Chapter 1

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Getting Started with Microsoft Excel 2013

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Lesson 1

Touring Excel

➤ What You Will Learn

Starting Excel
Naming and Saving a Workbook
Exploring the Excel Window
Exploring the Excel Interface
Navigating the Worksheet
Changing Worksheet Views
Closing a Workbook and Exiting Excel

Software Skills When you want to analyze business, personal, or financial data and create reports in a table format consisting of rows and columns, use the Microsoft Excel 2013 spreadsheet application in the Microsoft Office 2013 suite.

What You Can Do

Starting Excel

- Start Excel from the Windows 8 Start screen.
  - Click the Excel 2013 tile to start the program.
  - You can also find the program on the Apps screen. Scroll to the Excel 2013 tile and click to start.
- When you create a new blank worksheet, Excel displays a list of recently used files and a gallery of available **templates**.
- Click the Blank workbook tile to create a new Excel document.
- When Excel starts, it displays an empty **workbook** with one **worksheet**.
- A worksheet contains rows and columns that intersect to form **cells**.
- Gridlines mark the boundaries of each cell.

WORDS TO KNOW

Active cell
The active cell contains the cell pointer. There is a dark outline around the active cell.

The Backstage view
A feature of Microsoft Office 2013 from which you access file and program management commands.

Cell
A cell is the intersection of a column and a row on a worksheet. You enter data into cells to create a worksheet.

Cell address or cell reference
The location of a cell in a worksheet as identified by its column letter and row number.

Formula bar
As you enter data in a cell, it simultaneously appears in the formula bar, which is located above the worksheet.

Scroll
A way to view locations on the worksheet without changing the active cell.

Sheet tabs
Tabs that appear at the bottom of the workbook window, which display the name of each worksheet.

SkyDrive
A file hosting service that allows you to upload and sync files to a virtual, or cloud, storage environment. Files can then be accessed from a Web browser or a local device.

Tab scrolling buttons
Buttons that appear to the left of the sheet tabs, which allow you to scroll hidden tabs into view.

Template
A document that contains formatting, styles, and sample text that you can use to create new documents.

Workbook
An Excel file with one or more worksheets.

Worksheet
The work area for entering and calculating data made up of columns and rows separated by gridlines (light gray lines). Also called a spreadsheet.

Try It! **Starting Excel**

1. From the Windows Start screen, click the Excel 2013 program tile.

   ✓ *If your keyboard has a Windows key (a key with the Windows logo on it), you can press that key at any time to display the Start screen.*

   OR

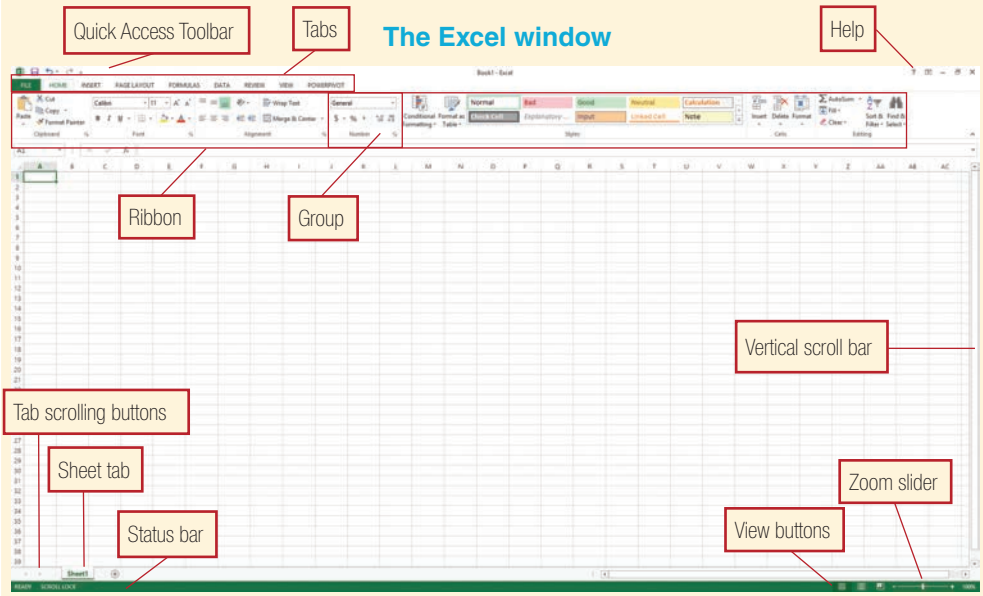
   a. Right-click a blank area of the Windows Start screen.
   b. Click the All apps button.
   c. Scroll to the Excel 2013 tile.
   d. Click Excel 2013.

   OR

   a. Move the mouse pointer to the lower-left corner of the screen.
   b. When you see the Windows Start screen icon, click to open the start screen.

2. Click Blank workbook.
3. Explore the features of the Excel program window.
4. Leave the file open to use in the next Try It.

The Excel window



Naming and Saving a Workbook

- After entering data in a workbook, you must save it, or that data will be lost when you exit Excel.
- A saved workbook is referred to as a file.
- A file may be saved on a hard disk, a removable disk, a shared group drive, or to the **SkyDrive**. Files saved to the SkyDrive are stored virtually on Microsoft's SkyDrive.com Web site.
- You must provide a name for the file when you save it. File names should be descriptive, with a limit of 255 characters for the name, disk drive, and path.
- A file name may contain letters, numbers, and spaces, but not \ / : * ? " < > or | .
- Excel automatically adds a period and a file type extension (usually .xlsx) to the end of a file name when you save it.

- You must select a location in which to save your file, for example, the Documents folder. You can also create new folders in which to store your workbooks.
- The default Excel file format is .xlsx, or Strict Open XML Spreadsheet file format. This XML-based file format allows your workbooks to integrate more easily with outside data sources and results in smaller workbook file sizes than in earlier versions of Excel.

  ✓ *You can install updates to some older versions of Excel so they can read the new .xlsx format.*

- Data can also be saved in other formats, such as HTML, Excel Binary (a file format for very large workbooks), or older versions of Excel (.xls).

  ✓ *You might want to save data in a different format in order to share that data with someone who uses a different version of Excel or a Web browser to view your data.*

- **The Backstage view** shows the places in which you can save your file, such as the SkyDrive or Computer. The the Backstage view will display the first time you save a file.

  ✓ *You can exit the the Backstage view by clicking the Back button .*

- When you select Computer, the Recent Folders list provides the locations of folders you have recently opened.
- You can select a different storage location by double-clicking Computer or by clicking Browse.
- Once you've saved a workbook, you need only click the Save button as you work to resave any changes made since the last save action. You will not need to reenter the file name.
- You can save a previously saved file with a different name by using the Save As tab in the the Backstage view.
- Click Browse to browse to a location and the Save As dialog box will open.

  ✓ *If the location where you want to store the file displays in the the Backstage view, click it instead of clicking Browse.*

- In the Save As dialog box, you can rename the file, browse to a location, and save the file.

Try It! Naming and Saving a Workbook

1. Click the FILE tab.

   OR

   Click the Save button on the Quick Access Toolbar.
2. Click Save As.
3. Click Computer and then click Browse .

   OR

   Double-click Computer.
4. In the File name text box, type **E01Try_xx**.

   ✓ *Replace xx with your own name or initials, as instructed by your teacher. For example, if your name is Mary Jones, type* **E01Try_MaryJones** *or* **E01Try_MJ**.
5. Use the Navigation pane to navigate to the location where your teacher instructs you to store the files for this lesson.

   ✓ *Use the drop-down lists at the top of the Save As dialog box or the locations in the Navigation pane at the left to select the folder to save to. Clicking the triangle beside any disk or folder in the Navigation pane displays or hides that location's contents. If saving to a USB drive, make sure it is inserted. Scroll down the Navigation pane at left, and click the USB drive under Computer. Refer to Lesson 1 of the Basics section of this book for more information on navigating.*
6. Click the Save button.
7. Leave the file open to use in the next Try It.

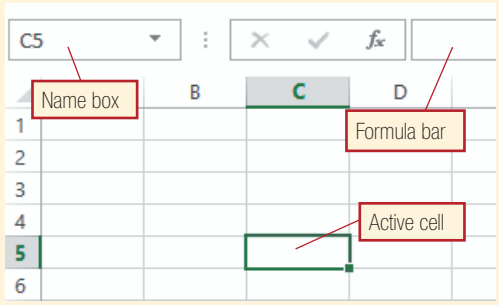
Exploring the Excel Window

- In the worksheet, a green border appears around the **active cell.**
- You can change the active cell using the mouse, touch device, or keyboard.
- Data is entered into the active cell.
- The Name box, located on the left side of the **formula bar,** displays the **cell reference** or **cell address** of the active cell (its column letter and row number). For example, A1 is the cell in the first row of the first column. B5 is the address for the cell in the fifth row of the second column.
- To help you identify the cell reference for the active cell, Excel surrounds the cell with a dark border and highlights its column letter (at the top of the worksheet) and row number (to the left of the worksheet). The column letters and row numbers are also known as the column and row headings.
- You can use the arrow keys ↑ ↓ ← → (alone or in combination with other keys), special key combinations, the mouse, a touch device, or Go To F5 to select a cell on the current worksheet.

Try It! Exploring the Excel Window

1. In the **E01Try_xx** file, press → twice.
2. Press ↓ four times.
3. Click in the Name box, type **b3**, and press ENTER.
4. Press ↓.
5. Click cell F13.
6. Press CTRL + HOME.
7. Save the **E01Try_xx** file, and leave it open to use in the next Try It.

Key worksheet features



Exploring the Excel Interface

- In the Microsoft Office Basics section, you learned that you can access common commands such as Save and Undo through the buttons on the Quick Access Toolbar.
- Through the FILE tab, you can access commands for managing files such as New, Open, Save, and Print. Clicking the FILE tab displays the Backstage view.
- The Ribbon, located at the top of the Excel window, offers buttons for the most common Excel commands.
- The Ribbon offers several tabs, and on each tab, related command buttons are arranged in groups. Click a tab to display its contents, and then click a button to choose a command or display further choices.
- Some tabs, called contextual tabs, appear only when you've selected an item to which the tab's commands apply.
- To access Help, click the Help button ?.

Try It! Exploring the Excel Interface

1. In the **E01Try_*xx*** file, click the FILE tab.
2. In the list at the left of the Backstage view, click Print.
3. Click the Back button in the upper-left corner of the window to go back to your document.
4. Click the FORMULAS tab.
5. On the FORMULAS tab, in the Function Library group, click the Date & Time button.
6. Press ESC.
7. Click the HOME tab.
8. Save the **E01Try_*xx*** file, and leave it open to use in the next Try It.

Navigating the Worksheet

- There are 16,384 columns and 1,048,576 rows available in a worksheet, but you don't need to fill the entire worksheet in order to use it—just type data in the cells you need.
- Since the workbook window displays only a part of a worksheet, you **scroll** through the worksheet to view another location.
- With the mouse or a touch device, you can scroll using the horizontal or vertical scroll bars.
  - ✓ *Using the mouse or touch device to scroll does not change the active cell.*
- With the keyboard, you can scroll by pressing specific keys or key combinations.
  - ✓ *Scrolling with the keyboard does change the active cell.*
- You can move to a specific cell that's not onscreen using Go To or the Name box.
  - ✓ *You can also use the Name box to go directly to a named cell or range. This is discussed in Lesson 13.*
- The Go To function allows you to go to a specific cell and make that cell active.
- You can open the Go To dialog box by clicking HOME > Find & Select > Go To.
  - ✓ *In this book, the symbol > is used to indicate a series of steps.*
- When you type the cell address into the Reference box and select OK, that cell will become the active cell.

Try It! Navigating the Worksheet

1. In the **E01Try_*xx*** file, click the down scroll arrow on the vertical scroll bar to scroll one row down.
2. Click the right scroll arrow on the horizontal scroll bar to scroll one column right.
3. Roll the mouse wheel down until row 52 comes into view. (Do not press the wheel, just lightly roll it with your fingertip.)
   - ✓ *If you are using a touchpad, click the down arrow on the vertical scroll bar.*
4. Click above the scroll box on the vertical scroll bar once or twice to redisplay row 1.
5. Drag the scroll box on the horizontal scroll bar all the way to the left to redisplay column A.
6. Click HOME > Find & Select > Go To.
7. In the Reference text box, type **ZZ88**.
8. Click OK.
9. Press CTRL + HOME to return to cell A1.
10. Save the **E01Try_*xx*** file, and leave it open to use in the next Try It.

Changing Worksheet Views

- To view or hide the formula bar, ruler, column and row headings, or gridlines, select or deselect them by checking or clearing the applicable check box in the Show group on the VIEW tab.

  ✓ *Hiding screen elements shows more rows onscreen.*

- To hide and redisplay the Ribbon, double-click any tab.
- Normal view is the default working view.
- Page Layout view is used to view data as it will look when printed and make adjustments.
- Page Break Preview is used before printing, to adjust where pages break.

