around to view different parts of the active worksheet. To the right of the sheet tabs at the bottom of the screen is the tab split box. You can drag the **tab split box** to increase or decrease the view of the sheet tabs (Figure 1–6). When you decrease the view of the sheet tabs, you increase the length of the horizontal scroll bar, and vice versa.

## Status Bar

The status bar is located immediately above the Windows taskbar at the bottom of the screen (Figure 1–6). The **status bar** presents information about the worksheet, the function of the button the mouse pointer is pointing to, or the mode of Excel. **Mode indicators**, such as Enter and Ready, appear on the status bar and specify the current mode of Excel. When the mode is **Ready**, Excel is ready to accept the next command or data entry. When the mode indicator reads **Enter**, Excel is in the process of accepting data through the keyboard into the active cell.

**Keyboard indicators**, such as Scroll Lock, show which toggle keys are engaged. Keyboard indicators appear to the right of the mode indicator. Toward the right edge of the status bar are buttons and controls you can use to change the view of a document and adjust the size of the displayed document.

## Ribbon

The **Ribbon**, located near the top of the Excel window, is the control center in Excel (Figure 1–7a). The Ribbon provides easy, central access to the tasks you perform while creating a worksheet. The Ribbon consists of tabs, groups, and commands. Each **tab** surrounds a collection of groups, and each **group** contains related commands.

**BTW The Worksheet Size and Window**  
Excel's 16,384 columns and 1,048,576 rows make for a huge worksheet that – if you could imagine – takes up the entire side of a building to display in its entirety. Your computer screen, by comparison, is a small window that allows you to view only a minute area of the worksheet at one time. While you cannot see the entire worksheet, you can move the window over the worksheet to view any part of it.

**BTW Increasing the Viewing Area**  
You can increase the size of the Excel window or viewing area to show more of the worksheet. Two ways exist to increase what you can see in the viewing area: (1) on the View tab on the Ribbon, click Full Screen; and (2) change to a higher resolution. See Appendix E for information about how to change to a higher resolution.

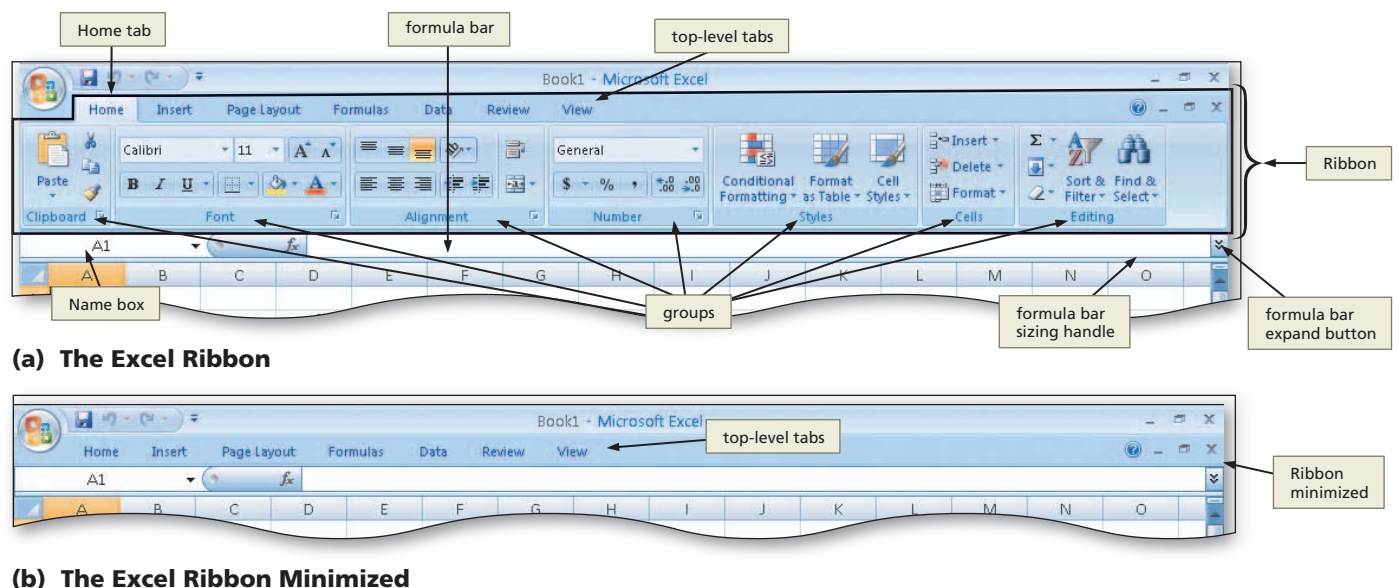


Figure 1–7



**Minimizing the Ribbon**

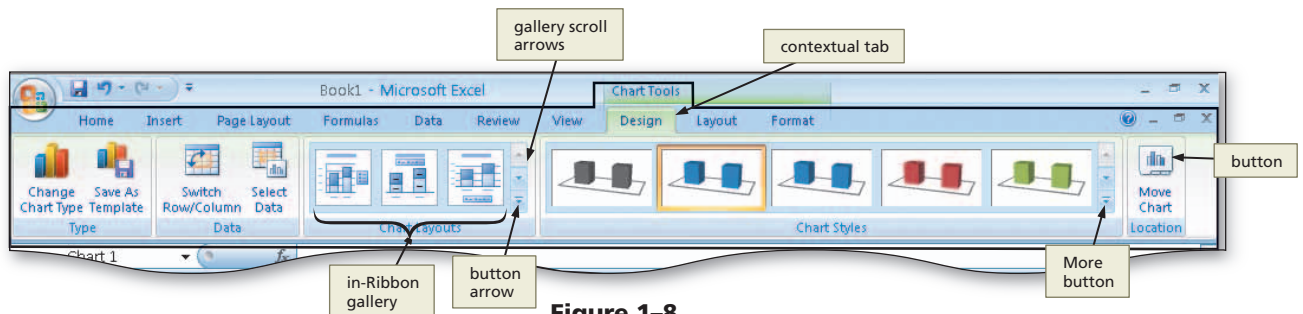
If you want to minimize the Ribbon, right-click the Ribbon and then click Minimize the Ribbon on the shortcut menu, double-click the active tab, or press CTRL+F1. To restore a minimized Ribbon, right-click the Ribbon and then click Minimize the Ribbon on the shortcut menu, double-click any top-level tab, or press CTRL+F1. To use commands on a minimized Ribbon, click the top-level tab.

When you start Excel, the Ribbon displays seven top-level tabs: Home, Insert, Page Layout, Formulas, Data, Review, and View. The **Home tab**, called the primary tab, contains groups with the more frequently used commands. To display a different tab on the Ribbon, click the top-level tab. That is, to display the Insert tab, click Insert on the Ribbon. To return to the Home tab, click Home on the Ribbon. The tab currently displayed is called the **active tab**.

To display more of the document in the document window, some users prefer to minimize the Ribbon, which hides the groups on the Ribbon and displays only the top-level tabs (Figure 1–7b). To use commands on a minimized Ribbon, click the top-level tab.

Each time you start Excel, the Ribbon appears the same way it did the last time you used Excel. The chapters in this book, however, begin with the Ribbon appearing as it did at the initial installation of the software. If you are stepping through this chapter on a computer and you want your Ribbon to match the figures in this book, read Appendix E.

In addition to the top-level tabs, Excel displays other tabs, called **contextual tabs**, when you perform certain tasks or work with objects such as charts or tables. If you insert a chart in the worksheet, for example, the Chart Tools tab and its related subordinate Design tab appear (Figure 1–8). When you are finished working with the chart, the Chart Tools and Design tabs disappear from the Ribbon. Excel determines when contextual tabs should appear and disappear, based on the tasks you perform.



**Figure 1–8**

**Ribbon commands** include buttons, boxes (text boxes, check boxes, etc.), and galleries (Figure 1–8). A **gallery** is a set of choices, often graphical, arranged in a grid or in a list. You can scroll through choices on an in-Ribbon gallery by clicking the gallery's scroll arrows. An **in-Ribbon** gallery shows common gallery choices on the Ribbon rather than in a dropdown list. Or, you can click a gallery's More button to view more gallery options on the screen at a time. Some buttons and boxes have arrows that, when clicked, also display a gallery; others always cause a gallery to be displayed when clicked. Most galleries support **live preview**, which is a feature that allows you to point to a gallery choice and see its effect in the worksheet without actually selecting the choice (Figure 1–9).

Some commands on the Ribbon display an image to help you remember their function. When you point to a command on the Ribbon, all or part of the command glows in shades of yellow and orange, and an Enhanced ScreenTip appears on the screen. An **Enhanced ScreenTip** is an on-screen note that provides the name of the command, available keyboard shortcut(s), a description of the command, and sometimes instructions for how to obtain Help about the command (Figure 1-10). Enhanced ScreenTips are more detailed than a typical **ScreenTip**, which usually displays only the name of the command.

The lower-right corner of some groups on the Ribbon has a small arrow, called a **Dialog Box Launcher**, that when clicked displays a dialog box or a task pane (Figure 1-11). A **dialog box** contains additional commands and options for the group. When presented with a dialog box, you make selections and must close the dialog box before returning to the worksheet. A **task pane**, by contrast, is a window that contains additional commands and can stay open and visible while you work on the worksheet.

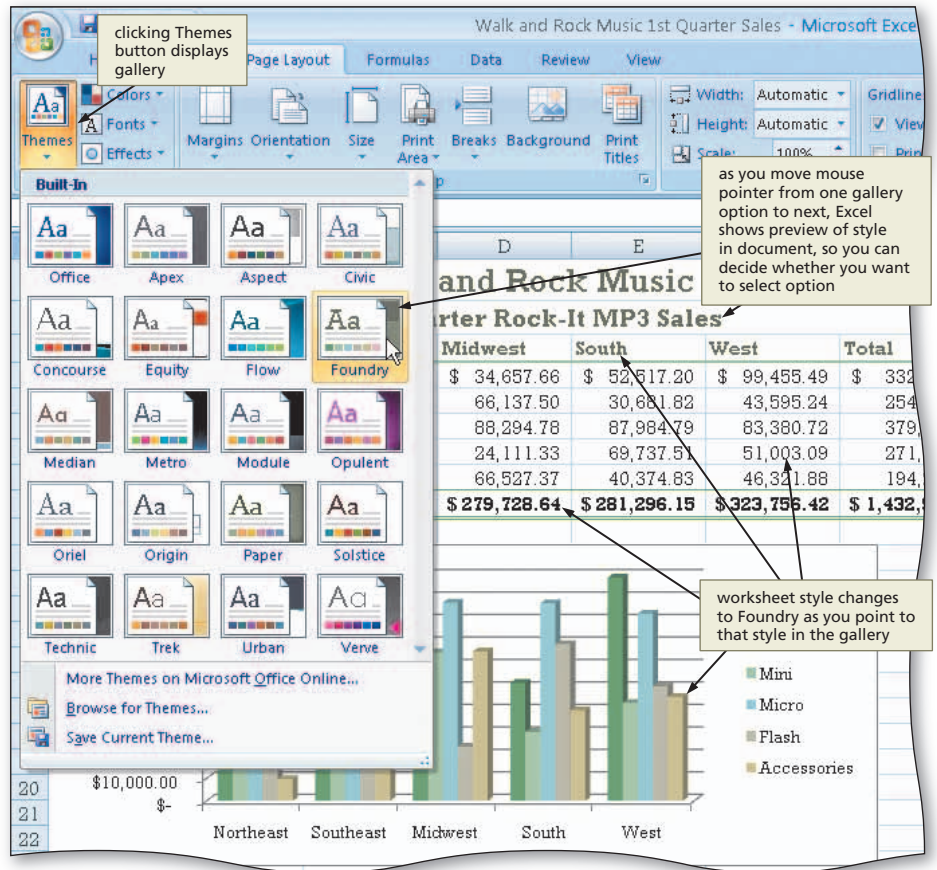


Figure 1-9

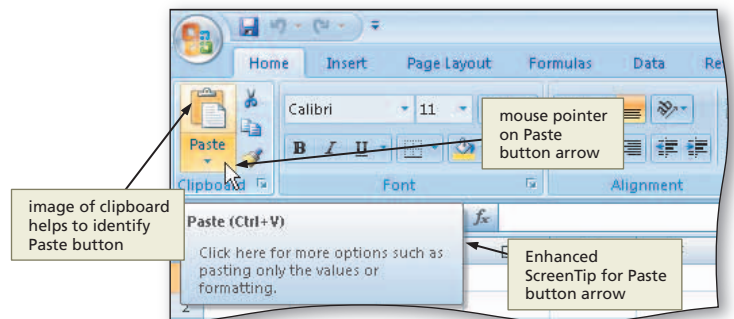


Figure 1-10

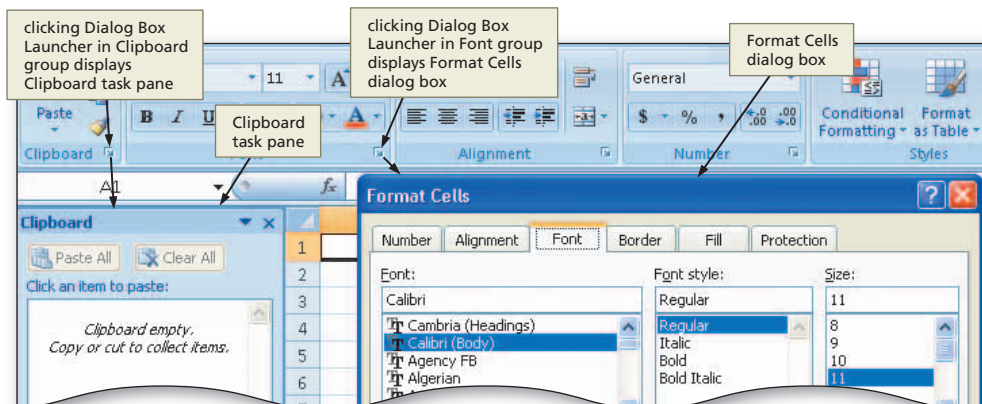


Figure 1-11

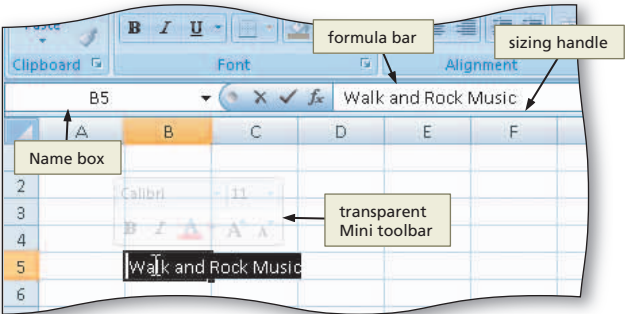
## Formula Bar

The formula bar appears below the Ribbon (Figure 1–12a). As you type, Excel displays the entry in the **formula bar**. You can make the formula bar larger by dragging the sizing handle (Figure 1–7) on the formula bar or clicking the expand button to the right of the formula bar. Excel also displays the active cell reference in the **Name box** on the left side of the formula bar.

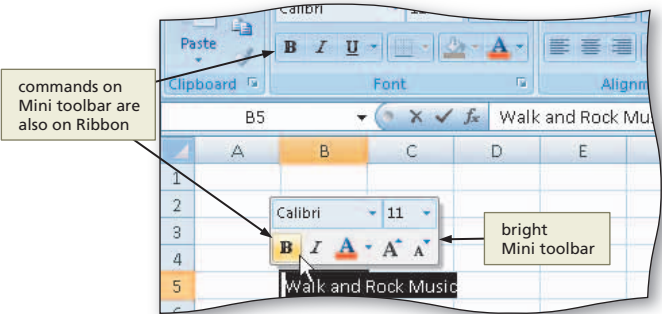
## Mini Toolbar and Shortcut Menus

The **Mini toolbar**, which appears automatically based on tasks you perform (such as selecting text), contains commands related to changing the appearance of text in a worksheet. All commands on the Mini toolbar also exist on the Ribbon. The purpose of the Mini toolbar is to minimize mouse movement. For example, if you want to format text using a command that currently is not displayed on the active tab, you can use the command on the Mini toolbar — instead of switching to a different tab to use the command.

When the Mini toolbar appears, it initially is transparent (Figure 1–12a). If you do not use the transparent Mini toolbar, it disappears from the screen. To use the Mini toolbar, move the mouse pointer into the toolbar, which causes the Mini toolbar to change from a transparent to bright appearance (Figure 1–12b).



(a) Transparent Mini Toolbar



(b) Bright Mini Toolbar

Figure 1–12

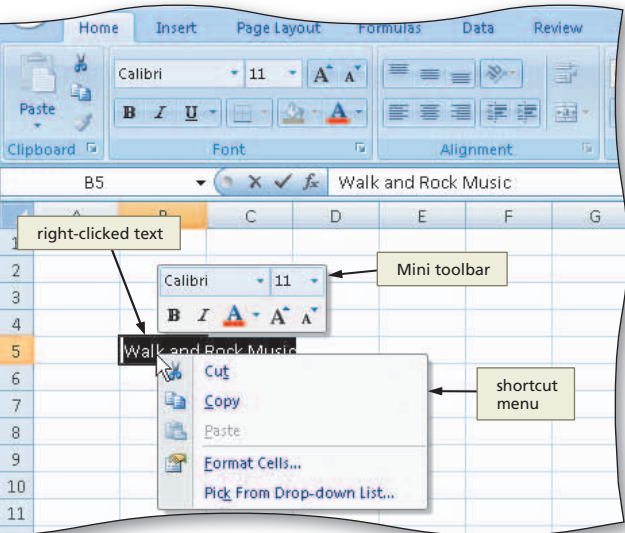


Figure 1–13

A **shortcut menu**, which appears when you right-click an object, is a list of frequently used commands that relate to the right-clicked object. If you right-click an item in the document window such as a cell, Excel displays both the Mini toolbar and a shortcut menu (Figure 1–13).



## Quick Access Toolbar

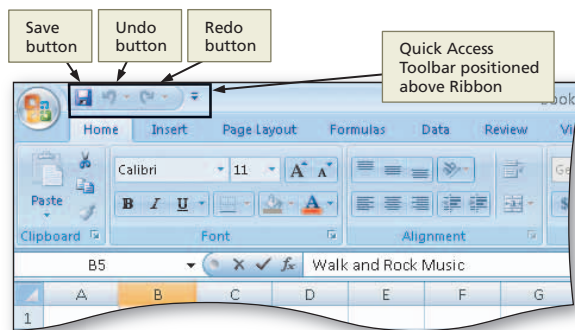
The **Quick Access Toolbar**, located by default above the Ribbon, provides easy access to frequently used commands (Figure 1–14a). The commands on the Quick Access Toolbar always are available, regardless of the task you are performing. Initially, the Quick Access Toolbar contains the Save, Undo, and Redo buttons. If you click the Customize Quick Access Toolbar button, Excel provides a list of commands you quickly can add to and remove from the Quick Access Toolbar (Figure 1–14b).

You also can add other commands to or delete commands from the Quick Access Toolbar so that it contains the commands you use most often. As you add commands to the Quick Access Toolbar, its commands may interfere with the workbook title on the title bar. For this reason, Excel provides an option of displaying the Quick Access Toolbar below the Ribbon (Figure 1–14c).

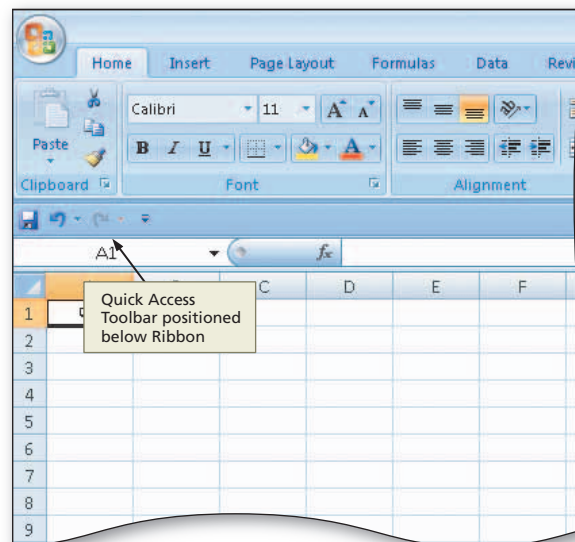
BTW

### Quick Access Toolbar Commands

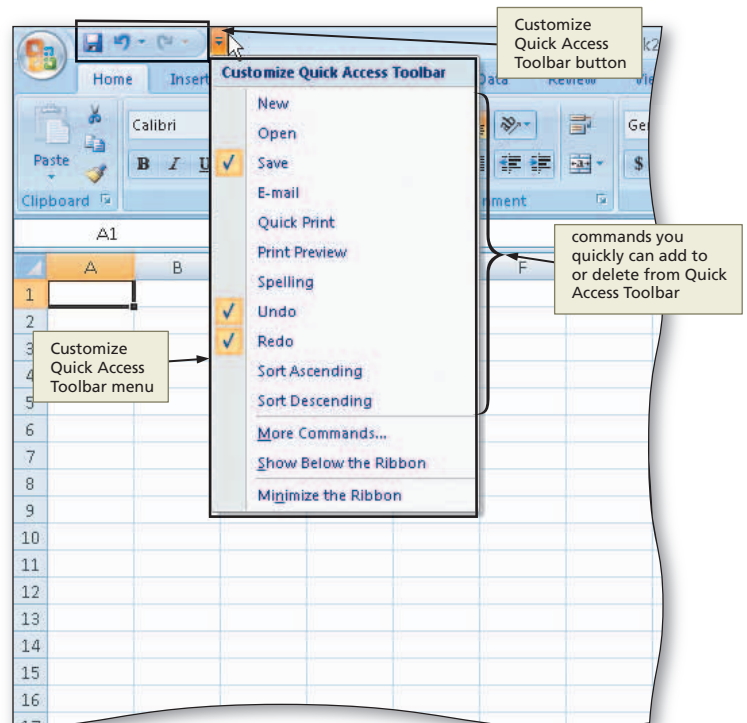
To add a Ribbon command as a button to the Quick Access Toolbar, right-click the command on the Ribbon and then click Add to Quick Access Toolbar on the shortcut menu. To delete a button from the Quick Access Toolbar, right-click the button on the Quick Access Toolbar and then click Remove from Quick Access Toolbar on the shortcut menu. To display the Quick Access Toolbar below the Ribbon, right-click the Quick Access Toolbar and then click Show Quick Access Toolbar below the Ribbon on the shortcut menu.



(a) Quick Access Toolbar above Ribbon



(c) Quick Access Toolbar below Ribbon



(b) Customize Quick Access Toolbar Menu

Figure 1–14

Each time you start Excel, the Quick Access Toolbar appears the same way it did the last time you used Excel. The chapters in this book, however, begin with the Quick Access Toolbar appearing as it did at the initial installation of the software. If you are stepping through this chapter on a computer and you want your Quick Access Toolbar to match the figures in this book, you should reset your Quick Access Toolbar. For more information about how to reset the Quick Access Toolbar, read Appendix E.

## Office Button

While the Ribbon is a control center for creating worksheets, the **Office Button** is a central location for managing and sharing workbooks. When you click the Office Button, located in the upper-left corner of the window, Excel displays the Office Button menu (Figure 1–15). A **menu** contains a list of commands.

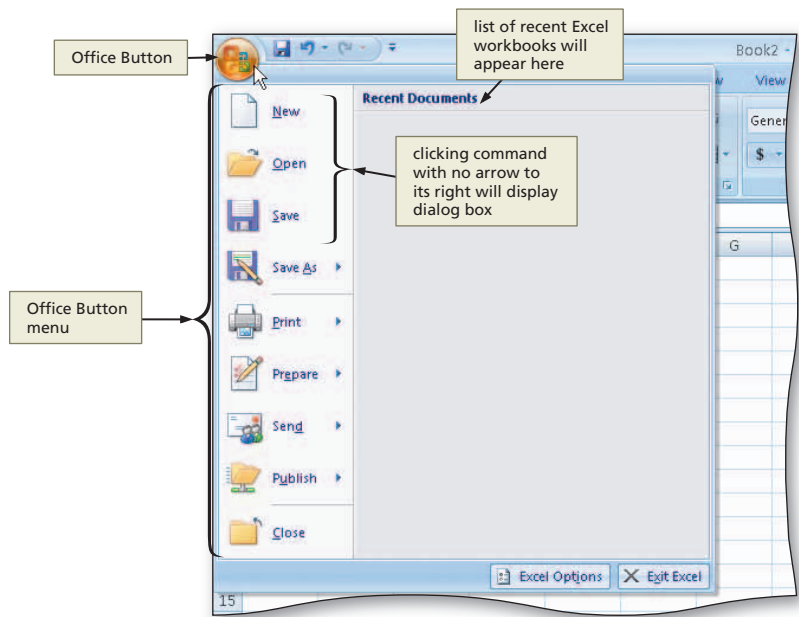


Figure 1–15

When you click the New, Open, Save As, and Print commands on the Office Button menu, Excel displays a dialog box with additional options. The Save As, Print, Prepare, Send, and Publish commands have an arrow to their right. If you point to a button that includes an arrow, Excel displays a **submenu**, which is a list of additional commands associated with the selected command (Figure 1–16). For the Prepare, Send, and Publish commands that do not display a dialog box when clicked, you can point either to the command or the arrow to display the submenu.

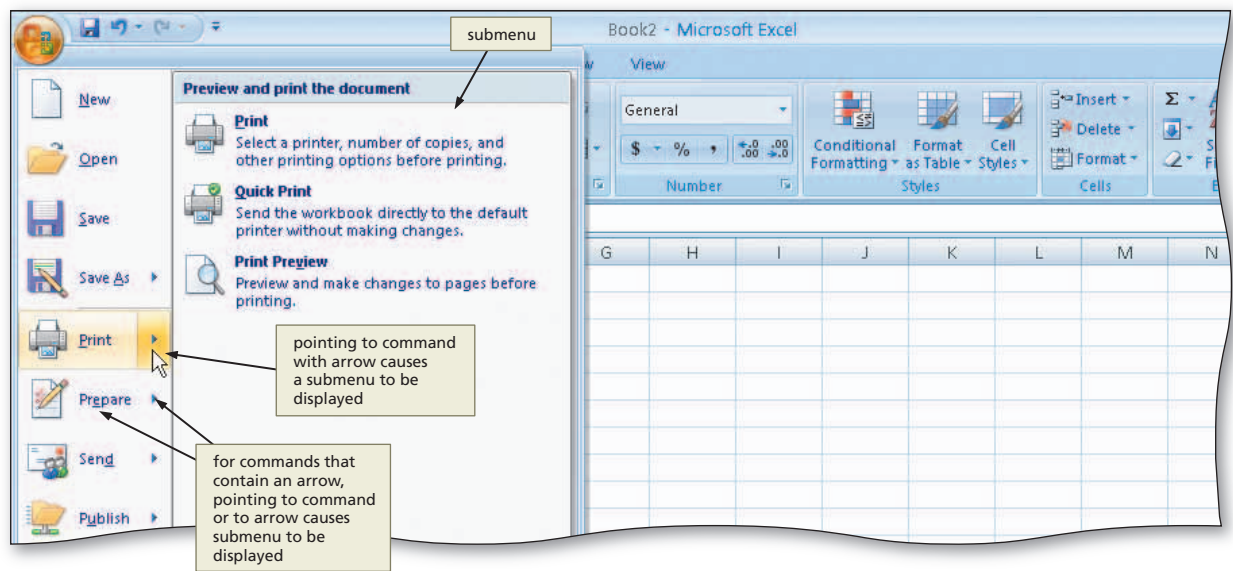
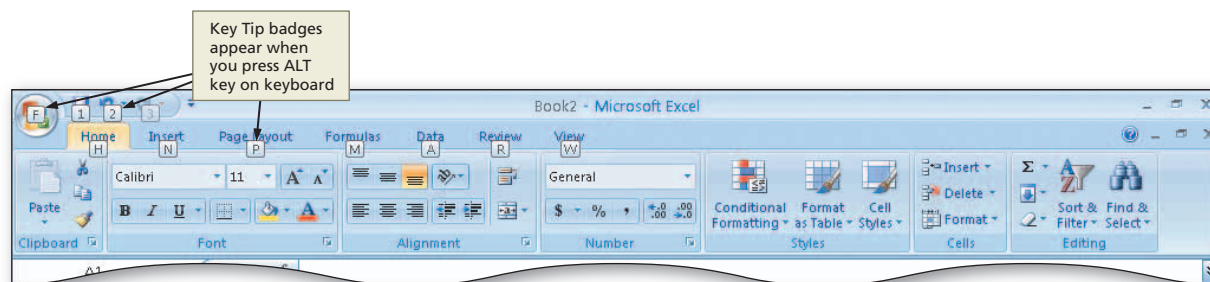


Figure 1–16



## Key Tips

If you prefer using the keyboard, instead of the mouse, you can press the ALT key on the keyboard to display a **Key Tip badge**, or keyboard code icon, for certain commands (Figure 1–17). To select a command using the keyboard, press its displayed code letter, or **Key Tip**. When you press a Key Tip, additional Key Tips related to the selected command appear. For example, to select the New command on the Office Button menu, press the ALT key, then press the F key, then press the N key.



**Figure 1–17**

To remove the Key Tip badges from the screen, press the ALT key or the ESC key on the keyboard until all Key Tip badges disappear or click the mouse anywhere in the Excel window.

## Selecting a Cell

To enter data into a cell, you first must select it. The easiest way **to select a cell** (make it active) is to use the mouse to move the block plus sign mouse pointer to the cell and then click.

An alternative method is to use the arrow keys that are located just to the right of the typewriter keys on the keyboard. An arrow key selects the cell adjacent to the active cell in the direction of the arrow on the key.

You know a cell is selected, or active, when a heavy border surrounds the cell and the active cell reference appears in the Name box on the left side of the formula bar. Excel also changes the active cell's column heading and row heading to a gold color.

**BTW**

### Selecting a Cell

You can select any cell by entering its cell reference, such as b4, in the Name box on the left side of the formula bar.

## Entering Text

In Excel, any set of characters containing a letter, hyphen (as in a telephone number), or space is considered text. **Text** is used to place titles, such as worksheet titles, column titles, and row titles, on the worksheet.

### Plan Ahead

#### Select titles and subtitles for the worksheet.

As previously stated, worksheet titles and subtitles should be as brief and meaningful as possible. As shown in Figure 1–18, the worksheet title, Walk and Rock Music, identifies the company for whom the worksheet is being created in Chapter 1. The worksheet subtitle, First Quarter Rock-It MP3 Sales, identifies the type of report.

### Plan Ahead

#### Determine the contents of rows and columns.

As previously mentioned, rows typically contain information that is similar to items in a list. For the Walk and Rock Music sales data, the list of product types meets this criterion. It is more likely that in the future, the company will add more product types as opposed to more regions. Each product type, therefore, should be placed in its own row. The row titles in column A (Video, Mini, Micro, Flash, Accessories, and Total) identify the numbers in each row.

Columns typically contain descriptive information about items in rows or contain information that helps to group the data in the worksheet. In the case of the Walk and Rock Music sales data, the regions classify the sales of each product type. The regions, therefore, are placed in columns. The column titles in row 3 (Northeast, Southeast, Midwest, South, West, and Total) identify the numbers in each column.

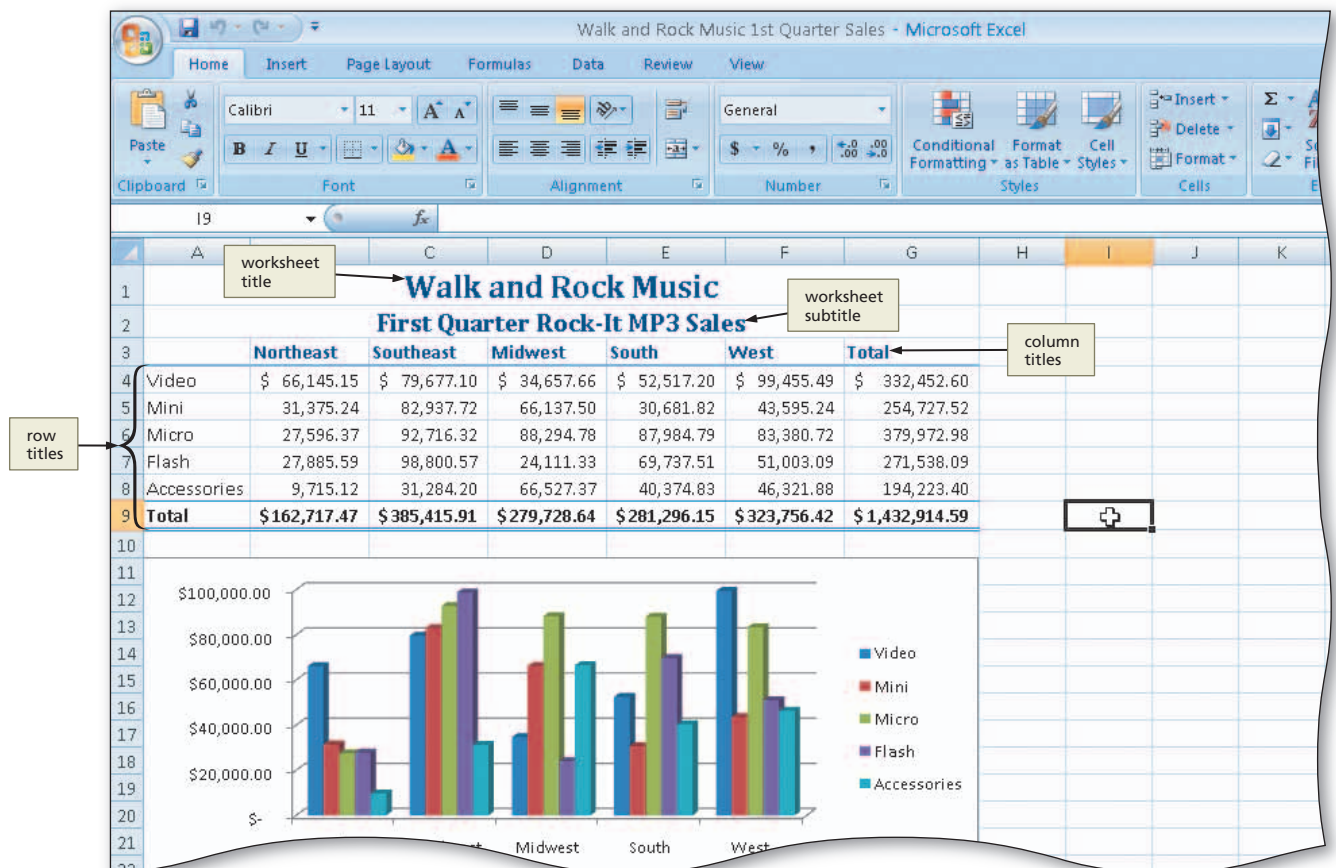


Figure 1–18

## To Enter the Worksheet Titles

The following steps show how to enter the worksheet titles in cells A1 and A2. Later in this chapter, the worksheet titles will be formatted so they appear as shown in Figure 1–18.

1

- Click cell A1 to make cell A1 the active cell (Figure 1–19).

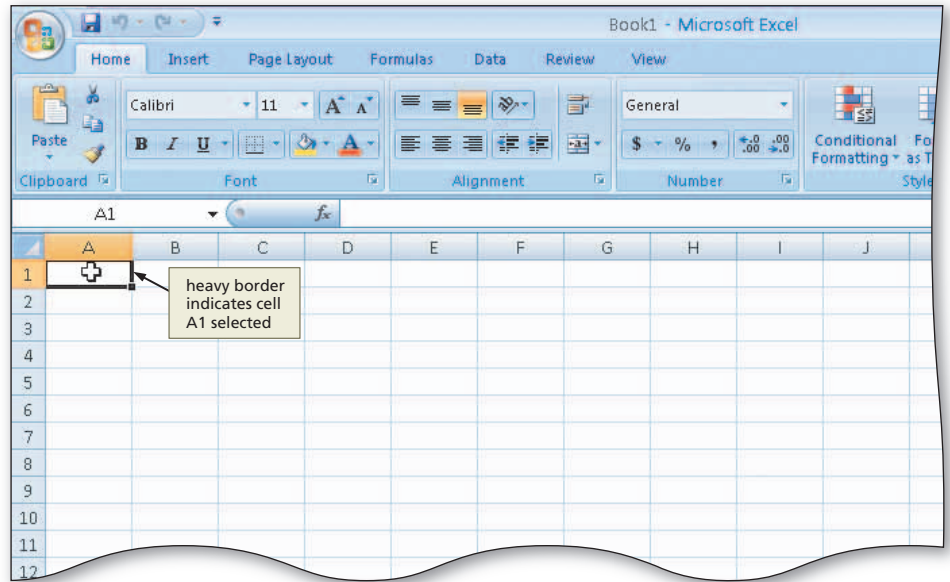


Figure 1–19

2

- Type Walk and Rock Music in cell A1, and then point to the Enter box in the formula bar.

Q&A

Why did the appearance of the formula bar change?

Excel displays the title in the formula bar and in cell A1. When you begin typing a cell entry, Excel displays two additional boxes in the formula bar: the Cancel box and the Enter box. Clicking the **Enter box** completes an entry. Clicking the **Cancel box** cancels an entry.

Q&A

What is the vertical line in cell A1?

In Figure 1–20, the text in cell A1 is followed by the insertion point. The **insertion point** is a blinking vertical line that indicates where the next typed character will appear.

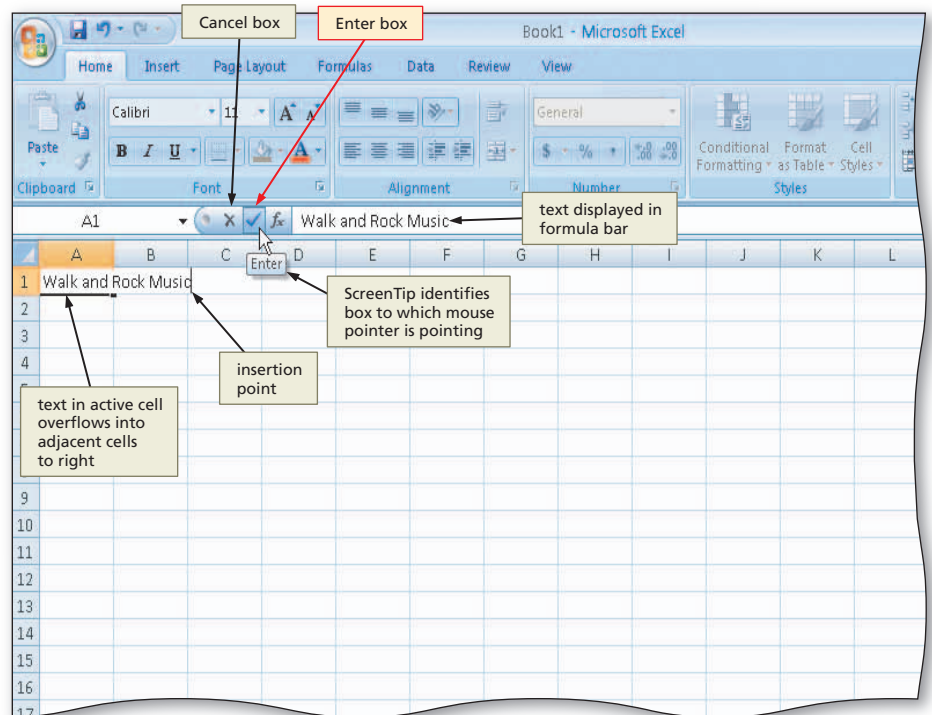


Figure 1–20

3

- Click the Enter box to complete the entry and enter the worksheet title in cell A1 (Figure 1–21).

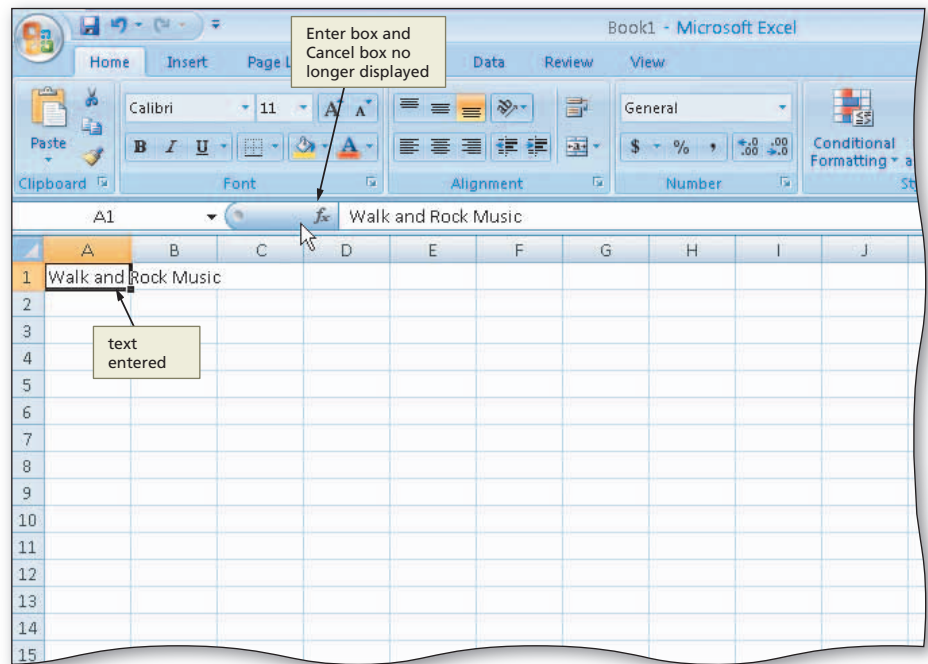


Figure 1–21

4

- Click cell A2 to select it.
- Type First Quarter Rock-It MP3 Sales as the cell entry.
- Click the Enter box to complete the entry and enter the worksheet subtitle in cell A2 (Figure 1–22).

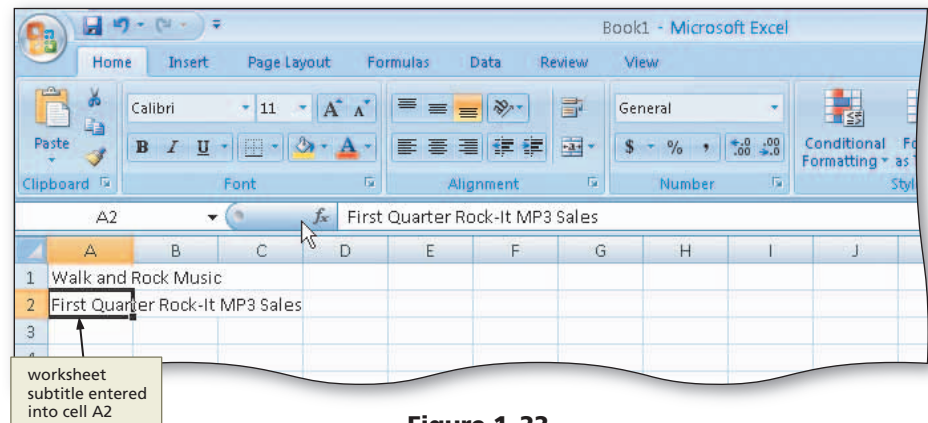


Figure 1–22

#### Other Ways

- To complete entry, click any cell other than active cell
- To complete entry, press ENTER key
- To complete entry, press HOME, PAGE UP, PAGE DOWN, or END key

## Entering Text in a Cell

When you complete a text entry into a cell, a series of events occurs. First, Excel positions the text left-aligned in the cell. **Left-aligned** means the cell entry is positioned at the far left in the cell. Therefore, the W in the worksheet title, Walk and Rock Music, begins in the leftmost position of cell A1.

Second, when the text is longer than the width of a column, Excel displays the overflow characters in adjacent cells to the right as long as these adjacent cells contain no data. In Figure 1–22, the width of cell A1 is approximately nine characters. The text consists of 19 characters. Therefore, Excel displays the overflow characters from cell A1 in cells B1 and C1, because cells B1 and C1 are empty. If cell B1 contained data, Excel would hide the overflow characters, so that only the first nine characters in cell A1 would appear

on the worksheet. Excel stores the overflow characters in cell A1 and displays them in the formula bar whenever cell A1 is the active cell.

Third, when you complete an entry by clicking the Enter box, the cell in which the text is entered remains the active cell.

## Correcting a Mistake while Typing

If you type the wrong letter and notice the error before clicking the Enter box or pressing the ENTER key, use the BACKSPACE key to delete all the characters back to and including the incorrect letter. To cancel the entire entry before entering it into the cell, click the Cancel box in the formula bar or press the ESC key. If you see an error in a cell after entering the text, select the cell and retype the entry. Later in this chapter, additional error-correction techniques are discussed.

## AutoCorrect

The **AutoCorrect** feature of Excel works behind the scenes, correcting common mistakes when you complete a text entry in a cell. AutoCorrect makes three types of corrections for you:

1. Corrects two initial capital letters by changing the second letter to lowercase.
2. Capitalizes the first letter in the names of days.
3. Replaces commonly misspelled words with their correct spelling. For example, it will change the misspelled word *recieve* to *receive* when you complete the entry. AutoCorrect will correct the spelling of hundreds of commonly misspelled words automatically.

**BTW**

### The ENTER Key

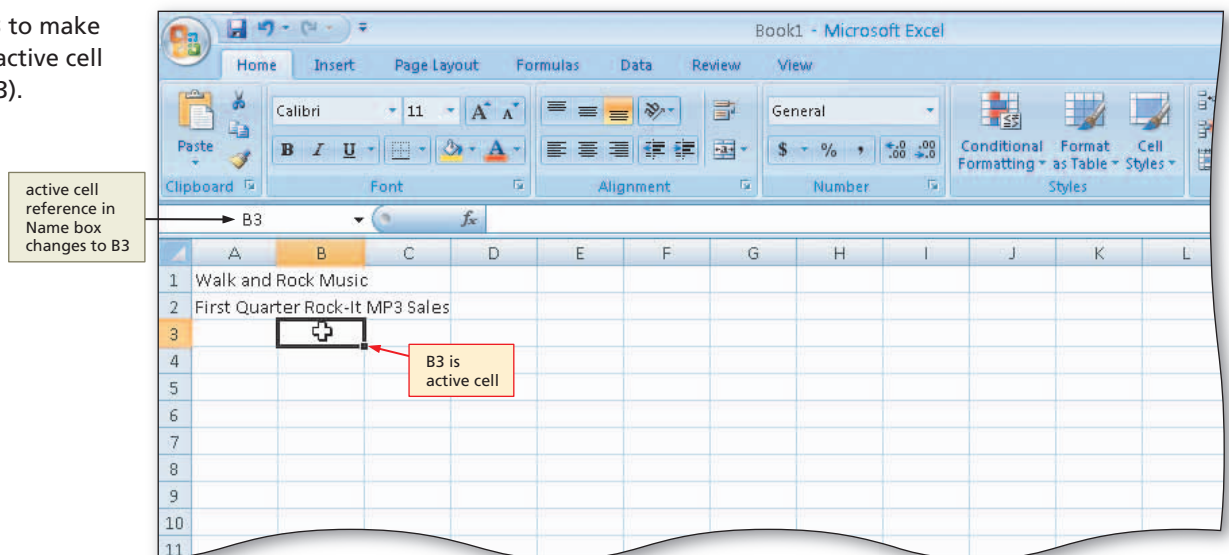
When you first install Excel, the ENTER key not only completes the entry, but it also moves the selection to an adjacent cell. You can instruct Excel not to move the selection after pressing the ENTER key by clicking the Excel Options button on the Office Button menu, clicking the Advanced option, removing the checkmark from the 'After pressing Enter, move selection' check box, and then clicking the OK button.

## To Enter Column Titles

To enter the column titles in row 3, select the appropriate cell and then enter the text. The following steps enter the column titles in row 3.

**1**

- Click cell B3 to make cell B3 the active cell (Figure 1–23).



**Figure 1–23**



2

- Type Northeast in cell B3 (Figure 1–24).

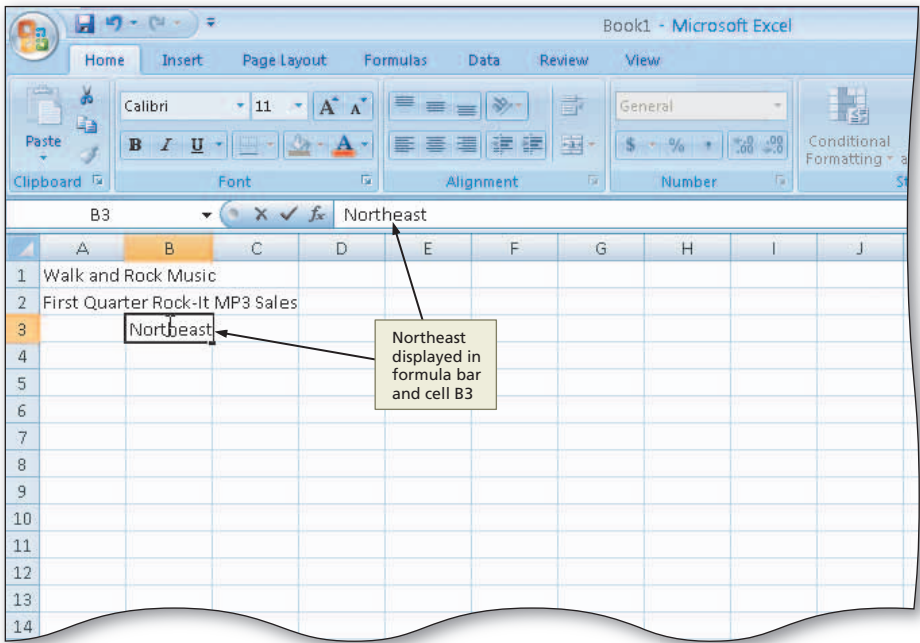


Figure 1–24

3

- Press the RIGHT ARROW key to enter the column title, Northeast, in cell B3 and make cell C3 the active cell (Figure 1–25).

Q&A

Why is the RIGHT ARROW key used to complete the entry in the cell?

If the next entry is in an adjacent cell, use the arrow keys to complete the entry in a cell. When you press an arrow key to complete an entry, the adjacent cell in the direction of the arrow (up, down, left, or right) becomes the active cell. If the next entry is in a nonadjacent cell, complete an entry by clicking the next cell in which you plan to enter data. You also can click the Enter box or press the ENTER key and then click the appropriate cell for the next entry.

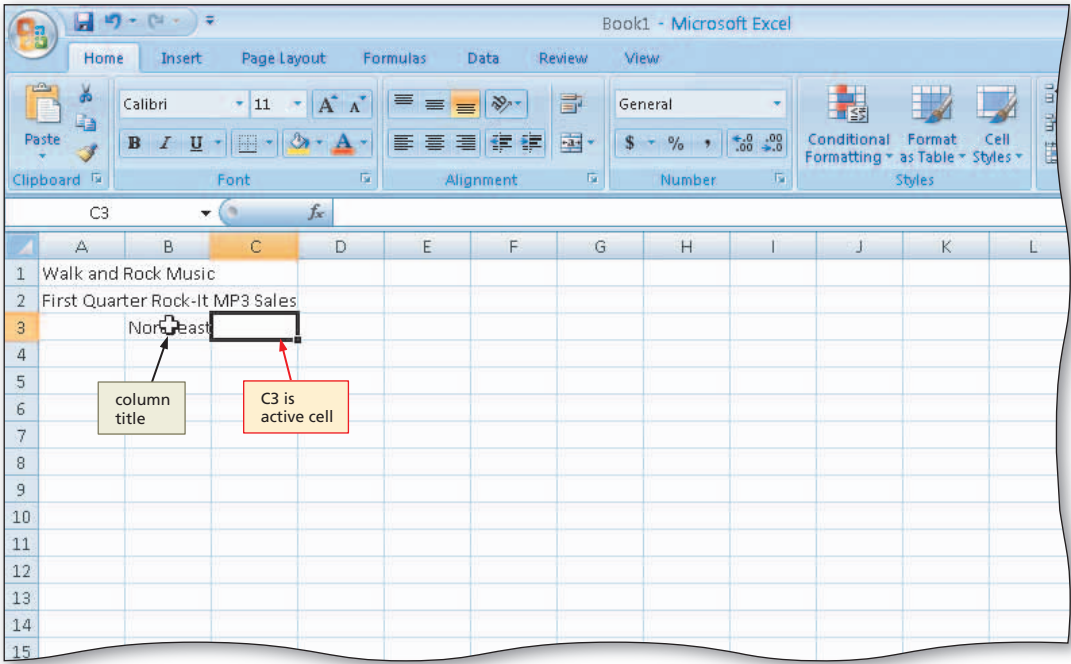


Figure 1–25

4

- Repeat Steps 2 and 3 to enter the remaining column titles in row 3; that is, enter Southeast in cell C3, Midwest in cell D3, South in cell E3, West in cell F3, and Total in cell G3 (complete the last entry in cell G3 by clicking the Enter box in the formula bar) (Figure 1–26).

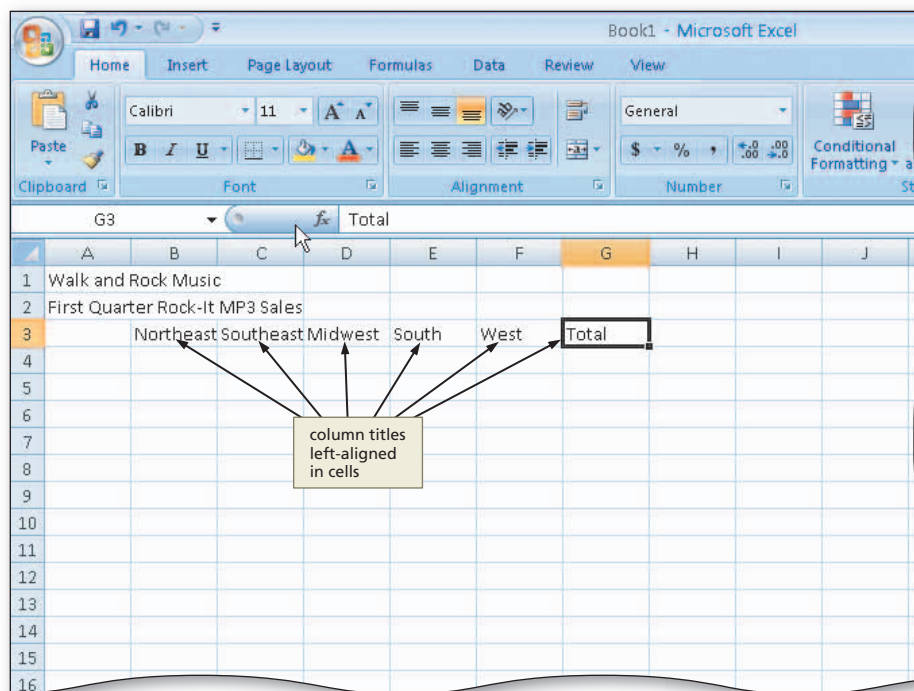


Figure 1–26

## To Enter Row Titles

The next step in developing the worksheet for this project is to enter the row titles in column A. This process is similar to entering the column titles. The following steps enter the row titles in the worksheet.

1

- Click cell A4 to select it.
- Type Video and then press the DOWN ARROW key to enter the row title and make cell A5 the active cell (Figure 1–27).

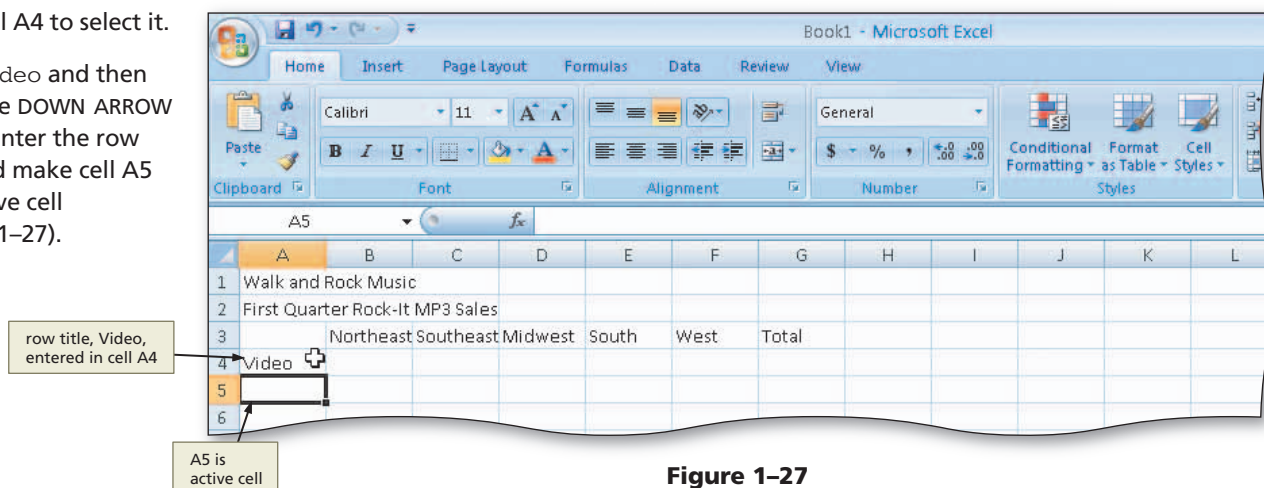


Figure 1–27

2

- Repeat Step 1 to enter the remaining row titles in column A; that is, enter Mini in cell A5, Micro in cell A6, Flash in cell A7, Accessories in cell A8, and Total in cell A9 (Figure 1–28).

Q&A

Why is the text left-aligned in the cells?

When you enter text, Excel automatically left-aligns the text in the cell. Excel treats any combination of numbers, spaces, and nonnumeric characters as text. For example, the following entries are text:

401AX21, 921-231, 619 321, 883XTY

You can change the text alignment in a cell by realigning it. Several alignment techniques are discussed later in the chapter.

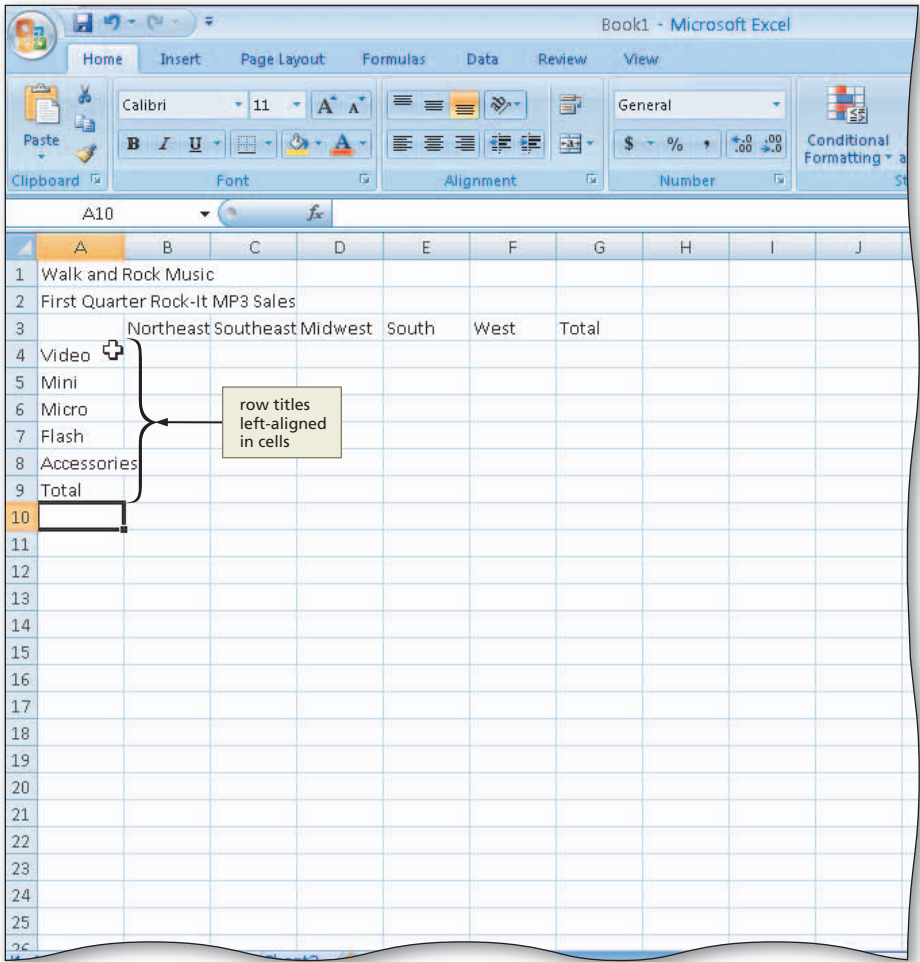


Figure 1–28

BTW

**Numeric Limitations**

In Excel, a number can be between approximately  $-1 \times 10^{308}$  and  $1 \times 10^{308}$ , that is, between a negative 1 followed by 308 zeros and a positive 1 followed by 308 zeros. To enter a number such as 6,000,000,000,000,000, you can type 6,000,000,000,000,000, or you can type 6E15, which stands for  $6 \times 10^{15}$ .

**Entering Numbers**

In Excel, you can enter numbers into cells to represent amounts. A **number** can contain only the following characters:

0 1 2 3 4 5 6 7 8 9 + - ( ) , / . \$ % E e

If a cell entry contains any other keyboard character (including spaces), Excel interprets the entry as text and treats it accordingly. The use of the special characters is explained when they are used in this book.

## To Enter Numbers

The Walk and Rock Music First Quarter Rock-It MP3 Sales numbers used in Chapter 1 are summarized in Table 1–1. These numbers, which represent sales revenue for each of the product types and regions, must be entered in rows 4, 5, 6, 7, and 8.

**Table 1–1 Walk and Rock Music First Quarter Rock-It MP3 Sales**

	Northeast	Southeast	Midwest	South	West
Video	66145.15	79677.10	34657.66	52517.20	99455.49
Mini	31375.24	82937.72	66137.50	30681.82	43595.24
Micro	27596.37	92716.32	88294.78	87984.79	83380.72
Flash	27885.59	98800.57	24111.33	69737.51	51003.09
Accessories	9715.12	31284.20	66527.37	40374.83	46321.88

The following steps enter the numbers in Table 1–1 one row at a time.

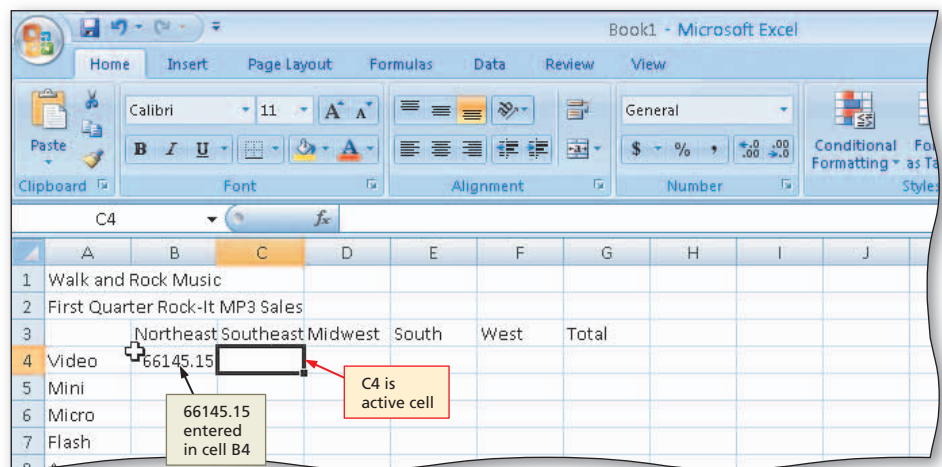
**1**

- Click cell B4.
- Type 66145.15 and then press the RIGHT ARROW key to enter the data in cell B4 and make cell C4 the active cell (Figure 1–29).

**Q&A**

Do I need to enter dollar signs, commas, or trailing zeros for the quarterly sales numbers?

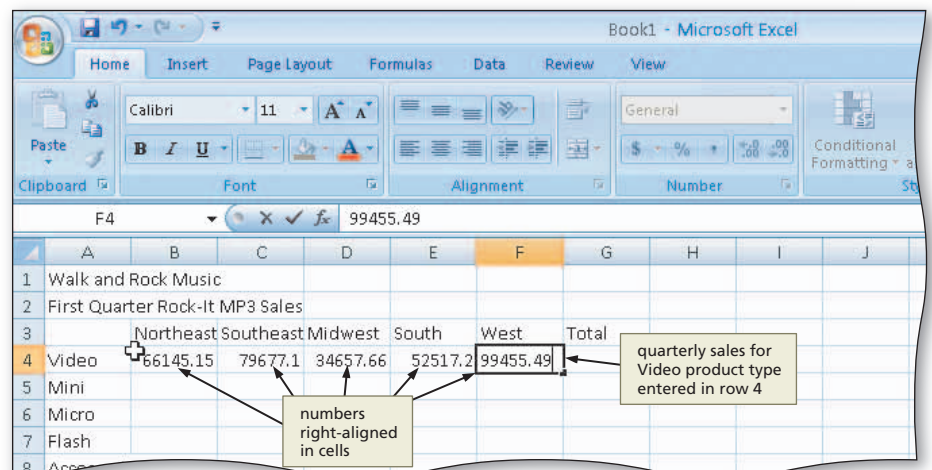
You are not required to type dollar signs, commas, or trailing zeros. When you enter a dollar value that has cents, however, you must add the decimal point and the numbers representing the cents. Later in this chapter, the numbers will be formatted to use dollar signs, commas, and trailing zeros to improve the appearance and readability of the numbers.



**Figure 1–29**

**2**

- Enter 79677.1 in cell C4, 34657.66 in cell D4, 52517.2 in cell E4, and 99455.49 in cell F4 (Figure 1–30).



**Figure 1–30**

3

- Click cell B5.
- Enter the remaining first quarter sales numbers provided in Table 1–1 for each of the four remaining offerings in rows 5, 6, 7, and 8 to display the quarterly sales in the worksheet (Figure 1–31).

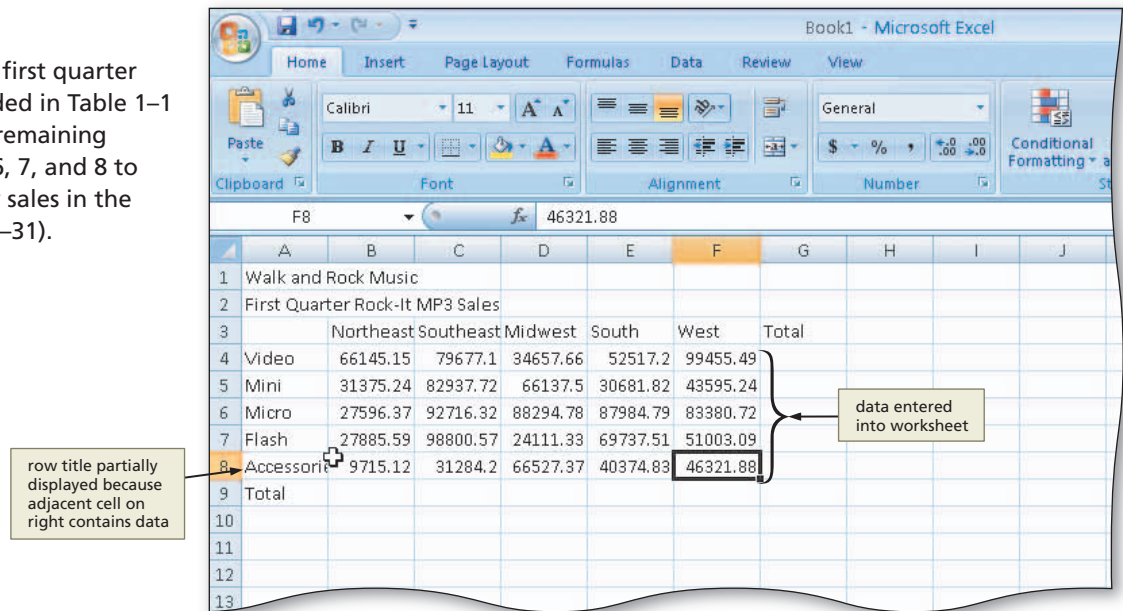


Figure 1–31

## Calculating a Sum

The next step in creating the worksheet is to perform any necessary calculations, such as calculating the column and row totals.

### Plan Ahead

#### BTW Entering Numbers as Text

Sometimes, you will want Excel to treat numbers, such as Zip codes and telephone numbers, as text. To enter a number as text, start the entry with an apostrophe (').

#### BTW Calculating Sums

Excel calculates sums for a variety of data types. For example, Boolean values, such as TRUE and FALSE, can be summed. Excel treats the value of TRUE as 1 and the value of FALSE as 0. Times also can be summed. For example, Excel treats the sum of 1:15 and 2:45 as 4:00.

#### Determine calculations that are needed.

As stated in the requirements document in Figure 1–2 on page EX 4, totals are required for each region, each product type, and the company. The first calculation is to determine the quarterly sales for the stores in the Northeast region in column B. To calculate this value in cell B9, Excel must add, or sum, the numbers in cells B4, B5, B6, B7, and B8. Excel's **SUM function**, which adds all of the numbers in a range of cells, provides a convenient means to accomplish this task.

A **range** is a series of two or more adjacent cells in a column or row or a rectangular group of cells. For example, the group of adjacent cells B4, B5, B6, B7, and B8 is called a range. Many Excel operations, such as summing numbers, take place on a range of cells.

After the total quarterly sales for the stores in the Northeast region in column B is determined, the totals for the remaining regions and totals for each product type will be determined.



## To Sum a Column of Numbers

The following steps sum the numbers in column B.

- 1
- Click cell B9 to make it the active cell and then point to the SUM button on the Ribbon (Figure 1–32).

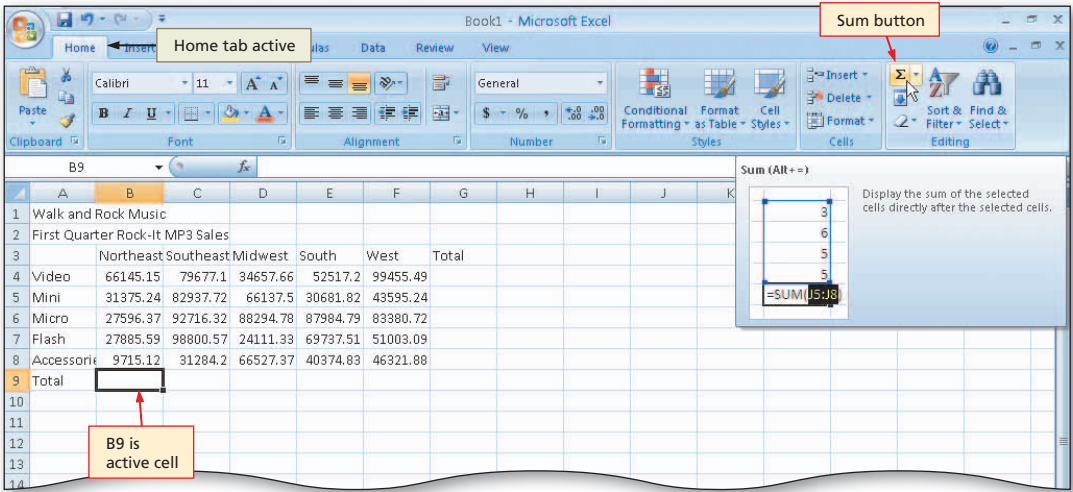


Figure 1–32

- 2
- Click the Sum button on the Ribbon to display =SUM(B4:B8) in the formula bar and in the active cell B9 (Figure 1–33).

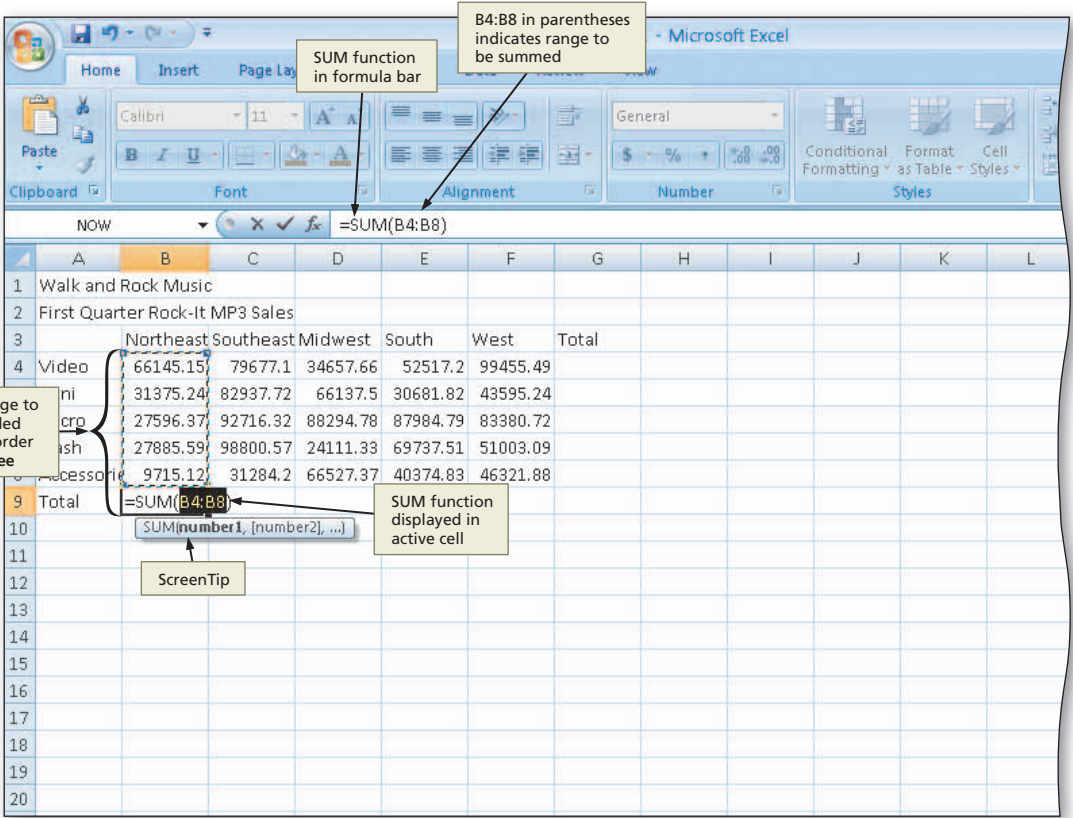


Figure 1–33

**Q&A** How does Excel know which cells to sum? When you enter the SUM function using the Sum button, Excel automatically selects what it considers to be your choice of the range to sum. When proposing the range to sum, Excel first looks for a range of cells with numbers above the active cell and then to the left. If Excel proposes the wrong range, you can correct it by dragging through the correct range before pressing the ENTER key. You also can enter the correct range by typing the beginning cell reference, a colon (:), and the ending cell reference.

- 3
- Click the Enter box in the formula bar to enter the sum of the first quarter sales for the five product types for the Northeast region in cell B9.
  - Select cell B9 to display the SUM function assigned to cell B9 in the formula bar (Figure 1–34).

Q&A

What is the purpose of the Sum button arrow?

If you click the Sum button arrow on the right side of the Sum button (Figure 1–34), Excel displays a list of often-used functions from which you can choose. The list includes functions that allow you to determine the average, the number of items in the selected range, the minimum value, or the maximum value of a range of numbers.

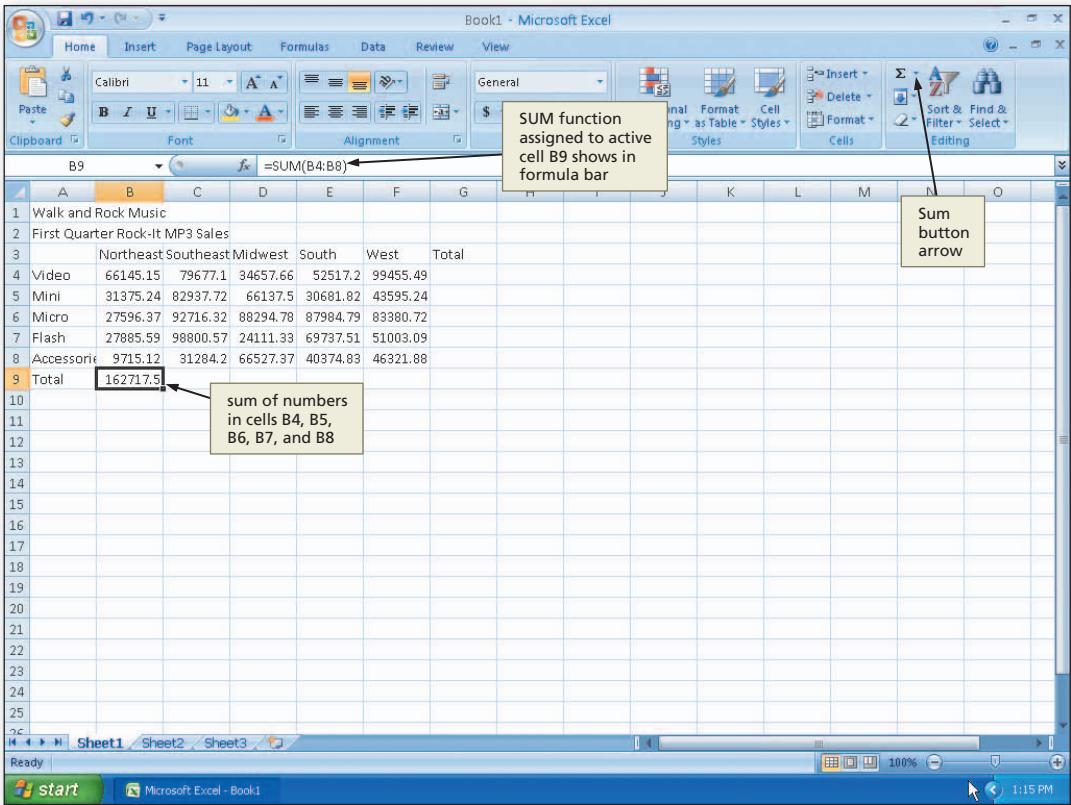


Figure 1–34

Other Ways

- Click Function Wizard button in formula bar, select SUM in Select a function list, click OK button, select range, click OK button
- Click Sum button arrow on Ribbon, click More Functions, select SUM in Select a function list, click OK button, select range, click OK button
- Type = s in cell, select SUM from list, select range
- Press ALT + EQUAL SIGN (=) twice

## Using the Fill Handle to Copy a Cell to Adjacent Cells

Excel also must calculate the totals for the Southeast in cell C9, the Midwest in cell D9, the South in cell E9, and for the West in cell F9. Table 1–2 illustrates the similarities between the entry in cell B9 and the entries required to sum the totals in cells C9, D9, E9, and F9.