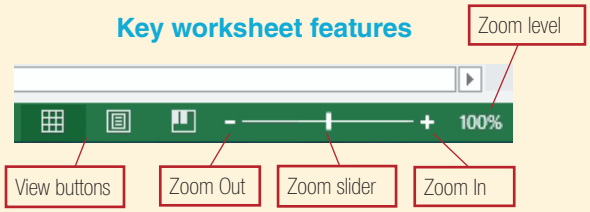
  ✓ *You'll learn more about Page Layout view and Page Break Preview in later lessons.*

- You can use the view buttons on the status bar to change to the most common views.
- You also can use the buttons in the Workbook Views group on the VIEW tab to change views.
- Use Zoom to magnify cells in a worksheet by any amount up to 400%.
- Change the zoom using the Zoom slider on the status bar.
- You can also change the zoom using the mouse, touch device, or the buttons in the Zoom group on the VIEW tab.

Try It! Changing Worksheet Views

1. In the **E01Try_xx** file, click the VIEW tab on the Ribbon.
2. In the Show group, click one of the following:
   - Ruler
   - Formula Bar
   - Gridlines
   - Headings
3. Click the item you clicked in step 2 again to redisplay it.
4. Double-click the VIEW tab to hide the Ribbon.
5. Double-click the VIEW tab again to redisplay the Ribbon.
6. Click the Page Layout button in either the Workbook Views group or near the zoom slider to change to Page Layout view.
7. In the Zoom group, click the Zoom button. The Zoom dialog box offers the following magnifications:
   - 200%
   - 100%
   - 75%
   - 50%
   - 25%
   - Fit Selection
   - Custom
8. Click 50%, and then click OK.
9. On the status bar, click Zoom In once.
10. On the status bar, use the zoom slider to change the view to more than 100%.
11. On the status bar, drag the Zoom slider to the middle to change the view to 100%.
12. On the VIEW tab, in the Zoom group, click the Zoom to Selection button.
13. In the Zoom group, click the 100% button.
14. In the Workbook Views group, click the Normal button.
15. Save the **E01Try_xx** file, and leave it open to use in the next Try It.

Key worksheet features



Closing a Workbook and Exiting Excel

- When your worksheet is complete and you want to close the Excel workbook, use the Close command after clicking on the FILE tab.
- You can also click the File button on the Quick Access Toolbar, and then click Close.
- Closing a workbook file removes it from the screen without exiting Excel.
- Save a workbook before you close it or you will lose the current data or updated entries that you made.
- If you attempt to close a workbook or close Excel before saving, you will be prompted to save the changes.
- If you have more than one file open, Excel allows you to close and save all of the files before you exit the program.
- Exit the Excel application by clicking the Close button at the right end of the program's title bar.

Try It! Closing a Workbook and Exiting Excel

1. In the **E01Try_xx** file, click the FILE tab on the Ribbon.
2. Click Close.
3. If necessary, click the Save button to save your changes to the file and close the workbook.
4. Click the **Close** button at the right end of the program's title bar to exit the Excel application.

Lesson 1—Practice

In this project, you will open an Excel worksheet, navigate the worksheet, change views, and close using the skills you learned in this lesson.

DIRECTIONS

1. Click **Excel 2013** and open a **Blank workbook** file.
2. Press → four times to select cell E1.
3. Press ↓ four times to select cell E5.
4. Click cell **H9** to make it the active cell, and then view its cell address in the Name box.
5. Click **HOME** > **Find & Select** > **Go To**.
6. In the Reference text box, type **T98**.
7. Click **OK**. The active cell changes to T98.
8. Click in the Name box to change the active cell to the following, pressing ENTER after typing each new cell address:
   a. **B1492** (row 1492, column B)
   b. **XFD1048576** (bottom right of worksheet)
9. Press CTRL + HOME to move to cell A1.
10. Click cell **D4**.
11. Point to the horizontal scroll bar and click the right scroll arrow. The worksheet moves right by one column but the active cell does not change.
12. Point to the horizontal scroll bar and click to the left of the scroll box. The worksheet moves back left but the active cell does not change.
13. Point to the horizontal scroll bar, and then drag the scroll box all the way to the right. The view of the worksheet has changed again but the active cell does not change.
14. Click the down scroll arrow on the vertical scroll bar three times. The worksheet moves down three rows but the active cell does not change.
15. On the **VIEW** tab, in the Show group, deselect the **Formula Bar** check box to hide the formula bar.
16. Change to the **Page Layout** view by clicking its button on the status bar. Notice that the rulers have appeared just above the column headings and to the left of the row numbers.

17. On the **VIEW** tab, change to Normal view by clicking the **Normal** button.
18. In the Show group, select the **Formula Bar** check box to redisplay the formula bar.
19. In the Zoom group, click the **Zoom** button to display the Zoom dialog box.
20. Click in the Custom box, type **150**, and then click **OK**. The Zoom changes to 150%, so cells appear much larger.
21. Click the **Zoom Out** button on the Status bar twice. The Zoom changes to 130%.
22. Drag the **Zoom slider** to the left until the zoom is set to **70%**. The current zoom percentage shows on the Zoom button as you drag. If you have trouble setting the zoom to an exact percentage using the slider, drag the slider to roughly 70%, then click the Zoom Out or Zoom In button as needed to jump to exactly 70%.
23. Drag the **Zoom slider** to the middle to change the view to 100%.
24. Click the **FILE** tab and then click **Close** to close the workbook. If asked to save the workbook, click **Don't Save**.
25. Click the Close button at the right end of the program's title bar to exit Excel.

Lesson 1—Apply

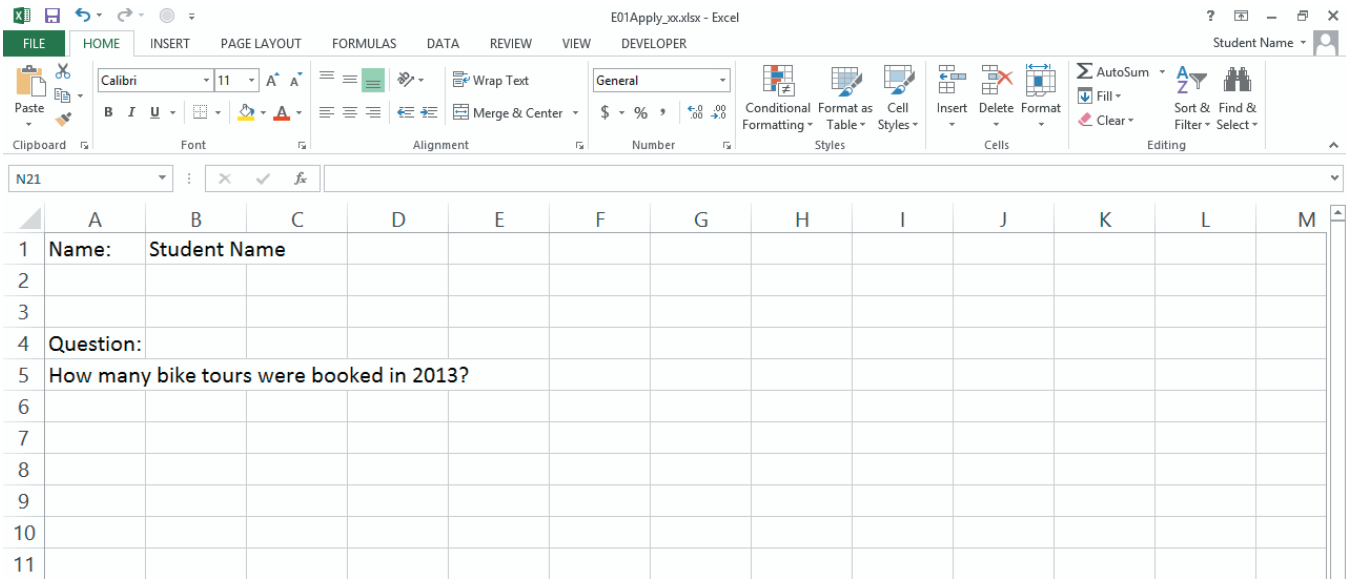
You've recently been hired as a marketing specialist for Bike Tours and Adventures, and you've enrolled yourself in a class to learn to use Excel. In this project, you will start Excel, familiarize yourself with the Excel window, change your view of the worksheet, and practice moving around the worksheet using the mouse and the keyboard.

DIRECTIONS

1. Start Excel, if necessary, and open **E01Apply** from the data files for this lesson.
2. Save the file as **E01Apply_xx** in the location where your teacher instructs you to store the files for this lesson.

   ✓ *Replace the text xx with your own first name and last name or initials as directed by your teacher.*
3. Click cell **B1**, type your name, and press ENTER.
4. Increase the zoom to **150%**. Your document should appear as shown in Figure 1-1 on the next page. Scroll to the left and up, if necessary, to see your name.
5. Hide and redisplay these screen elements:
   a. Ribbon.
   b. Formula bar.
   c. Gridlines.
6. Change to **Page Layout** view, and then back to **Normal** view.
7. Click **HOME** > **Find & Select** > **Go To**.
8. In the **Reference** text box, type **AL29**.
9. Click **OK**.
10. Click **HOME** > **Copy** to copy the contents of cell AL29.
11. Click **HOME** > **Find & Select** > **Go To**.
12. In the **Reference** text box, type **F5**.
13. Click **OK**.
14. Click **HOME** > **Paste** to paste the contents of cell AL29 to cell F5.
15. Press CTRL + HOME to return to cell A1.
16. Save and close the file, and exit Excel.

Figure 1-1


E01Apply_xx.xlsx - Excel
FILE
HOME
INSERT
PAGE LAYOUT
FORMULAS
DATA
REVIEW
VIEW
DEVELOPER
Student Name
Paste
Calibri
11
Wrap Text
General
Merge & Center
Conditional Formatting
Format as Table
Cell Styles
Insert
Delete
Format
AutoSum
Fill
Clear
Sort & Filter
Find & Select
Clipboard
Font
Alignment
Number
Styles
Cells
Editing
N21
Name: Student Name
Question:
How many bike tours were booked in 2013?

Lesson 2

Worksheet and Workbook Basics

➤ What You Will Learn

Creating a New (Blank) Workbook
Entering Text and Labels
Editing Text
Using Undo and Redo
Clearing Cell Contents
Inserting a Built-In Header or Footer
Previewing and Printing a Worksheet

Software Skills Building a workbook involves creating a new file, entering text to identify the data that will be calculated, making changes, and adding an identifying header and footer, among other information. You also can save and print a workbook before closing it. You'll learn these skills in this lesson.

WORDS TO KNOW

Blank workbook
A new, empty workbook contains one worksheet (sheet).

Clear
To remove a cell's contents and/or formatting.

Default
The standard settings Excel uses in its software, such as column width or bottom alignment of text in a cell.

Footer
Descriptive text, such as page numbers, that appears at the bottom of every page of a printout.

Header
Descriptive text, such as page numbers, that appears at the top of every page of a printout.

Label
Text entered to identify the type of data contained in a row or column.

What You Can Do

Creating a New (Blank) Workbook

- You can create a new workbook file any time after you begin working in Excel.
- A **blank workbook** file that you create has one worksheet by **default**, just like the blank workbook that appears when you start Excel.
- Use the Blank workbook choice in the Backstage view to create a blank file. Click the FILE tab > New > Blank workbook.

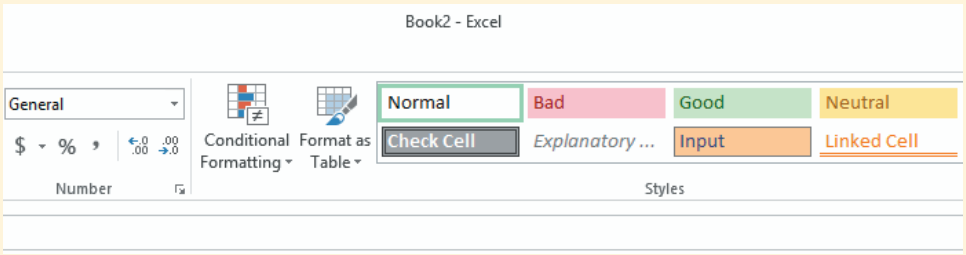
  ✓ *You can press CTRL + N at any time to create a blank file without displaying the Backstage view.*

- You can create a workbook using a template in the the Backstage view. You can choose from sample templates installed with Excel, or templates in a variety of categories on Office.com.
- During the current work session, Excel applies a temporary name to any new workbook you create. The first blank workbook that appears is named Book1 until you save it with a new name. Subsequent blank files you create are named Book2, Book3, and so on.

Try It! **Creating a New Workbook in Excel**

1. From the Windows Start screen, click the Excel 2013 program tile and then click Blank workbook. Excel starts and opens a blank workbook file.
   - ✓ *If your keyboard has a Windows key (a key with the Windows logo on it), you can press that key at any time to display the Start menu.*
2. Click FILE > New > Blank workbook.
   - ✓ *Throughout this book, you will see instructions provided in a sequence format; for example, "Click FILE > New" means to click the FILE tab and then click New.*
3. Click Blank worksheet. A second new, blank workbook appears, with its sequentially numbered temporary name, *Book2*.
4. Save the file as **ETry02_xx** in the location where your teacher instructs you to store the files for this lesson.
5. Leave the file open for the next Try It.

The new file shown in title bar



Entering Text and Labels

- The first character entered in a cell determines what type of cell entry it is—a label or **text**, number, or formula.
- If you enter an alphabetical character or a symbol (` ~ ! # % ^ & * ( ) _ \ | { } ; : ' " < > , ?) as the first character in a cell, you are entering a label.
- A **label** may be text data, such as the labels: Blue, Sally Smith, Ohio, or Above Average.
- Or, a label may be used to identify data in the row beside it or the column below it, such as the labels: Sales, Qtr 1, or January.
- As you type a label in a cell, it appears in the cell and in the formula bar.
- To enter the label in the cell, type the text and then do any of the following to finalize the entry: press the ENTER key, an arrow key, the TAB key, click another cell, or click the Enter button ✓ on the formula bar.
  - ✓ *To enter multiple lines in a cell such as* Overtime above *and* Hours below*, type* Overtime*, press* ALT + ENTER *. Type* Hours *on the second line in the cell and press* ENTER *to finalize the entry.*

Preview
To see how a worksheet will look when printed.

Redo
The command used to redo an action you have undone.

Text
An alphanumeric entry in a worksheet that is not a cell or range address.

Undo
The command used to reverse one or a series of editing actions.

- You also can press CTRL + ENTER to finish a cell entry and leave the current cell selected. This is a good technique to use if you later need to copy the cell's contents.
- The default width of each cell is 8.43 characters in the standard font (Calibri, 11 point).
- A label longer than the cell width displays the complete text only if the cell to the right is blank, or if you make the column wide enough to fit the entry.
- If you enter a lot of text in a cell, that text may not fully display in the formula bar. You can expand the formula bar (make it taller) by clicking the Expand Formula Bar button at the right end of the formula bar.
- A label automatically aligns to the left of the cell, making it a left-justified entry.

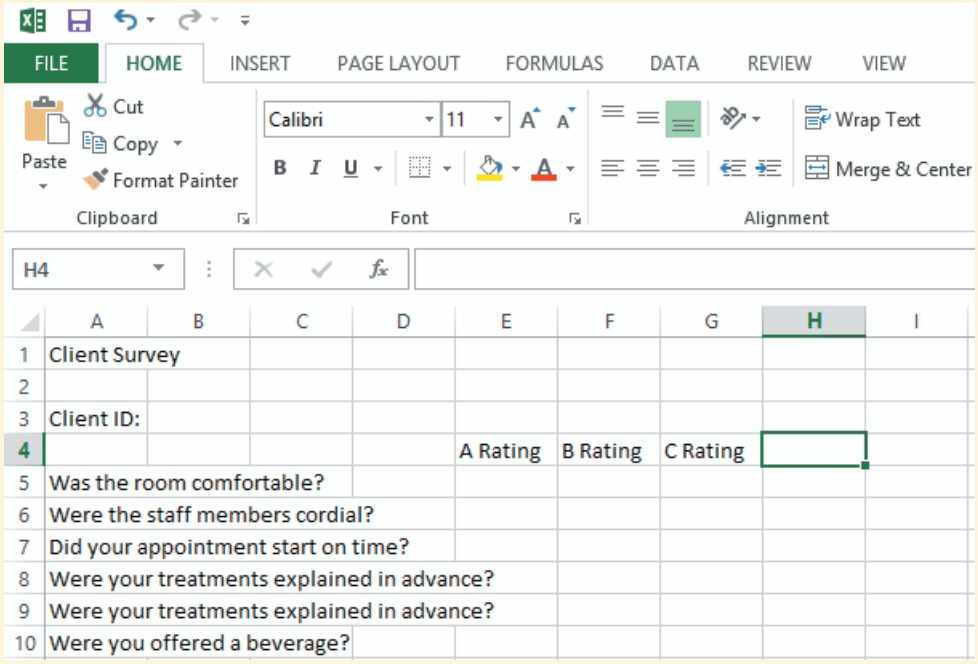
Try It! Entering Labels (Text)

1. In the **E02Try_*xx*** file, click cell A1, type **Client Survey**, and press ENTER twice.
2. Type **Client ID**, and press ENTER twice.
3. Type the following entries, pressing ENTER after each one:

   Was the room temperature appropriate?
   Were the staff members cordial?
   Was your appointment administered on time?
   Were your treatments explained in advance?
   Were your treatments explained in advance?
   Were you offered a beverage?

4. Click cell E4. Type **A Rating**, and press ↵.
5. Type **B Rating** and **C Rating** in the next two cells to the right, pressing TAB to complete each entry.
6. Click the Save button on the Quick Access Toolbar to save the file, and leave it open for the next Try It.

The file with label entries



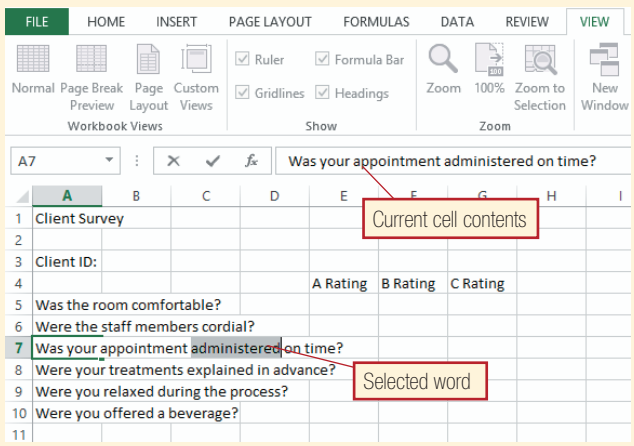
Editing Text

- As you type data in a cell, if you notice a mistake before you press ENTER (or any of the other keys that finalize an entry), you can press the BACKSPACE key to erase characters to the left of the insertion point.
- Before you finalize an entry, you can press the ESC key or click the Cancel button ✕ on the formula bar to cancel it.
- After you enter data, you can make the cell active again (by clicking it, pressing an arrow key, etc.) and then type a new entry to replace the old one.
- You can double-click a cell in which the entry has been finalized to enable in-cell editing (also called Edit mode) and then make changes to only part of the entry.
- When in Edit mode, in a cell with data, the word *EDIT* displays at the left end of the status bar.
- Use the BACKSPACE, DEL, and other keys and selection techniques (as in Word) as needed to select and replace data.

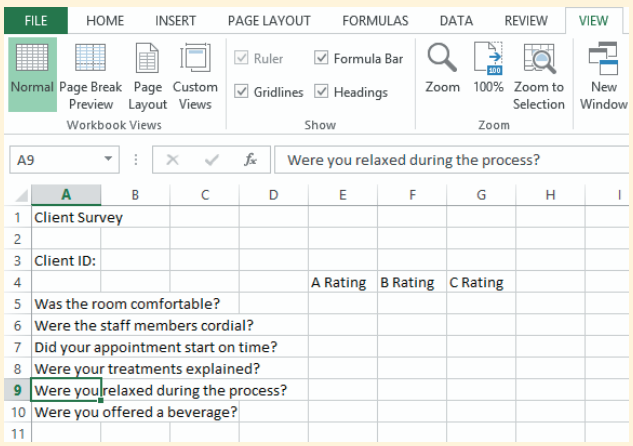
Try It! Editing Text

1. In the **E02Try_xx** file, click cell A9. This cell has a repeated entry that you want to replace.
2. Type **Were you relaxed during the process?**, and press CTRL + ENTER to finish the entry.
3. Click cell A5 and press F2. Drag over *temperature appropriate* to select those words, type **comfortable**, and press ENTER.
4. Double-click cell A7, and press HOME to make sure the insertion point is at the beginning of the cell entry. Press and hold SHIFT while pressing → three times to select *Was*. Type **Did**.
5. With the cell still in Edit mode, double-click *administered* to select it.
6. Type **start**, and press ENTER.
7. With cell A8 selected, click in the formula bar to the right of the word *explained*, press SHIFT and click to the right of the word *advance*, press DEL, and then press ENTER. This finishes the current edits.
8. Press CTRL + S to save your changes to the **E02Try_xx** file, and leave it open to use in the next Try It.

Editing a text entry



The edited text



Using Undo and Redo

- Use the **Undo** button on the Quick Access Toolbar to reverse any editing action.
- Some actions can't be undone (such as saving a workbook); in such cases, the Undo button will not be available and will be grayed out.
- You can reverse up to 100 previous editing actions with Undo.

✓ *The default number of Undo actions is 25.*

- The Undo button's name changes to reflect the most recent editing action.
- You can also redo (reinstate any action you've undone in error) up to 100 reversed actions using the **Redo** button.
- Both the Undo and Redo buttons include a drop-down list that enables you to undo or redo multiple edits at once.

Try It! Using Undo and Redo

1. In the **E02Try_xx** file, click cell E4.
2. Type **Yes**, and press TAB.
3. In cell F4, type **No** and press CTRL + ENTER to finish the entry.
4. On the HOME tab, in the Font group, click the Bold button **B**.
5. Click the Undo button on the Quick Access Toolbar.
6. Click the Redo button on the Quick Access Toolbar.
7. Click the Undo drop-down arrow on the Quick Access Toolbar, and click the third choice in the menu, which should be **Typing 'Yes' in E4**.
8. Click the **Redo** button on the Quick Access Toolbar twice.
9. Save the **E02Try_xx** file, and leave it open to use in the next Try It.

Clearing Cell Contents

- Press ESC or click the Cancel button on the formula bar to clear a cell's contents before finalizing any cell entry.
- To erase a finished cell entry, select the cell and then press DEL.
- You also can use the **Clear** button Clear in the Editing group of the HOME tab to delete the cell's contents or to selectively delete its formatting or contents only.
- Right-click a selected cell or range and click Clear Contents on the shortcut menu to remove the contents of the selected cell or range.
- You can clear the formatting of a selected cell or range by clicking HOME > Clear > Clear Formats.
- Clear All will clear the selected cell or range completely (format, contents, etc.). Click HOME > Clear > Clear All.

Try It! Clearing Cell Contents

1. In the **E02Try_xx** file, drag over the range E4:G4 to select it.

   ✓ *The above instruction means to drag the mouse from cell E4 across to cell G4. The shorthand E4:G4 is the address for the range of cells. Lesson 6 provides more detail about selecting and working with ranges.*
2. In the Font group of the HOME tab, click the **Bold** button **B**.
3. Click cell G4, and press DEL.
4. Click the Undo button on the Quick Access Toolbar.
5. With cell G4 still selected, click HOME > Clear Clear > Clear All.
6. Drag over the range E4:F4 to select it.
7. Click HOME > Clear Clear > Clear Formats.
8. Save the **E02Try_xx** file, and leave it open to use in the next Try It.

Inserting a Built-In Header or Footer

- When you want to repeat the same information at the top of each printed page, create a **header**.
- When you want to repeat the same information at the bottom of each printed page, create a **footer.**
- Header and footer information only appears in the Page Layout view or the printed worksheet.
- You can select a predesigned header or footer or create customized ones.
- To create a predesigned header or footer, click the INSERT tab, go to the Text group, and the Header & Footer button to display the HEADER & FOOTER TOOLS DESIGN tab. Then click either the Header or Footer buttons, and choose one of the predefined headers or footers.
- To customize the header/footer from there, type text in the appropriate section of the header or footer area: left, center, or right.

✓ *From here on, you will need to add a header with your name, the current date, and a page number print code to all the project workbooks.*

- You can also click buttons in the Header & Footer Elements group to insert print codes for the page number, total pages, current date, current time, file path, file name, or sheet name.

✓ *A print code is a set of characters that represent an element. For example, &[Page] is the print code for a page number.*

- You can also insert a graphic or picture (such as a company logo) in a header or footer.
- You can change the font, font style, and font size of the header or footer using the tools on the HOME tab.
- Press ESC to finish editing a custom header or footer and close the HEADER & FOOTER TOOLS DESIGN tab.

Try It! Inserting a Built-In Header or Footer

1. In the **E02Try_xx** file, click cell A1.
2. On the INSERT tab, in the Text group, click the Header & Footer button.
3. On the HEADER & FOOTER TOOLS DESIGN tab, in the Header & Footer group, click the Header button, and then click **E02Try_xx, Page 1** on the menu. The header appears in PAGE LAYOUT view.

   ✓ *If you've entered your name as the user name in Excel's options, you can choose a predefined header or footer that includes your name.*
4. Click INSERT > Header & Footer.
5. On the HEADER & FOOTER TOOLS DESIGN tab in the Navigation group, click the Go to Footer button.
6. With the insertion point in the center box of the footer, type your name, and then press TAB to move the insertion point to the right box.
7. On the HEADER & FOOTER TOOLS DESIGN tab in the Header & Footer Elements group, click the Current Date button to insert a code that will display and print the current date.
8. Press TAB to finish the entry in the right box.
9. Press ESC to finish working with the header and footer.
10. Review the footer you created, then scroll up and view the header.
11. Click VIEW > Normal to return to Normal view.
12. Save the **E02Try_xx** file, and leave it open to use in the next Try It.

Previewing and Printing a Worksheet

- You may print the selected worksheet(s), an entire workbook, or a selected data range.
- You can **preview** a worksheet before you print it. Previewing enables you to see a more accurate representation of how the worksheet will look when printed, so you don't waste paper printing a sheet with the wrong settings.

  ✓ *In Lesson 20, you learn how to print an entire workbook and a selected range.*

- Before you print a worksheet, you have the opportunity to review its appearance in the Backstage view.
- You also can specify print options in the Backstage view.
- If you decide not to print, click the HOME tab to leave the Backstage view.