Table 1–2 Sum Function Entries in Row 9		
Cell	Sum Function Entries	Remark
B9	=SUM(B4:B8)	Sums cells B4, B5, B6, B7, and B8
C9	=SUM(C4:C8)	Sums cells C4, C5, C6, C7, and C8
D9	=SUM(D4:D8)	Sums cells D4, D5, D6, D7, and D8
E9	=SUM(E4:E8)	Sums cells E4, E5, E6, E7, and E8
F9	=SUM(F4:F8)	Sums cells F4, F5, F6, F7, and F8

To place the SUM functions in cells C9, D9, E9, and F9, you could follow the same steps shown previously in Figures 1–32 through 1–34. A second, more efficient method is to copy the SUM function from cell B9 to the range C9:F9. The cell being copied is called the **source area** or **copy area**. The range of cells receiving the copy is called the **destination area** or **paste area**.

Although the SUM function entries in Table 1–2 are similar, they are not exact copies. The range in each SUM function entry uses cell references that are one column to the right of the previous column. When you copy cell references, Excel automatically adjusts them for each new position, resulting in the SUM function entries illustrated in Table 1–2. Each adjusted cell reference is called a **relative reference**.

### To Copy a Cell to Adjacent Cells in a Row

The easiest way to copy the SUM formula from cell B9 to cells C9, D9, E9, and F9 is to use the fill handle. The **fill handle** is the small black square located in the lower-right corner of the heavy border around the active cell. The following steps use the fill handle to copy cell B9 to the adjacent cells C9:F9.

- 1
- With cell B9 active, point to the fill handle (Figure 1–35).

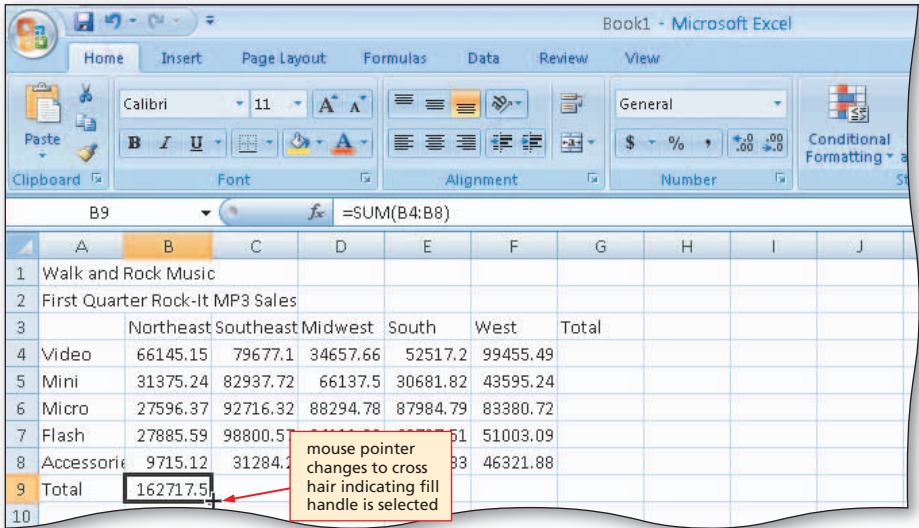


Figure 1–35

- 2
- Drag the fill handle to select the destination area, range C9:F9, to display a shaded border around the destination area, range C9:F9, and the source area, cell B9 (Figure 1–36). Do not release the mouse button.

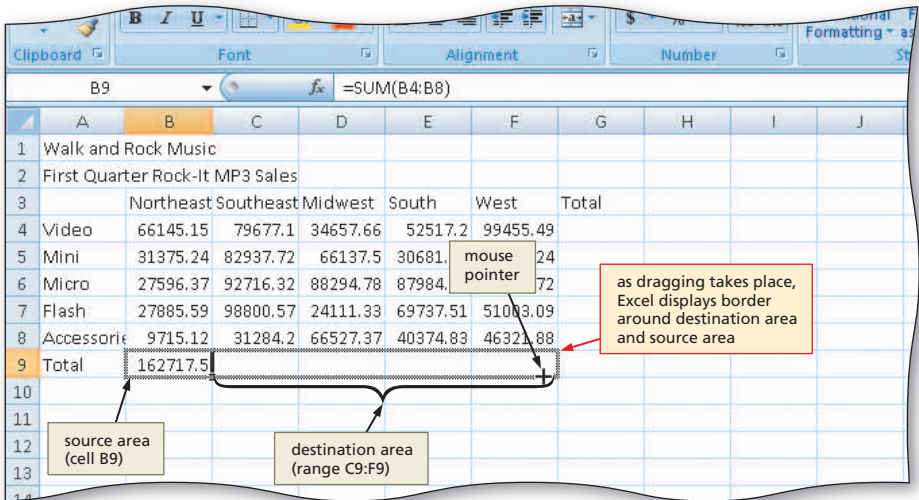


Figure 1–36

3

- Release the mouse button to copy the SUM function in cell B9 to the range C9:F9 (Figure 1–37) and calculate the sums in cells C9, D9, E9, and F9.

Q&amp;A

What is the purpose of the Auto Fill Options button?

When you copy one range to another, Excel displays an Auto Fill Options button (Figure 1–37). The Auto Fill Options button allows you to choose whether you want to copy the values from the source area to the destination area with formatting, without formatting, or copy only the format. To view the available fill options, click the Auto Fill Options button. The Auto Fill Options button disappears when you begin another activity.

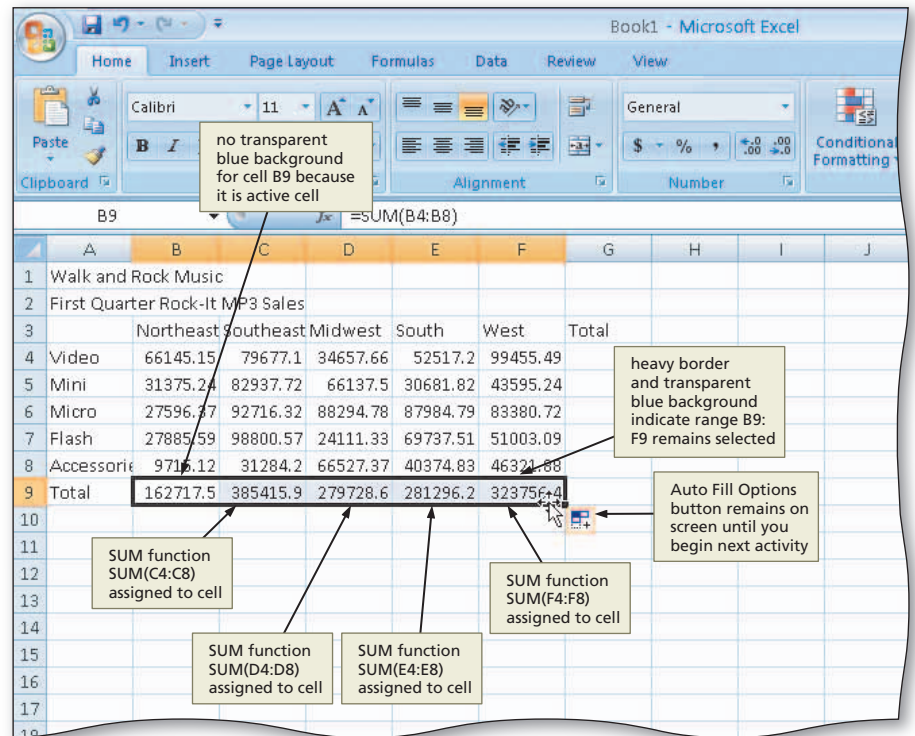


Figure 1–37

#### Other Ways

1. Select source area, click Copy button on Ribbon, select destination area, click Paste button on Ribbon
2. Right-click source area, click Copy on shortcut menu, right-click destination area, click Paste on shortcut menu
3. Select source area and then point to border of range; while holding down CTRL key, drag source area to destination area

## To Determine Multiple Totals at the Same Time

The next step in building the worksheet is to determine the quarterly sales for each product type and total quarterly sales for the company in column G. To calculate these totals, you can use the SUM function much as it was used to total the quarterly sales by region in row 9. In this example, however, Excel will determine totals for all of the rows at the same time. The following steps illustrate this process.

1

- Click cell G4 to make it the active cell (Figure 1–38).

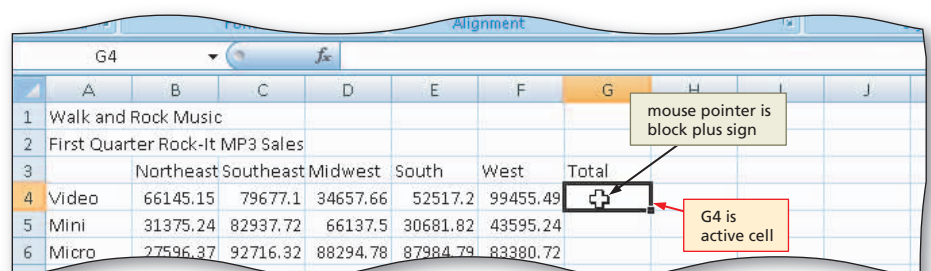


Figure 1–38



2

- With the mouse pointer in cell G4 and in the shape of a block plus sign, drag the mouse pointer down to cell G9 to highlight the range G4:G9 with a transparent view (Figure 1–39).

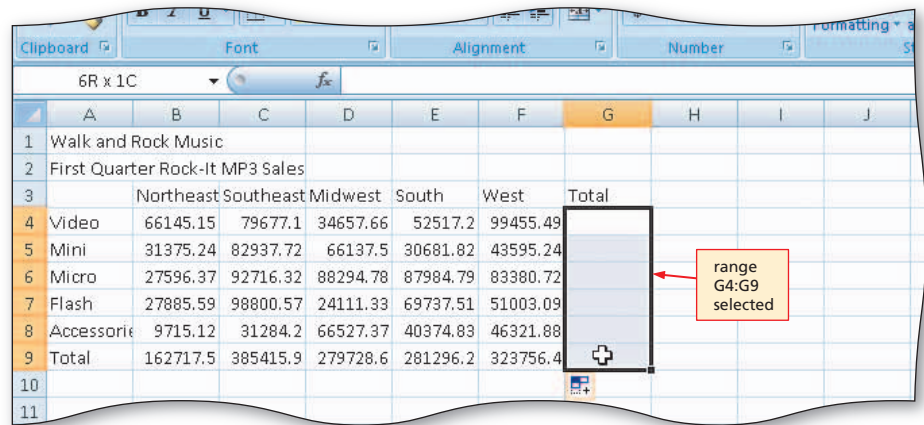


Figure 1–39

3

- Click the Sum button on the Ribbon to calculate and display the sums of the corresponding rows of sales in cells G4, G5, G6, G7, G8, and G9 (Figure 1–40).

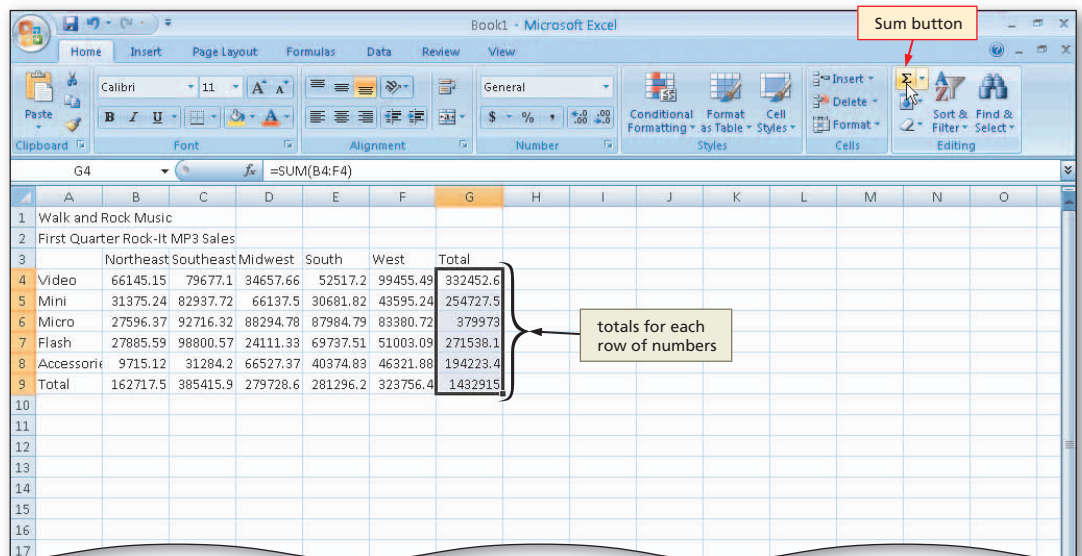


Figure 1–40

4

- Select cell A10 to deselect the range G4:G9.

**Q&A** Why does Excel create totals for each row?  
If each cell in a selected range is next to a row of numbers, Excel assigns the SUM function to each cell when you click the Sum button.

## Saving the Project

While you are building a worksheet in a workbook, the computer stores it in memory. When you save a workbook, the computer places it on a storage medium such as a USB flash drive, CD, or hard disk. A saved workbook is referred to as a **file**. A **file name** is the name assigned to a file when it is saved. It is important to save the workbook frequently for the following reasons:

- The worksheet in memory will be lost if the computer is turned off or you lose electrical power while Excel is open.
- If you run out of time before completing your workbook, you may finish your worksheet at a future time without starting over.

BTW

### Saving

Excel allows you to save a workbook in more than 30 different file formats. Choose the file format by clicking the 'Save as type' box arrow at the bottom of the Save As dialog box (Figure 1–41 on the next page). Excel Workbook is the default file format.

## Plan Ahead

### Determine where to save the workbook.

When saving a workbook, you must decide which storage medium to use.

- If you always work on the same computer and have no need to transport your projects to a different location, then your computer's hard drive will suffice as a storage location. It is a good idea, however, to save a backup copy of your projects on a separate medium in case the file becomes corrupted or the computer's hard drive fails.
- If you plan to work on your workbooks in various locations or on multiple computers, then you should save your workbooks on a portable medium, such as a USB flash drive or CD. The workbooks used in this book are saved to a USB flash drive, which saves files quickly and reliably and can be reused. CDs are easily portable and serve as good backups for the final versions of workbooks because they generally can save files only one time.

## To Save a Workbook

You have performed many tasks while creating this project and do not want to risk losing the work completed thus far. Accordingly, you should save the workbook. The following steps save a workbook on a USB flash drive using the file name, Walk and Rock Music 1st Quarter Sales.

- 1 With a USB flash drive connected to one of the computer's USB ports, click the Save button on the Quick Access Toolbar to display the Save As dialog box (Figure 1-41).

### Q&A

Do I have to save to a USB flash drive?

No. You can save to any device or folder. A **folder** is a specific location on a storage medium. You can save to the default folder or a different folder. You also can create your own folders, which is explained later in this book.

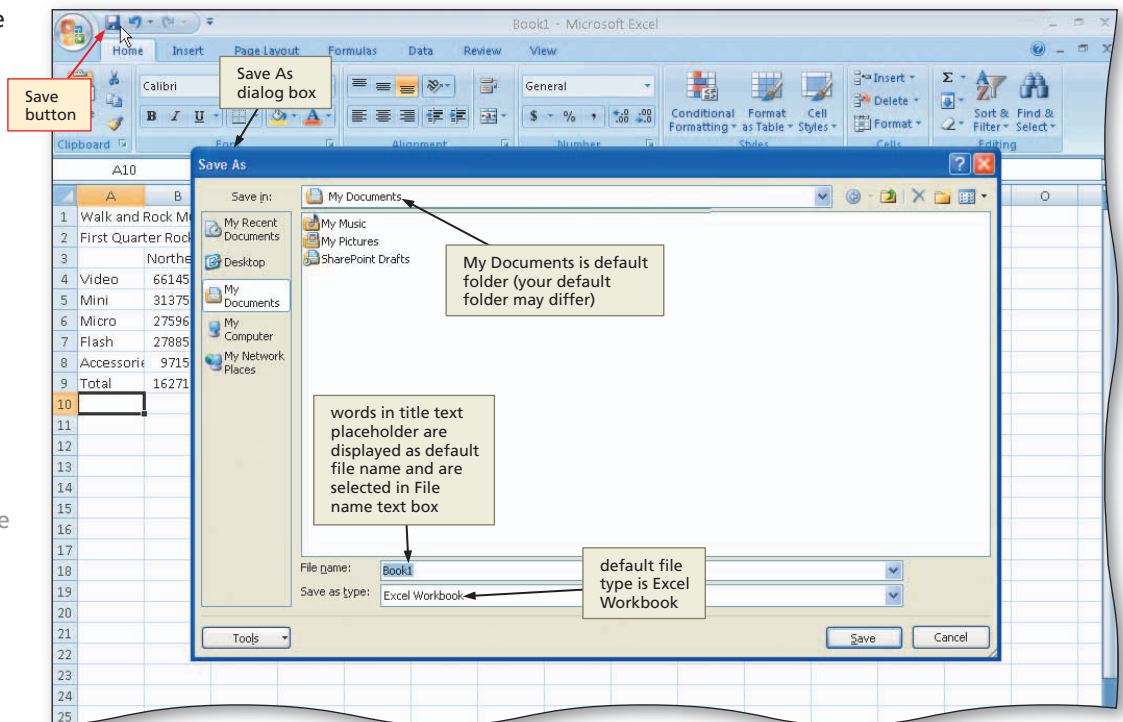


Figure 1-41

2

- Type Walk and Rock Music 1st Quarter Sales in the File name text box to change the file name. Do not press the ENTER key after typing the file name (Figure 1-42).

Q&amp;A

What characters can I use in a file name?

A file name can have a maximum of 255 characters, including spaces. The only invalid characters are the backslash (\), slash (/), colon (:), asterisk (\*), question mark (?), quotation mark ("), less than symbol (<), greater than symbol (>), and vertical bar (|).

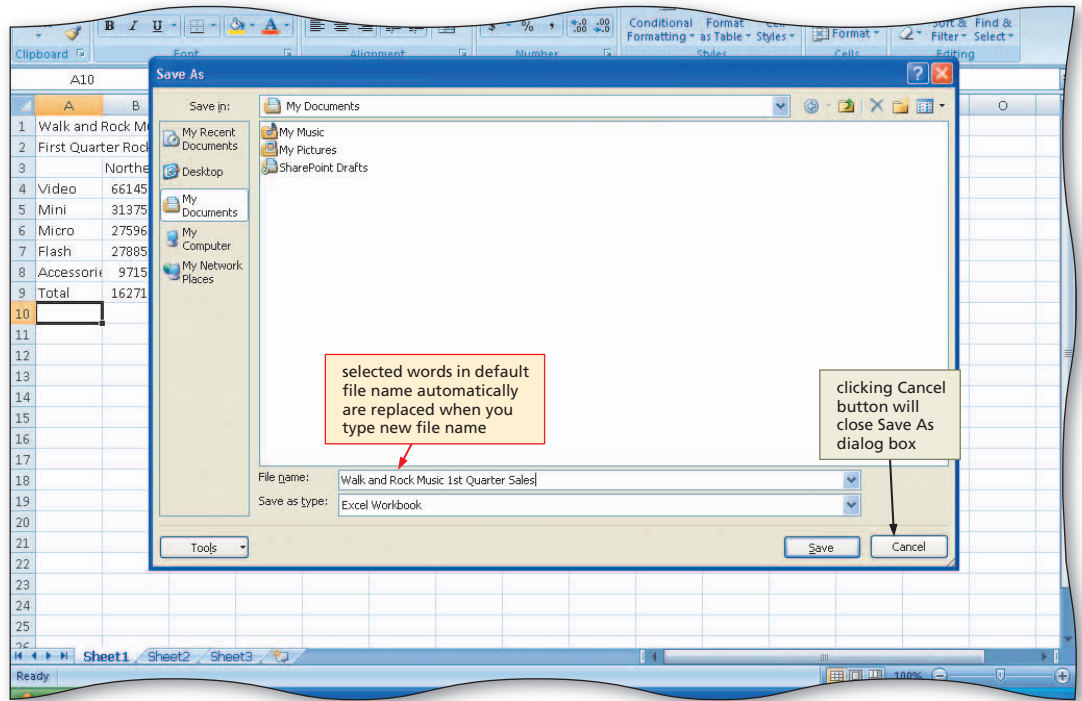


Figure 1-42

3

- Click the Save in box arrow to display a list of available drives and folders (Figure 1-43).

Q&amp;A

Why is my list of files, folders, and drives arranged and named differently from those shown in the figure?

Your computer's configuration determines how the list of files and folders is displayed and how drives are named. You can change the save location by clicking shortcuts on the My Places bar.

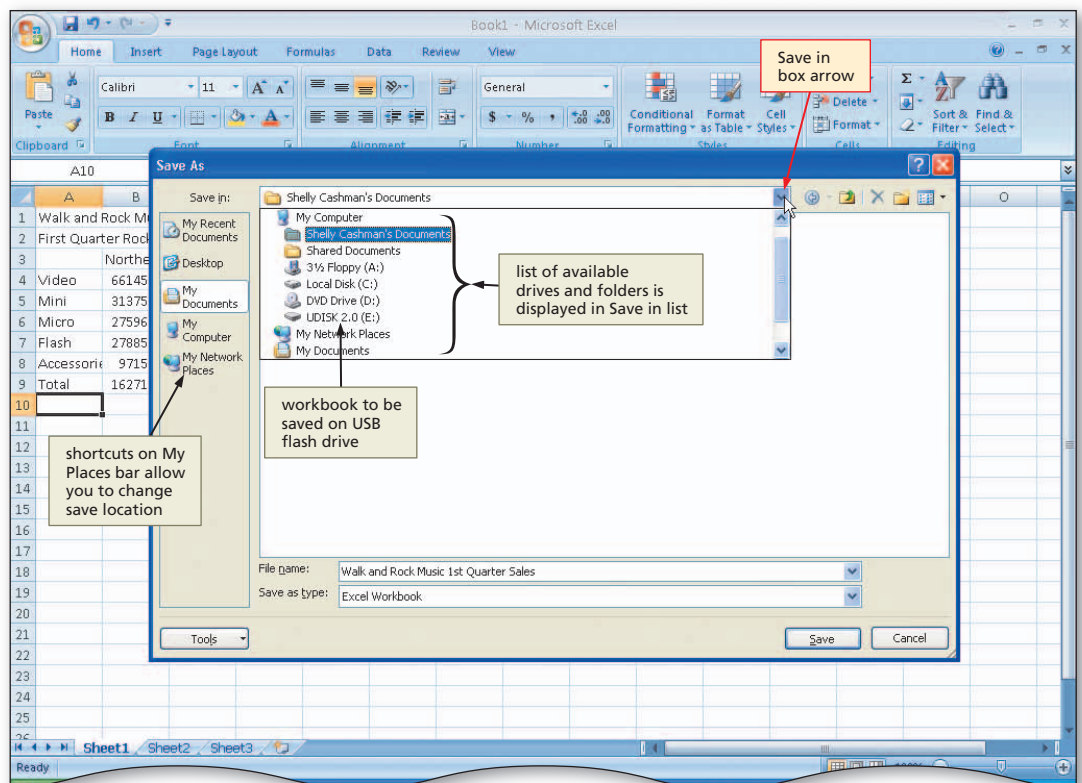


Figure 1-43

Q&amp;A

How do I save the file if I am not using a USB flash drive?

Use the same process, but be certain to select your device in the Save in list.

4

- Click UDISK 2.0 (E:) in the Save in list to select the USB flash drive, Drive E in this case, as the new save location (Figure 1-44).

Q&amp;A

What if my USB flash drive has a different name or letter?

It is very likely that your USB flash drive will have a different name and drive letter and be connected to a different port.

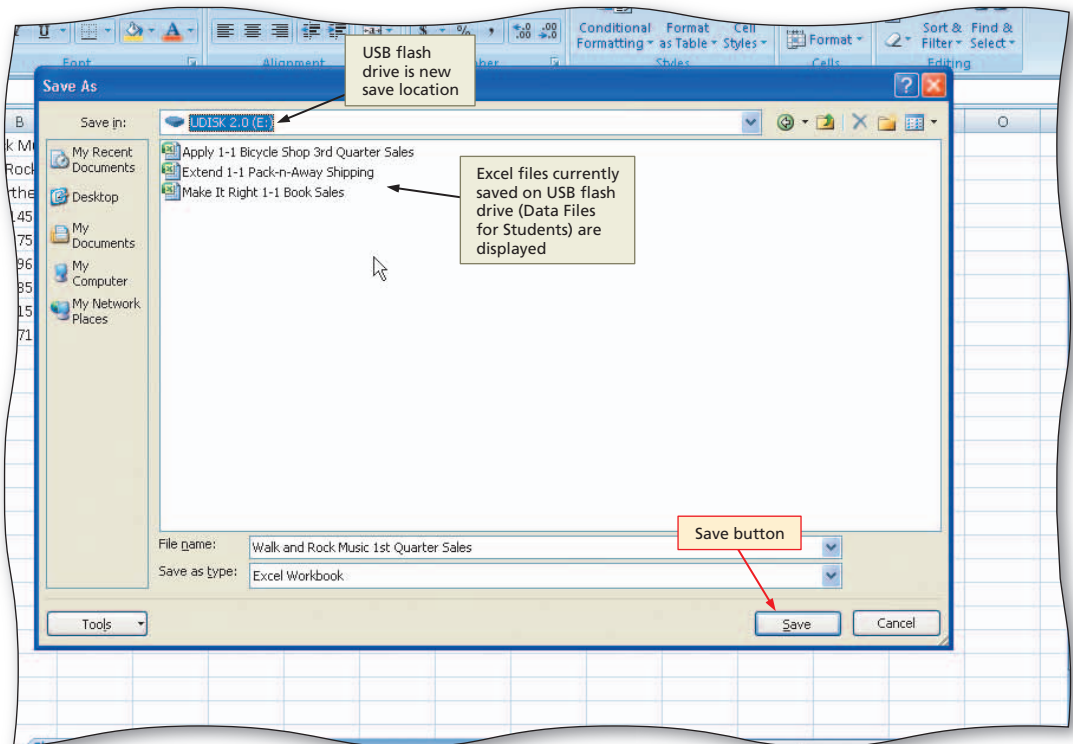


Figure 1-44

5

- Click the Save button in the Save As dialog box to save the workbook on the USB flash drive with the file name, Walk and Rock Music 1st Quarter Sales (Figure 1-45).

Q&amp;A

How do I know that Excel saved the workbook?

While Excel is saving your file, it briefly displays a message on the status bar indicating the amount of the file saved. In addition, your USB drive may have a light that flashes during the save process.

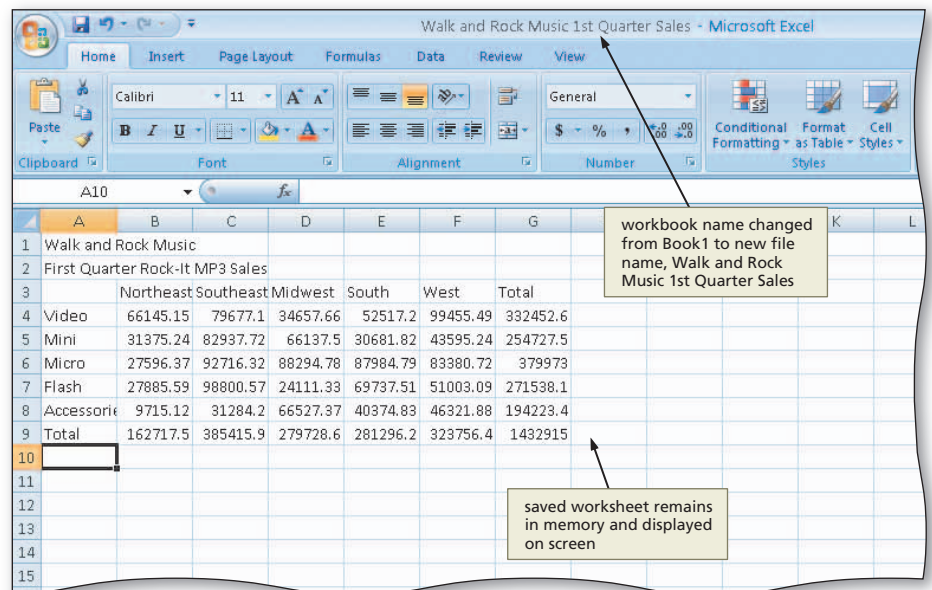


Figure 1-45

#### Other Ways

- Click Office Button, click Save, type file name, select drive or folder, click Save button
- Press CTRL+S or press SHIFT+F12, type file name, select drive or folder, click Save button



# Formatting the Worksheet

The text, numeric entries, and functions for the worksheet now are complete. The next step is to format the worksheet. You **format** a worksheet to emphasize certain entries and make the worksheet easier to read and understand.

Figure 1-46a shows the worksheet before formatting. Figure 1-46b shows the worksheet after formatting. As you can see from the two figures, a worksheet that is formatted not only is easier to read but also looks more professional.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Walk and Rock Music												
2	First Quarter Rock-It MP3 Sales												
3		Northeast	Southeast	Midwest	South	West	Total						
4	Video	66145.15	79677.1	34657.66	52517.2	99455.49	332452.6						
5	Mini	31375.24	82937.72	66137.5	30681.82	43595.24	254727.5						
6	Micro	27596.37	92716.32	88294.78	87984.79	83380.72	379973						
7	Flash	27885.59	98800.57	24111.33	69737.51	51003.09	271538.1						
8	Accessories	9715.12	31284.2	66527.37	40374.83	46321.88	194223.4						
9	Total	162717.5	385415.9	279728.6	281296.2	323756.4	1432915						
10													
11													
12													
13													
14													
15													
16													
17													

(a) Before Formatting

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Walk and Rock Music</b>										
2	<b>First Quarter Rock-It MP3 Sales</b>										
3		<b>Northeast</b>	<b>Southeast</b>	<b>Midwest</b>	<b>South</b>	<b>West</b>	<b>Total</b>				
4	Video	\$ 66,145.15	\$ 79,677.10	\$ 34,657.66	\$ 52,517.20	\$ 99,455.49	\$ 332,452.60				
5	Mini	31,375.24	82,937.72	66,137.50	30,681.82	43,595.24	254,727.52				
6	Micro	27,596.37	92,716.32	88,294.78	87,984.79	83,380.72	379,972.98				
7	Flash	27,885.59	98,800.57	24,111.33	69,737.51	51,003.09	271,538.09				
8	Accessories	9,715.12	31,284.20	66,527.37	40,374.83	46,321.88	194,223.40				
9	<b>Total</b>	<b>\$ 162,717.47</b>	<b>\$ 385,415.91</b>	<b>\$ 279,728.64</b>	<b>\$ 281,296.15</b>	<b>\$ 323,756.42</b>	<b>\$ 1,432,914.59</b>				
10											
11											

(b) After Formatting

Figure 1-46

**Plan Ahead****Identify how to format various elements of the worksheet.**

To change the unformatted worksheet in Figure 1–46a to the formatted worksheet in Figure 1–46b, the following tasks must be completed:

1. Change the font type, change the font style to bold, increase the font size, and change the font color of the worksheet titles in cells A1 and A2. These changes make the worksheet title prominently display to the user and inform the user of the purpose of the worksheet.
2. Center the worksheet titles in cells A1 and A2 across columns A through G.
3. Format the body of the worksheet. The body of the worksheet, range A3:G9, includes the column titles, row titles, and numbers. Formatting the body of the worksheet changes the numbers to use a dollars-and-cents format, with dollar signs in the first row (row 4) and the total row (row 9); adds underlining that emphasizes portions of the worksheet; and modifies the column widths to make the text and numbers readable.

The remainder of this section explains the process required to format the worksheet. Although the format procedures are explained in the order described above, you should be aware that you could make these format changes in any order. Modifying the column widths, however, usually is done last.

**BTW****Fonts**

In general, use no more than two font types in a worksheet.

**BTW****Fonts and Themes**

Excel uses default recommended fonts based on the workbook's theme. A theme is a collection of fonts and color schemes. The default theme is named Office, and the two recommended fonts for the Office theme are Calibri and Cambria. Excel, however, allows you to apply any font to a cell or range as long as the font is installed on your computer.

**Font Type, Style, Size, and Color**

The characters that Excel displays on the screen are a specific font type, style, size, and color. The **font type**, or font face, defines the appearance and shape of the letters, numbers, and special characters. Examples of font types include Calibri, Cambria, Times New Roman, Arial, and Courier. **Font style** indicates how the characters are emphasized. Common font styles include regular, bold, underline, or italic. The **font size** specifies the size of the characters on the screen. Font size is gauged by a measurement system called points. A single point is about 1/72 of one inch in height. Thus, a character with a **point size** of 10 is about 10/72 of one inch in height. The **font color** defines the color of the characters. Excel can display characters in a wide variety of colors, including black, red, orange, and blue.

When Excel begins, the preset font type for the entire workbook is Calibri, with a font size, font style, and font color of 11-point regular black. Excel allows you to change the font characteristics in a single cell, a range of cells, the entire worksheet, or the entire workbook.

## To Change a Cell Style

Excel includes the capability of changing several characteristics of a cell, such as font type, font size, and font color, all at once by assigning a predefined cell style to a cell. The following steps assign the Title cell style to the worksheet title in cell A1.

- 1
- Click cell A1 to make cell A1 the active cell.
  - Click the Cell Styles button on the Ribbon to display the Cell Styles gallery (Figure 1-47).

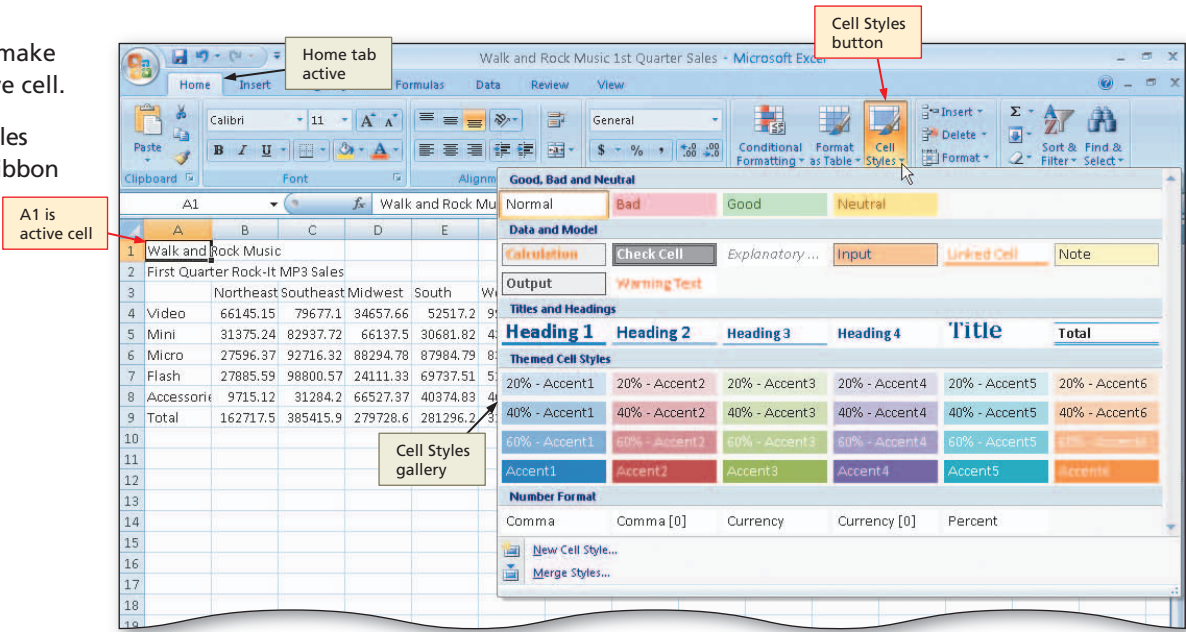


Figure 1-47

- 2
- Point to the Title cell style in the Titles and Headings area of the Cell Styles gallery to see a live preview of the cell style in cell A1 (Figure 1-48).

### Experiment

- Point to several other cell styles in the Cell Styles gallery to see a live preview of other cell styles in cell A1.

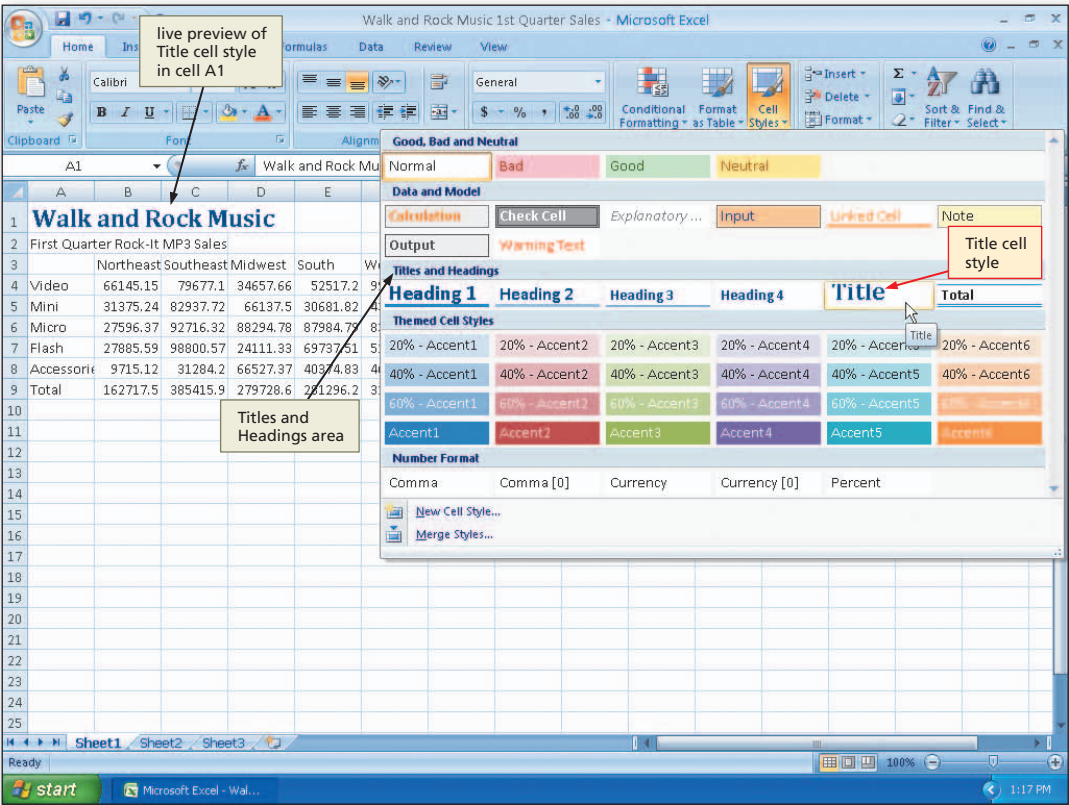


Figure 1-48

### Q&A

Why does the font type, font size, and font color change in cell A1 when I point to it?