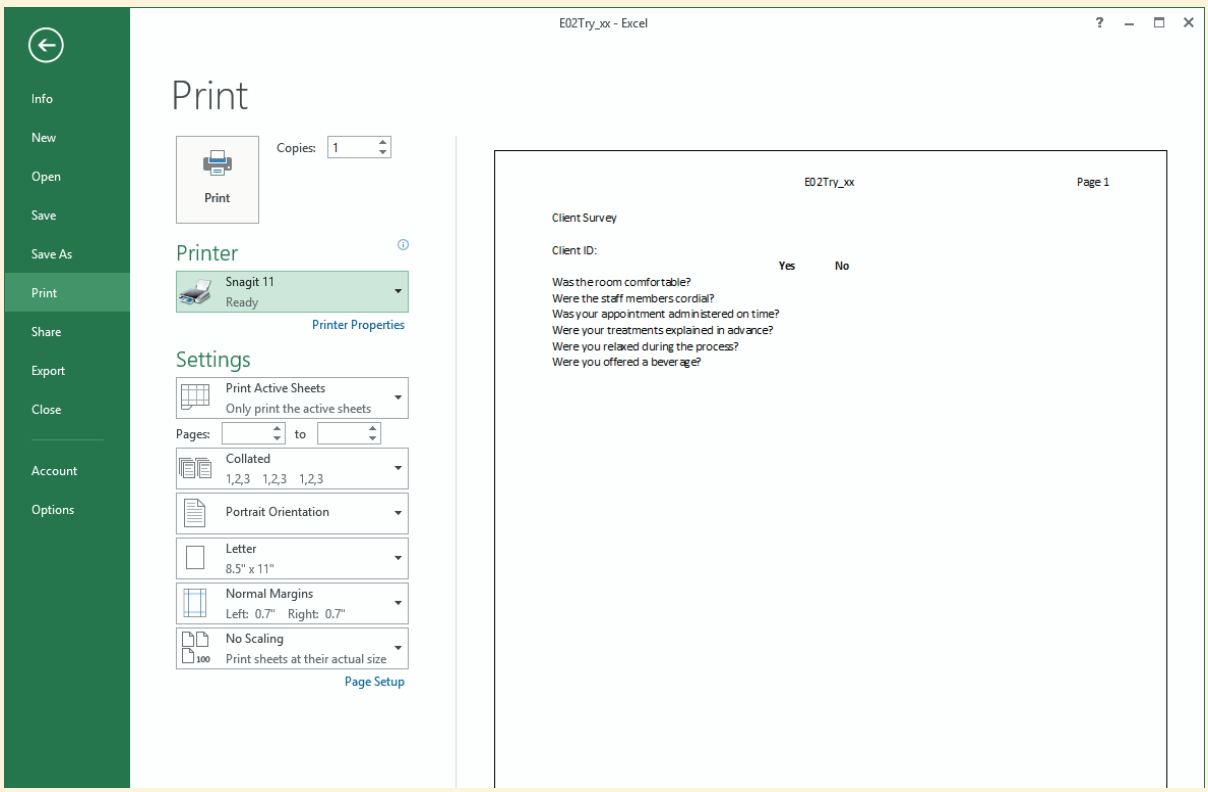
Try It! Previewing and Printing a Worksheet

1. In the **E02Try_xx** file, click FILE > Print.
2. Review the document preview at the right side of the Backstage view. The preview shows the placement of headers and footers and all entries on the page.

   ✓ *If the worksheet you were printing consisted of multiple pages, you could use the buttons at the lower left to move between them.*

3. The various print settings appear in the Print pane area of the Backstage view.
4. Make sure that Print Active Sheets is selected under Settings.
5. **With your teacher's permission**, click the Print button. Otherwise, click the HOME tab.
6. Save and close the file, and exit Excel.

Print Preview



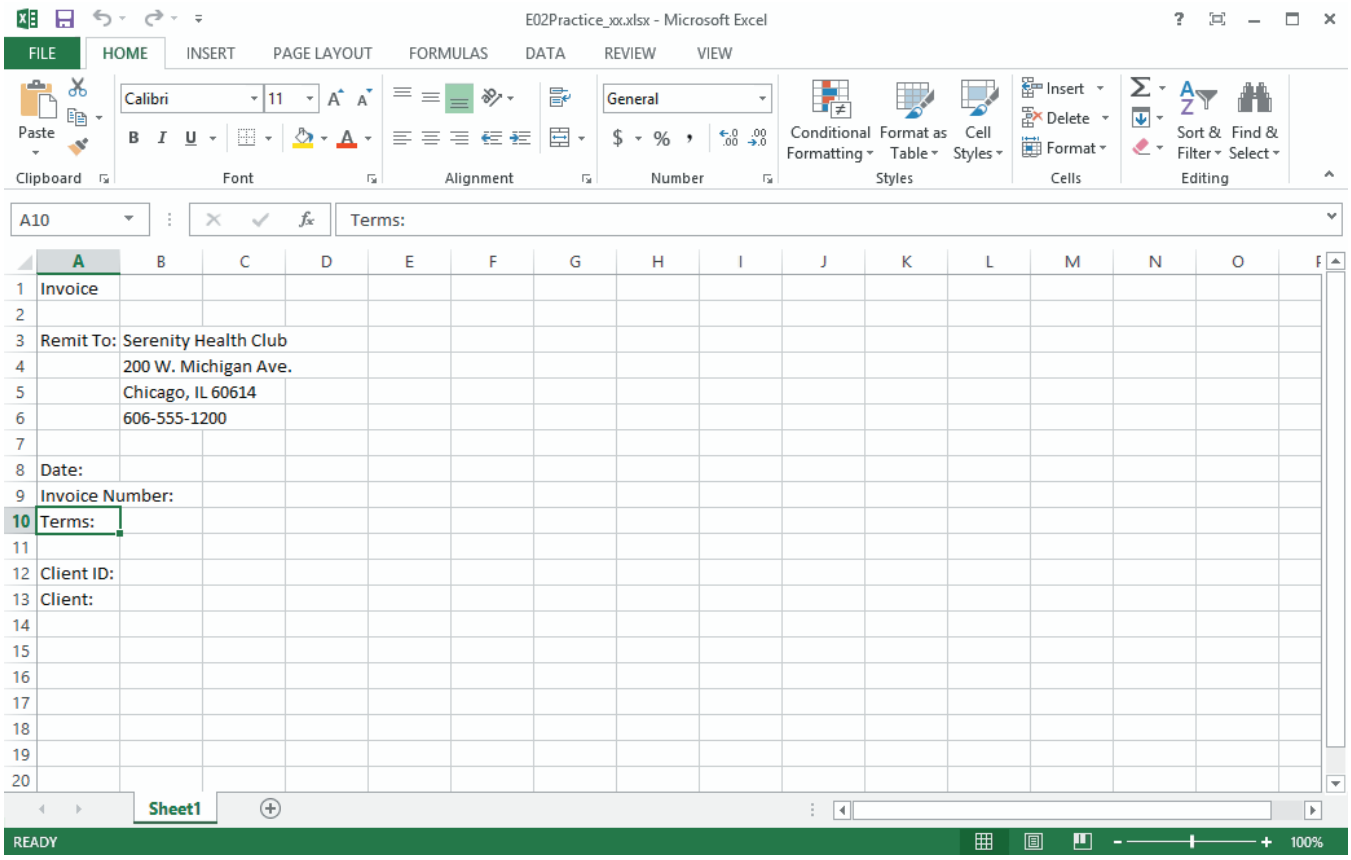
Lesson 2—Practice

In this project, you will create a new Excel worksheet, insert a built-in header, and undo and redo editing actions using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary.
2. Click **Blank workbook**.
3. Save the blank file that appears as **E02Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Click **INSERT** > **Header & Footer**.
5. In the HEADER & FOOTER TOOLS DESIGN tab, click **Header**, and click the **Page 1** choice.
6. Click **INSERT** > **Header & Footer**.
7. Type **your name** in the left header box, and press TAB twice to move to the right header box.
8. In the HEADER & FOOTER TOOLS DESIGN tab, click **Current Date** to insert a date printing code.
9. Press TAB and then ESC to finish creating the header.
10. Click **VIEW** > **Normal** to return to Normal view.
11. Type **Invoice** in cell **A1**, and press ENTER twice.
12. Type **Remit To:** and press TAB.
13. Type **Serenity Health Club**, press ENTER, and press ← if needed to select cell B4.
14. Type **200 W. Michigan Ave.** and press ENTER.
15. In cell **B5**, type **Chicago, IL 60614**, and press ENTER.
16. In cell **B6**, type **606-555-1200**, and press ENTER.
17. Click cell **A8,** and type the following three entries, pressing ENTER after each:
    a. **Time:**
    b. **Number:**
    c. **Due Date:**
18. Press ENTER again to select cell **A12**, and make the following two entries, pressing ENTER after each:
    a. **Client ID:**
    b. **Client:**
19. Click the **Undo** button on the Quick Access Toolbar twice to undo the previous two entries.
20. Click the **Redo** button on the Quick Access Toolbar twice to redo your entries.
21. Scroll up and drag over the range **B3:B6** to select it.
22. Click **HOME** > **Clear** > **Clear Contents**.
23. Click the **Undo** button on the Quick Access Toolbar.
24. Click cell **A8**, type **Date:**, and press ENTER to replace that cell's entry.
25. With cell **A9** selected, press F2, press CTRL + ← to move the insertion point to the beginning of the cell, type **Invoice**, press SPACE, and press ENTER.
26. Drag over cell A10's entry in the formula bar, type **Terms:**, and click the **Enter** button on the formula bar to replace the entry. The finished worksheet appears as shown in Figure 2-1 on the next page.
27. Click **FILE** > **Print**.
28. **With your teacher's permission**, click the **Print** button. Otherwise, click the Back button to exit the Backstage view.
29. Click the **Save** button on the Quick Access Toolbar, and then click the Close button at the end of the program's menu bar to exit Excel.

Figure 2-1



Lesson 2—Apply

You are the Accounts Receivable Supervisor at the Serenity Health Club. A member has charged several services but has not yet paid for them. You need to create an invoice detailing the charges.

DIRECTIONS

1. Start Excel, if necessary, and open **E02Apply** from the data files for this lesson.
2. Save the file as **E02Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number at the right.
4. Change back to **Normal** view.
5. Enter the following data in cells **B8:B10**:
   a. **1/3/14**
   b. **546**
   c. **Due on receipt**
6. Click cell **A9** and replace **Number** with **No.**.
7. Click cell **B10**, and then click **HOME** > **Align Right** in the Alignment group.
8. Clear the formatting you just applied in cell B10.
9. Click the **Undo** button on the Quick Access Toolbar to undo the formatting change.

10. Change the entries in cells **A12:A13** to the following:
    a. **Member ID:**
    b. **Member:**
11. Click cell **B12**, and enter **A1054**.
12. Enter the following data in cells **B13:B15**:
    a. **Joy Wen**
    b. **12 W. 21st St.**
    c. **Chicago, IL 60602**
13. Make entries in the portion of the invoice that calculates the invoice charges, as follows:
    a. cell **A18: 2**
    b. cell **B18: Massage Hours**
    c. cell **C18: 45**
    d. cell **A19: 1**
    e. cell **B19: Facial**
    f. cell **C19: 75**
    g. cell **A20: 3**
    h. cell **B20: Personal Trainer Hours**
    i. cell **C20: 50**
14. Scroll down. Notice that the worksheet already has calculations built in, so it calculates values in the Amount column and Total cell for you.
15. You have been informed that the rate for personal training has changed. Click the **Undo** button on the Quick Access Toolbar, and then enter a rate of **55** in cell C20.
16. Click **FILE** > **Print** to preview the file in the Backstage view.
17. **With your teacher's permission**, click the **Print** button. Otherwise, click the Back button to exit the Backstage view. Submit the printout or the file for grading as required.
18. Save and close the file, and exit Excel.

Lesson 3

Adding Worksheet Contents

➤ What You Will Learn

Opening an Existing Workbook and Saving It with a New Name
Entering and Editing Numeric Labels and Values
Using AutoComplete
Using Pick From List
Using AutoCorrect
Checking the Spelling in a Worksheet

Software Skills Save a copy of a workbook with a new name to use it as the basis for another workbook. You also need to know how to enter numeric values, which are the basis for calculations. When entering data, take advantage of the many time-saving features Excel offers. Excel's AutoComplete feature, for example, automatically completes certain entries based on previous entries that you've made. AutoCorrect automatically corrects common spelling errors as you type, while the spelling checker checks your worksheet for any additional errors.

WORDS TO KNOW

AutoComplete
A feature used to complete an entry based on previous entries made in the column containing the active cell.

AutoCorrect
A feature used to automate the correction of common typing errors.

Numeric label
A number entered in the worksheet as a label, not as a value—such as the year 2014 used as a column label.

Pick From List
A shortcut used to insert repeated information.

Spelling checker
A tool used to assist you in finding and correcting typographical or spelling errors.

Value
A cell entry that consists of a number and numeric formatting only.