The change in cell A1 is a result of live preview. Live preview is a feature of Excel 2007 that allows you to preview cell styles as you point to them in the Cell Styles gallery.



3

- Click the Title cell style to apply the cell style to cell A1 (Figure 1-49).

Q&amp;A

Why do several items in the Font group on the Ribbon change?

The changes to the Font box, Bold button, and Font Size box indicate the font changes applied to the active cell, cell A1, as a result of applying the Title cell style.

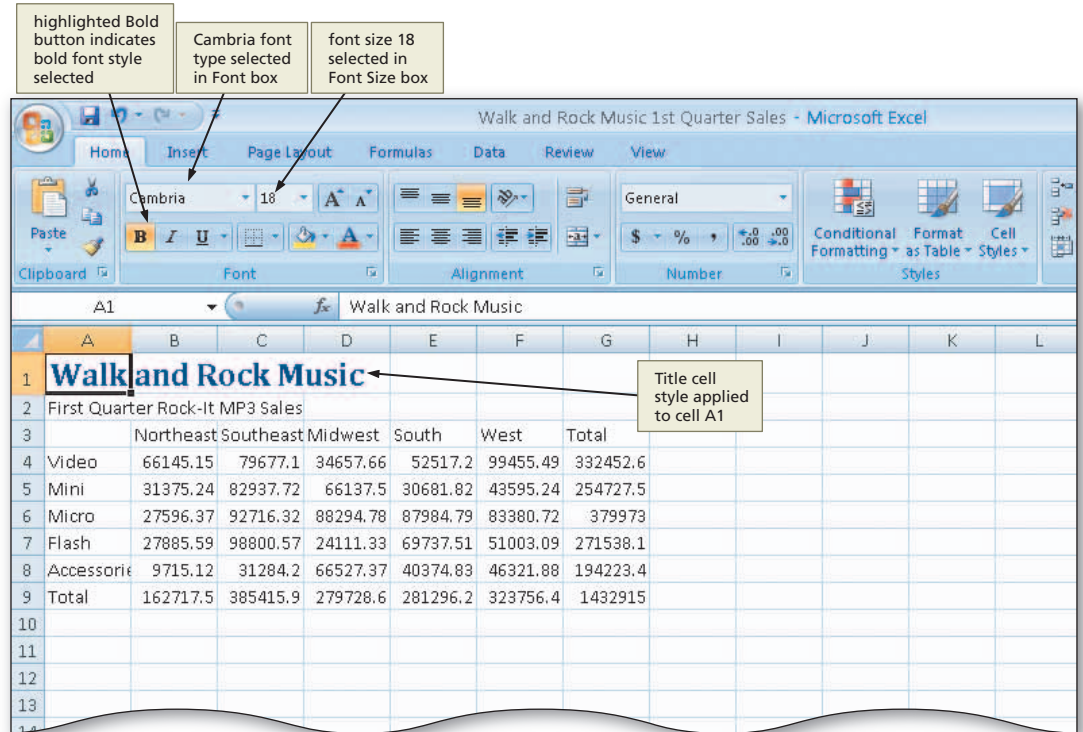


Figure 1-49

## To Change the Font Type

Different font types often are used in a worksheet to make it more appealing to the reader. The following steps show how to change the worksheet subtitle's font type from Calibri to Cambria.

1

- Click cell A2 to make cell A2 the active cell.
- Click the Font box arrow on the Ribbon to display the Font gallery (Figure 1-50).

Q&amp;A

Which fonts are displayed in the Font gallery?

Because many applications supply additional font types beyond what comes with the Windows operating system, the number of font types available on your computer will depend on the applications installed. This book uses only font types that come with the Windows operating system and Microsoft Office.

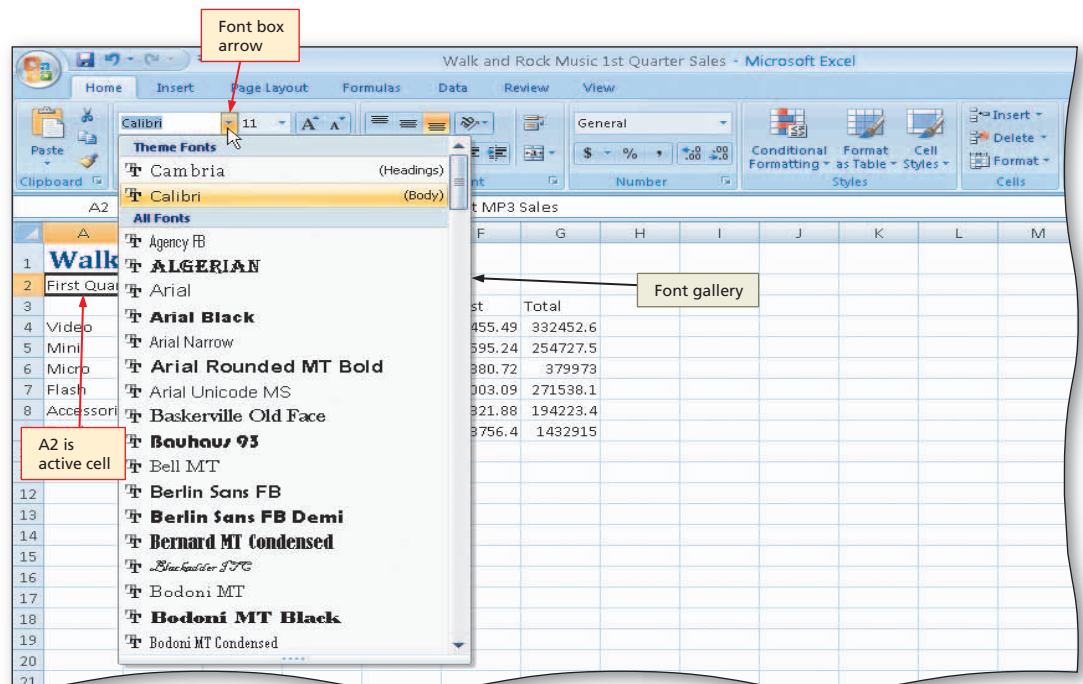


Figure 1-50



2

- Point to Cambria in the Theme Fonts area of the Font gallery to see a live preview of the Cambria font in cell A2 (Figure 1–51).



### Experiment

- Point to several other fonts in the Font gallery to see a live preview of other fonts in cell A2.

### Q&A

What is the Theme Fonts area?

Excel applies the same default theme to any new workbook that you start. A **theme** is a collection of cell styles and other styles that have common characteristics, such as a color scheme and font type. The default theme for an Excel workbook is the Office theme. The Theme Fonts area of the Font gallery includes the fonts included in the default Office theme. Cambria is recommended for headings and Calibri is recommended for cells in the body of the worksheet (Figure 1–51).

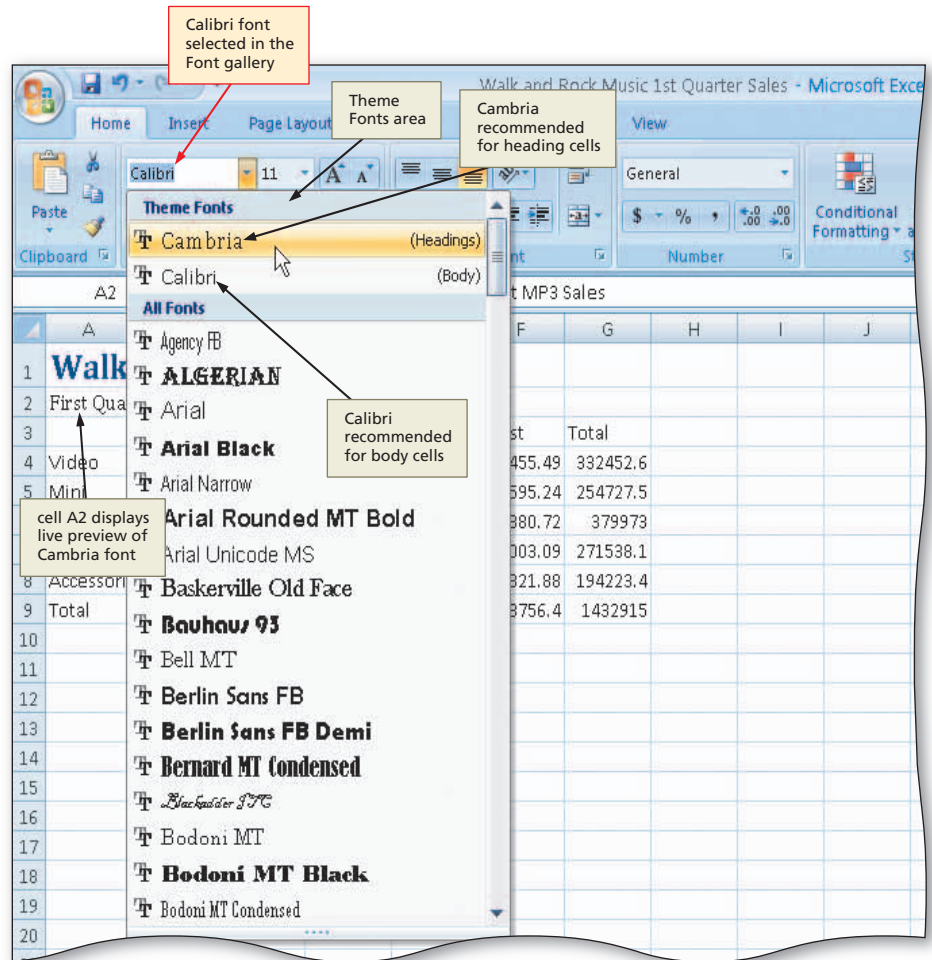


Figure 1–51

3

- Click Cambria in the Theme Fonts area to change the font type of the worksheet subtitle in cell A2 from Calibri to Cambria (Figure 1–52).

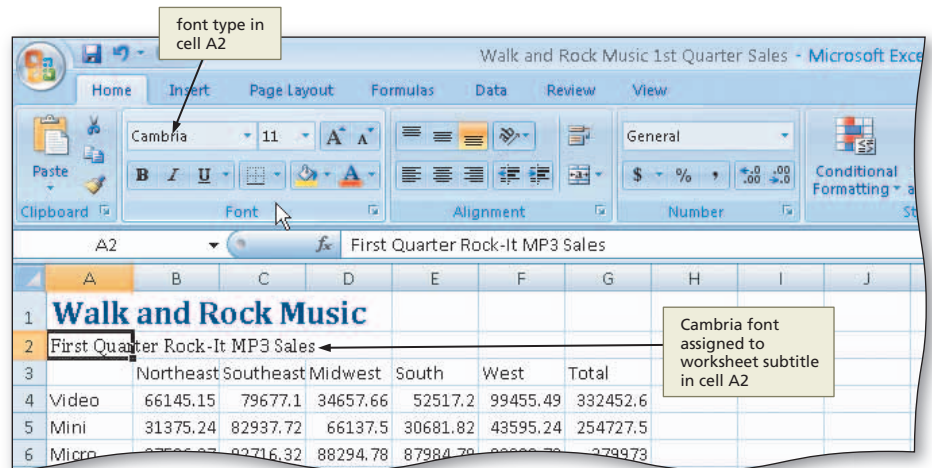


Figure 1–52

### Other Ways

- Select font type from Font list on Mini toolbar
- Right-click cell, click Format Cells on shortcut menu, click Font tab, click desired font type, click OK button

To Bold a Cell

You **bold** an entry in a cell to emphasize it or make it stand out from the rest of the worksheet. The following step shows how to bold the worksheet subtitle in cell A2.

- 1
- With cell A2 active, click the Bold button on the Ribbon to change the font style of the worksheet subtitle to bold (Figure 1-53).

Q&A What if a cell already includes a bold style?

If you point to the Bold button and the active cell already is bold, then Excel displays the button with a transparent orange background.

Q&A How do I remove the bold style from a cell?

Clicking the Bold button a second time removes the bold font style.

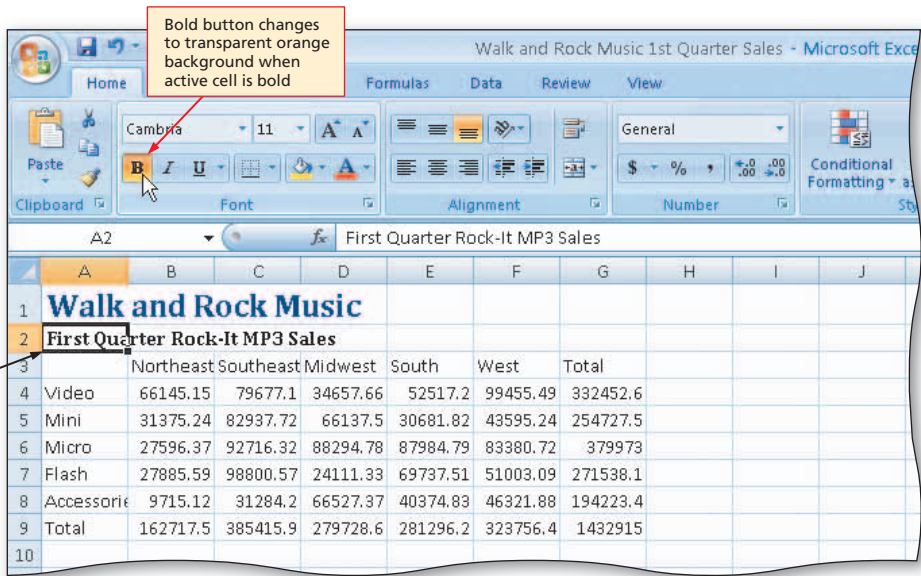


Figure 1-53

Other Ways

1. Click Bold button on Mini toolbar

click Font tab, click Bold, click OK button

2. Right-click cell, click Format Cells on shortcut menu,

3. Press CTRL+B

To Increase the Font Size of a Cell Entry

Increasing the font size is the next step in formatting the worksheet subtitle. You increase the font size of a cell so the entry stands out and is easier to read. The following steps increase the font size of the worksheet subtitle in cell A2.

- 1
- With cell A2 selected, click the Font Size box arrow on the Ribbon to display the Font Size list.
  - Point to 14 in the Font Size list to see a live preview of cell A2 with a font size of 14 (Figure 1-54).

Experiment

- Point to several other font sizes in the Font Size list to see a live preview of other font sizes in cell A2.

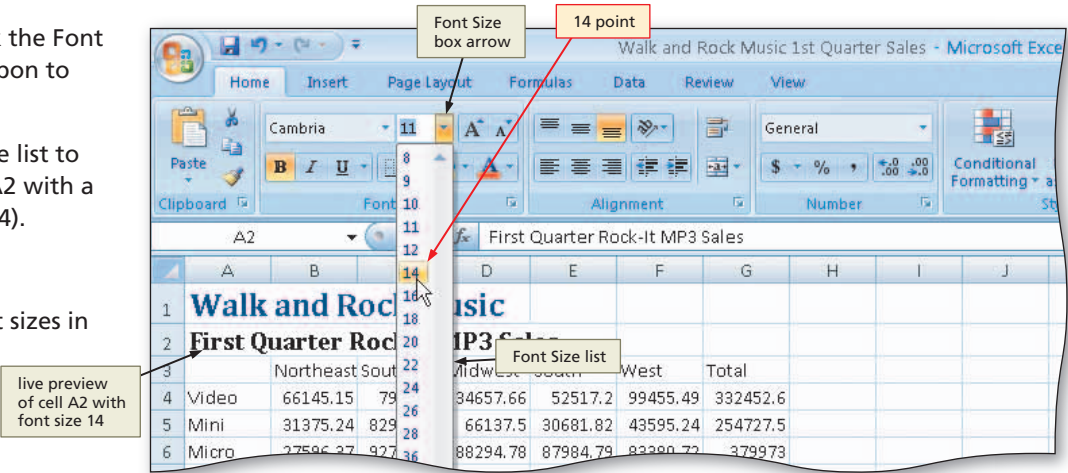


Figure 1-54

2

- Click 14 in the Font Size list to change the font in cell A2 from 11 point to 14 point (Figure 1–55).

Q&amp;A

Can I assign a font size that is not in the Font Size list?

Yes. An alternative to clicking a font size in the Font Size list is to click the Font Size box, type the font size, and then press the ENTER key. This procedure allows you to assign a font size not available in the Font Size list to a selected cell entry.

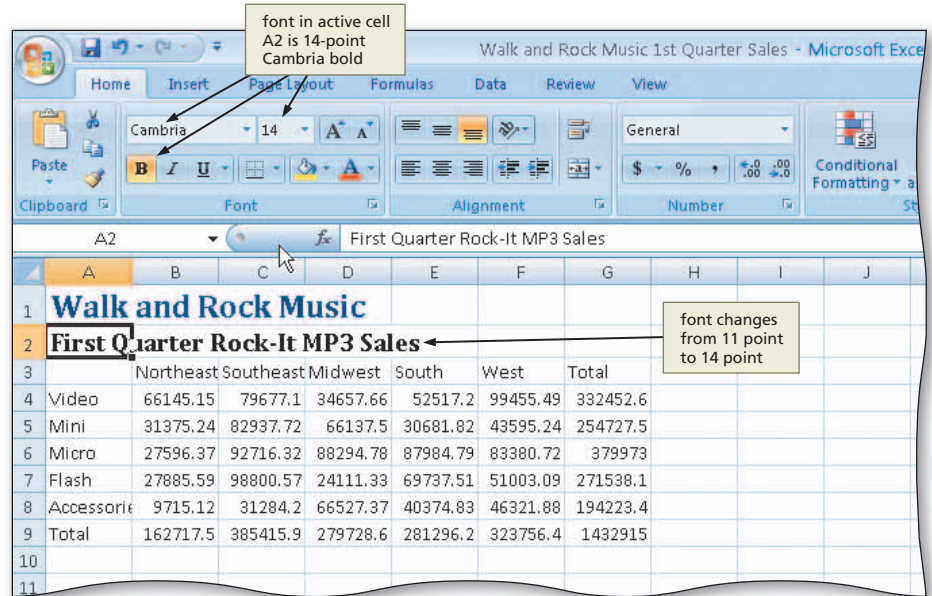


Figure 1–55

#### Other Ways

- Click Increase Font Size button or Decrease Font Size button on Ribbon
- Select font size from Font Size list on Mini toolbar
- Right-click cell, click Format Cells on shortcut menu, click Font tab, select font size in Size box, click OK button

## To Change the Font Color of a Cell Entry

The next step is to change the color of the font in cell A2 from black to dark blue. The following steps change the font color of a cell entry.

1

- With cell A2 selected, click the Font Color button arrow on the Ribbon to display the Font Color palette.
- Point to Dark Blue, Text 2 (dark blue color in column 4, row 1) in the Theme Colors area of the Font Color palette to see a live preview of the font color in cell A2 (Figure 1–56).



#### Experiment

- Point to several other colors in the Font Color palette to see a live preview of other font colors in cell A2.

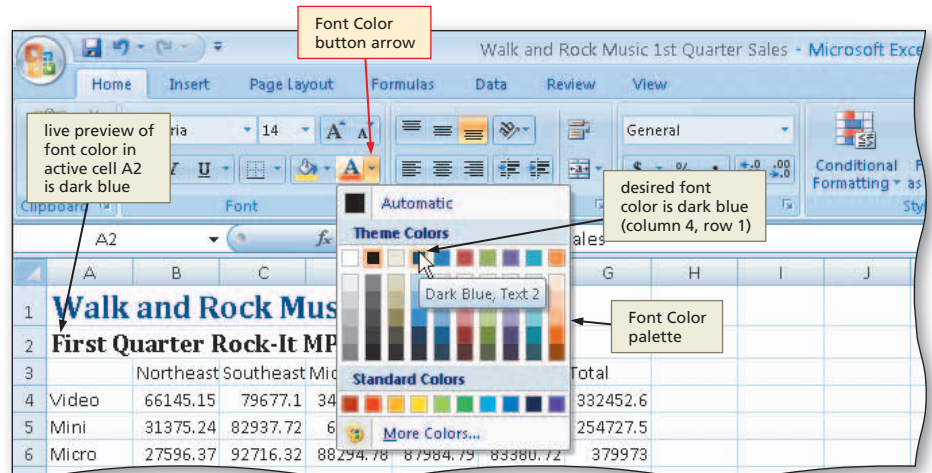


Figure 1–56

Q&amp;A

Which colors does Excel make available on the Font Color palette?

You can choose from more than 60 different font colors on the Font Color palette (Figure 1–56). Your Font Color palette may have more or fewer colors, depending on color settings of your operating system. The Theme Colors area includes colors that are included in the current workbook's theme.



2

- Click Dark Blue, Text 2 (column 4, row 1) on the Font Color palette to change the font of the worksheet subtitle in cell A2 from black to dark blue (Figure 1-57).

**Q&A** Why does the Font Color button change after I select the new font color?

When you choose a color on the Font Color palette, Excel changes the Font Color button on the Formatting toolbar to the chosen color. Thus, to change the font color of the cell entry in another cell to the same color, you need only to select the cell and then click the Font Color button.

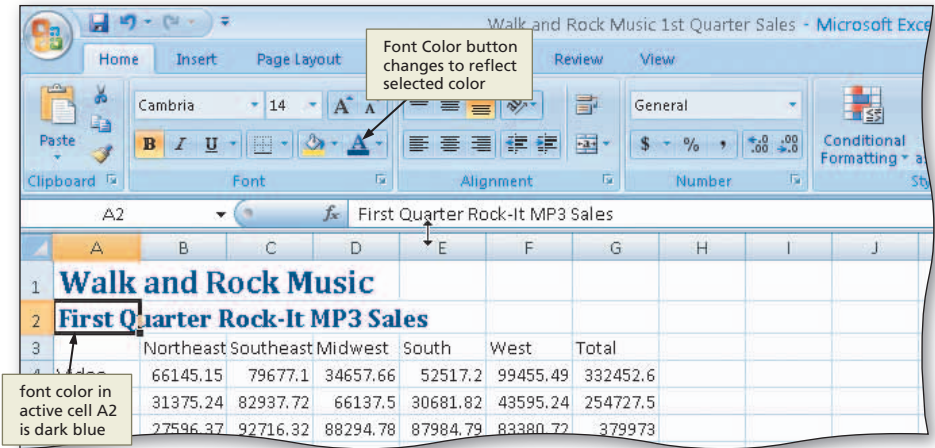


Figure 1-57

Other Ways

1. Select font color from Font Color list on Mini toolbar

2. Right-click cell, click Format Cells on shortcut menu, click Font tab, select color on Font Color palette, click OK button

To Center Cell Entries across Columns by Merging Cells

The final step in formatting the worksheet title and subtitle is to center them across columns A through G. Centering a title across the columns used in the body of the worksheet improves the worksheet's appearance. To do this, the seven cells in the range A1:G1 are combined, or merged, into a single cell that is the width of the columns in the body of the worksheet. The seven cells in the range A2:G2 also are merged in a similar manner. **Merging cells** involves creating a single cell by combining two or more selected cells. The following steps center the worksheet title and subtitle across columns by merging cells.

1

- Select cell A1 and then drag to cell G1 to highlight the range A1:G1 (Figure 1-58).

**Q&A** What if a cell in the range B1:G1 contained data?

For the Merge and Center button to work properly, all the cells except the leftmost cell in the selected range must be empty.

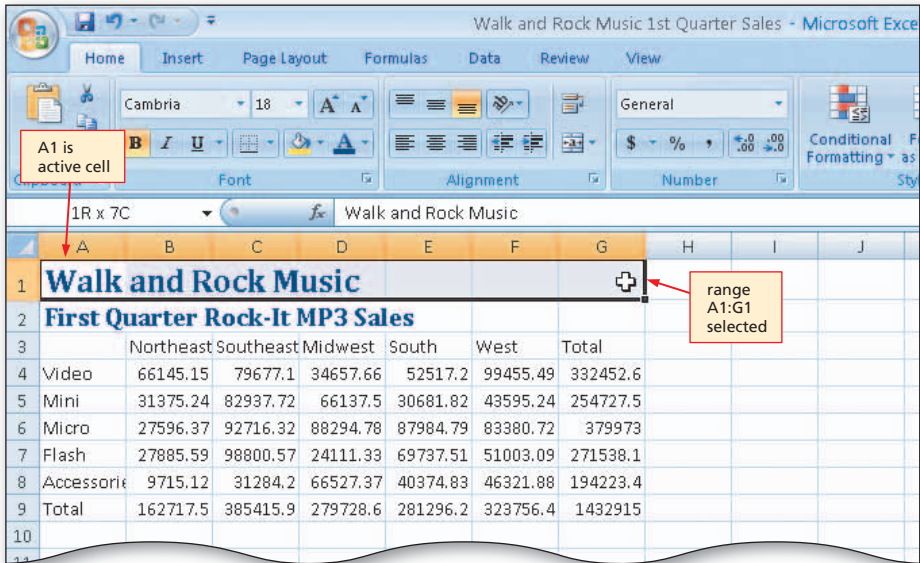


Figure 1-58



2

- Click the Merge and Center button on the Ribbon to merge cells A1 through G1 and center the contents of cell A1 across columns A through G (Figure 1-59).

Q&amp;A

What happened to cells B1 through G1?

After the merge, cells B1 through G1 no longer exist. Cell A1 now extends across columns A through G.

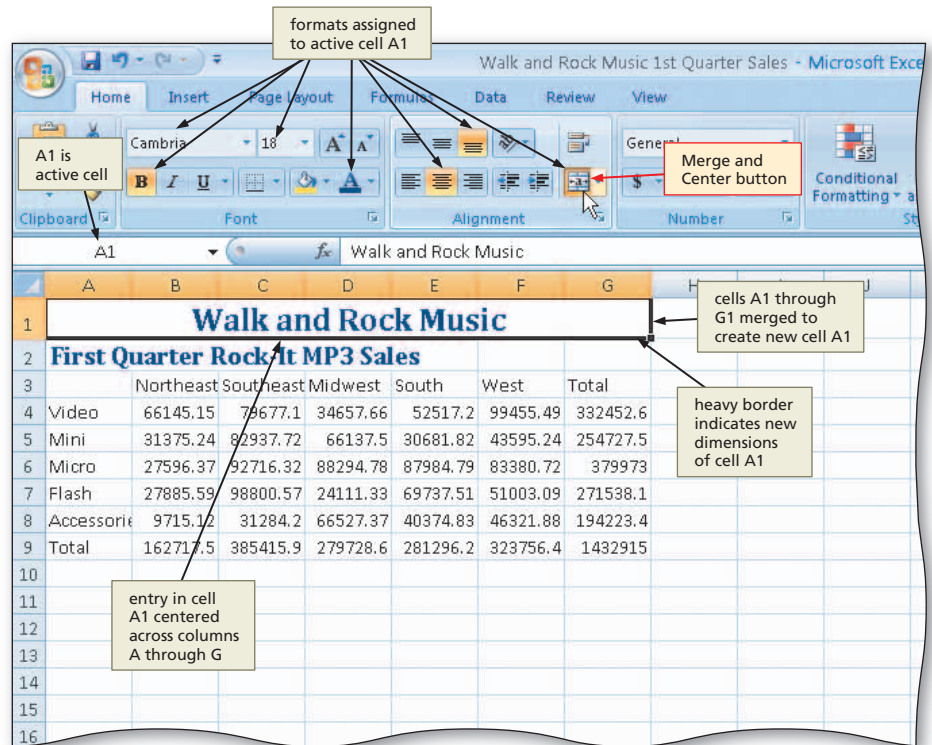


Figure 1-59

3

- Repeat Steps 1 and 2 to merge and center the worksheet subtitle across cells A2 through G2 (Figure 1-60).

Q&amp;A

Are cells B1 through G1 and B2 through G2 lost forever?

No. The opposite of merging cells is **splitting a merged cell**. After you have merged multiple cells to create one merged cell, you can unmerge, or split, the merged cell to display the original cells on the worksheet. You split a merged cell by selecting it and clicking the Merge and Center button. For example, if you click the Merge and Center button a second time in Step 2, it will split the merged cell A1 to cells A1, B1, C1, D1, E1, F1, and G1.

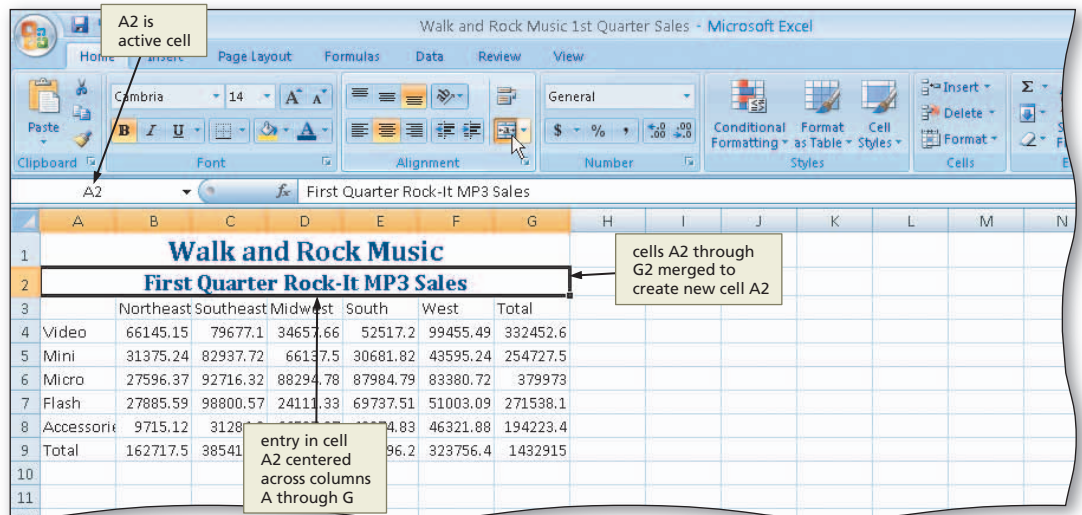


Figure 1-60

#### Other Ways

- Right-click selection, click Merge and Center button on Mini toolbar
- Right-click selection, click Format Cells on shortcut menu, click Alignment tab, select Center Across Selection in Horizontal list, click OK button

To Format Column Titles and the Total Row

The next step to format the worksheet is to format the column titles in row 3 and the total row, row 9. Column titles and the total row should be formatted so anyone who views the worksheet can quickly distinguish the column titles and total row from the data in the body of the worksheet. The following steps format the column titles and total row using cell styles in the default worksheet theme.

- 1
- Click cell A3 and then drag the mouse pointer to cell G3 to select the range A3:G3.
  - Point to the Cell Styles button on the Ribbon (Figure 1–61).

Q&A

Why is cell A3 selected in the range for the column headings?

The style to be applied to the column headings includes an underline that will help to distinguish the column headings from the rest of the worksheet. Including cell A3 in the range ensures that the cell will include the underline, which is visually appealing and further helps to separate the data in the worksheet.

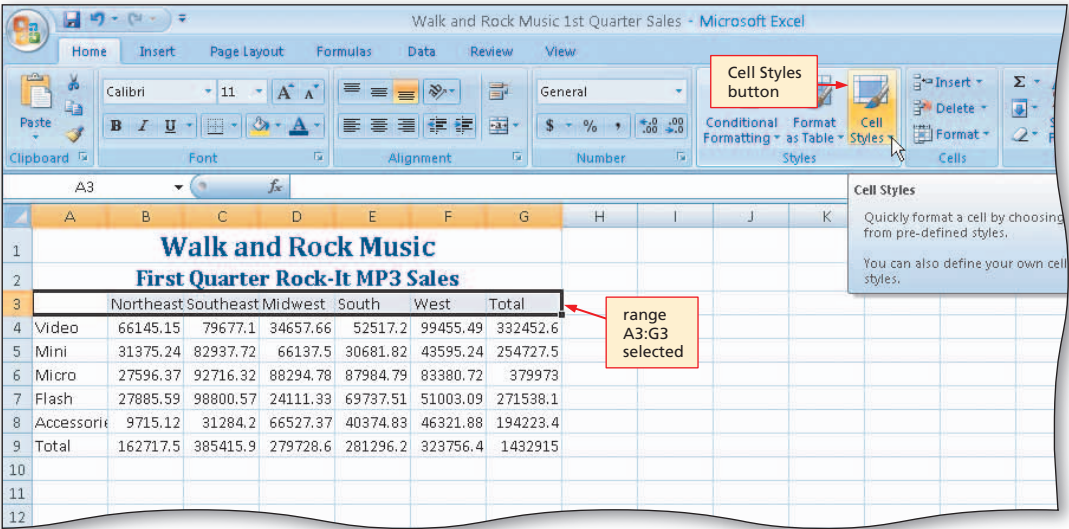


Figure 1–61

- 2
- Click the Cell Styles button to display the Cell Styles gallery.
  - Point to the Heading 3 cell style in the Titles and Headings area of the Cell Styles gallery to see a live preview of the cell style in the range A3:G3 (Figure 1–62).

Experiment

- Point to other cell styles in the Titles and Headings area of the Cell Styles gallery to see a live preview of other cell styles in the range A3:G3.

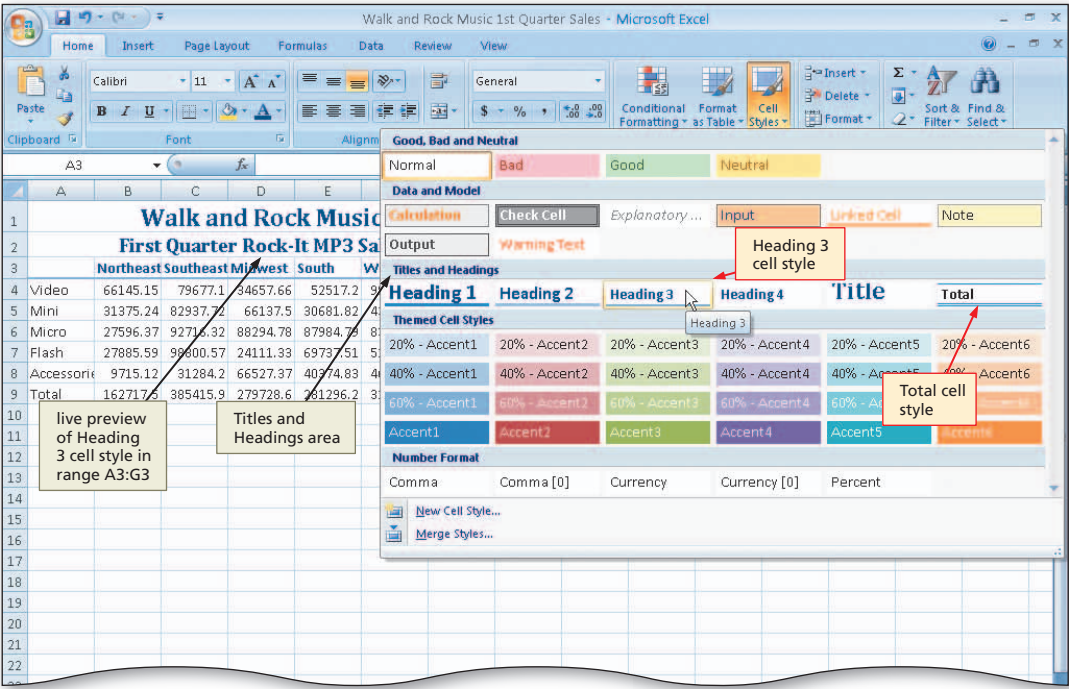


Figure 1–62

3

- Click the Heading 3 cell style to apply the cell style to the range A3:G3.
- Click cell A9 and then drag the mouse pointer to cell G9 to select the range A9:G9.
- Point to the Cell Styles button on the Ribbon (Figure 1–63).

Q&amp;A

Why should I choose Heading 3 instead of another heading cell style?

Excel includes many types of headings, such as Heading 1 and Heading 2, because worksheets often include many levels of headings above columns. In the case of the worksheet created for this project, the Heading 3 title includes formatting that makes the column titles' font size smaller than the title and subtitle and makes the column title stand out from the data in the body of the worksheet.

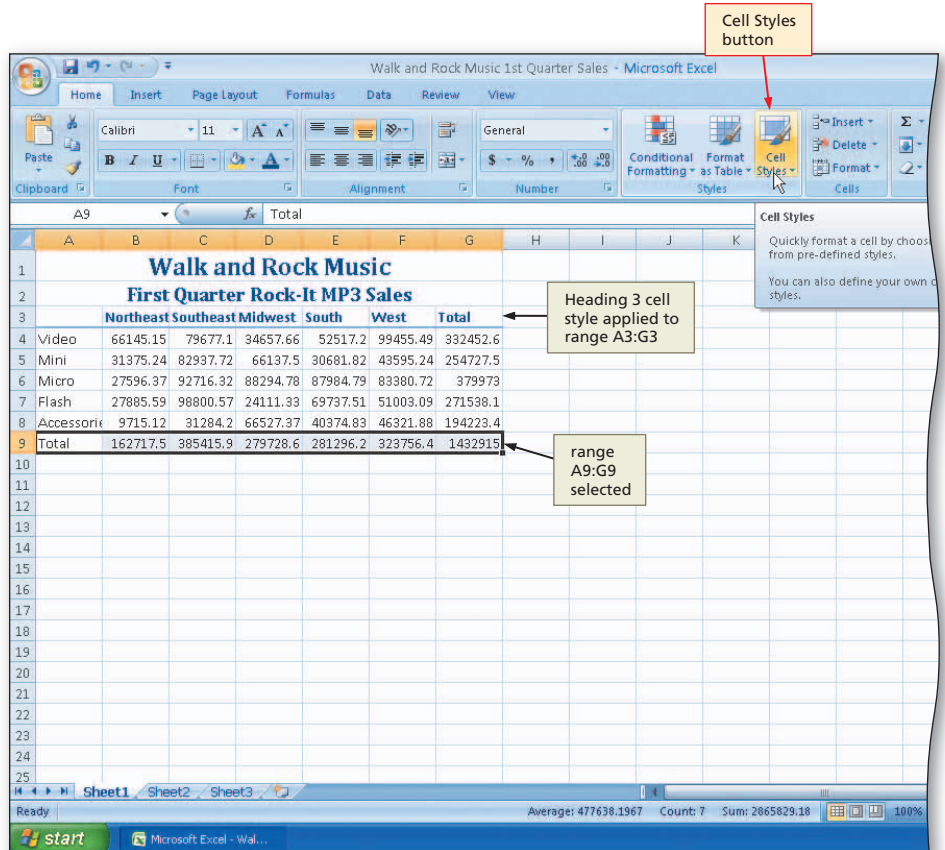


Figure 1–63

4

- Click the Cell Styles button on the Ribbon to display the Cell Styles gallery and then click the Total cell style in the Titles and Headings area to apply the Total cell style to the cells in the range A9:G9.
- Click cell A11 to select the cell (Figure 1–64).