What You Can Do

Opening an Existing Workbook and Saving It with a New Name

- When you have saved and closed a workbook file, you can open it from the same disk drive, folder, and file name you used during the save process.
- When Excel starts, you can access a recently used file from the Recent list on the left. Click a file to open it.

  ✓ *You can also click Open Other Workbooks to go to the Backstage view and select a file from a specific location.*

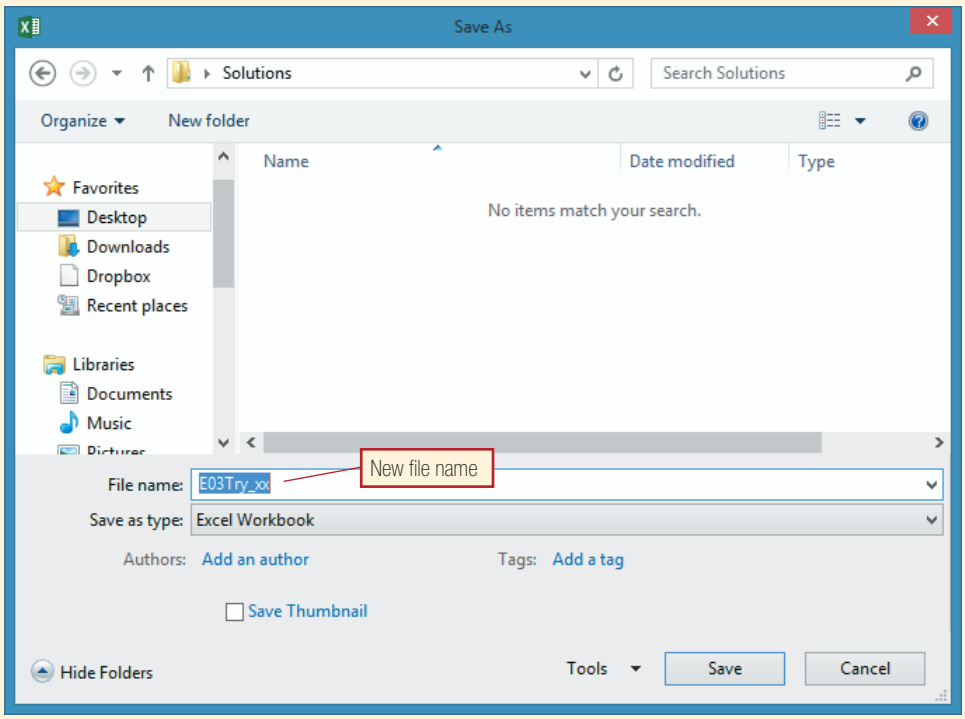
- Click FILE > Open to display the Backstage view and access recently opened workbooks, the Skydrive, and Computer. The Recent Workbooks window is displayed by default. Click a workbook or location to open it.
- Click SkyDrive to access files from Microsoft's virtual storage location.
- Click Computer to access files from a specific location on your computer. Click Browse to open the Open dialog box.
- In the Open dialog box, use the arrows in the text box at the top to navigate the disks, libraries, and folders on your computer.

- You also can use the Navigation pane at the left to go to the location of the workbook. Clicking the triangle beside any location displays the location's contents, and clicking again hides its contents.
- The default file location, the Documents library in Windows 8, appears in the Navigation pane by default. You can navigate to other libraries, favorite locations (under Favorites), locations on your computer, locations on the network, and locations on the Skydrive. You can also navigate to Homegroup (local network) locations if that feature is enabled.
- Click the Change your view button in the Open dialog box to preview a file, change the list to display file details, or display the properties of a file.
- You can pin a recently used workbook or location to the Recent lists so it is always easily accessible.
- A newly opened workbook becomes the active workbook and hides any other open workbook.

Try It! Opening an Existing Workbook and Saving It with a New Name

1. Start Excel.
2. Click FILE > Open.
3. Navigate to and select the folder containing the data files for this lesson.
4. Click the **E03Try** file. The file appears onscreen.
5. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
6. Click FILE > Save As.
7. Navigate to the folder where your teacher instructs you to store the files for this lesson.
8. Click in the File name text box, and edit the file name to read **E03Try_xx**.
9. Click the Save button to finish saving the file, and leave it open to use in the next Try It.

Renaming the file



Entering and Editing Numeric Labels and Values

- A cell contains a **value** when its first character begins with either a number or one of the following symbols (+, −, =, $).
- Type the value, and then do one of the following to enter it in the cell:
  - Press ENTER.
  - Press an arrow key.
  - Click the Enter button ✓ on the formula bar.
  - Click another cell.
- The default cell format in Excel is General.
- To display any number in a different format, apply the number format you want to use, as explained in Lesson 4.
- If you see pound signs displayed in a cell instead of a number, widen the column to display the value.
- You can enter some numbers with their formatting and Excel will recognize them as numbers, including:
  - Thousands: You can enter numbers with thousands separators, as in 1,543,009.24
  - Currency values: You can enter values with currency formatting, as in $1,299.60.
  - Percentages: You can enter a percent symbol to specify a percentage, as in 54%.
- When you enter numbers that contain hyphen formatting—such as Social Security numbers, phone numbers, and Zip codes—Excel treats the entries as text, and they cannot be used in calculations.
- A **numeric label**, such as a year number above a column of data that identifies the data's timing, is a number that typically will not be used in calculations.
- Begin the entry of a numeric label with an apostrophe (') as a label prefix to indicate that the number should be treated as a label (text) and not as a value. The entry will align at the left of the cell, unlike other value entries, which align right.
- Although the label prefix (') is shown on the formula bar, it is not displayed on the worksheet or printed.
- When you enter a value with an apostrophe, Excel displays a green triangle in the upper left-hand corner of the cell. Select the cell again, and an error button appears. You can:
  - Click the button and click Ignore Error to confirm that the number is really a label.
  - Click the button and click Convert to Number if the apostrophe was entered in error and the entry should be treated as a number.
- Edit a cell with a value or numeric label using the same techniques as editing a cell with a text entry.

Try It! Entering and Editing Numeric Labels and Values

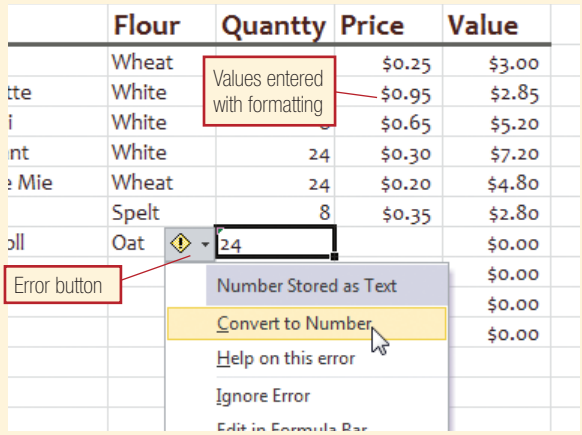
1. In the **E03Try_*xx*** file, click cell A12, type **Roll**, and press TAB.
2. Type **Spelt** and press TAB.
3. Type **8** and press TAB.
4. Type **.35** and press ENTER.
5. In cell A13 type **Mini Roll**, and press TAB.
6. Type **Oat** and press TAB.
7. Type **'24** and press TAB. Notice that the number left aligns in the cell and a green triangle appears.
8. Click cell C13, click the Error button, and click Convert to Number. The entry right aligns in the cell.

(continued)

Try It! Entering and Editing Numeric Labels and Values *(continued)*

9. Press TAB, type **$.20**, and press CTRL + ENTER.
10. Click cell D8, type **$1.15**, and press ENTER to replace the current entry.
11. Click cell C10, press F2, press BACKSPACE, type **8**, and press ENTER.
12. Save the **E03Try_xx** file, and leave it open to use in the next Try It.

Converting a numeric label to text



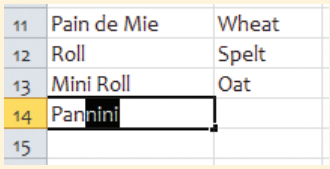
Using AutoComplete

- When you need to repeat a label that has already been typed in the same column, the **AutoComplete** feature allows you to enter the label automatically.
- Type part of the label. If an entry with the same characters has already been entered in the column above, a suggestion for completing the entry appears in black.
- To accept the AutoComplete suggestion, press TAB or ENTER. Otherwise, continue typing the rest of the entry.

Try It! Using AutoComplete

1. In the **E03Try_xx** file, click cell A14.
2. Type **Pan**. An AutoComplete suggestion appears in the cell.
3. Press TAB to accept the AutoComplete entry and move to cell B14.
4. Type **Whe**, and press TAB to accept the AutoComplete entry and move to cell C14.
5. Type **8**, and press TAB.
6. Type **$.70**, and press ENTER.
7. Save the **E03Try_xx** file, and leave it open to use in the next Try It.

An AutoComplete suggestion



Using Pick From List

- If several labels are entered in a list and the next items to be typed are repeated information, you also can use the **Pick From List** feature to make entries. Right-click a cell and then click the Pick From Drop-down List command on the shortcut menu.

✓ *The cells in the list and the cell to be typed must be next to each other and in the same column. Use the Undo button on the Quick Access Toolbar to reverse any editing action.*

- Click the desired choice in the list of entries that appears to enter it in the cell, and then press TAB or ENTER to move to the next cell, if needed.

Try It! Using Pick From List

1. In the **E03Try_xx** file, right-click cell A15, and click Pick From Drop-down List.
2. In the list that appears, click Roll.
3. Right-click cell B15, and click Pick From Drop-down List.
4. In the list that appears, click White, and then press TAB.
5. Type **36**, and then press TAB.
6. Type **$.23**, and then press TAB.
7. Save the **E03Try_xx** file, and leave it open to use in the next Try It.

Using AutoCorrect

- If you type a word incorrectly and it is in the **AutoCorrect** list, Excel automatically changes the word as you type.
- AutoCorrect automatically capitalizes the names of days of the week; corrects incorrectly capitalized letters in the first two positions in a word; and undoes accidental use of the Caps Lock key.
- When certain changes are made with AutoCorrect, you're given an option to remove the corrections by clicking the arrow on the AutoCorrect Options button that appears, and selecting the action you want.
- You can add words to the AutoCorrect list that you often type incorrectly. Click FILE > Options. In the Excel Options dialog box, click Proofing in the list at the left. Click the AutoCorrect Options button. Type entries in the Replace and With text boxes, and then click the Add button. Repeat as needed, and then click OK to close both dialog boxes.

Try It! Using AutoCorrect

1. In the **E03Try_xx** file, click cell A16.
2. Type **Cafe Biscotti**, and press TAB. Notice that when you press SPACE to finish the first word, Excel adds the accent to correct its spelling.
3. Type **O**, and then press TAB. AutoComplete fills in the word *Oat* for you.
4. Type **92**, and then press TAB.
5. Type **$.28**, and then press TAB.
6. Click FILE > Options.
7. In the Excel Options dialog box, click Proofing in the list at the left.
8. Click the AutoCorrect Options button.
9. Type **quantty** in the Replace text box, and **quantity** in the With text box.
10. Click the Add button.
11. Click the OK button twice.

✓ *If your teacher asks you to, reopen the AutoCorrect Options dialog box, select the quantty correction, and click Delete.*

12. Click cell A18 to select it.
13. Type **quantty**, and then press ENTER. Notice that AutoCorrect corrects the text you typed.
14. Click Undo.
15. Save the **E03Try_xx** file, and leave it open to use in the next Try It.

Checking the Spelling in a Worksheet

- To check the spelling of text in a worksheet and obtain replacement word suggestions, use the **spelling checker** feature.
- Start the spelling check from cell A1 to ensure it checks all sheet contents.

✓ *If you don't start the spell check from the beginning of the worksheet, Excel completes the spell check and then displays "Do you want to continue checking at the beginning of the sheet?"*

✓ *Press CTRL + HOME to go to the beginning of the worksheet.*

- To start the spelling checker, click the REVIEW tab and in the Proofing group, click the Spelling button .

✓ *Pressing F7 also starts a spelling check.*

✓ *Checking spelling in Excel works much as it does in Word.*

Try It! **Checking the Spelling in a Worksheet**

1. In the **E03Try_xx** file, click cell A1.
2. Click REVIEW > Spelling .
3. At the first misspelling, Quantty, make sure the proper spelling is selected in the Suggestions list, and click the Change button.
4. At the next misspelling, Pannini, make sure the proper spelling is selected in the Suggestions list, and click the Change All button.
5. Save and close the file, and exit Excel.