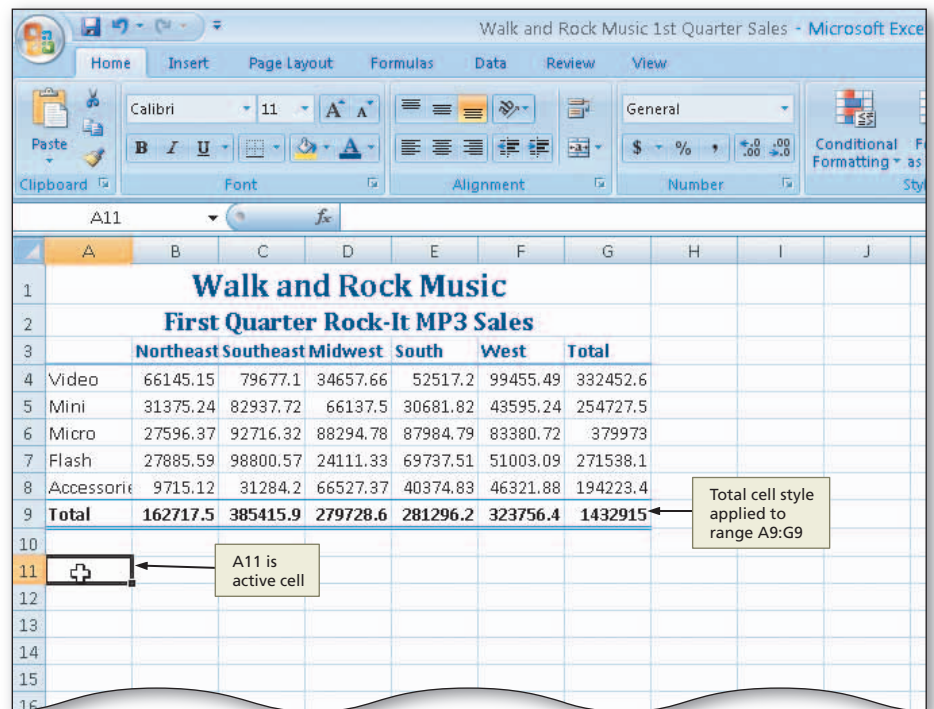


Figure 1–64



## To Format Numbers in the Worksheet

As previously noted, the numbers in the worksheet should be formatted to use a dollar-and-cents format, with dollar signs in the first row (row 4) and the total row (row 9). Excel allows you to format numbers in a variety of ways, and these methods are discussed in other chapters in this book. The following steps use buttons on the Ribbon to format the numbers in the worksheet.

- 1
- Select cell B4 and drag the mouse pointer to cell G4 to select the range B4:G4.
  - Point to the Accounting Number Format button on the Ribbon to display the Enhanced ScreenTip (Figure 1–65).

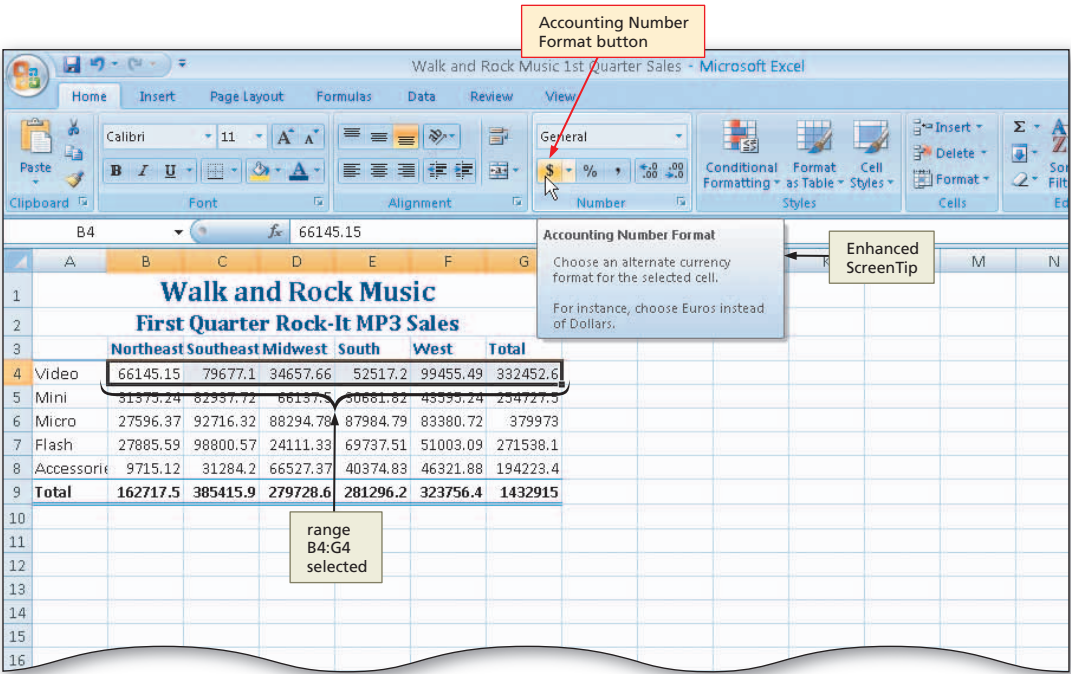


Figure 1–65

- 2
- Click the Accounting Number Format button on the Ribbon to apply the Accounting Number Format to the cells in the range B4:G4.
  - Select the range B5:G8 (Figure 1–66).

**Q&A** What effect does the Accounting Number Format have on the selected cells?

The Accounting Number Format causes the cells to display with two decimal places so that decimal places in cells below the selected cells align vertically. Cell widths are automatically adjusted to accommodate the new formatting.

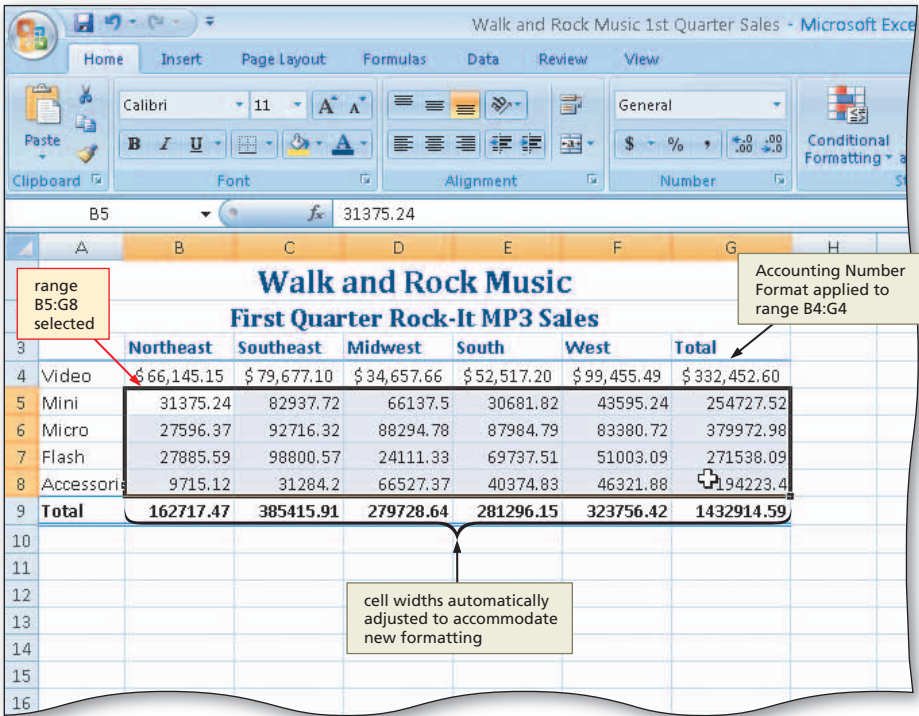


Figure 1–66



3

- Click the Comma Style button on the Ribbon to apply the Comma Style to the range B5:G8.
- Select the range B9:G9 (Figure 1-67).

Q&amp;A

What effect does the Comma Style format have on the selected cells?

The Comma Style format causes the cells to display with two decimal places and commas as thousands separators.

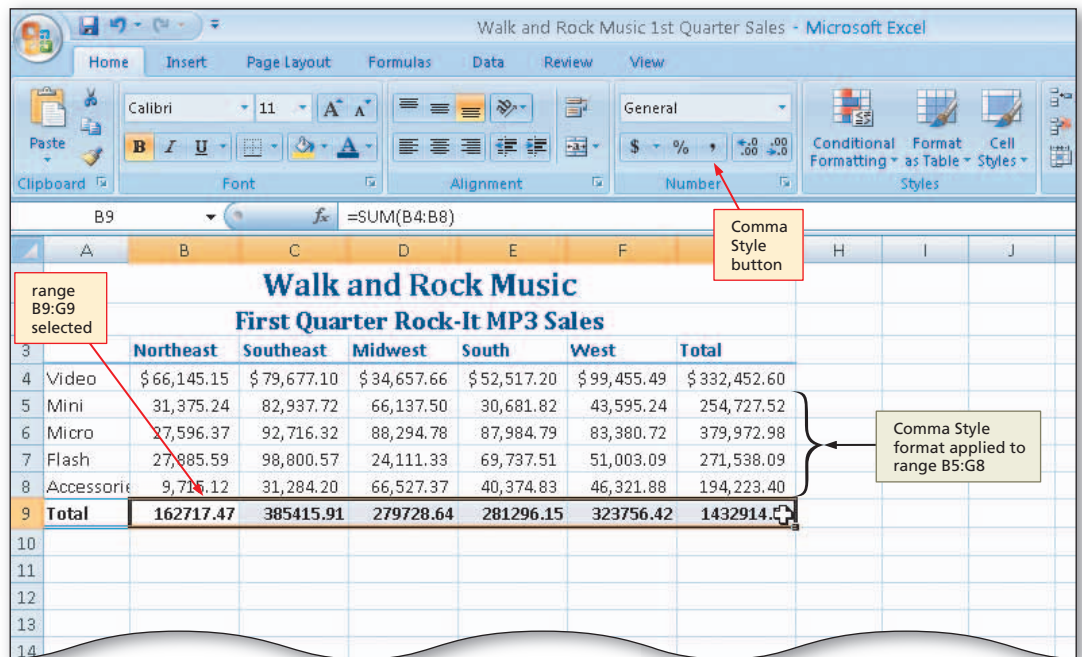


Figure 1-67

4

- Click the Accounting Number Format button on the Ribbon to apply the Accounting Number format to the cells in the range B9:G9.
- Select cell A11 (Figure 1-68).

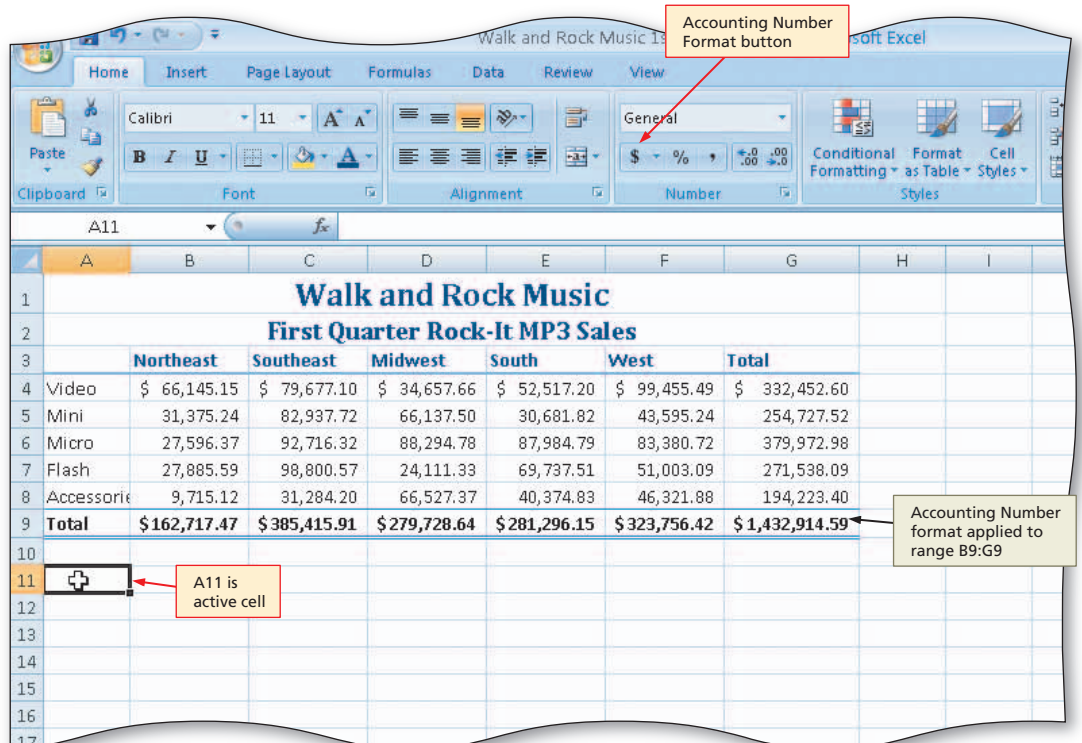


Figure 1-68

#### Other Ways

- Click Accounting Number Format or Comma button on Mini toolbar
- Right-click selection, click Format Cells on the shortcut menu, select Accounting in Category list or select Number and click Use 1000 Separator, click OK button

To Adjust the Column Width

The last step in formatting the worksheet is to adjust the width of column A so that the word Accessories in cell A8 is shown in its entirety in the cell. Excel includes several methods for adjusting cell widths and row heights, and these methods are discussed later in this book. The following steps adjust the width of column A so that the contents of cell A8 are displayed in the column.

- 1
- Point to the boundary on the right side of the column A heading above row 1 to change the mouse pointer to a split double arrow (Figure 1–69).

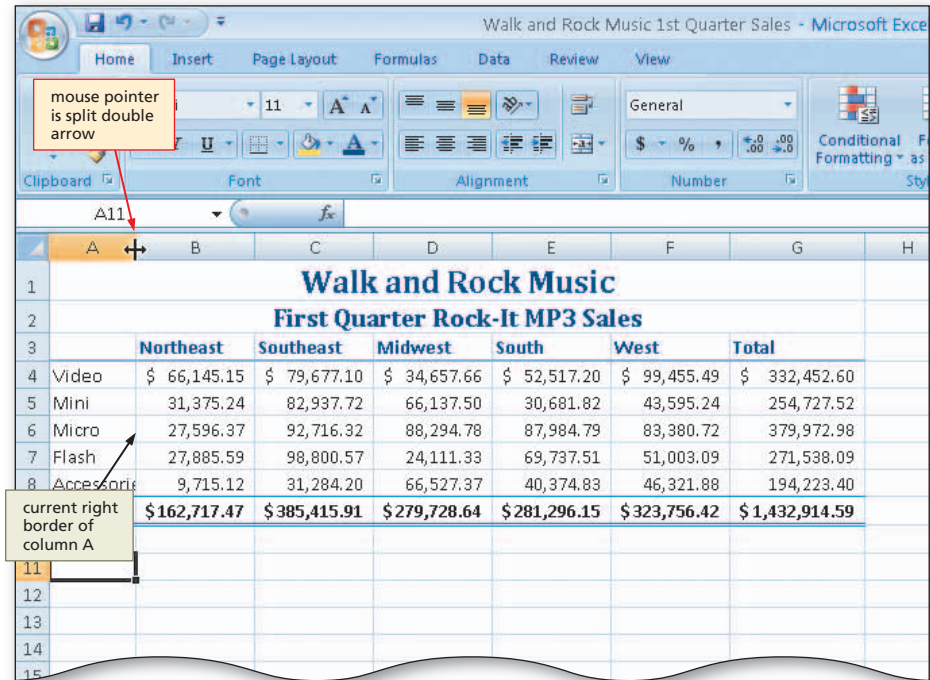


Figure 1–69

- 2
- Double-click on the boundary to adjust the width of column A to the width of the largest item in the column (Figure 1–70).

Q&A What if none of the items in column A extended through the entire width of the column?

If all of the items in column A were shorter in length than the width of the column when you double-click the right side of the column A heading, then Excel still would adjust the column width to the largest item in the column. That is, Excel would reduce the width of the column to the largest item.

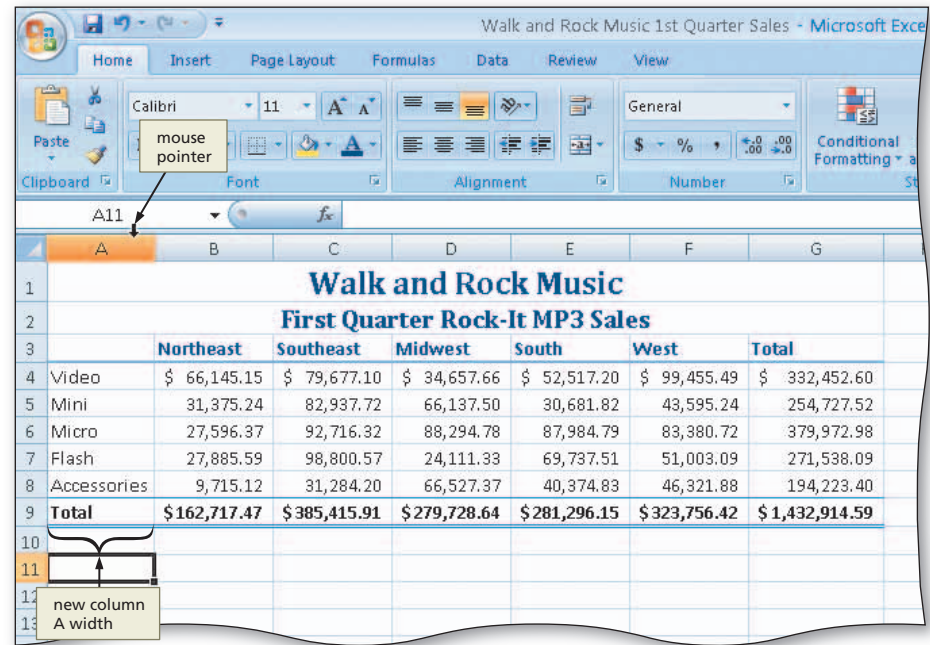


Figure 1–70

## Using the Name Box to Select a Cell

The next step is to chart the quarterly sales for the five product types sold by the company. To create the chart, you must select the cell in the upper-left corner of the range to chart (cell A3). Rather than clicking cell A3 to select it, the next section describes how to use the Name box to select the cell.

### To Use the Name Box to Select a Cell

As previously noted, the Name box is located on the left side of the formula bar. To select any cell, click the Name box and enter the cell reference of the cell you want to select. The following steps select cell A3.

1

- Click the Name box in the formula bar and then type a3 as the cell to select (Figure 1-71).

Q&A

Why is cell A11 still selected?

Even though cell A11 is the active cell, Excel displays the typed cell reference a3 in the Name box until you press the ENTER key.

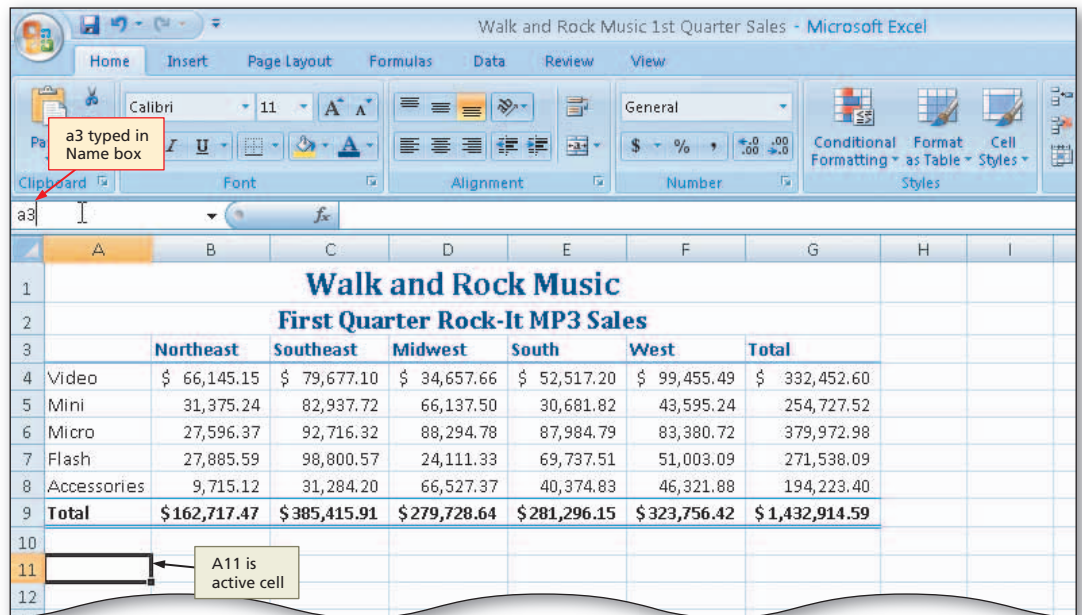


Figure 1-71

2

- Press the ENTER key to change the active cell from A11 to cell A3 (Figure 1-72).

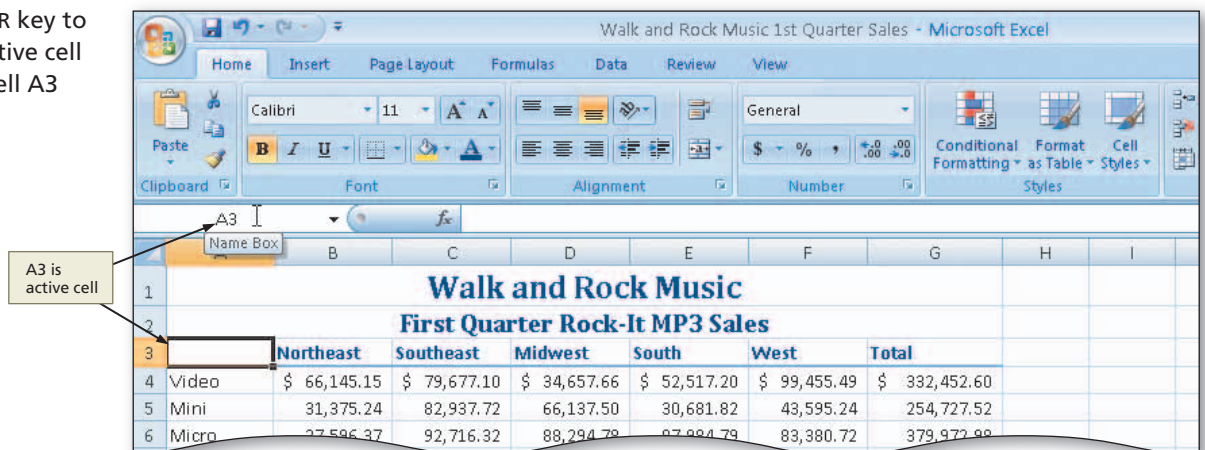


Figure 1-72



## Other Ways to Select Cells

As you will see in later chapters, in addition to using the Name box to select any cell in a worksheet, you also can use it to assign names to a cell or range of cells. Excel supports several additional ways to select a cell, as summarized in Table 1–3.

**Find & Select**  
You can find and select cells based on their content. Click the Find & Select button on the Home tab on the Ribbon. Then, click the Go To Special command. Choose your desired option in the Select area of the Go To Special dialog box and then click the OK button.

Table 1–3 Selecting Cells in Excel	
Key, Box, or Command	Function
ALT+PAGE DOWN	Selects the cell one worksheet window to the right and moves the worksheet window accordingly.
ALT+PAGE UP	Selects the cell one worksheet window to the left and moves the worksheet window accordingly.
ARROW	Selects the adjacent cell in the direction of the arrow on the key.
CTRL+ARROW	Selects the border cell of the worksheet in combination with the arrow keys and moves the worksheet window accordingly. For example, to select the rightmost cell in the row that contains the active cell, press CTRL+RIGHT ARROW. You also can press the END key, release it, and then press the appropriate arrow key to accomplish the same task.
CTRL+HOME	Selects cell A1 or the cell one column and one row below and to the right of frozen titles and moves the worksheet window accordingly.
Find command on Edit menu or SHIFT+F5	Finds and selects a cell that contains specific contents that you enter in the Find dialog box. If necessary, Excel moves the worksheet window to display the cell. You also can press CTRL+F to display the Find dialog box.
Go To command on Edit menu or F5	Selects the cell that corresponds to the cell reference you enter in the Go To dialog box and moves the worksheet window accordingly. You also can press CTRL+G to display the Go To dialog box.
HOME	Selects the cell at the beginning of the row that contains the active cell and moves the worksheet window accordingly.
Name box	Selects the cell in the workbook that corresponds to the cell reference you enter in the Name box.
PAGE DOWN	Selects the cell down one worksheet window from the active cell and moves the worksheet window accordingly.
PAGE UP	Selects the cell up one worksheet window from the active cell and moves the worksheet window accordingly.

**Plan Ahead**

**Decide on the type of chart needed.**  
Excel includes 11 chart types from which you can choose including column, line, pie, bar, area, X Y (scatter), stock, surface, doughnut, bubble, and radar. The type of chart you choose depends on the type of data that you have, how much data you have, and the message you want to convey.  
A column chart is a good way to compare values side-by-side. A Clustered Column chart can go even further in comparing values across categories. In the case of the Walk and Rock Music quarterly sales data, comparisons of product types within each region can be made side-by-side with a Clustered Column chart.

- Establish where to position and how to format the chart.**
- When possible, try to position charts so that both the data and chart appear on the screen on the worksheet together and so that the data and chart can be printed in the most readable manner possible. By placing the chart below the data on the Walk and Rock Music 1st Quarter Sales worksheet, both of these goals are accomplished.
  - When choosing/selecting colors for a chart, consider the color scheme of the rest of the worksheet. The chart should not present colors that are in stark contrast to the rest of the worksheet. If the chart will be printed in color, minimize the amount of dark colors on the chart so that the chart both prints quickly and preserves ink.



## Adding a 3-D Clustered Column Chart to the Worksheet

As outlined in the requirements document in Figure 1–2 on page EX 4, the worksheet should include a 3-D Clustered Column chart to graphically represent quarterly sales for each product type that the company sells. The 3-D Clustered Column chart shown in Figure 1–73 is called an **embedded chart** because it is drawn on the same worksheet as the data.

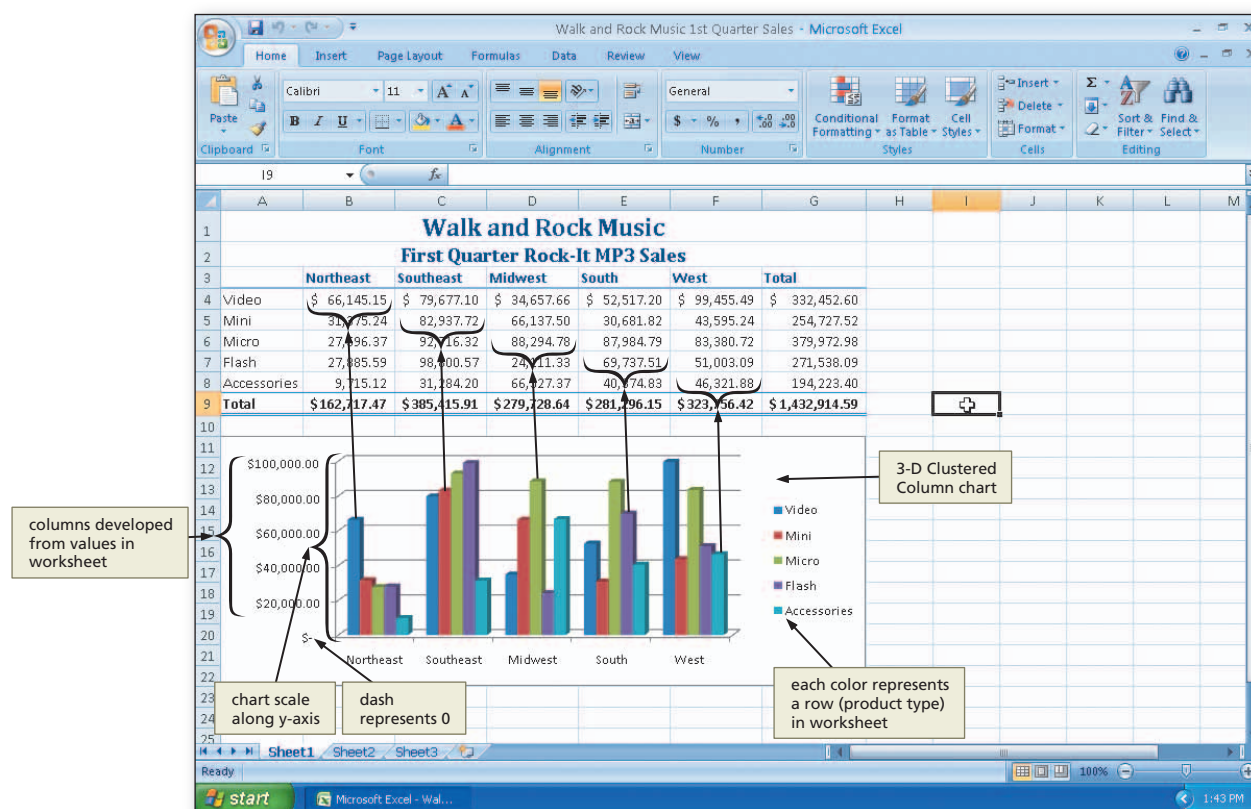


Figure 1–73

The chart uses different colored columns to represent sales for different product types. Each region uses the same color scheme for identifying product types, which allows for easy identification and comparison. For the Northeast sales region, for example, the dark blue column representing Video products shows quarterly sales of \$66,145.15; for the Southeast sales region, the maroon column representing Mini products shows quarterly sales of \$82,937.72; for the Midwest sales region, the pale green column representing Micro products shows quarterly sales of \$88,294.78; for the South sales region, the violet column representing Flash products shows quarterly sales of \$69,737.51; and for the West sales region, the light blue column representing Accessories shows quarterly sales of \$46,321.88. Because the same color scheme is used in each region to represent the five product types, you easily can compare sales of product types among the sales regions. The totals from the worksheet are not represented, because the totals are not in the range specified for charting.

BTW

### Cell Values and Charting

When you change a cell value on which a chart is dependent, Excel redraws the chart instantaneously, unless automatic recalculation is disabled. If automatic recalculation is disabled, then you must press the F9 key to redraw the chart. To enable or disable automatic recalculation, click the Calculations Options button on the Formulas tab on the Ribbon.

Excel derives the chart scale based on the values in the worksheet and then displays the scale along the vertical axis (also called the **y-axis** or **value axis**) of the chart. For example, no value in the range B4:F8 is less than 0 or greater than \$100,000.00, so the scale ranges from 0 to \$100,000.00. Excel also determines the \$10,000.00 increments of the scale automatically. For the numbers along the y-axis, Excel uses a format that includes representing the 0 value with a dash (Figure 1–73 on the previous page).

To Add a 3-D Clustered Column Chart to the Worksheet

The commands to insert a chart are located on the Insert tab. With the range to chart selected, you click the Column button on the Ribbon to initiate drawing the chart. The area on the worksheet where the chart appears is called the chart location. As shown in Figure 1–73, the chart location in this worksheet is the range A11:G22, immediately below the worksheet data.

The following steps draw a 3-D Clustered Column chart that compares the quarterly sales by product type for the five sales regions.

- 1
- Click cell A3 and then drag the mouse pointer to the cell F8 to select the range A3:F8 (Figure 1–74).

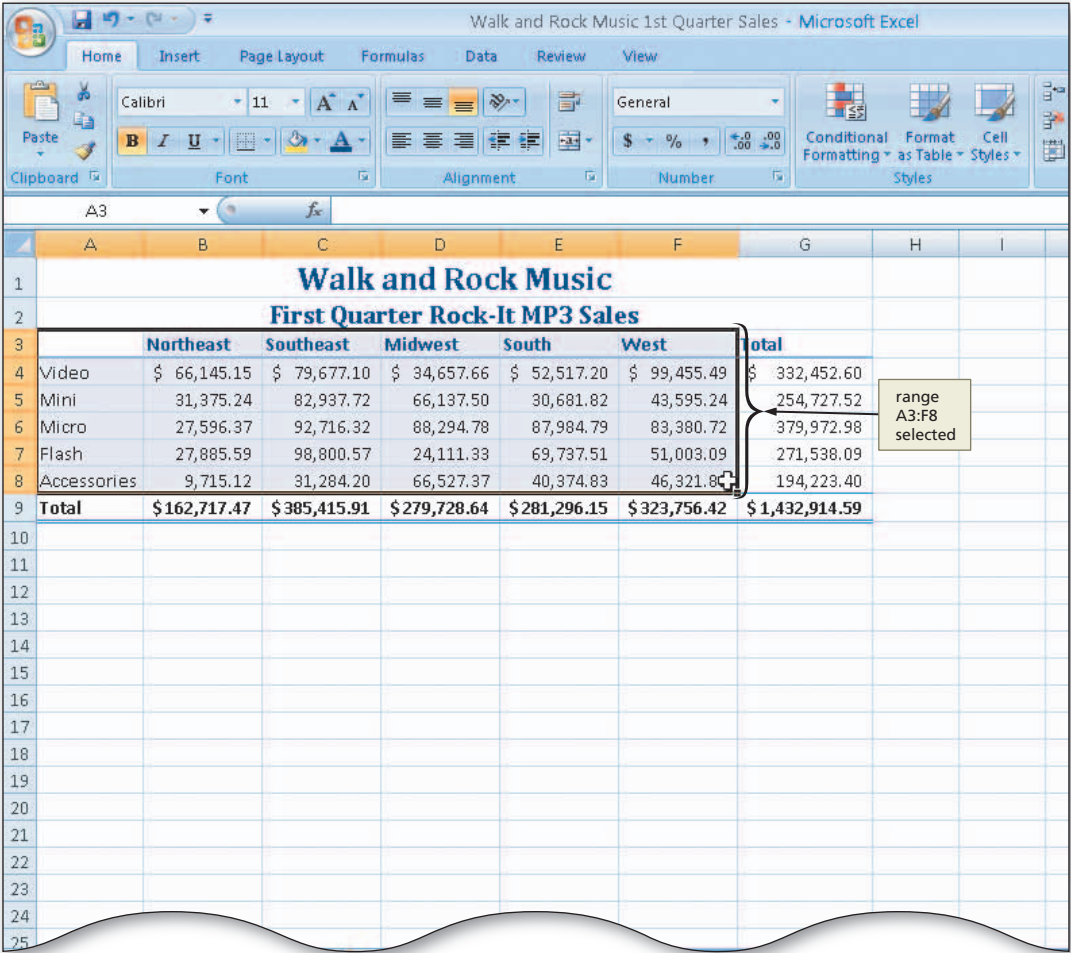


Figure 1–74

2

- Click the Insert tab to make the Insert tab the active tab (Figure 1–75).

Q&amp;A

What tasks can I perform with the Insert tab?

The Insert tab includes commands that allow you to insert various objects, such as shapes, tables, illustrations, and charts, into a worksheet. These objects will be discussed as they are used throughout this book.

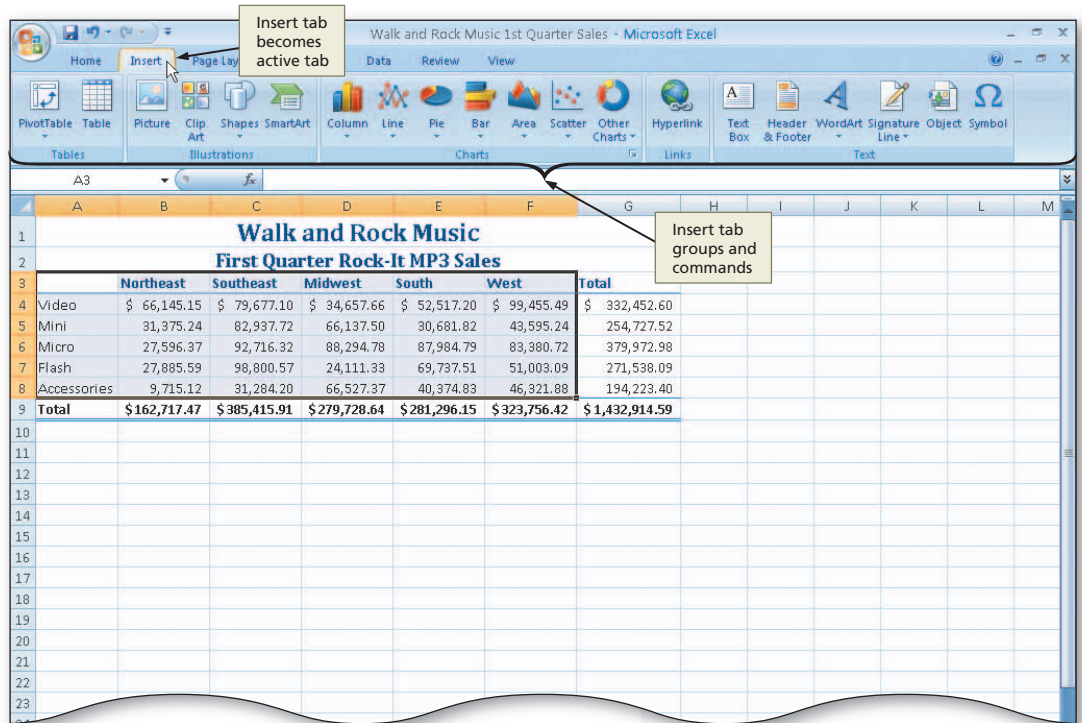


Figure 1–75

3

- Click the Column button on the Ribbon to display the Column gallery.
- Point to the 3-D Clustered Column chart type in the 3-D Column area of the Column gallery (Figure 1–76).