Lesson 3—Practice

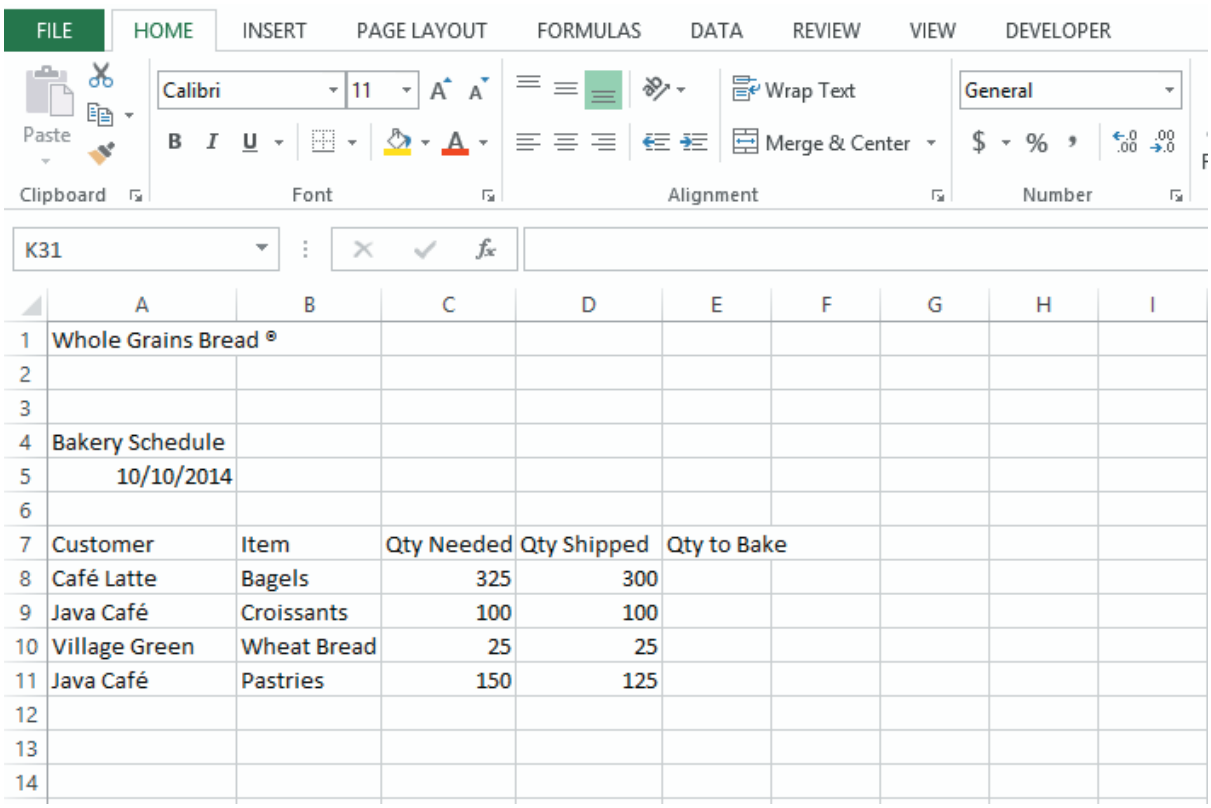
In this project, you will enter and edit text, undo and redo editing actions, and check the spelling in a worksheet.

DIRECTIONS

1. Start Excel, if necessary.
2. Click **Blank workbook** to open a new file.
3. Save the file as **E03Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
5. Type **Whole Garins Bread (r)** in cell A1, and press SPACE. (Type the entry exactly as shown; errors will be corrected later.) Notice that the AutoCorrect feature changes the (r) entry to a register mark: ®.
6. Press ENTER three times.
7. Type **Bakery Schedule**, and press ENTER.
8. Type **10/10/14**, and press ENTER twice.
9. Type the following cell entries, pressing TAB after each:
   a. **Customer**
   b. **Item**
   c. **Qty Needed**
   d. **Qty Shipped**
   e. **Qty to Bake**
10. Click cell **A8**, and type the following cell entries exactly as shown, pressing ENTER after each (note AutoCorrect in action again):
    a. **Cafe Latte**
    b. **Java Cafe**
    c. **Villige Green**
11. Click cell **B8**, and type the following cell entries exactly as shown, pressing ENTER after each:
    a. **Bagels**
    b. **Croissants**
    c. **Wheat Bread**
12. Click cell **C8**, and type the following cell entries exactly as shown, pressing ENTER after each:
    a. **325**
    b. **100**
    c. **25**
13. Click cell **D8**, and type the following cell entries exactly as shown, pressing ENTER after each:
    a. **300**
    b. **100**
    c. **25**

14. Click cell **A11**, type **J**, and press TAB to complete the cell entry using AutoComplete.
15. Type the following cell entries, pressing TAB after each:
    a. **Pastries**
    b. **150**
    c. **125**
16. Click cell **A1**.
17. Click **REVIEW** > **Spelling**.
18. At the first misspelling, *Garins*, make sure that **Grains** is selected in the Suggestions list, and then click the **Change** button.
19. At the next misspelling, *Qty*, click the **Ignore All** button.
20. At the next misspelling, *Villige*, make sure that **Village** is selected in the Suggestions list, and then click the **Change** button.
21. In the message box that informs you that the spelling check is complete, click the **OK** button. The finished spreadsheet appears as shown in Figure 3-1.
22. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
23. Save and close the file, and exit Excel.

Figure 3-1



	A	B	C	D	E	F	G	H	I
1	Whole Grains Bread ®								
2									
3									
4	Bakery Schedule								
5	10/10/2014								
6									
7	Customer	Item	Qty Needed	Qty Shipped	Qty to Bake				
8	Café Latte	Bagels	325	300					
9	Java Café	Croissants	100	100					
10	Village Green	Wheat Bread	25	25					
11	Java Café	Pastries	150	125					
12									
13									
14									

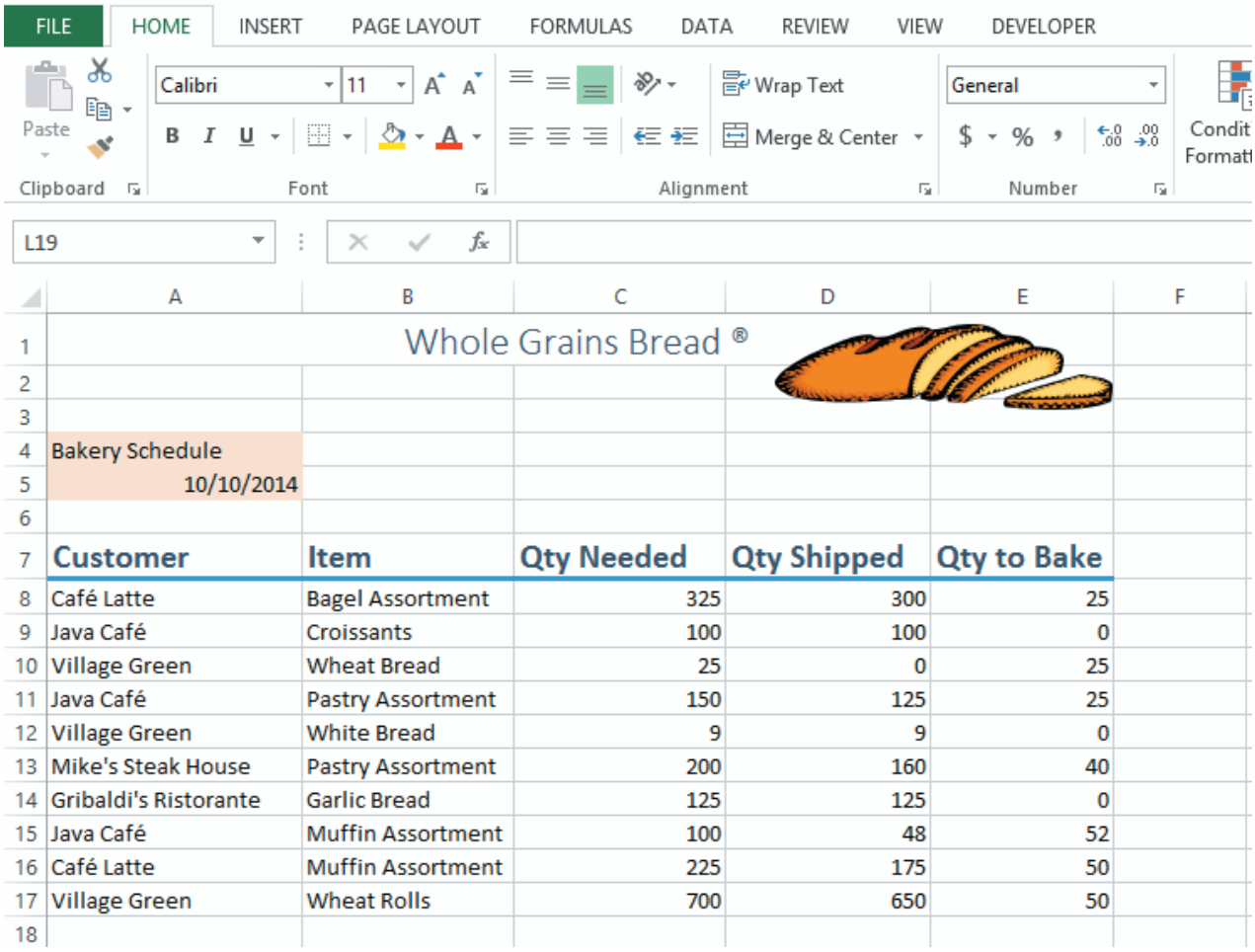
Lesson 3—Apply

You're the team leader at Whole Grains Bread, and you need to complete the baking schedule for today so the other chefs will know what needs to be done for delivery tomorrow. You want to compare today's schedule with yesterday's, in order to compile a list of any items that were not completed on time. Those items will be given the highest priority.

DIRECTIONS

1. Start Excel, if necessary, and open the **E03Apply** file from the data files for this lesson.
2. Save the file as **E03Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. In cell **A12**, use **Pick From Drop-down List** to enter **Village Green**.
5. Click cell **A13**, and make the following entries, using AutoComplete where applicable and pressing ENTER after each:
   a. **Mike's Steak House**
   b. **Gribaldi's Risorante**
   c. **Java Café**
   d. **Café Latte**
   e. **Village Green**
6. Click cell **B12**, and make the following entries exactly as shown, using AutoComplete where applicable and pressing ENTER after each:
   a. **White Bread**
   b. **Pastry Assortment**
   c. **Garlic Bread**
   d. **Muffin Assotment**
   e. **Muffin Assortment**
   f. **Wheat Rolls**
7. Click cell **C12**, and make the following entries, pressing ENTER after each:
   a. **9**
   b. **200**
   c. **125**
   d. **100**
   e. **225**
   f. **700**
8. Click cell **D12**, and make the following entries, pressing ENTER after each:
   a. **9**
   b. **200**
   c. **125**
   d. **100**
   e. **175**
   f. **650**
9. Click cell **D10**, and change the entry to **0**.
10. Click cell **D13**, and change the entry to **160**.
11. Click cell **D15**, and change the entry to **48**.
12. Click cell **A1**.
13. Check the spelling in the worksheet.
14. At the first misspelling, *Qty*, click the **Ignore All** button.
15. At the next misspelling, *Gribaldi's*, click the **Ignore Once** button.
16. At the next misspelling, *Risorante*, edit the entry to read **Ristorante**, and then click the **Change** button. Click **Yes** to change the word even though it's not in the dictionary.
17. At the next misspelling, *Assotment*, make sure the right correction is selected in the Suggestions list, and click the **Change** button.
18. In the message box that informs you that the spelling check is complete, click **OK**.
19. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
20. Save and close the file, and exit Excel.

Figure 3-2



	Customer	Item	Qty Needed	Qty Shipped	Qty to Bake
8	Café Latte	Bagel Assortment	325	300	25
9	Java Café	Croissants	100	100	0
10	Village Green	Wheat Bread	25	0	25
11	Java Café	Pastry Assortment	150	125	25
12	Village Green	White Bread	9	9	0
13	Mike's Steak House	Pastry Assortment	200	160	40
14	Gribaldi's Ristorante	Garlic Bread	125	125	0
15	Java Café	Muffin Assortment	100	48	52
16	Café Latte	Muffin Assortment	225	175	50
17	Village Green	Wheat Rolls	700	650	50

Lesson 4

Worksheet Formatting

➤ What You Will Learn

Software Skills When you change the appearance of worksheet data by applying various formats, you also make that data more attractive and readable.

What You Can Do

Choosing a Theme

- To make your worksheet readable and interesting, you can manually apply a set of formats.
- You manually **format** data by selecting cells and then clicking options on the HOME tab, such as the Font Calibri (Body) and Font Color A buttons.
- Using too many manual formats can make the worksheet seem disjointed and chaotic.
- To make your worksheet more professional-looking, use a **theme** to apply a coordinated set of formats.
- By default, the Office theme is applied to all new workbooks; if you select a different theme, the **fonts** and colors in your workbook will automatically change.
- If you don't want to change the fonts in your worksheet, you can apply just the theme colors from a theme.
- Likewise, you can change theme fonts and the theme effects applied to graphics without affecting the colors already in your worksheet.
- You select a theme from the Themes gallery in the Themes group on the Page Layout tab.
- As you move the mouse over the themes shown in the gallery, the worksheet automatically shows a **Live Preview** of the data.
- When you type data in a cell, it's automatically formatted using the font in the current theme.

WORDS TO KNOW

Accounting format
A style that vertically aligns dollar signs ($), thousands separators (,), and decimal points.

Cell style
A combination of a font, text color, cell color, and other font attributes applied to a single cell.

Comma format
A style that displays numbers with a thousands separator (,).

Currency format
A style that displays dollar signs ($) immediately preceding the number and includes a thousands separator (,).

Fill
A color that fills a cell, appearing behind the data.

Font
The typeface or design of the text.

Font size
The measurement of the typeface in points (1 point = 1/72 of an inch).