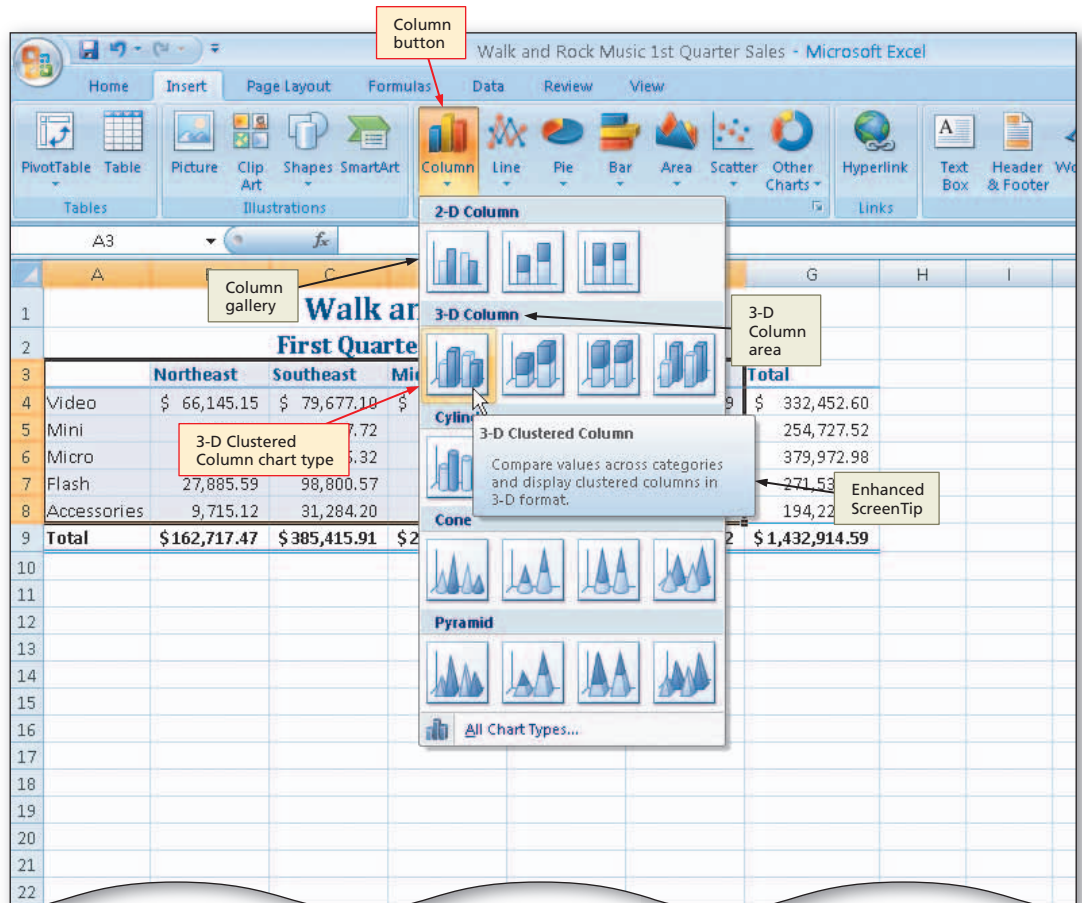


Figure 1–76



4

- Click the 3-D Clustered Column chart type in the 3-D Column area of the Column gallery to add a 3-D Clustered Column chart to the middle of the worksheet in a selection rectangle.
- Click the top-right edge of the selection rectangle but do not release the mouse to grab the chart and change the mouse pointer to a cross hair with four arrowheads (Figure 1-77).

**Q&A** Why is a new tab displayed on the Ribbon?

When you select objects such as shapes or charts, Excel displays contextual tabs that include special commands that are used to work with the type of object selected. Because a chart is selected, Excel displays the Chart Tools contextual tab. The three tabs below the Chart Tools contextual tab, Design, Layout, and Format, are tabs that include commands to work with charts.

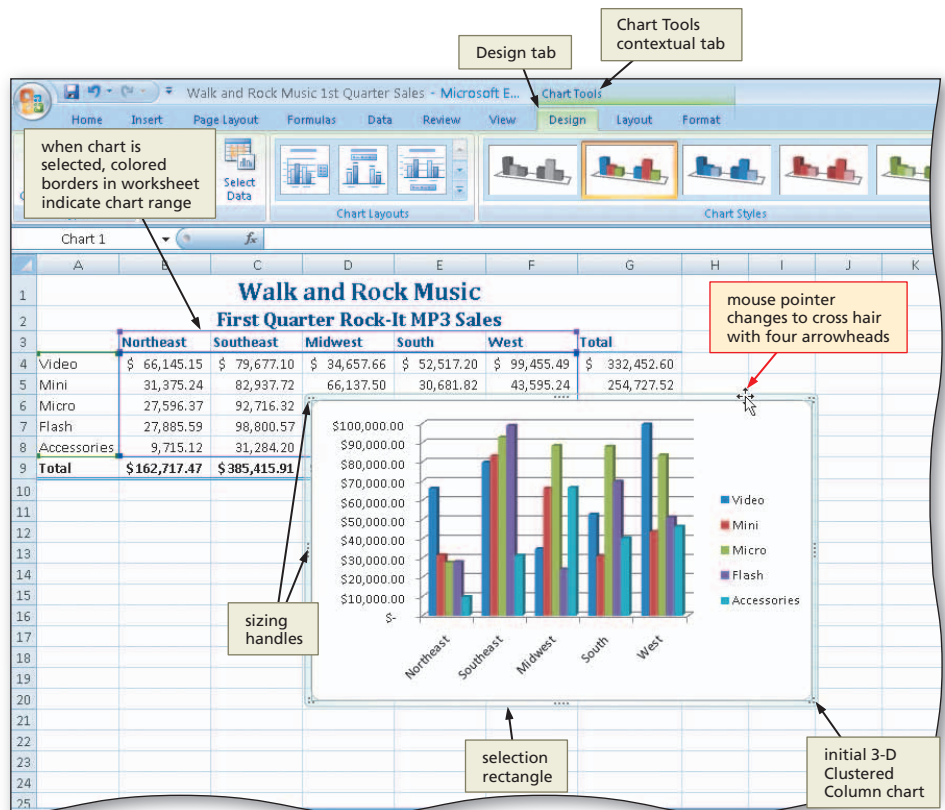


Figure 1-77

5

- Continue holding down the left mouse button while dragging the chart down and to the left to position the upper-left corner of the dotted line rectangle over the upper-left corner of cell A11. Release the mouse button to complete the move of the chart.
- Click the middle sizing handle on the right edge of the chart and do not release the mouse button (Figure 1-78).

**Q&A** How does Excel know how to create the chart?

Excel automatically selects the entries in the topmost row of the chart range (row 3) as the titles for the horizontal axis (also called the **x-axis** or **category axis**) and draws a column for each of the 25 cells in the range containing numbers.

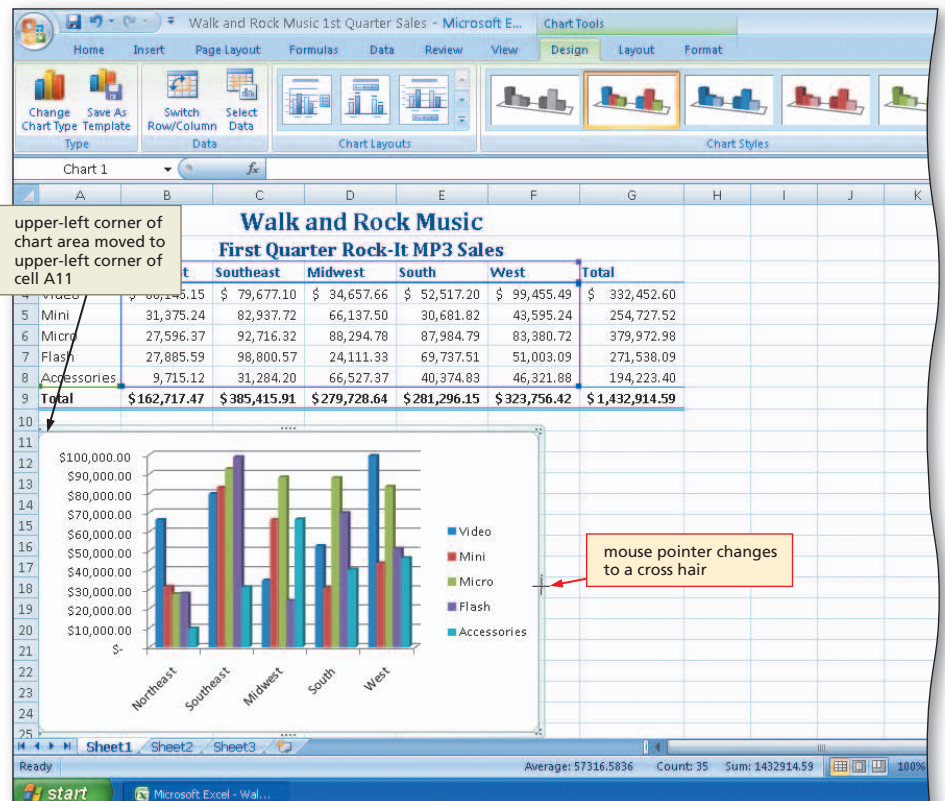


Figure 1-78



6

- While continuing to hold down the mouse button, press the ALT key and drag the right edge of the chart to the right edge of column G and then release the mouse button to resize the chart.

- Point to the middle sizing handle on the bottom edge of the selection rectangle and do not release the mouse button (Figure 1-79).

Q&amp;A

Why should I hold the ALT key down while I resize a chart?

Holding down the ALT key while you drag a chart **snaps** (aligns) the edge of the chart area to the worksheet gridlines. If you do not hold down the ALT key, then you can place an edge of a chart in the middle of a column or row.

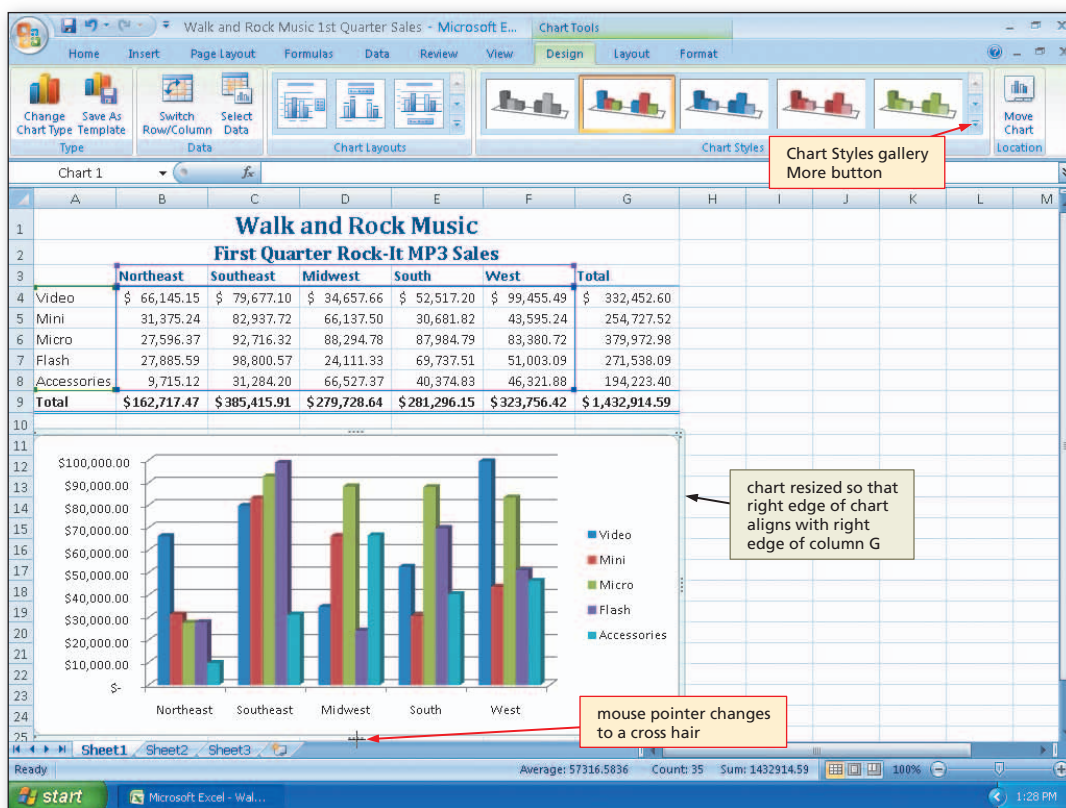


Figure 1-79

7

- While continuing to hold down the mouse button, press the ALT key and drag the bottom edge of the chart up to the bottom edge of row 22 and then release the mouse button to resize the chart.
- Click the More button in the Chart Styles gallery to expand the gallery and point to Style 2 in the gallery (column 2, row 1) (Figure 1-80).

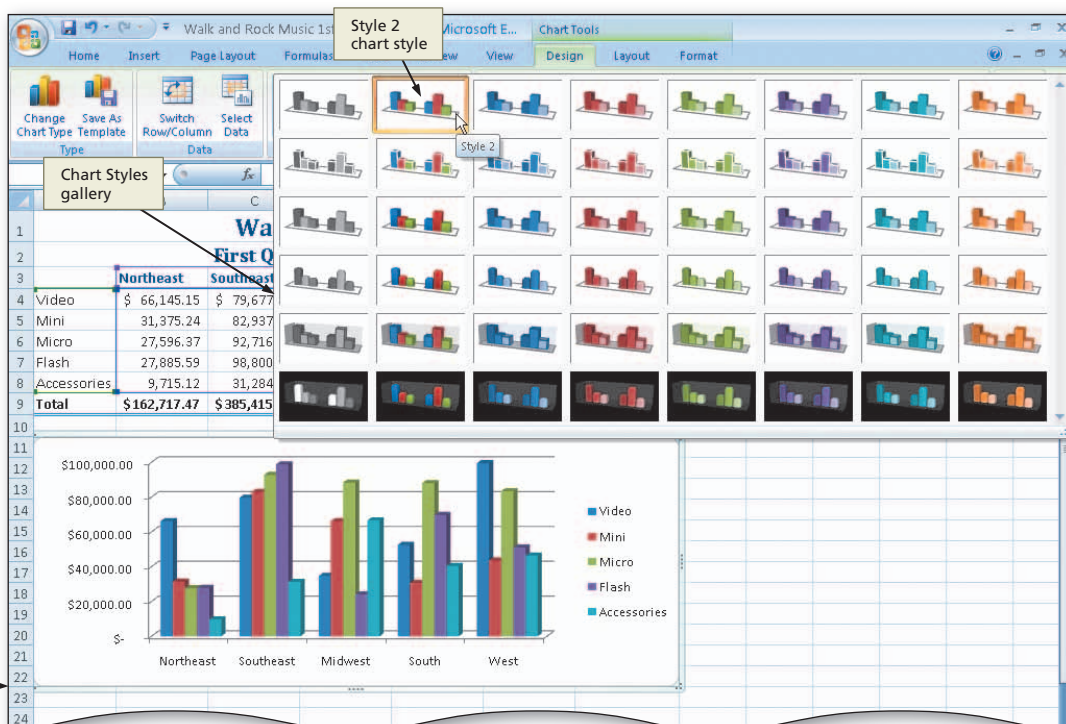


Figure 1-80

**8**

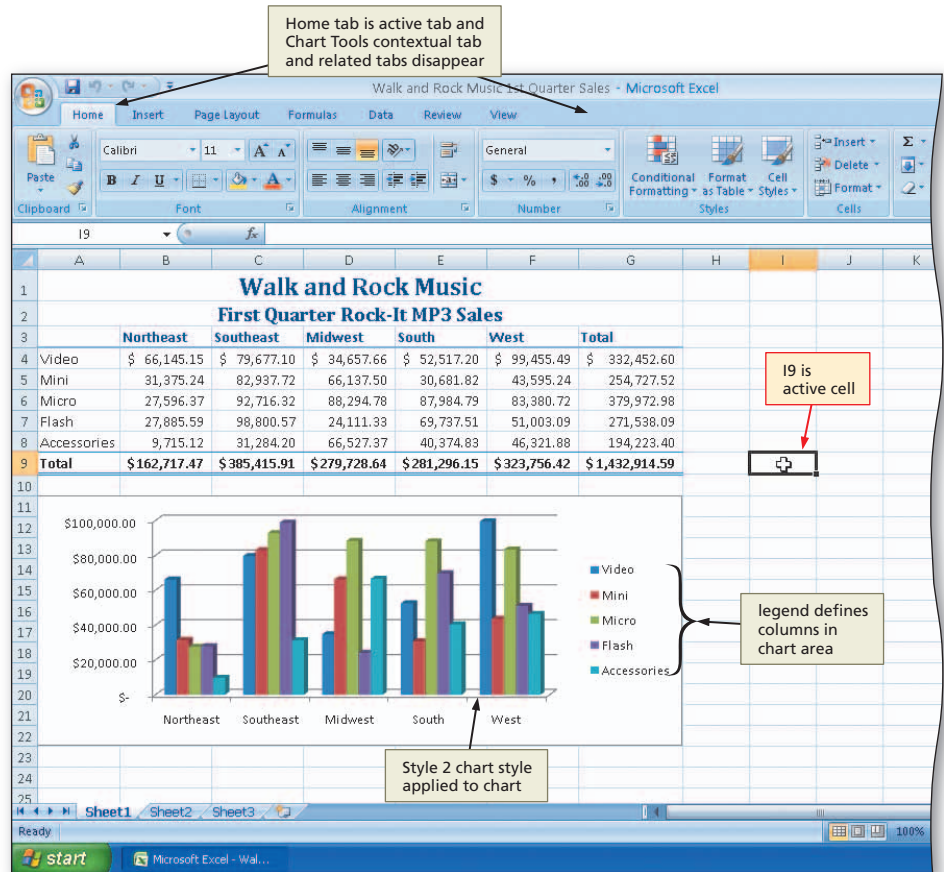
- Click Style 2 in the Chart Styles gallery to apply the chart style Style 2 to the chart.

**Experiment**

- Select other chart styles in the Chart Styles gallery to apply other chart styles to the chart, but select Style 2 as your final choice.
- Click cell I9 to deselect the chart and complete the worksheet (Figure 1–81).

**Q&A** What is the purpose of the items on the right side of the chart?

The items to the right of the column chart in Figure 1–81 are the **legend**, which identifies the colors assigned to each bar in the chart. Excel automatically selects the entries in the leftmost column of the chart range (column A) as titles within the legend.

**Figure 1–81**

## Changing Document Properties and Saving Again

**BTW****Document Properties**

Excel allows you to assign additional document properties by clicking the Document Properties button arrow in the Document Information panel and then clicking Advanced Properties. You can assign custom properties, such as Department, Purpose, and Editor. Or, you can create your own document properties.

Excel helps you organize and identify your files by using **document properties**, which are the details about a file. Document properties, also known as **metadata**, can include such information as the project author, title, or subject. **Keywords** are words or phrases that further describe the document. For example, a class name or worksheet topic can describe the file's purpose or content. Document properties are valuable for a variety of reasons:

- Users can save time locating a particular file because they can view a document's properties without opening the workbook.
- By creating consistent properties for files having similar content, users can better organize their workbooks.
- Some organizations require Excel users to add document properties so that other employees can view details about these files.

Five different types of document properties exist, but the more common ones used in this book are standard and automatically updated properties. **Standard properties** are associated with all Microsoft Office documents and include author, title, and subject. **Automatically updated properties** include file system properties, such as the date you create or change a file, and statistics, such as the file size.

## To Change Document Properties

The **Document Information Panel** contains areas where you can view and enter document properties. You can view and change information in this panel at any time while you are creating your workbook. Before saving the workbook again, you want to add your name and class name as document properties. The following steps use the Document Information Panel to change document properties.

- 1
- Click the Office Button to display the Office Button menu.
  - Point to Prepare on the Office Button menu to display the Prepare submenu (Figure 1–82).

Q&A What other types of actions besides changing properties can you take to prepare a document for distribution?

The Prepare submenu provides commands related to sharing a document with others, such as allowing or restricting people to view and modify your document, checking to see if your worksheet will work in earlier versions of Excel, and searching for hidden personal information.

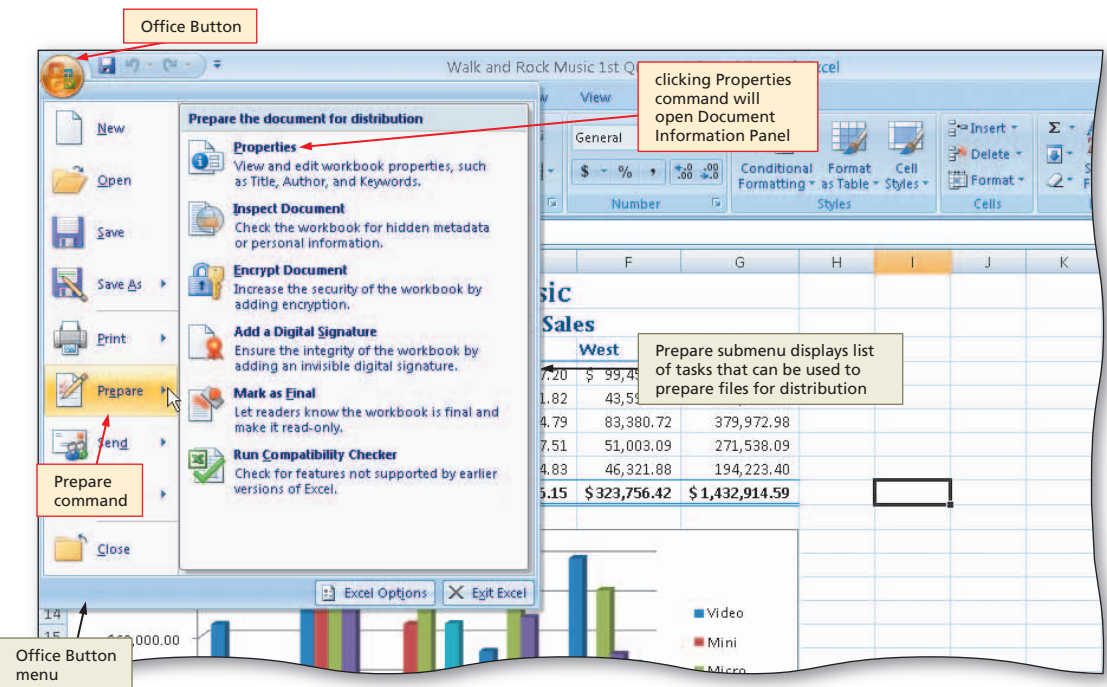


Figure 1–82

- 2
- Click Properties on the Prepare submenu to display the Document Information Panel (Figure 1–83).

Q&A Why are some of the document properties in my Document Information Panel already filled in?

The person who installed Microsoft Office 2007 on your computer or network may have set or customized the properties.

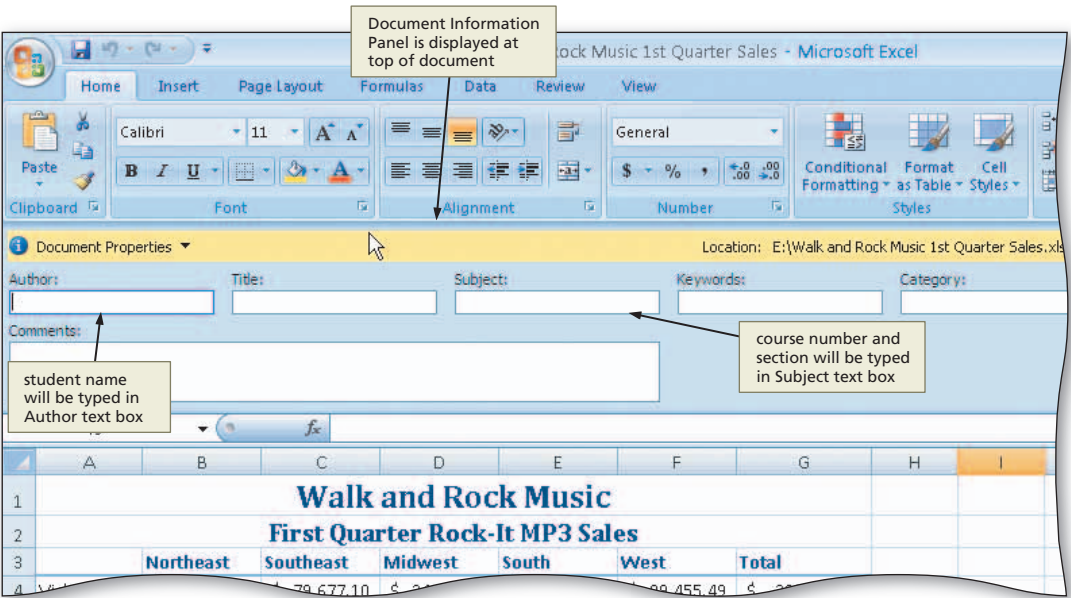


Figure 1–83



3

- Click the Author text box and then type your name as the Author property. If a name already is displayed in the Author text box, delete it before typing your name.
- Click the Subject text box, if necessary delete any existing text, and then type your course and section as the Subject property.
- Click the Keywords text box, if necessary delete any existing text, and then type First Quarter Rock-It MP3 Sales (Figure 1-84).

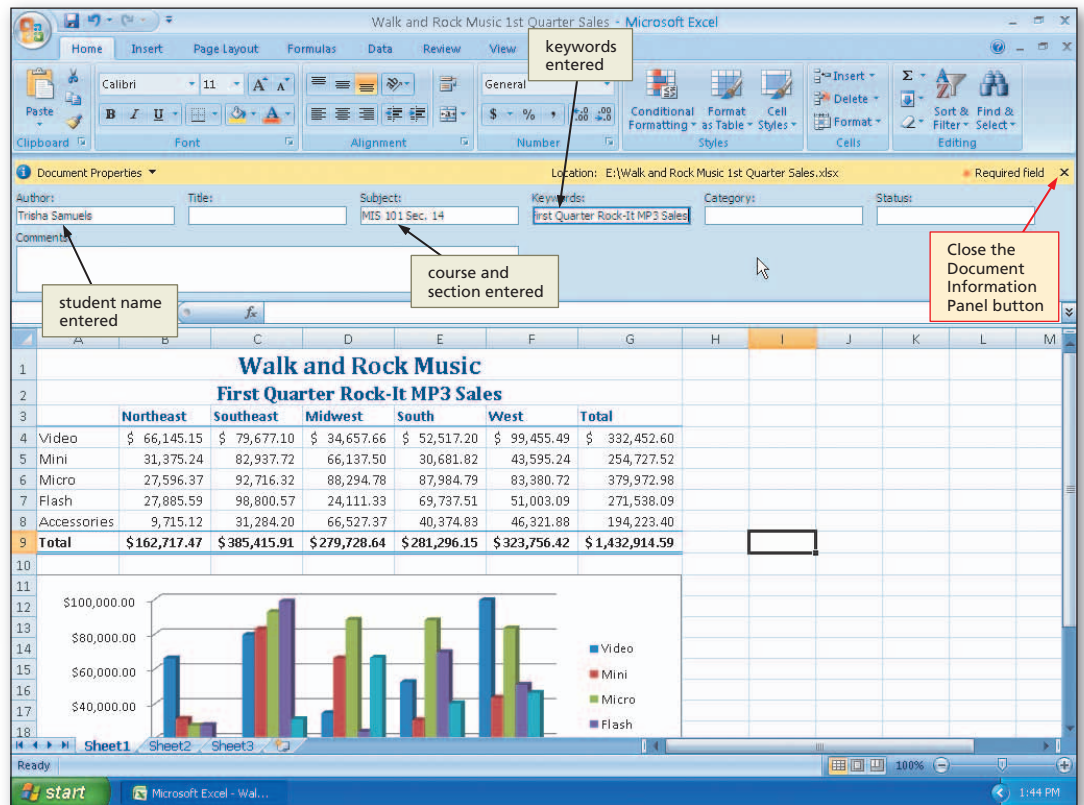


Figure 1-84

**Q&A** What types of document properties does Excel collect automatically?

Excel records such details as how long you worked at creating your project, how many times you revised the document, and what fonts and themes are used.

4

- Click the Close the Document Information Panel button so that the Document Information Panel no longer is displayed.

## To Save an Existing Workbook with the Same File Name

Saving frequently cannot be overemphasized. Several modifications have been made to the workbook since it was saved earlier in the chapter. Earlier in this chapter, the Save button on the Quick Access Toolbar caused the Save As dialog box to appear, and the file name, Walk and Rock Music 1st Quarter Sales, was entered. Clicking the Save button on the Quick Access Toolbar causes Excel to save the changes made to the workbook since the last time it was saved. The following step saves the workbook again.



1

- With your USB flash drive connected to one of the computer's USB ports, click the Save button on the Quick Access Toolbar to overwrite the previous Walk and Rock Music 1st Quarter Sales file on the USB flash drive (Figure 1–85).

**Q&A** Why did the Save As dialog box not appear?

Excel overwrites the document using the settings specified the first time the document was saved. To save the file with a different file name or on different media, display the Save As dialog box by clicking the Office Button and then clicking Save As on the Office Button menu. Then, fill in the Save As dialog box as described in Steps 2 through 5 on pages EX 31 and EX 32.

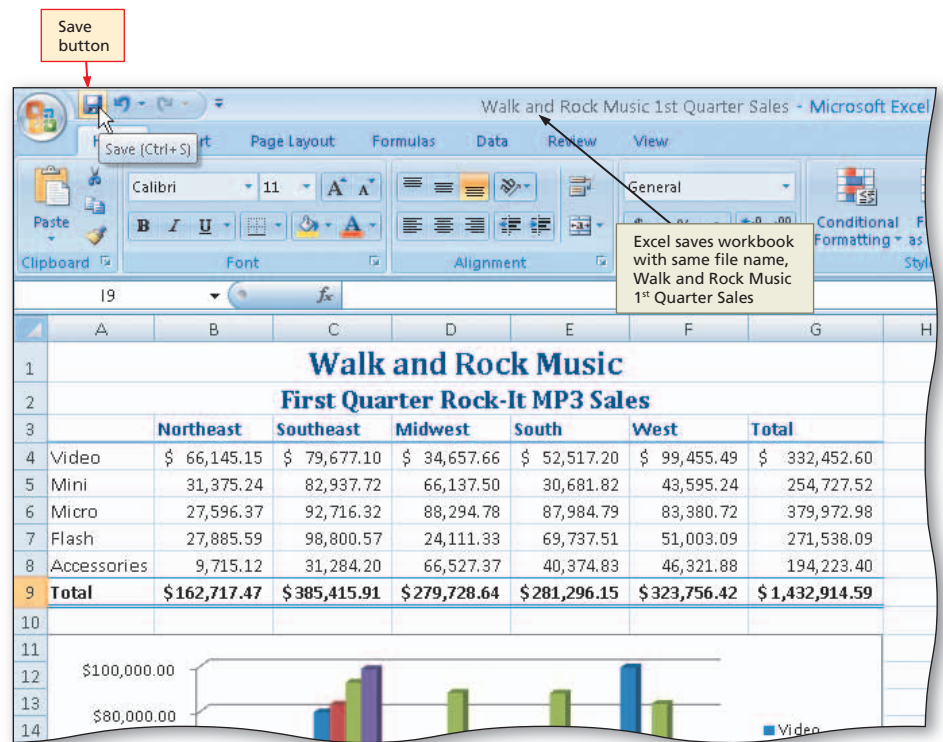


Figure 1–85

#### Other Ways

- Press CTRL+S or press SHIFT+F12, press ENTER

## Printing a Worksheet

After you create a worksheet, you often want to print it. A printed version of the worksheet is called a **hard copy** or **printout**. Printed copies of your worksheet can be useful for the following reasons:

- Many people prefer proofreading a hard copy of the worksheet rather than viewing the worksheet on the screen to check for errors and readability.
- Someone without computer access can view the worksheet's content.
- Copies can be distributed as handouts to people during a meeting or presentation.
- Hard copies can serve as reference material if your storage medium is lost or becomes corrupted and you need to recreate the worksheet.

It is a good practice to save a workbook before printing it, in the event you experience difficulties with the printer.

**BTW**

#### Conserving Ink and Toner

You can print a presentation in black and white to conserve ink or toner by clicking the Office Button, pointing to Print on the Office Button menu, and then clicking Print Preview on the Print submenu. Click the Options button on the Print Preview tab, point to Color/Grayscale on the Options button menu, and then click Pure Black and White on the Color/Grayscale submenu. Click the Office Button, point to Print, and then click Quick Print.

To Print a Worksheet

With the completed worksheet saved, you may want to print it. The following steps print the worksheet in the saved Walk and Rock Music 1st Quarter Sales workbook.

- 1
- Click the Office Button to display the Office Button menu.
  - Point to Print on the Office Button menu to display the Print submenu (Figure 1-86).

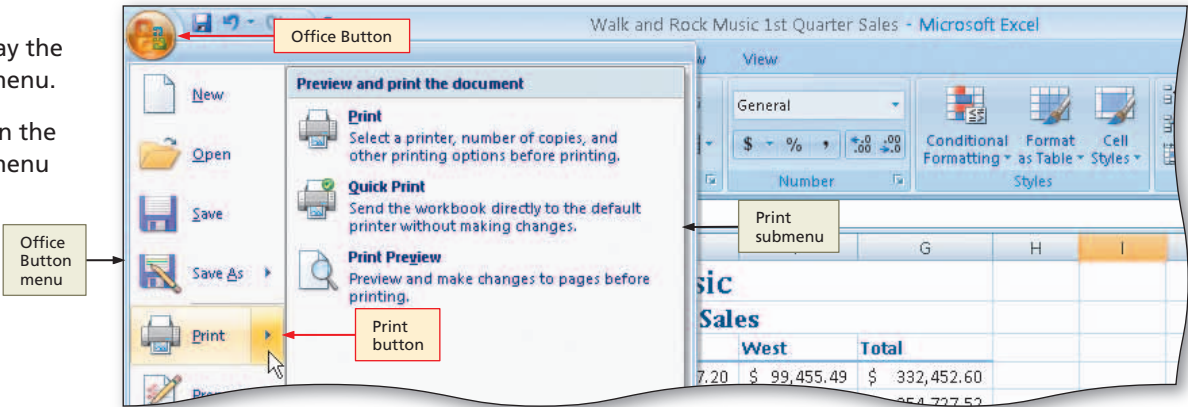


Figure 1-86

- 2
- Click Quick Print on the Print submenu to print the document (Figure 1-87).

**Q&A** Can I print my document in black and white to conserve ink or toner?

Yes. Click the Office Button and then click the Excel Options button on the Office Button menu. When the Excel Options dialog box is displayed, click Advanced, scroll to the Print area, place a check mark in the Use draft quality check box if it is displayed, and then click the OK button. Click the Office Button, point to Print, and then click Quick Print.

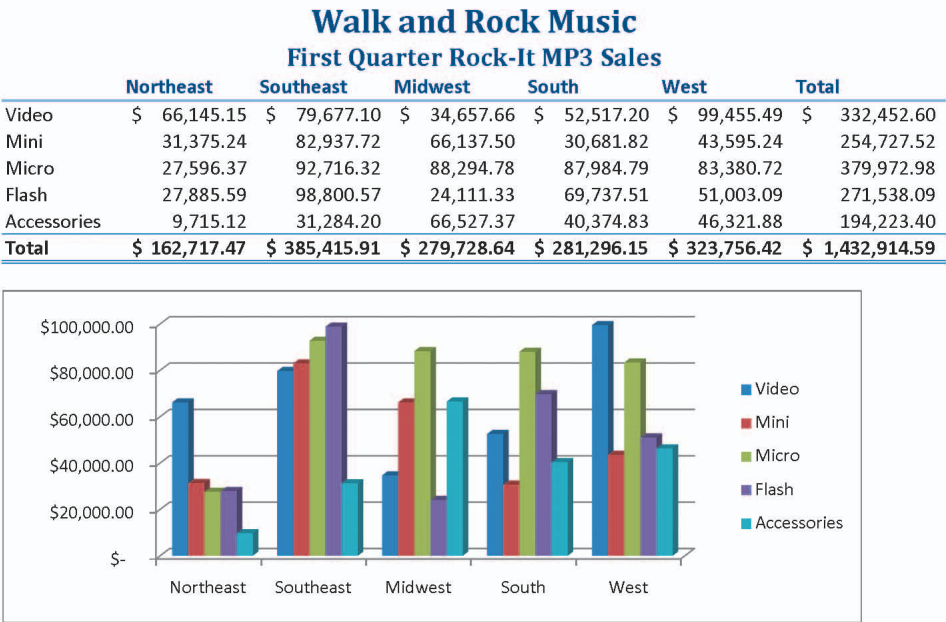


Figure 1-87

Other Ways

1. Press CTRL+P, press ENTER

## Quitting Excel

When you close a workbook, if you have made changes to a workbook since the last time the file was saved, Excel displays a dialog box asking if you want to save the changes you made to the file before it closes that window. The dialog box contains three buttons with these resulting actions:

- Yes button — Saves the changes and then quits Excel
- No button — Quits Excel without saving changes
- Cancel button — Closes the dialog box and redisplay the worksheet without saving the changes

If no changes have been made to an open workbook since the last time the file was saved, Excel will close all windows without displaying any dialog boxes.

### To Quit Excel

The Walk and Rock 1st Quarter Sales worksheet is complete. The following steps quit Excel if only one workbook is open.

- 1 Point to the Close button on the right side of the Excel title bar (Figure 1–88).

- 2 Click the Close button to quit Excel.

Q&A

Why are there two Minimize and Restore buttons in the Microsoft Excel window?

You can see that the Excel window includes two Minimize and two Restore icons (Figure 1–88). The Minimize button and Restore button on the title bar are used to minimize and restore the entire Excel window. The Minimize button and Restore button next to the Help icon are used to minimize and restore the worksheet within the Excel window.