Format
To apply attributes to cell data to change the appearance of the worksheet.

Live Preview
A feature that shows you how a gallery formatting choice will appear in the worksheet when you move the mouse pointer over that choice.

Merge and Center
A feature that enables you to automatically combine cells and center the contents of the original far left cell in the new cell.

Number format
A format that controls how numerical data is displayed, including the use of commas, dollar signs (or other symbols), and the number of decimal places.

Percent format
A style that displays decimal numbers as a percentage.

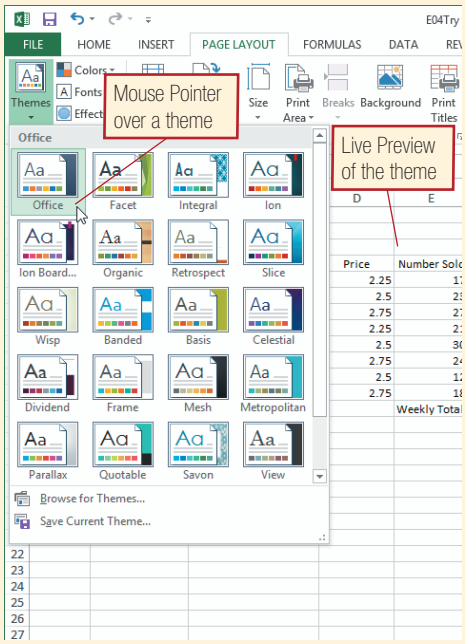
Theme
A collection of coordinated fonts, colors, and effects for graphic elements, such as charts and images, that can be quickly applied to all sheets in a workbook.

- You can apply a cell color (called a **fill**) or a text color. Click the down arrow on the Fill Color or Font Color buttons in the Font group of the HOME tab, and then click one of the choices under Theme Colors.
- If you apply a theme color to text or as a fill and later switch themes, Excel updates the color according to the new theme.
- If you choose one of the standard colors or use the More Colors option, the selected color will not change if you later change the theme.

Try It! Choosing a Theme

1. Start Excel.
2. Open the **E04Try** file from the data files for this lesson.
3. Save the file as **E04Try_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
5. On the PAGE LAYOUT tab, click the Themes button.

Previewing a theme

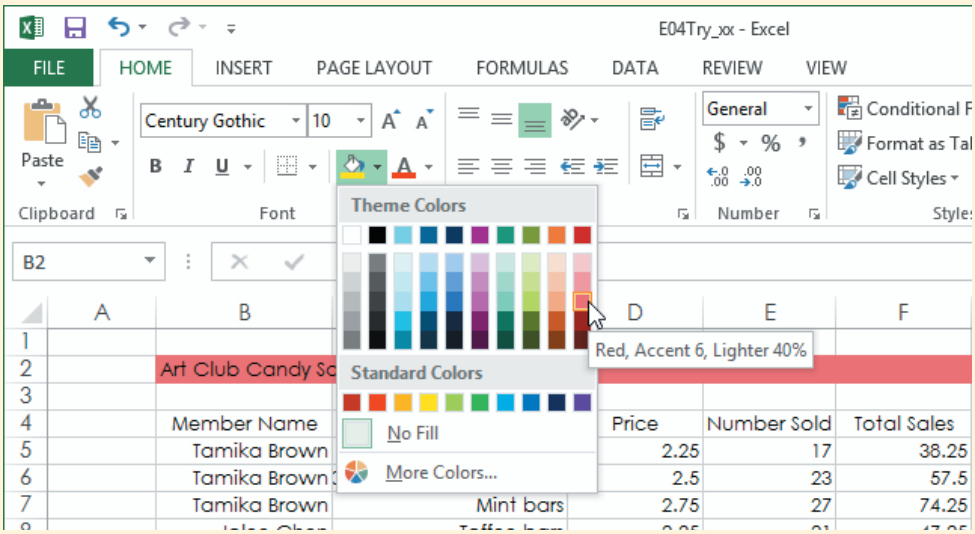


6. Move the mouse pointer over the Integral choice in the Themes gallery. Notice how the fonts applied on the worksheet change.
7. Click the Slice theme.
8. Double-click the right column header border for columns C and E to make them wider to accommodate the text due to the theme font change. (Lesson 5 covers this technique in more detail.)
   ✓ *Move the mouse pointer over the right border of the column header you want to resize until you see the resizing pointer, which is a vertical bar with left and right arrows, then double-click to resize the column.*
9. Drag over the range B2:F2 to select it.
10. On the HOME tab in the Font group, click the Fill Color drop-down arrow. Under Theme Colors, click the Red, Accent 6, Lighter 40% fill color in the tenth column. The selected range shows a Live Preview of the color. Click the color to apply it.
11. Click cell F13.
12. Click Fill Color drop-down arrow. Under Standard Colors, click the Green color.
13. Save the **E04Try_xx** file, and leave it open to use in the next Try It.

(continued)

Try It! Choosing a Theme *(continued)*

Applying a theme color



Applying Cell Styles

- Themes contain a coordinated set of colors, fonts, and other elements, such as **cell styles**.
- Cell styles in a theme include various styles you can apply to column headings or totals and title and heading styles.
- If you apply any of the title, headings, or themed cell styles, the cells using that style will update automatically if you change themes.
- You also can apply cell styles that aren't changed if you change themes, such as formats you might use to highlight good or bad values, a warning, or a note.
- There are also some number format cell styles available that won't change if you change themes.

  ✓ *Sometimes applying a cell style to a cell holding a label causes the label to be cut off rather than spilling over into the cell to the right as you might expect. If this happens and you don't want to change the column width, also apply the style to the next cell to the right.*

- If you have a widescreen monitor and display Excel using the full screen, the Cell Styles button will change to the Styles gallery.
- After you select a cell or ranges of cells, you can use the Cell Styles button or the Styles gallery to apply a style. Use the gallery scroll arrows to scroll through the styles. You can also use the More button to view the styles in one window.

Try It! Applying Cell Styles

1. In the **E04Try_xx** file, drag over the range B4:F4 to select it.
2. On the HOME tab in the Styles group, click the Cell Styles button to display the gallery of cell styles.

   OR

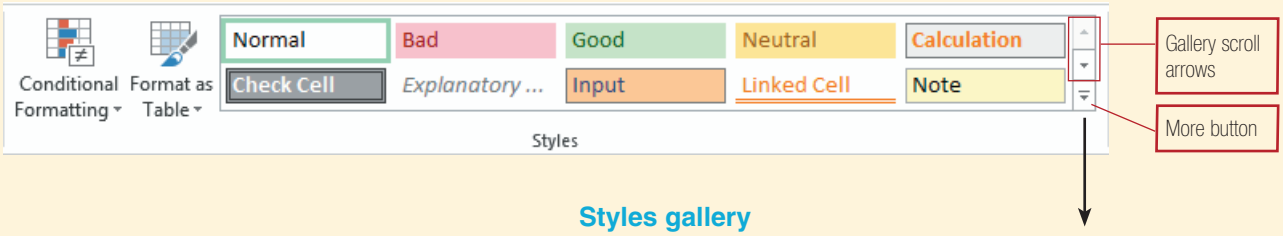
   On the HOME tab, click the More button.
3. In the second column under Themed Cell Styles, move your mouse pointer over the 60% - Accent2 choice. The selected range shows a Live Preview of the cell style. Click the cell style to apply it.
4. Drag over the range E13:F13 to select it.
5. On the HOME tab, in the Styles group, click Cell Styles.

(continued)

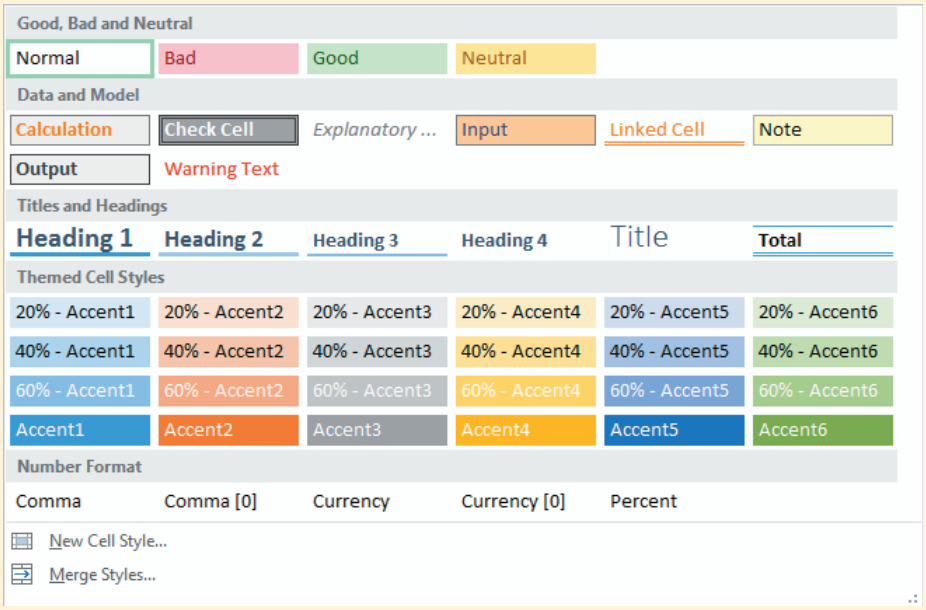
Try It! Applying Cell Styles *(continued)*

6. Under Titles and Headings, click the Total choice in the far right column.
   - ✓ *Notice that the standard color you applied to cell F13 doesn't change when you apply the cell style.*
7. Double-click the right column header border for columns B, E, and F to adjust the column widths due to the new styles.
8. Save the **E04Try_xx** file, and leave it open to use in the next Try It.

Styles gallery preview



Styles gallery



Applying Font Formats

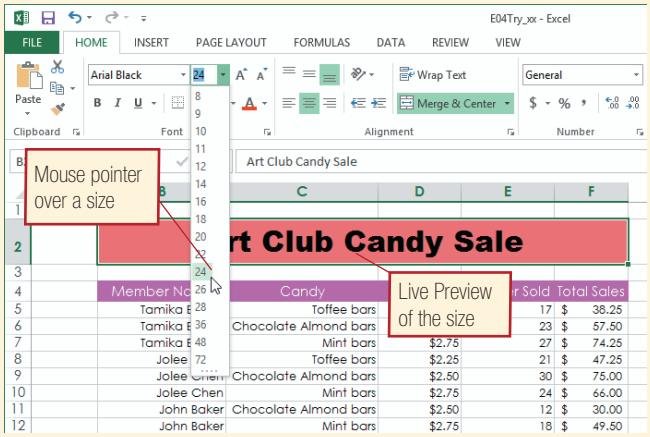
- The Font group on the HOME tab of the Ribbon offers choices for formatting text, including font size, color, and attributes such as bold and italics.
  - ✓ *This type of formatting is sometimes called direct formatting.*
- The Font group settings you apply override the formatting applied by the current theme.
- If a cell has formatting you applied directly using the Font group tools, such as bold or underlining, that formatting will NOT change if you change themes.
- Theme fonts, font colors, and cell colors appear at the top of the selection list when you click the appropriate button. For example, if you click the Font drop-down arrow, the theme fonts appear at the top of the list.
- Standard fill or text colors will not change if you select a different theme.

- The way in which your data appears after making font and font size changes is dependent on your monitor and printer.
- The available fonts depend on those installed in Windows.
- When you change **font size**, Excel automatically adjusts the row height but does not adjust the column width.

Try It! Applying Font Formats

1. In the **E04Try_xx** file, click cell B2.
2. Click HOME > Font drop-down arrow.
3. Scroll down the list, and click Arial Black.
4. Click HOME > Font Size drop-down arrow.
5. Move the mouse pointer over the 24 size, view the Live Preview, and then click 24.
   - ✓ *When you increase the font size, the row height increases automatically.*
6. Save the **E04Try_xx** file, and leave it open to use in the next Try It.

Applying a new font size



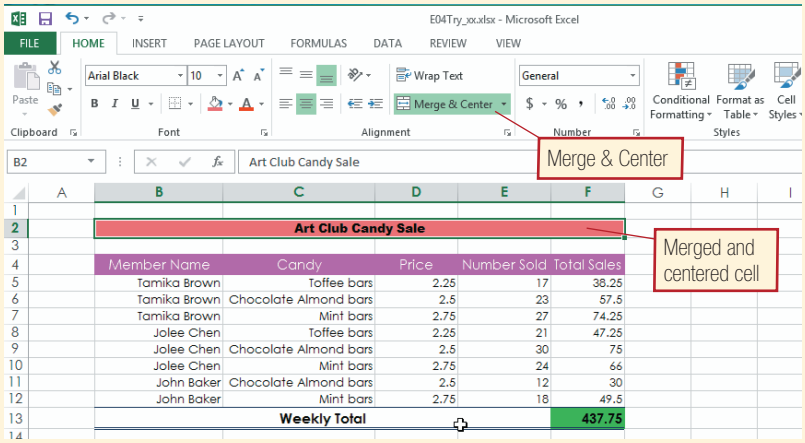
Merging and Centering Across Cells

- You can center a worksheet's title across the columns that contain the worksheet data.
- To center a label across several columns, use the **Merge & Center** button Merge & Center in the Alignment group of the HOME tab.
  - ✓ *The Merge & Center command actually merges the selected cells into one large cell and then centers the data in the newly merged cell.*
  - ✓ *You can align merge cells left or right instead of centering the data. Click the Merge & Center drop-down arrow and click Merge Across to merge the cells with the current alignment (left or right).*
- For Merge & Center to work properly, enter the data in the first cell in a range, and then select adjacent cells to the right.
- Merged cells act as a single cell. Applying formatting to a merged cell formats the entire merged area.
- You can unmerge, or separate, merged cells by selecting the cell and clicking the Merge & Center button Merge & Center again.