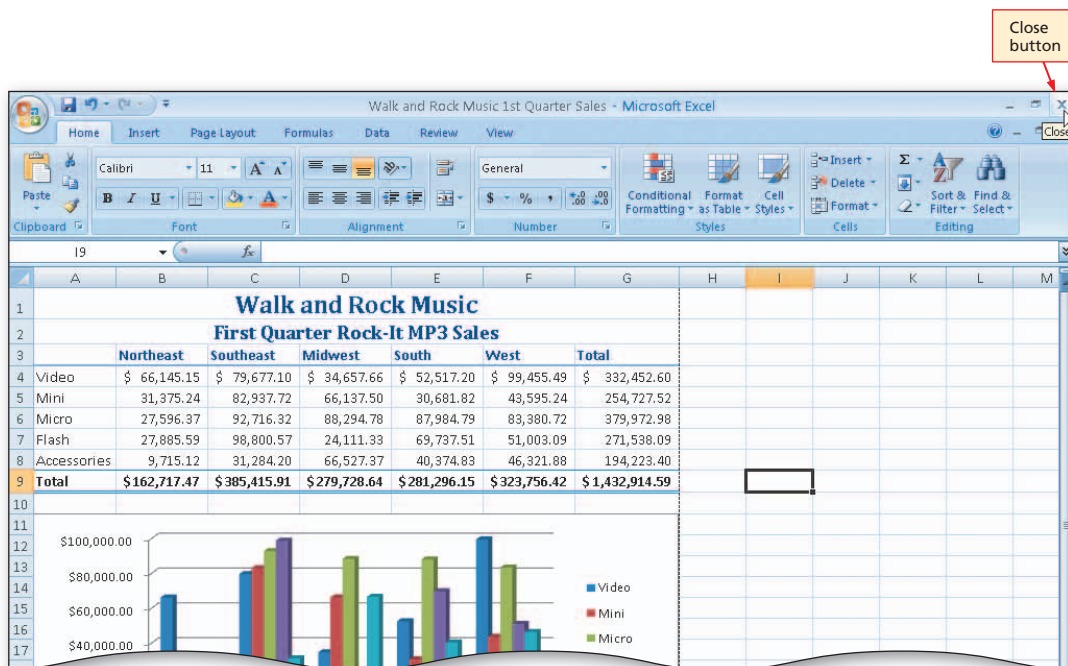


Figure 1–88

#### Other Ways

1. Double-click Office Button
2. Click Office Button, click Exit Excel on Office Button menu
3. Right-click Microsoft Excel button on Windows taskbar, click Close on shortcut menu
4. Press ALT+F4

BTW

**Print Preview**

You can preview the printout on your screen using the Print Preview command on the Print submenu (Figure 1–86 on page EX 58), make adjustments to the worksheet, and then print it only when it appears exactly as you want. Each time you preview rather than print, you save both ink and paper.

## Starting Excel and Opening a Workbook

Once you have created and saved a workbook, you may need to retrieve it from your storage medium. For example, you might want to revise a worksheet or reprint it. Opening a workbook requires that Excel is running on your computer.

### To Start Excel

The following steps, which assume Windows is running, start Excel.

- 1** Click the Start button on the Windows taskbar to display the Start menu.
- 2** Point to All Programs on the Start menu to display the All Programs submenu and then point to Microsoft Office in the All Programs submenu to display the Microsoft Office submenu.
- 3** Click Microsoft Office Excel 2007 on the Microsoft Office submenu to start Excel and display a new blank worksheet in the Excel window.
- 4** If the Excel window is not maximized, click the Maximize button on its title bar to maximize the window.

### To Open a Workbook from Excel

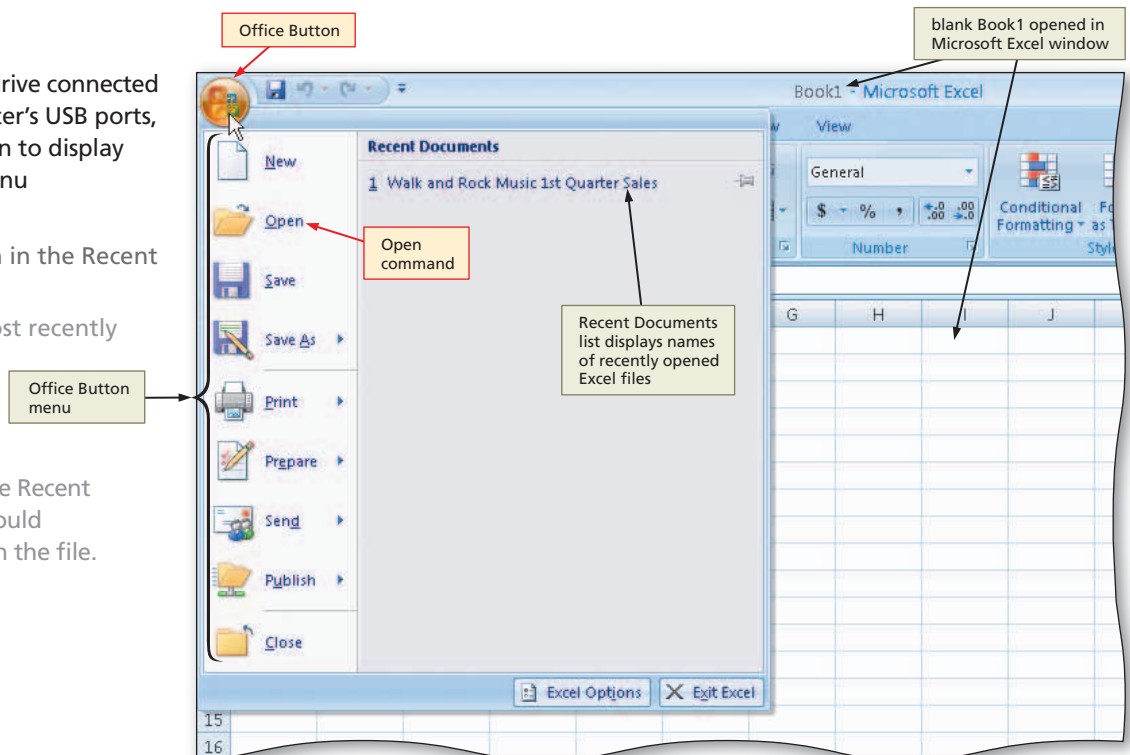
Earlier in this chapter, you saved your workbook on a USB flash drive using the file name, Walk and Rock Music 1st Quarter Sales. The following steps open the Walk and Rock Music 1st Quarter Sales file from the USB flash drive.

- 1** With your USB flash drive connected to one of the computer's USB ports, click the Office Button to display the Office Button menu (Figure 1–89).

Q&amp;A

What files are shown in the Recent Documents list?

Excel displays the most recently opened document file names in this list. If the name of the file you want to open appears in the Recent Documents list, you could double-click it to open the file.



**Figure 1–89**



2

- Click Open on the Office Button menu to display the Open dialog box.
- If necessary, click the Look in box arrow and then click UDISK 2.0 (E:) to select the USB flash drive, Drive E in this case, in the Look in list as the new open location.
- Click Walk and Rock Music 1st Quarter Sales to select the file name (Figure 1-90).

**Q&A** How do I open the file if I am not using a USB flash drive?

Use the same process, but be certain to select your device in the Look in list.

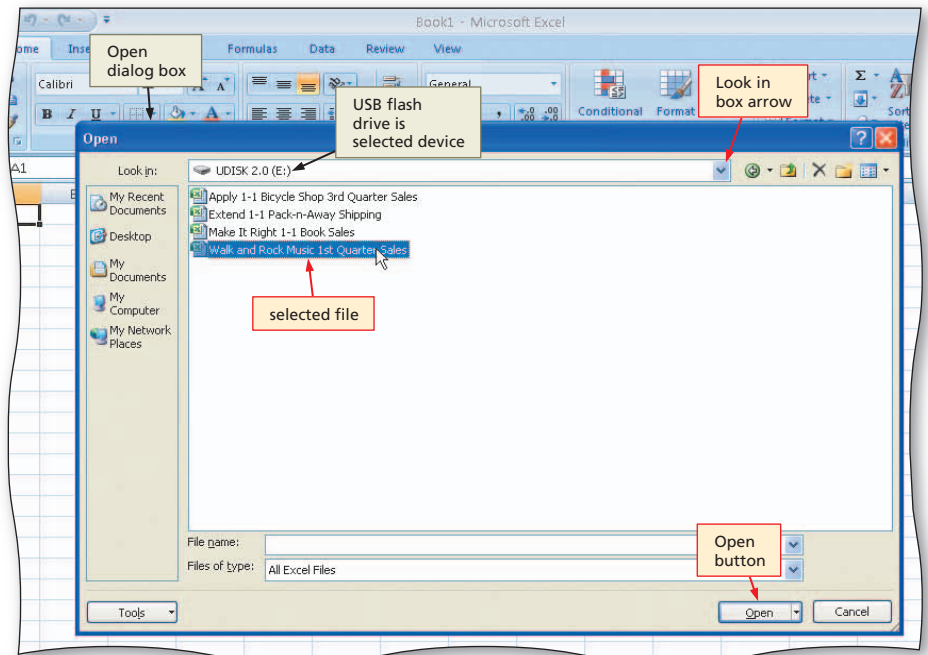


Figure 1-90

3

- Click the Open button to open the selected file and display the worksheet in the Excel window (Figure 1-91).

**Q&A** Why do I see the Microsoft Excel icon and name on the Windows taskbar?

When you open an Excel file, the application name (Microsoft Excel) is displayed on a selected button on the taskbar. If you point to this button, the file name also appears in a ScreenTip.

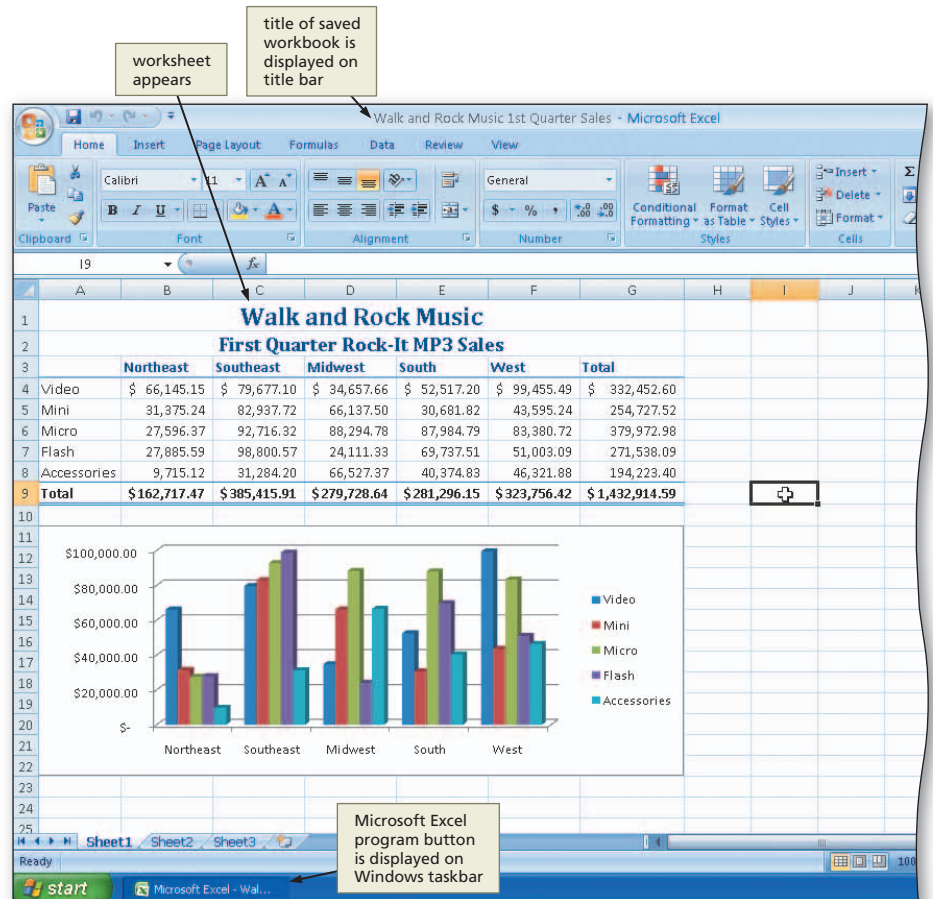


Figure 1-91

#### Other Ways

- Click Office Button, double-click file name in Recent Documents list
- Press CTRL+O, select file name, press ENTER

**BTW** **AutoCalculate**  
Use the AutoCalculate area on the status bar to check your work as you enter data in a worksheet. If you enter large amounts of data, you select a range of data and then check the AutoCalculate area to provide insight into statistics about the data you entered. Often, you will have an intuitive feel for whether the numbers are accurate or if you may have made a mistake while entering the data.

## AutoCalculate

You easily can obtain a total, an average, or other information about the numbers in a range by using the **AutoCalculate** area on the status bar. First, select the range of cells containing the numbers you want to check. Next, right-click the AutoCalculate area to display the Status Bar Configuration shortcut menu (Figure 1–92). The check mark to the left of the active functions (Average, Count, and Sum) indicates that the sum, count, and average of the selected range are displayed in the AutoCalculate area on the status bar. The functions of the AutoCalculate commands on the Status Bar Configuration shortcut menu are described in Table 1–4.

Table 1–4 AutoCalculate Shortcut Menu Commands

Command	Function
Average	AutoCalculate area displays the average of the numbers in the selected range
Count	AutoCalculate area displays the number of nonblank cells in the selected range
Numerical Count	AutoCalculate area displays the number of cells containing numbers in the selected range
Minimum	AutoCalculate area displays the lowest value in the selected range
Maximum	AutoCalculate area displays the highest value in the selected range
Sum	AutoCalculate area displays the sum of the numbers in the selected range

### To Use the AutoCalculate Area to Determine a Maximum

The following steps show how to display the largest quarterly sales for any region for the Micro product type.

- 1**
- Select the range B6:F6 and then right-click the AutoCalculate area on the status bar to display the Status Bar Configuration shortcut menu (Figure 1–92).

**Q&A** What is displayed on the Status Bar Configuration shortcut menu?

This shortcut menu includes several commands that allow you to control the items displayed on the Customize Status Bar shortcut menu. The AutoCalculate area of the shortcut menu includes six commands as well as the result of the associated calculation on the right side of the menu.

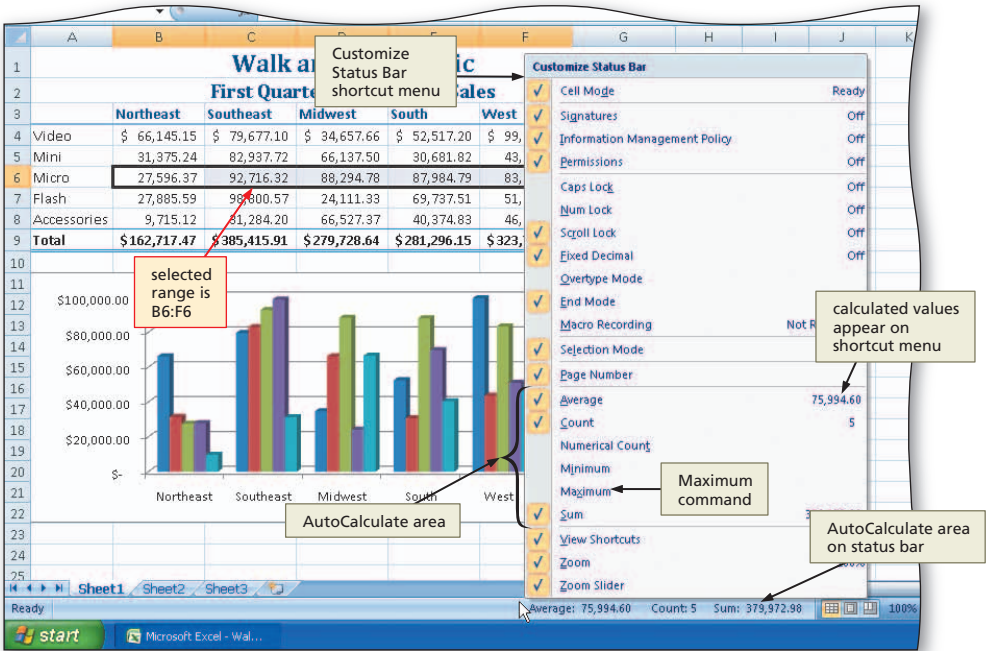


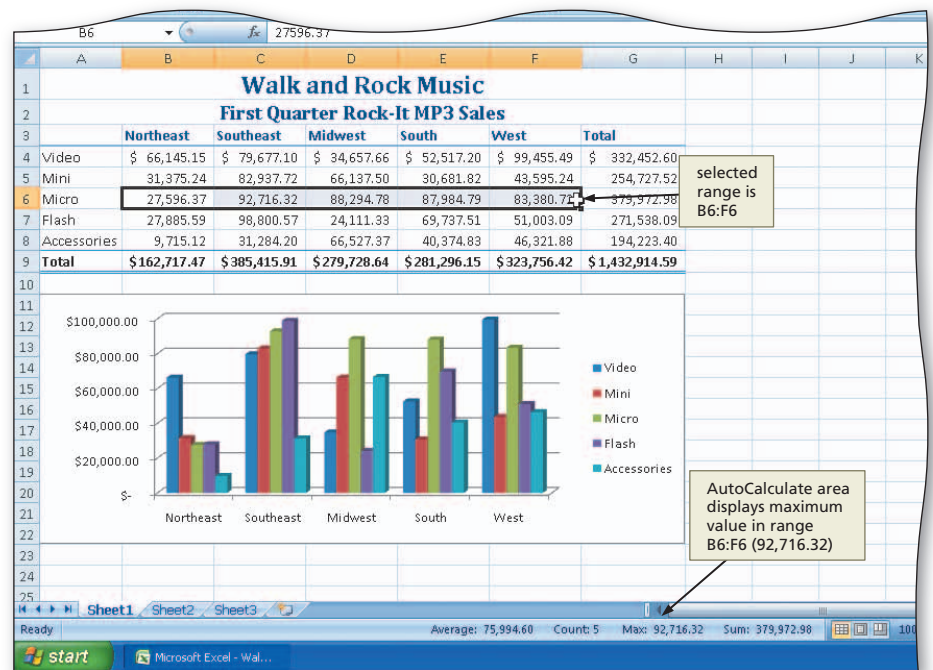
Figure 1–92

**2**

- Click Maximum on the shortcut menu to display the Maximum value in the range B6:F6 in the AutoCalculate area of the status bar.
- Click anywhere on the worksheet to cause the shortcut menu to disappear (Figure 1–93).

**3**

- Right-click the AutoCalculate area and then click Maximum on the shortcut menu to cause the Maximum value to no longer appear in the AutoCalculate area.

**Figure 1–93**

## Correcting Errors

You can correct errors on a worksheet using one of several methods. The method you choose will depend on the extent of the error and whether you notice it while typing the data or after you have entered the incorrect data into the cell.

### Correcting Errors while You Are Typing Data into a Cell

If you notice an error while you are typing data into a cell, press the **BACKSPACE** key to erase the incorrect characters and then type the correct characters. If the error is a major one, click the **Cancel** box in the formula bar or press the **ESC** key to erase the entire entry and then reenter the data from the beginning.

### Correcting Errors after Entering Data into a Cell

If you find an error in the worksheet after entering the data, you can correct the error in one of two ways:

- If the entry is short, select the cell, retype the entry correctly, and then click the **Enter** box or press the **ENTER** key. The new entry will replace the old entry.
- If the entry in the cell is long and the errors are minor, using **Edit mode** may be a better choice than retyping the cell entry. Use the **Edit mode** as described below.
  - Double-click the cell containing the error to switch Excel to **Edit mode**. In **Edit mode**, Excel displays the active cell entry in the formula bar and a flashing

BTW

**In-Cell Editing**

An alternative to double-clicking the cell to edit it is to select the cell and then press the F2 key.

insertion point in the active cell (Figure 1–94). With Excel in Edit mode, you can edit the contents directly in the cell — a procedure called **in-cell editing**.

b. Make changes using in-cell editing, as indicated below.

- (1) To insert new characters between two characters, place the insertion point between the two characters and begin typing. Excel inserts the new characters at the location of the insertion point.
- (2) To delete a character in the cell, move the insertion point to the left of the character you want to delete and then press the DELETE key or place the insertion point to the right of the character you want to delete and then press the BACKSPACE key. You also can use the mouse to drag through the character or adjacent characters you want to delete and then press the DELETE key or click the Cut button on the Standard toolbar.
- (3) When you are finished editing an entry, click the Enter box or press the ENTER key.

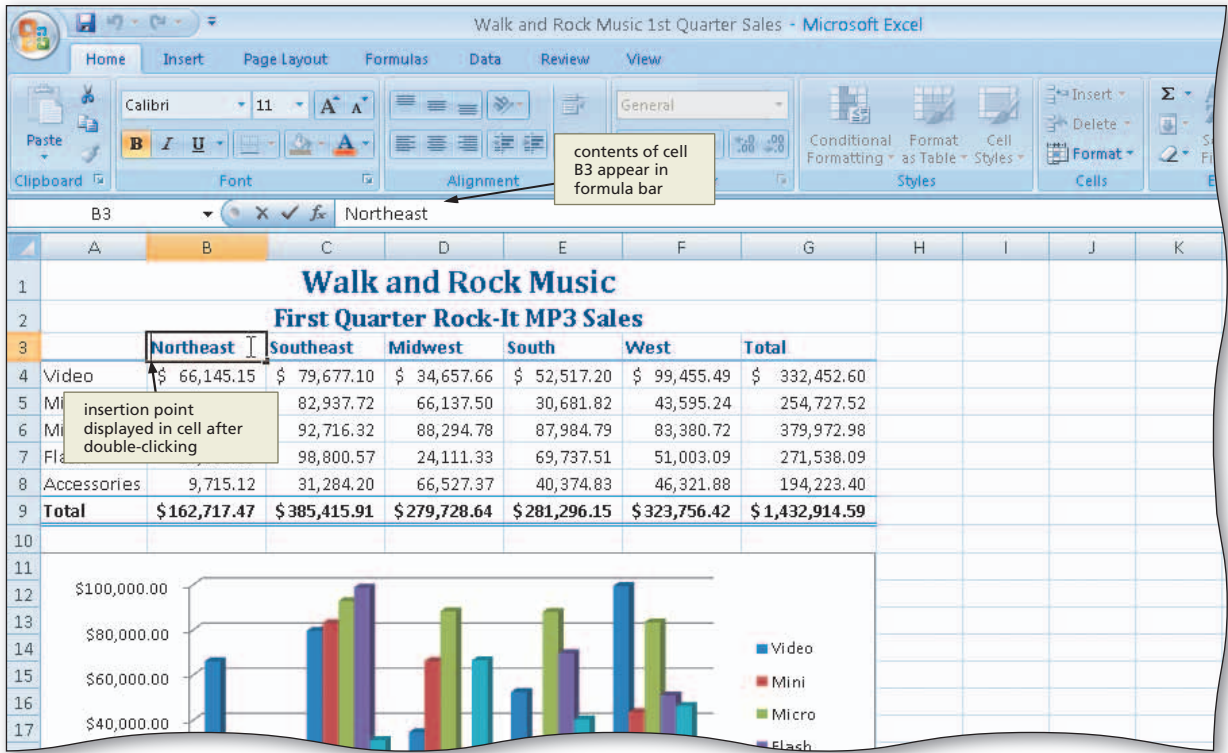


Figure 1–94

When Excel enters the Edit mode, the keyboard usually is in Insert mode. In **Insert mode**, as you type a character, Excel inserts the character and moves all characters to the right of the typed character one position to the right. You can change to Overtyping mode by pressing the INSERT key. In **Overtyping mode**, Excel overtypes, or replaces, the character to the right of the insertion point. The INSERT key toggles the keyboard between Insert mode and Overtyping mode.

While in Edit mode, you may have reason to move the insertion point to various points in the cell, select portions of the data in the cell, or switch from inserting characters to overtyping characters. Table 1–5 summarizes the more common tasks used during in-cell editing.

BTW

**Editing the Contents of a Cell**

Rather than using in-cell editing, you can select the cell and then click the formula bar to edit the contents.



Table 1–5 Summary of In-Cell Editing Tasks

Task	Mouse	Keyboard
1 Move the insertion point to the beginning of data in a cell.	Point to the left of the first character and click.	Press HOME
2 Move the insertion point to the end of data in a cell.	Point to the right of the last character and click.	Press END
3 Move the insertion point anywhere in a cell.	Point to the appropriate position and click the character.	Press RIGHT ARROW OR LEFT ARROW
4 Highlight one or more adjacent characters.	Drag the mouse pointer through adjacent characters.	Press SHIFT+RIGHT ARROW OR SHIFT+LEFT ARROW
5 Select all data in a cell.	Double-click the cell with the insertion point in the cell.	
6 Delete selected characters.	Click the Cut button on the Standard toolbar.	Press DELETE
7 Delete characters to the left of the insertion point.		Press BACKSPACE
8 Delete characters to the right of the insertion point.		Press DELETE
9 Toggle between Insert and Overtype modes.		Press INSERT

## Undoing the Last Cell Entry

Excel provides the Undo command on the Quick Access Toolbar (Figure 1–95), which allows you to erase recent cell entries. Thus, if you enter incorrect data in a cell and notice it immediately, click the Undo button and Excel changes the cell entry to what it was prior to the incorrect data entry.

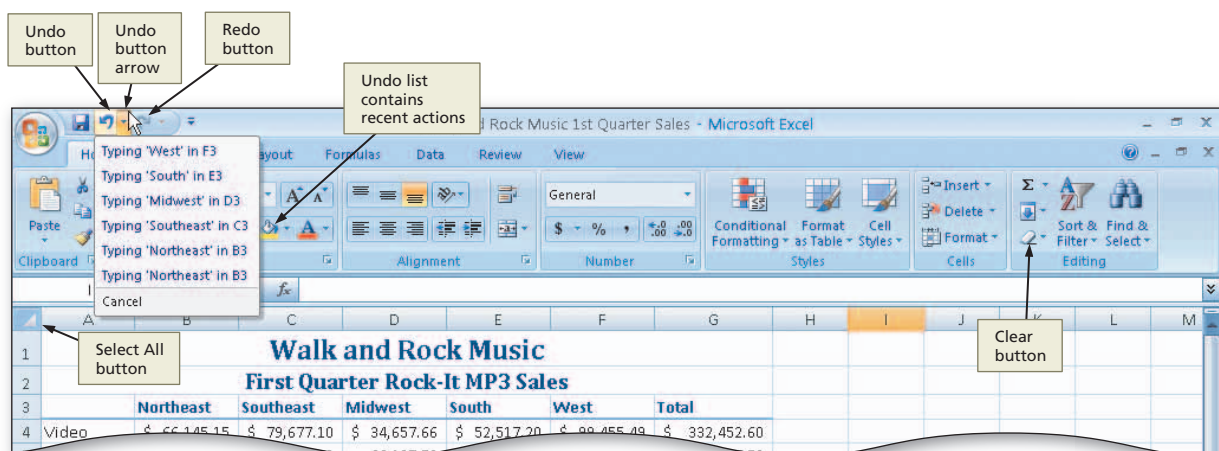


Figure 1–95

Excel remembers the last 100 actions you have completed. Thus, you can undo up to 100 previous actions by clicking the Undo button arrow to display the Undo list and then clicking the action to be undone (Figure 1–95). You can drag through several actions in the Undo list to undo all of them at once. If no actions are available for Excel to undo, then the Undo button is dimmed and inoperative.

The Redo button, next to the Undo button on the Quick Access Toolbar, allows you to repeat previous actions.

BTW

**Quick Reference**

For a table that lists how to complete the tasks covered in this book using the mouse, Ribbon, shortcut menu, and keyboard, see the Quick Reference Summary at the back of this book, or visit the Excel 2007 Quick Reference Web page ([scsite.com/ex2007/qr](http://scsite.com/ex2007/qr)).

BTW

**Certification**

The Microsoft Certified Application Specialist (MCAS) program provides an opportunity for you to obtain a valuable industry credential – proof that you have the Excel 2007 skills required by employers. For more information, see Appendix F or visit the Excel 2007 Certification Web page ([scsite.com/ex2007/cert](http://scsite.com/ex2007/cert)).

BTW

**Getting Back to Normal**

If you accidentally assign unwanted formats to a range of cells, you can use the Normal cell style selection in the Cell Styles gallery. Click Cell Styles on the Home tab on the Ribbon and then click Normal. Doing so changes the format to Normal style. To view the characteristics of the Normal style, right-click the style in the Cell Styles gallery and then click Modify, or press ALT+APOSTROPHE (').

## Clearing a Cell or Range of Cells

If you enter data into the wrong cell or range of cells, you can erase, or clear, the data using one of the first four methods listed below. The fifth method clears the formatting from the selected cells.

### To Clear Cell Entries Using the Fill Handle

1. Select the cell or range of cells and then point to the fill handle so the mouse pointer changes to a cross hair.
2. Drag the fill handle back into the selected cell or range until a shadow covers the cell or cells you want to erase. Release the mouse button.

### To Clear Cell Entries Using the Shortcut Menu

1. Select the cell or range of cells to be cleared.
2. Right-click the selection.
3. Click Clear Contents on the shortcut menu.

### To Clear Cell Entries Using the DELETE KEY

1. Select the cell or range of cells to be cleared.
2. Press the DELETE key.

### To Clear Cell Entries and Formatting Using the Clear Button

1. Select the cell or range of cells to be cleared.
2. Click the Clear button on the Home tab (Figure 1–95 on the previous page).
3. Click Clear Contents on the menu.

### To Clear Formatting Using the Cell Styles Button

1. Select the cell or range of cells from which you want to remove the formatting.
2. Click the Cell Styles button on the Home tab and point to Normal.
3. Click Normal in the Live Preview Gallery.

The Clear button on the Home tab is the only command that clears both the cell entry and the cell formatting. As you are clearing cell entries, always remember that you should *never press the SPACEBAR to clear a cell*. Pressing the SPACEBAR enters a blank character. A blank character is text and is different from an empty cell, even though the cell may appear empty.

## Clearing the Entire Worksheet

If required worksheet edits are extremely extensive, you may want to clear the entire worksheet and start over. To clear the worksheet or delete an embedded chart, use the following steps.

### To Clear the Entire Worksheet

1. Click the Select All button on the worksheet (Figure 1–95).
2. Click the Clear button on the Home tab to delete both the entries and formats.

The Select All button selects the entire worksheet. Instead of clicking the Select All button, you also can press CTRL+A. To clear an unsaved workbook, click the workbook's Close Window button or click the Close command on the Office Button menu. Click the No button if the Microsoft Excel dialog box asks if you want to save changes. To start a new, blank workbook, click the New command on the Office Button menu.

To delete an embedded chart, complete the following steps.

#### TO DELETE AN EMBEDDED CHART

1. Click the chart to select it.
2. Press the DELETE key.

## Excel Help

At any time while using Excel, you can find answers to questions and display information about various topics through **Excel Help**. This section introduces you to Excel Help.

### To Search for Excel Help

Using Excel Help, you can search for information based on phrases such as save a workbook or format a chart, or key terms such as copy, save, or format. Excel Help responds with a list of search results displayed as links to a variety of resources. The following steps, which use Excel Help to search for information about formatting a chart, assume you are connected to the Internet.

- 1
  - Click the Microsoft Office Excel Help button near the upper-right corner of the Excel window to open the Excel Help window.
  - Type format a chart in the Type words to search for text box at the top of the Excel Help window (Figure 1-96).

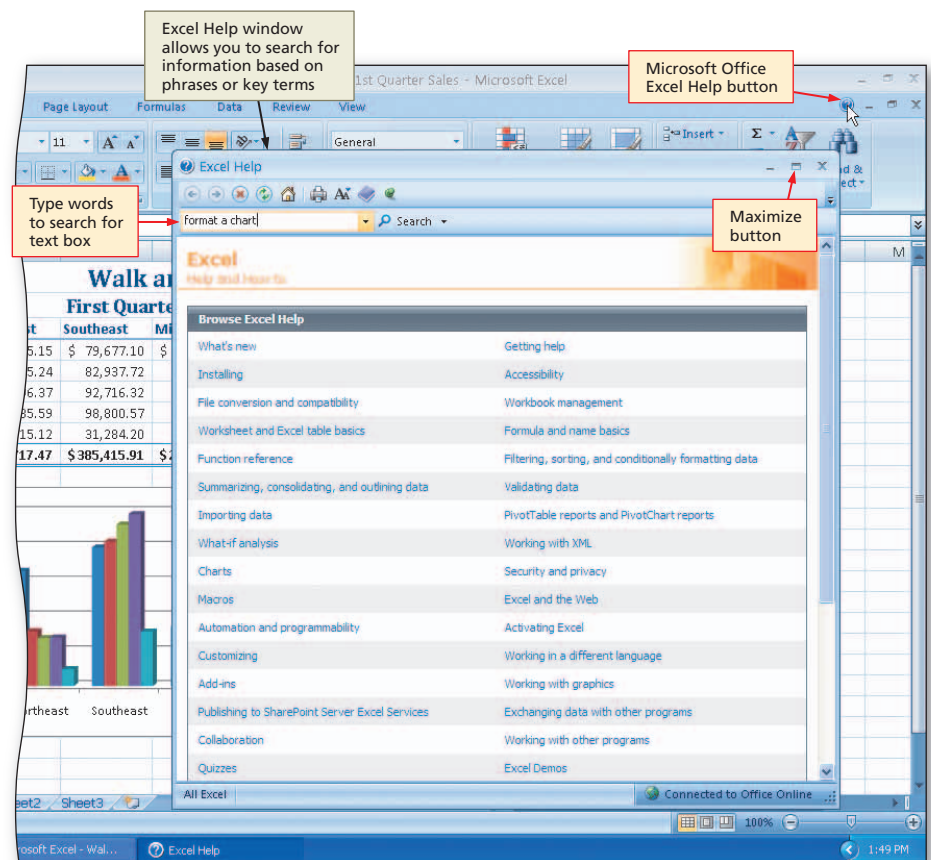


Figure 1-96

#### Excel Help

The best way to become familiar with Excel Help is to use it. Appendix C includes detailed information about Excel Help and exercises that will help you gain confidence in using it.

BTW

- 2
- Press the ENTER key to display the search results.
  - Click the Maximize button on the Excel Help window title bar to maximize the Help window (Figure 1–97).

**Q&A** Where is the Excel window with the Walk and Rock Music 1st Quarter Sales worksheet?

Excel is open in the background, but the Excel Help window is overlaid on top of the Microsoft Excel window. When the Excel Help window is closed, the worksheet will reappear.

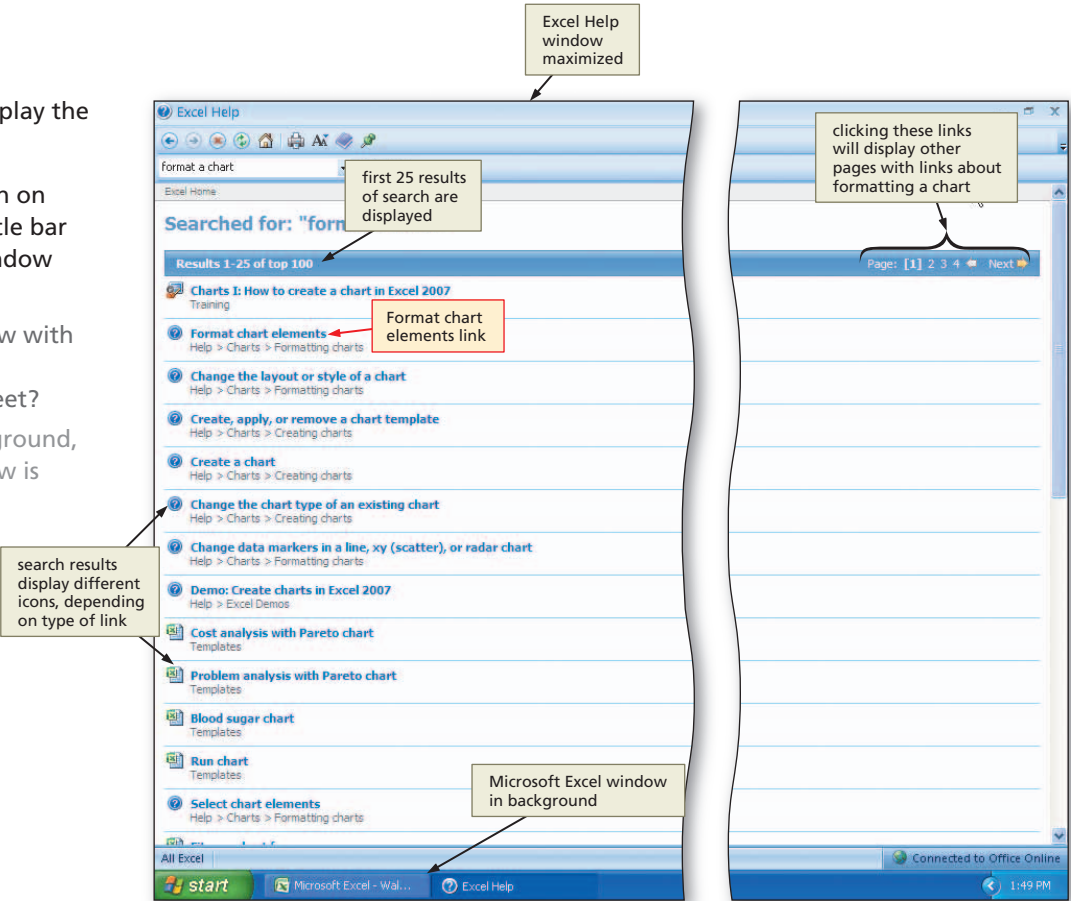


Figure 1–97

- 3
- Click the Format chart elements link to display information regarding formatting chart elements (Figure 1–98).

**Q&A** What is the purpose of the buttons at the top of the Excel Help window?

Use the buttons in the upper-left corner of the Excel Help window to navigate through the Help system, change the display, show the Excel Help table of contents, and print the contents of the window.

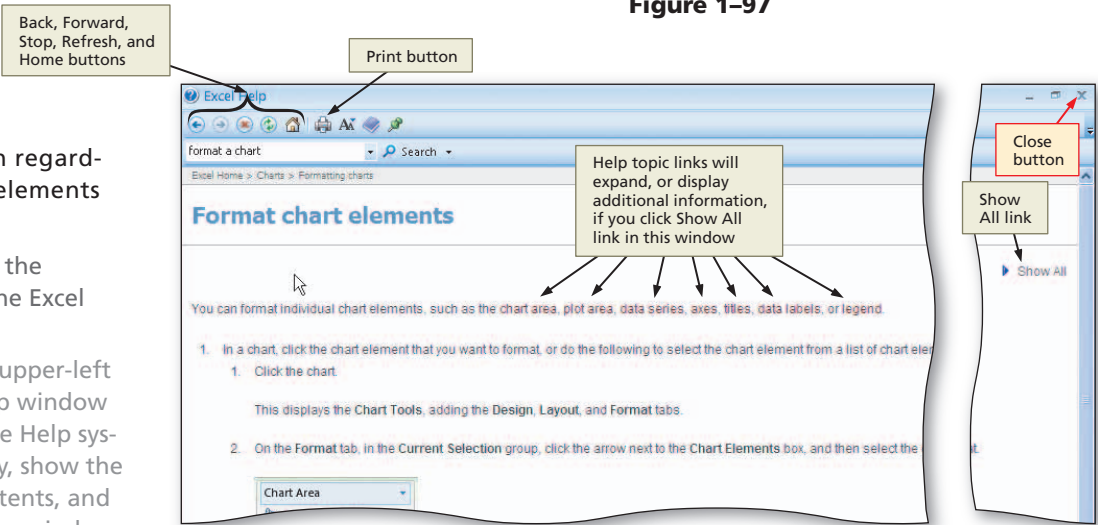


Figure 1–98

- 4
- Click the Close button on the Excel Help window title bar to close the Excel Help window and make Excel active.

Other Ways
1. Press F1



## To Quit Excel

The following steps quit Excel.

- 1 Click the Close button on the right side of the title bar to quit Excel.
- 2 If necessary, click the No button in the Microsoft Office Excel dialog box so that any changes you have made are not saved.

BTW

### Quitting Excel

Do not forget to remove your USB flash drive from the USB port after quitting Excel, especially if you are working in a laboratory environment. Nothing can be more frustrating than leaving all of your hard work behind on a USB flash drive for the next user.

## Chapter Summary

In this chapter you have learned about the Excel window, how to enter text and numbers to create a worksheet, how to select a range, how to use the Sum button, save a workbook, format cells, insert a chart, print a worksheet, quit Excel, and use Excel Help. The items listed below include all the new Excel skills you have learned in this chapter.

1. Start Excel (EX 6)
2. Enter the Worksheet Titles (EX 17)
3. Enter Column Titles (EX 19)
4. Enter Row Titles (EX 21)
5. Enter Numbers (EX 23)
6. Sum a Column of Numbers (EX 25)
7. Copy a Cell to Adjacent Cells in a Row (EX 27)
8. Determine Multiple Totals at the Same Time (EX 28)
9. Save a Workbook (EX 30)
10. Change a Cell Style (EX 35)
11. Change the Font Type (EX 36)
12. Bold a Cell (EX 38)
13. Increase the Font Size of a Cell Entry (EX 38)
14. Change the Font Color of a Cell Entry (EX 39)
15. Center Cell Entries across Columns by Merging Cells (EX 40)
16. Format Column Titles and the Total Row (EX 42)
17. Format Numbers in the Worksheet (EX 44)
18. Adjust the Column Width (EX 46)
19. Use the Name Box to Select a Cell (EX 47)
20. Add a 3-D Clustered Column Chart to the Worksheet (EX 50)
21. Change Document Properties (EX 55)
22. Save an Existing Workbook with the Same File Name (EX 58)
23. Print a Worksheet (EX 58)
24. Quit Excel (EX 59)
25. Open a Workbook from Excel (EX 60)
26. Use the AutoCalculate Area to Determine a Maximum (EX 62)
27. Clear Cell Entries Using the Fill Handle (EX 66)
28. Clear Cell Entries Using the Shortcut Menu (EX 66)
29. Clear Cell Entries Using the DELETE Key (EX 66)
30. Clear Cell Entries and Formatting Using the Clear Button (EX 66)
31. Clear Formatting Using the Cell Styles Button (EX 66)
32. Clear the Entire Worksheet (EX 66)
33. Delete an Embedded Chart (EX 67)
34. Search for Excel Help (EX 67)



If you have a SAM user profile, you may have access to hands-on instruction, practice, and assessment. Log in to your SAM account (<http://sam2007.course.com>) to launch any assigned training activities or exams that relate to the skills covered in this chapter.

## Learn It Online

Test your knowledge of chapter content and key terms.

**Instructions:** To complete the Learn It Online exercises, start your browser, click the Address bar, and then enter the Web address [scs.site.com/ex2007/learn](http://scs.site.com/ex2007/learn). When the Excel 2007 Learn It Online page is displayed, click the link for the exercise you want to complete and then read the instructions.

### Chapter Reinforcement TF, MC, and SA

A series of true/false, multiple choice, and short answer questions that test your knowledge of the chapter content.

### Flash Cards

An interactive learning environment where you identify chapter key terms associated with displayed definitions.

### Practice Test

A series of multiple choice questions that test your knowledge of chapter content and key terms.

### Who Wants To Be a Computer Genius?

An interactive game that challenges your knowledge of chapter content in the style of a television quiz show.

### Wheel of Terms

An interactive game that challenges your knowledge of chapter key terms in the style of the television show *Wheel of Fortune*.

### Crossword Puzzle Challenge

A crossword puzzle that challenges your knowledge of key terms presented in the chapter.

## Apply Your Knowledge

Reinforce the skills and apply the concepts you learned in this chapter.

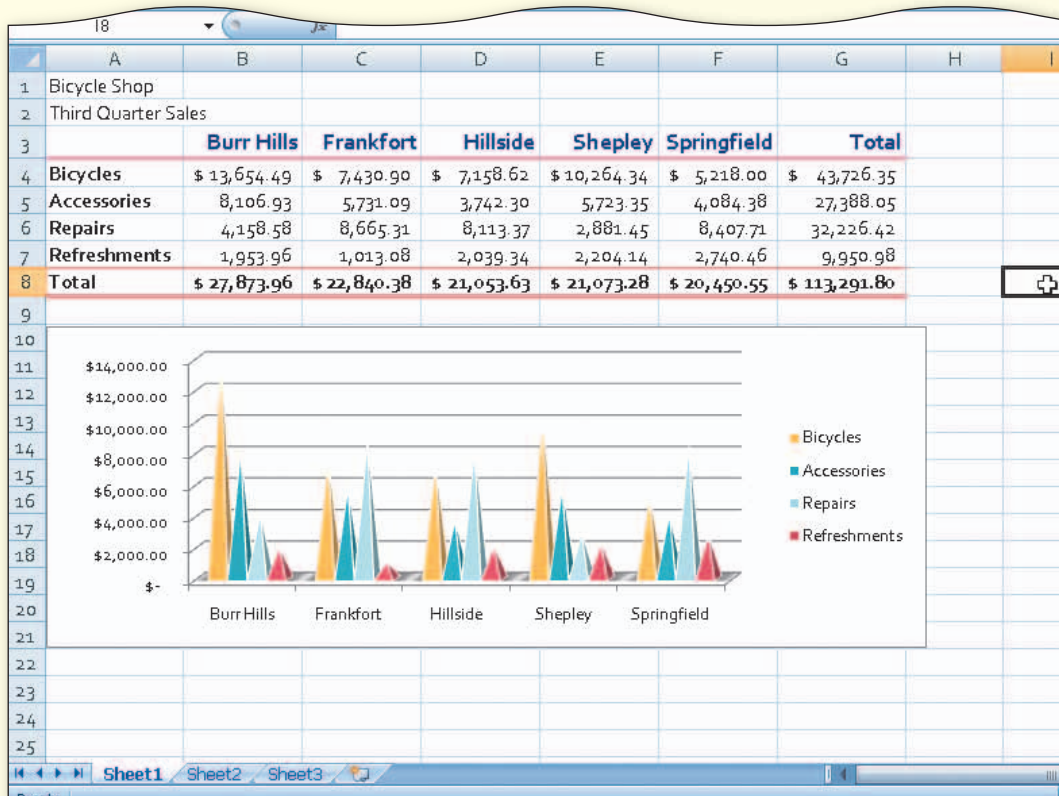
### Changing the Values in a Worksheet

**Instructions:** Start Excel. Open the workbook Apply 1-1 Bicycle Shop 3rd Quarter Sales (Figure 1-99a). See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book.

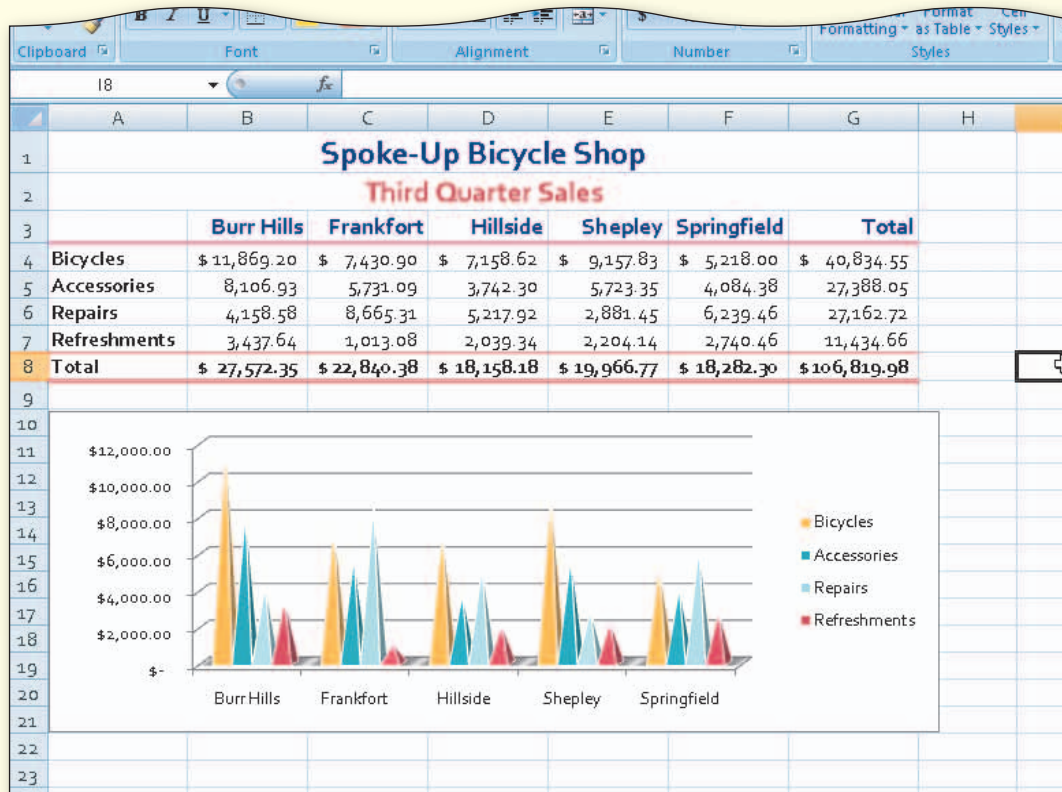
1. Make the changes to the worksheet described in Table 1-6 so that the worksheet appears as shown in Figure 1-99b. As you edit the values in the cells containing numeric data, watch the totals in row 8, the totals in column G, and the chart change.
2. Change the worksheet title in cell A1 to the Title cell style and then merge and center it across columns A through G. Use commands in the Font group on the Home tab on the Ribbon to change the worksheet subtitle in cell A2 to 16-point Corbel red, bold font and then center it across columns A through G. Use the Accent 1 theme color (column 5, row 1 on the Font palette) for the red font color.
3. Update the document properties with your name, course number, and name for the workbook. Save the workbook using the file name, Apply 1-1 Spoke-Up Bicycle Shop 3rd Quarter Sales. Submit the assignment as requested by your instructor.

**Table 1-6 New Worksheet Data**

Cell	Change Cell Contents To
A1	Spoke-Up Bicycle Shop
B4	11869.2
E4	9157.83
D6	5217.92
F6	6239.46
B7	3437.64



(a) Before



(b) After  
Figure 1-99

## Extend Your Knowledge

Extend the skills you learned in this chapter and experiment with new skills. You may need to use Help to complete the assignment.

### Formatting Cells and Inserting Multiple Charts

*Instructions:* Start Excel. Open the workbook Extend 1-1 Pack-n-Away Shipping. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book. Perform the following tasks to format cells in the worksheet and to add two charts to the worksheet.

1. Use the commands in the Font group on the Home tab on the Ribbon to change the font of the title in cell A1 to 24-point Arial, red, bold and subtitle of the worksheet to 16-point Arial Narrow, blue, bold.
2. Select the range A3:E8, click the Insert tab on the Ribbon and then click the More button in the lower-right corner of the Charts group on the Ribbon to open the Insert Chart dialog box (Figure 1–100).

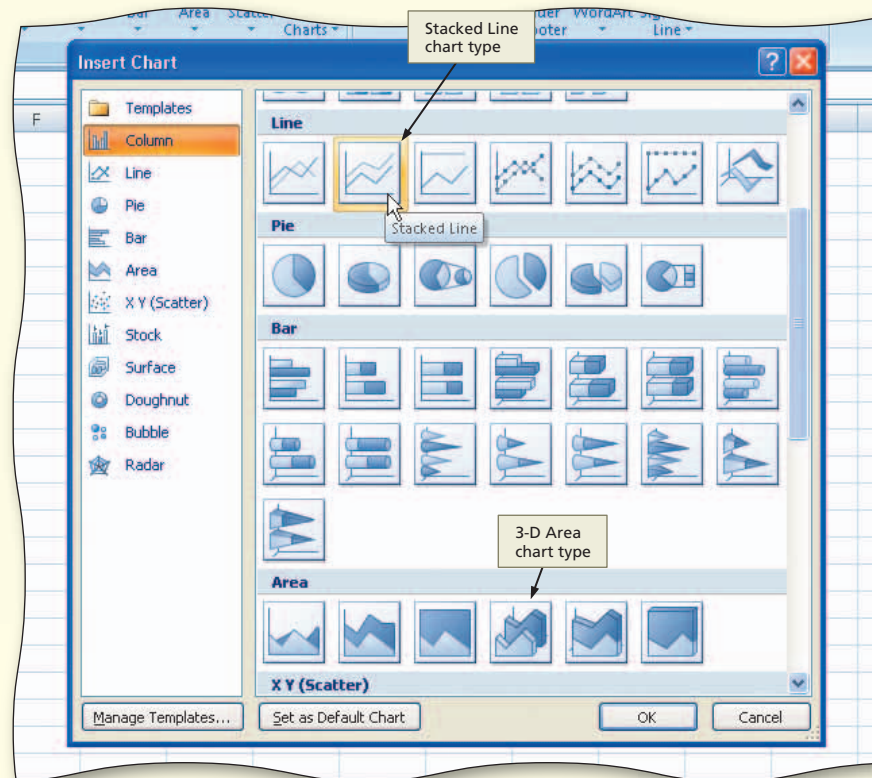


Figure 1–100

3. Insert a Stacked Line chart by clicking the Stacked Line chart in the gallery and then clicking the OK button. Move the chart either below or to the right of the data in the worksheet. Click the Design tab and apply a chart style to the chart.
4. With the same range selected, follow Step 3 above to insert a 3-D Area chart in the worksheet. You may need to use the scroll box on the right side of the Insert Chart dialog box to view the Area charts in the gallery. Move the chart either below or to the right of the data so that each chart does not overlap the Stacked Line chart. Choose a different chart style for this chart than the one you selected for the Stacked Line chart.



5. Resize each chart so that each snaps to the worksheet gridlines. Make certain that both charts are visible with the worksheet data without the need to scroll the worksheet.
6. Update the document properties with your name, course number, and name for the workbook.
7. Save the workbook using the file name, Extend 1-1 Pack-n-Away Shipping Charts. Submit the assignment as requested by your instructor.

## Make It Right

Analyze a workbook and correct all errors and/or improve the design.

### Correcting Formatting and Values in a Worksheet

**Instructions:** Start Excel. Open the workbook Make It Right 1-1 Book Sales. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required for this book. Correct the following formatting problems and data errors (Figure 1–101) in the worksheet, while keeping in mind the guidelines presented in this chapter.

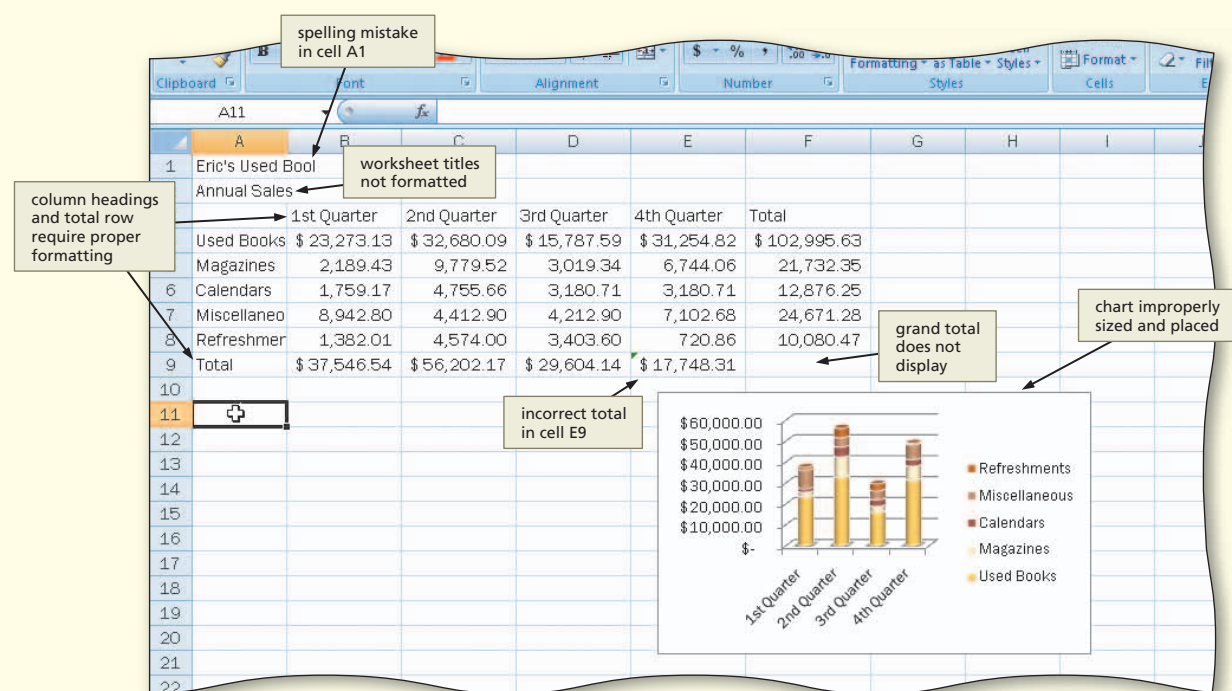


Figure 1–101

1. Merge and center the worksheet title and subtitle appropriately.
2. Format the worksheet title with a cell style appropriate for a worksheet title.
3. Format the subtitle using commands in the Font group on the Ribbon.
4. Correct the spelling mistake in cell A1 by changing Bool to Books.
5. Apply proper formatting to the column headers and total row.

Continued >

**Make It Right** *continued*

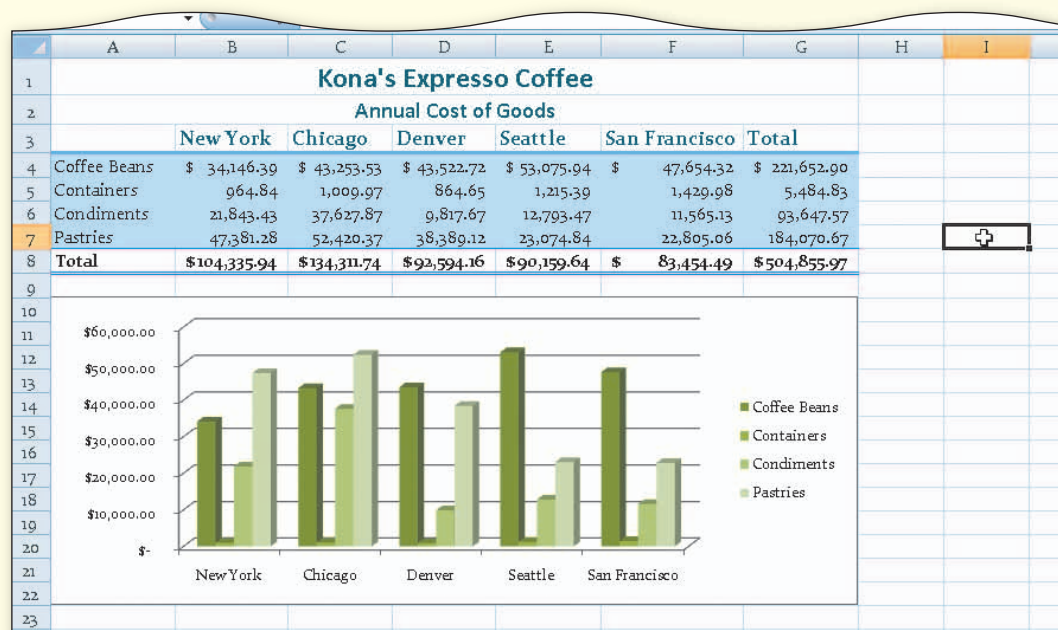
6. Adjust column sizes so that all data in each column is visible.
7. Use the SUM function to create the grand total for annual sales.
8. The SUM function in cell E9 does not sum all of the numbers in the column. Correct this error by editing the range for the SUM function in the cell.
9. Resize and move the chart so that it is below the worksheet data and does not extend past the right edge of the worksheet data. Be certain to snap the chart to the worksheet gridlines by holding down the ALT key as you resize the chart.
10. Update the document properties with your name, course number, and name for the workbook. Save the workbook using the file name, Make It Right 1-1 Eric's Used Books Annual Sales. Submit the assignment as requested by your instructor.

## In the Lab

Design and/or create a workbook using the guidelines, concepts, and skills presented in this chapter. Labs 1, 2, and 3 are listed in order of increasing difficulty.

### Lab 1: Annual Cost of Goods Worksheet

**Problem:** You work part-time as a spreadsheet specialist for Kona's Espresso Coffee, one of the up-and-coming coffee franchises in the United States. Your manager has asked you to develop an annual cost of goods analysis worksheet similar to the one shown in Figure 1-102.



**Figure 1-102**

**Instructions:** Perform the following tasks.

1. Start Excel. Enter the worksheet title, Kona's Espresso Coffee, in cell A1 and the worksheet subtitle, Annual Cost of Goods, in cell A2. Beginning in row 3, enter the store locations, costs of goods, and supplies categories shown in Table 1–7.

**Table 1–7 Kona's Espresso Coffee Annual Cost of Goods**

	New York	Chicago	Denver	Seattle	San Francisco
Coffee Beans	34146.39	43253.53	43522.72	53075.94	47654.32
Containers	964.84	1009.97	864.65	1215.39	1429.98
Condiments	21843.43	37627.87	9817.67	12793.47	11565.13
Pastries	47381.28	52420.37	38389.12	23074.84	22805.06

2. Use the SUM function to determine the totals for each store location, type of supply, and company grand total.
3. Use Cell Styles in the Styles group on the Home tab on the Ribbon to format the worksheet title with the Title cell style. Center the title across columns A through G. Do not be concerned if the edges of the worksheet title are not displayed.
4. Use buttons in the Font group on the Home tab on the Ribbon to format the worksheet subtitle to 14-point Calibri dark blue, bold font and center it across columns A through G.
5. Use Cell Styles in the Styles group on the Home tab on the Ribbon to format the range A3:G3 with the Heading 2 cell style, the range A4:G7 with the Accent1 - 20% cell style, and the range A8:G8 with the Total cell style. Use the buttons in the Number group on the Home tab on the Ribbon to apply the Accounting Number format to the range B4:G4 and the range B8:G8. Use the buttons in the Number group on the Home tab on the Ribbon to apply the Comma Style to the range B5:G7. Adjust any column widths to the widest text entry in each column.
6. Select the range A3:F7 and then insert a 3-D Clustered Column chart. Apply the Style 8 chart style to the chart. Move and resize the chart so that it appears in the range A10:G22. If the labels along the horizontal axis (x-axis) do not appear as shown in Figure 1-102, then drag the right side of the chart so that it is displayed in the range A10:H22.
7. Update the document properties with your name, course number, and name for the workbook.
8. Save the workbook using the file name Lab 1-1 Kona's Espresso Coffee Annual Cost of Goods.
9. Print the worksheet.
10. Make the following two corrections to the sales amounts: \$9,648.12 for Seattle Condiments (cell E6), \$12,844.79 for Chicago Pastries (cell C7). After you enter the corrections, the company totals in cell G8 should equal \$462,135.04.
11. Print the revised worksheet. Close the workbook without saving the changes. Submit the assignment as requested by your instructor.

## In the Lab

### Lab 2: Annual Sales Analysis Worksheet

**Problem:** As the chief accountant for Scissors Office Supply, Inc., you have been asked by the sales manager to create a worksheet to analyze the annual sales for the company by location and customer type category (Figure 1–103). The office locations and corresponding sales by customer type for the year are shown in Table 1–8.

*Continued >*

In the Lab *continued*

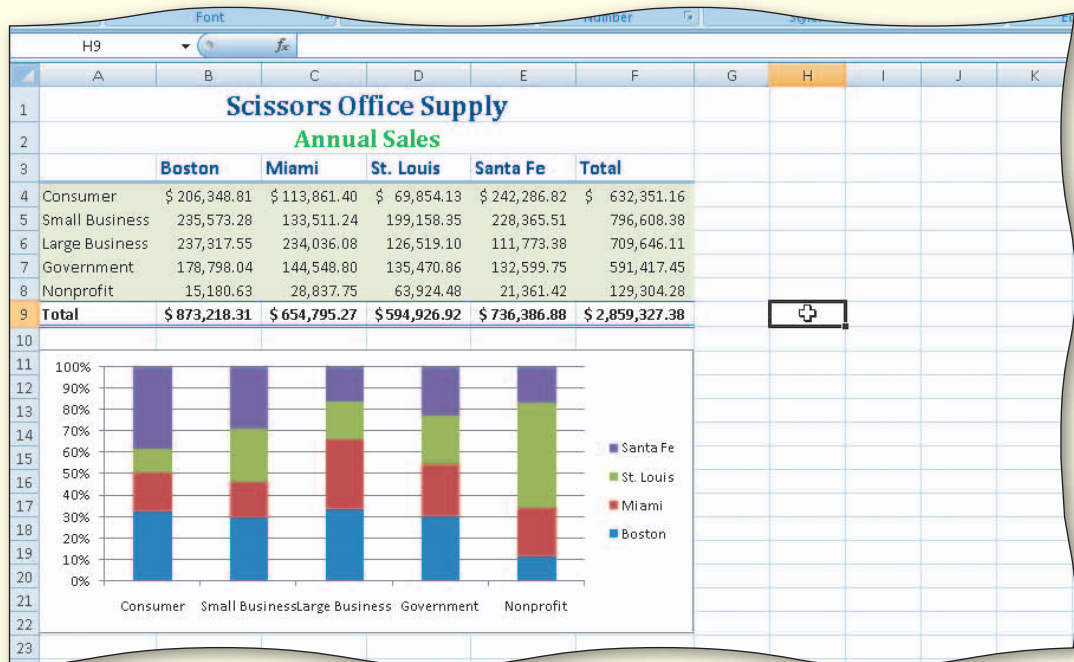
**Instructions:** Perform the following tasks.

1. Create the worksheet shown in Figure 1–103 using the data in Table 1–8.
2. Use the SUM function to determine totals sales for the four offices, the totals for each customer type, and the company total. Add column and row headings for the totals row and totals column, as appropriate.

**Table 1–8 Scissors Office Supply Annual Sales**

	Boston	Miami	St. Louis	Santa Fe
Consumer	206348.81	113861.40	69854.13	242286.82
Small Business	235573.28	133511.24	199158.35	228365.51
Large Business	237317.55	234036.08	126519.10	111773.38
Government	178798.04	144548.80	135470.86	132599.75
Nonprofit	15180.63	28837.75	63924.48	21361.42

3. Format the worksheet title with the Title cell style and center it across columns A through F. Use the Font group on the Ribbon to format the worksheet subtitle to 16-point Cambria green, and bold font. Center the title across columns A through F.



**Figure 1–103**

4. Format the range A3:F3 with the Heading 2 cell style, the range A4:F8 with the Accent3 - 20% cell style, and the range B9:F9 with the Total cell style. Use the Number group on the Ribbon to format cells B4:F4 and B9:F9 with the Accounting Number Format and cells B5:F8 with the Comma Style numeric format.
5. Chart the range A3:E8. Insert a 100% Stacked Column chart for the range A3:E8, as shown in Figure 1–103, by using the Column button on the Insert tab on the Ribbon. Use the chart location A11:F22.



6. Update the document properties with your name, course number, and name for the workbook.
7. Save the workbook using the file name, Lab 1-2 Scissors Office Supply Annual Sales. Print the worksheet.
8. Two corrections to the figures were sent in from the accounting department. The correct sales are \$98,342.16 for Miami's annual Small Business sales (cell C5) and \$48,933.75 for St. Louis's annual Nonprofit sales (cell D8). After you enter the two corrections, the company total in cell F9 should equal \$2,809,167.57. Print the revised worksheet.
9. Use the Undo button to change the worksheet back to the original numbers in Table 1–8. Use the Redo button to change the worksheet back to the revised state.
10. Close Excel without saving the latest changes. Start Excel and open the workbook saved in Step 7. Double-click cell E6 and use in-cell editing to change the Santa Fe annual Large Business sales (cell E6) to \$154,108.49. Write the company total in cell F9 at the top of the first printout. Click the Undo button.
11. Click cell A1 and then click the Merge and Center button to split cell A1 into cells A1, B1, C1, D1, E1, and F1. To merge the cells into one again, select the range A1:F1 and then click the Merge and Center button on the Home tab on the Ribbon.
12. Close the workbook without saving the changes. Submit the assignment as requested by your instructor.

## In the Lab

### Lab 3: College Cost and Financial Support Worksheet

**Problem:** Attending college is an expensive proposition and your resources are limited. To plan for your four-year college career, you have decided to organize your anticipated resources and costs in a worksheet. The data required to prepare your worksheet is shown in Table 1–9.

Table 1–9 College Cost and Resources				
Cost	Freshman	Sophomore	Junior	Senior
Books	450.00	477.00	505.62	535.95
Room & Board	7500.00	7950.00	8427.00	8932.62
Tuition	8200.00	8692.00	9213.52	9766.33
Entertainment	1325.00	1404.50	1488.77	1578.10
Miscellaneous	950.00	1007.00	1067.42	1131.47
Clothes	725.00	768.50	814.61	863.49
Financial Support	Freshman	Sophomore	Junior	Senior
Job	3400.00	3604.00	3820.24	4049.45
Savings	4350.00	4611.00	4887.66	5180.92
Parents	4700.00	4982.00	5280.92	5597.78
Financial Aid	5500.00	5830.00	6179.80	6550.59
Other	1200.00	1272.00	1348.32	1429.22

In the Lab *continued*

**Instructions Part 1:** Using the numbers in Table 1–9, create the worksheet shown in columns A through F in Figure 1–104. Format the worksheet title as Calibri 24-point bold red. Merge and center the worksheet title in cell A1 across columns A through F. Format the worksheet subtitles in cells A2 and A11 as Calibri 16-point bold green. Format the ranges A3:F3 and A12:F12 with the Heading 2 cell style, the ranges A4:F9 and A13:F17 with the Accent 1 - 20% style, and the ranges A10:F10 and A18:F18 with the Total cell style.

Update the document properties, including the addition of at least one keyword to the properties, and save the workbook using the file name, Lab 1-3 Part 1 College Cost and Financial Support. Print the worksheet. Submit the assignment as requested by your instructor.

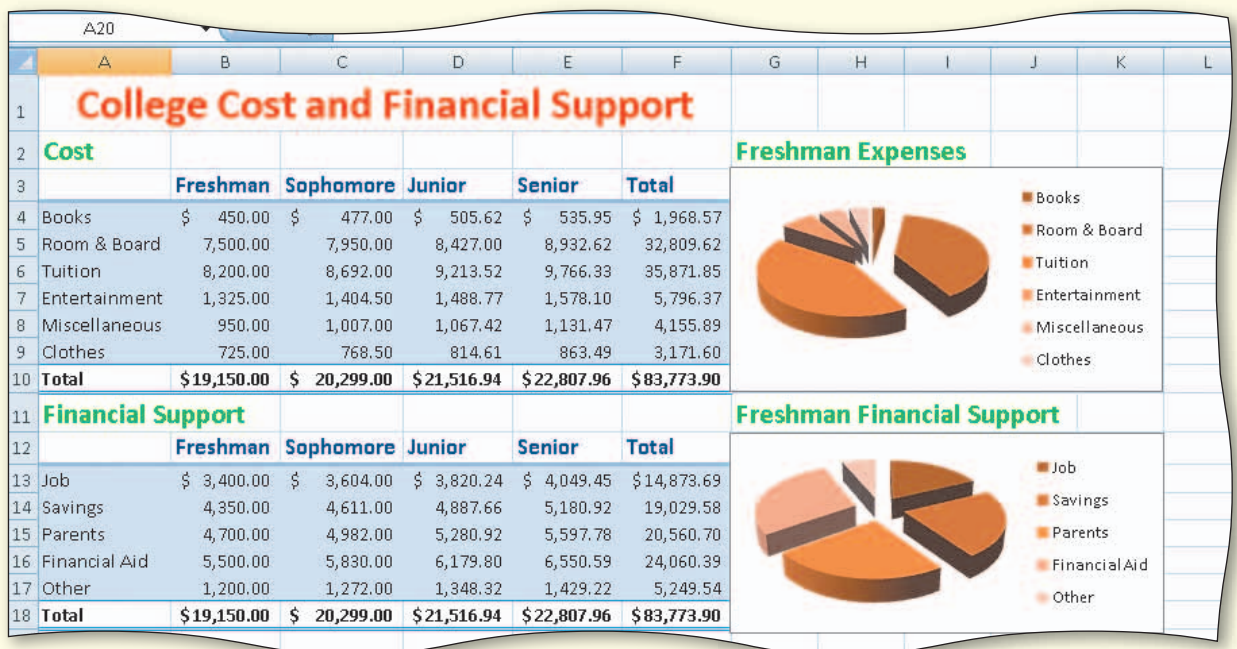


Figure 1–104

After reviewing the numbers, you realize you need to increase manually each of the Junior-year expenses in column D by \$600. Change the Junior-year expenses to reflect this change. Manually change the financial aid for the Junior year by the amount required to cover the increase in costs. The totals in cells F10 and F18 should equal \$87,373.90. Print the worksheet. Close the workbook without saving changes.

**Instructions Part 2:** Open the workbook Lab 1-3 Part 1 College Cost and Financial Support. Insert an Exploded pie in 3-D chart in the range G3:K10 to show the contribution of each category of cost for the Freshman year. Chart the range A4:B9 and apply the Style 8 chart style to the chart. Add the Pie chart title as shown in cell G2 in Figure 1–104. Insert an Exploded pie in 3-D chart in the range G12:K18 to show the contribution of each category of financial support for the Freshman year. Chart the range A13:B17 and apply the Style 8 chart style to the chart. Add the Pie chart title shown in cell G11 in Figure 1–104. Update the identification area with the exercise part number and save the workbook using the file name, Lab 1-3 Part 2 College Cost and Financial Support. Print the worksheet. Submit the assignment as requested by your instructor.

**Instructions Part 3:** Open the workbook Lab 1-3 Part 2 College Cost and Financial Support. A close inspection of Table 1–9 shows that both cost and financial support figures increase 6% each year. Use Excel Help to learn how to enter the data for the last three years using a formula and the Copy and Paste buttons on the Home tab on the Ribbon. For example, the formula to enter in cell C4 is =B4\*1.06. Enter formulas to replace all the numbers in the range C4:E9 and C13:E17. If necessary, reformat the

tables, as described in Part 1. The worksheet should appear as shown in Figure 1–104, except that some of the totals will be off by 0.01 due to rounding errors. Save the worksheet using the file name, Lab 1-3 Part 3 College Cost and Financial Support. Print the worksheet. Press CTRL+ACCENT MARK (') to display the formulas. Print the formulas version. Submit the assignment as requested by your instructor. Close the workbook without saving changes.

## Cases and Places

Apply your creative thinking and problem solving skills to design and implement a solution.

• EASIER •• MORE DIFFICULT

### • 1: Design and Create a Workbook to Analyze Yearly Sales

You are working as a summer intern for Hit-the-Road Mobile Services. Your manager has asked you to prepare a worksheet to help her analyze historical yearly sales by type of product (Table 1–10). Use the concepts and techniques presented in this chapter to create the worksheet and an embedded 3-D Clustered Column chart.

**Table 1–10 Hit-the-Road Mobile Services Sales**

	2005	2006	2007	2008
Standard Mobile Phones	87598	99087	129791	188785
Camera Phones	71035	75909	96886	100512
Music Phones	65942	24923	34590	15696
Wireless PDAs	67604	58793	44483	35095
Satellite Radios	15161	27293	34763	43367
Headsets	9549	6264	2600	4048
Other Accessories	47963	108059	100025	62367

### • 2: Design and Create a Worksheet and Chart to Analyze a Budget

To estimate the funds needed by your school's Environmental Club to make it through the upcoming year, you decide to create a budget for the club itemizing the expected quarterly expenses. The anticipated expenses are listed in Table 1–11. Use the concepts and techniques presented in this chapter to create the worksheet and an embedded 3-D Column chart using an appropriate chart style that compares the quarterly cost of each expense. Use the AutoCalculate area to determine the average amount spent per quarter on each expense. Manually insert the averages with appropriate titles in an empty area on the worksheet.

**Table 1–11 Quarterly Environmental Club Budget**

	Jan – Mar	April – June	July – Sept	Oct – Dec
Meeting Room Rent	300	300	150	450
Copies and Supplies	390	725	325	640
Travel	450	755	275	850
Refreshments	105	85	215	155
Speaker Fees	200	200	0	500
Miscellaneous	125	110	75	215

Continued >

*Cases and Places continued***• • 3: Create a 3-D Pie Chart to Analyze Quarterly Revenue**

In-the-Villa DVD Rental is a DVD movie rental store. The owner of the store is trying to decide if it is feasible to hire more employees during certain times of the year. You have been asked to develop a worksheet totaling all the revenue received last year by quarter. The revenue per quarter is: Quarter 1, \$52,699.23; Quarter 2, \$111,244.32; Quarter 3, \$70,905.03; and Quarter 4, \$87,560.10. Create a 3-D Pie chart to illustrate quarterly revenue contribution by quarter. Use the AutoCalculate area to find the average, maximum, and minimum quarterly revenue and manually enter them and their corresponding identifiers in an empty area of the worksheet.

**• • 4: Design and Create a Workbook to Analyze Your Field of Interest****Make It Personal**

Based on your college major, area of interest, or career, use an Internet search engine or other research material to determine the total number of people employed in your chosen field of interest in the country over the past five years. For each year, break the yearly number down into two or more categories. For example, the number for each year can be broken into management and nonmanagement employees. Create an Excel worksheet that includes this data. Place the data in appropriate rows and columns for each year and category. Create totals for each row, totals for each column, and a grand total. Format the worksheet title, column headings, and data using the concepts presented in this chapter. Create a properly formatted 3-D Clustered Cone chart for the data and place it below the data in the worksheet. Make certain that years are on the X axis and number of employees is on the Y axis.

**• • 5: Design and Create a Workbook to Analyze Your School****Working Together**

Visit the registrar's office at your school and obtain data, such as age, gender, and full-time versus part-time status, for the students majoring in at least six different academic departments this semester. Have each member of your team divide the data into different categories. For example, separate the data by:

1. Age, divided into four different age groups
2. Gender, divided into male and female
3. Status, divided into full-time and part-time

After coordinating the data as a group, have each member independently use the concepts and techniques presented in this chapter to create a worksheet and appropriate chart to show the total students by characteristics by academic department. As a group, critique each worksheet and have each member modify his or her worksheet based on the group recommendations.