Try It! Merging and Centering Across Cells

1. In the **E04Try_xx** file, drag over the range B2:F2 to select it.
2. On the HOME tab, in the Alignment group, click the Merge & Center button Merge & Center.
3. Drag over the range B13:E13 to select it.
4. On the HOME tab, in the Alignment group, click the Merge & Center button Merge & Center.
5. Leave the merged cell selected. On the HOME tab in the Styles group, click Total in the gallery of styles.
6. Save the **E04Try_xx** file, and leave it open to use in the next Try It.

Merge & Center aligns headings over all the data



Applying Number Formats

- When formatting numerical data, you may want to change more than just the font and font size—you may want to also apply a **number format.**
- Number formats are grouped together in the Number group on the HOME tab.
- The number format determines the number of decimal places and the display of zeros (if any) before/after the decimal point.
- Number formats also include various symbols such as dollar signs, percentage signs, or negative signs.
- Changing the format of a cell does not affect the actual value stored there or used in calculations—it affects only the way in which that value is displayed.
- There are buttons for quickly applying three commonly used number formats:
  - **Accounting format** $ 21,008.00, which includes a decimal point with two decimal places, the thousands separator (comma), and a dollar sign aligned to the far left of the cell.
  - **Percent format** 32%, which includes a percentage sign and no decimal points.

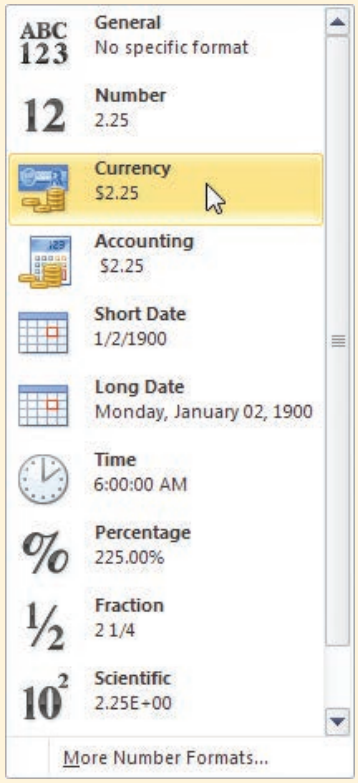
✓ *32% is entered as **.32** in the cell. If you type 32 and apply the Percent format, you'll see 3200%.*

  - **Comma format** 178,495.00, which includes two decimal places and the thousands separator (comma).
- Using the Number Format list, you can also apply a variety of other number formats such as Currency, Long Date, and Fraction.
- The **Currency format** is similar to Accounting format, except that the dollar sign is placed just to the left of the data, rather than left-aligned in the cell.
- If you don't see a number format you like, you can create your own by applying a format that's close. For example, you might apply the Accounting format and then change the number of decimal places using the Increase Decimal or Decrease Decimal buttons.
- You can also make selections in the Format Cells dialog box to design a custom number format. Click the Number group dialog box launcher to open the dialog box.

Try It! Applying Number Formats

1. In the **E04Try_xx** file, click cell F5.
2. On the HOME tab, in the Number group, click the Accounting Number Format button $. Excel formats the cell with the Accounting format.
3. Click cell D5.
4. On the HOME tab, in the Number group, click the Number Format drop-down arrow > Currency. Excel formats the cell with the Currency format. Notice the difference between it and the Accounting format in cell F5.
5. Drag over the cell range D6:D12 to select it.
6. Click the Number Format arrow > Currency.
7. Drag over the range F6:F13 to select it.
8. Click the Accounting Number Format $.
9. Drag over the range E5:E12 to select it.
10. In the Number group, click the Increase Decimal button twice.
11. In the Number group, click the Decrease Decimal button twice.
12. Save and close the file, and exit Excel.

Applying Currency format



Lesson 4—Practice

In this project, you will apply font and number formats to cells, merge and center cells, apply cell styles, and apply a workbook theme using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary, and open the **E04Practice** file from the data files for this lesson.
2. Save the file as **E04Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Drag over the row headers for rows **1** through **4** to select them.
5. Click **HOME** > **Clear** > **Clear Formats**.
6. Click cell **A4**, type **11/30/14**, and press CTRL + ENTER .
7. On the **HOME** tab, in the Number group, click the dialog box launcher to open the Format Cells dialog box. Date should already be selected in the Category list.
8. Click **14-Mar** in the Type list, and then click **OK**.
9. Click **PAGE LAYOUT** > **Themes** .
10. Move the mouse pointer over the **Facet** theme to view a Live Preview of its appearance.
11. Click the **Ion** theme to apply it.

12. Drag over the range **A1:I1** to select it.
13. Click **HOME** > **Merge & Center** Merge & Center ·
14. In the Styles group, click **Cell Styles**, and click **Title**.
15. Drag over the range **A3:I3** to select it.
16. Click **Merge & Center** Merge & Center ·
17. Click **Cell Styles** and then click **Heading 2**.
18. Drag over the range **A4:I4** to select it.
19. Click **Merge & Center** Merge & Center ·
20. Click **Bold** **B**.
21. Drag over the range **D5:G5** to select it.
22. Click **Merge & Center** Merge & Center ·
23. Click **Cell Styles** > **20% - Accent 3**.
24. Click cell **D7**, and type the following cell entries, pressing ENTER after each:
    a. **1**
    b. **3**
    c. **2**
    d. **2**
25. Click cell **E7**, and type the following cell entries, pressing ENTER after each:
    a. **2**
    b. **4**
    c. **2**
    d. **1**
26. Drag over the range **C7:C29** to select it.
27. Click **Accounting Number Format** $ ·.
28. Press CTRL + HOME. Your worksheet should look like the one shown in Figure 4-1.
29. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
30. Save and close the file, and exit Excel.

Figure 4-1

	A	B	C	D	E	F	G	H	I
1	Voyager Travel Adventures								
2									
3	Logan Store Inventory								
4	30-Nov								
5				Inventory Valuation					
6	Item #	Description	Cost	Starting Inventory	Additions				
7	BS102	Backpacking stove, dual fue	$ 25.00	1	2				
8	BS104	Backpacking stove, canister	$ 35.00	3	4				
9	BS106	Camping stove, liquid fuel	$ 32.50	2	2				
10	BS107	Camping stove, canister	$ 100.00	2	1				
11	BS108	Camping cooker, canister	$ 60.00						
12	BS110	Stove base	$ 10.00						
13	BS111	Stove stand	$ 17.50						
14	BS112	Heavy duty grill	$ 8.00						
15	BS113	Backpacker grill	$ 4.00						
16	CK101	Open country mess kit	$ 6.50						
17	CK102	Camp cook set	$ 50.00						
18	FL103	Emergency tinder	$ 1.50						
19	FL104	Fire paste	$ 2.00						
20	FL105	Liquid fuel, 1 gal.	$ 3.00						
21	FL108	Canister fuel, 170 g	$ 2.00						
22	FL109	Canister fuel, 300 g	$ 2.50						
23	WJ101	Water carrier, 2L	$ 9.00						
24	WJ102	Water carrier, 32 oz	$ 4.50						
25	WJ103	Water carrier, 48 oz.	$ 5.00						
26	WJ104	Dromedary, 6L	$ 15.00						
27	WJ105	Water bag, 4L	$ 10.00						
28	WT101	Water purifier, portable	$ 80.00						
29	WT103	Water purifier, camp	$ 25.00						
30									
31									
32									
33									
34									

Sheet1

READY

Lesson 4—Apply

As the Inventory Manager of the Voyager Travel Adventures retail store, you want to enhance the appearance of an inventory worksheet you have created. You have already compiled the inventory data, and you want to spruce up the worksheet prior to printing by adding some formatting.

DIRECTIONS

1. Start Excel, if necessary, and open the **E04Apply** file from the data files for this lesson.
2. Save the file as **E04Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Apply the **Organic** theme to the file. Notice how the fonts and colors in the worksheet change.
5. Select the range **I7:I29** and apply the **Percent** style. Then, format the data for two decimal places.
6. Select the range **G7:G29** and apply the **Accounting** number format.
7. Select the range **A6:I6** and apply the **Accent3** cell style and **Center** alignment.
8. Select the range **A7:A29** and apply the **60% - Accent3** cell style.
9. Click cell **A4** and apply the ***Wednesday, March 14, 2014** date format.
10. Go to cell **A1**. Your worksheet should look like the one shown in Figure 4-2.
11. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
12. Save and close the file, and exit Excel.

	A	B	C	D	E	F	G	H	I
1	Voyager Travel Adventures								
2									
3	Logan Store Inventory								
4	Sunday, November 30, 2014								
5				Inventory Valuation					
6	Item #	Description	Cost	Starting Inventory	Additions	Ending Inventory	Value	Full Stock Level	Current Stock Percentage
7	BS102	Backpacking stove, dual fuel	$ 25.00	1	2	3	$ 75.00	4	75.00%
8	BS104	Backpacking stove, canister	$ 35.00	3	4	7	$ 245.00	8	87.50%
9	BS106	Camping stove, liquid fuel	$ 32.50	2	2	4	$ 130.00	5	80.00%
10	BS107	Camping stove, canister	$ 100.00	2	1	3	$ 300.00	5	60.00%
11	BS108	Camping cooker, canister	$ 60.00	2	0	2	$ 120.00	2	100.00%
12	BS110	Stove base	$ 10.00	1	1	2	$ 20.00	3	66.67%
13	BS111	Stove stand	$ 17.50	2	1	3	$ 52.50	3	100.00%
14	BS112	Heavy duty grill	$ 8.00	2	0	2	$ 16.00	3	66.67%
15	BS113	Backpacker grill	$ 4.00	5	4	9	$ 36.00	10	90.00%
16	CK101	Open country mess kit	$ 6.50	4	3	7	$ 45.50	10	70.00%
17	CK102	Camp cook set	$ 50.00	2	1	3	$ 150.00	4	75.00%
18	FL103	Emergency tinder	$ 1.50	9	7	16	$ 24.00	15	106.67%
19	FL104	Fire paste	$ 2.00	12	6	18	$ 36.00	24	75.00%
20	FL105	Liquid fuel, 1 gal.	$ 3.00	18	15	33	$ 99.00	36	91.67%
21	FL108	Canister fuel, 170 g	$ 2.00	20	5	25	$ 50.00	36	69.44%
22	FL109	Canister fuel, 300 g	$ 2.50	21	13	34	$ 85.00	36	94.44%
23	WJ101	Water carrier, 2L	$ 9.00	10	2	12	$ 108.00	15	80.00%
24	WJ102	Water carrier, 32 oz	$ 4.50	12	6	18	$ 81.00	24	75.00%
25	WJ103	Water carrier, 48 oz.	$ 5.00	3	15	18	$ 90.00	24	75.00%
26	WJ104	Dromedary, 6L	$ 15.00	6	6	12	$ 180.00	15	80.00%
27	WJ105	Water bag, 4L	$ 10.00	10	2	12	$ 120.00	15	80.00%
28	WT101	Water purifier, portable	$ 80.00	15	5	20	$ 1,600.00	20	100.00%
29	WT103	Water purifier, camp	$ 25.00	12	0	12	$ 300.00	12	100.00%
30									

Figure 4-2

Lesson 5

More on Cell Entries and Formatting

➤ What You Will Learn

- Entering Dates
- Filling a Series
- Aligning Data in a Cell
- Wrapping Text in Cells
- Changing Column Width and Row Height
- Using Keyboard Shortcuts

WORDS TO KNOW

Auto Fill
The feature that enables Excel to create a series automatically.

Date
A cell entry that indicates a date or time and is stored as a date code in Excel.

Default column width
The default number of characters that display in a column based on the default font.

Fill handle
A black box on the lower-right corner of the selected cell or range that you can use to fill (copy) a series or formula.

Key Tips
Keyboard shortcuts for choosing Ribbon commands that you display by pressing Alt.

Software Skills Use dates to identify when you created a worksheet or to label a column or row of data by time period. After typing dates, labels, and numbers in a worksheet, you can improve its appearance by changing the alignment of data and the widths of columns. If you need to enter a series of labels (such as Monday, Tuesday, Wednesday) or values (such as 1, 2, 3), using Excel's Auto Fill feature saves data entry time and reduces errors.

What You Can Do

Entering Dates

- Enter a **date** when you need to indicate the timing for data. Excel stores dates as special date codes, but automatically applies a Date number format depending on how you type in the date.
- You can enter a date using one of these date formats:
  - mm/dd/yy, as in 1/14/14 or 01/14/14
  - mm/dd, as in 1/14
  - dd-mmm-yy, as in 14-Jan-14
  - dd-mmm, as in 14-Jan

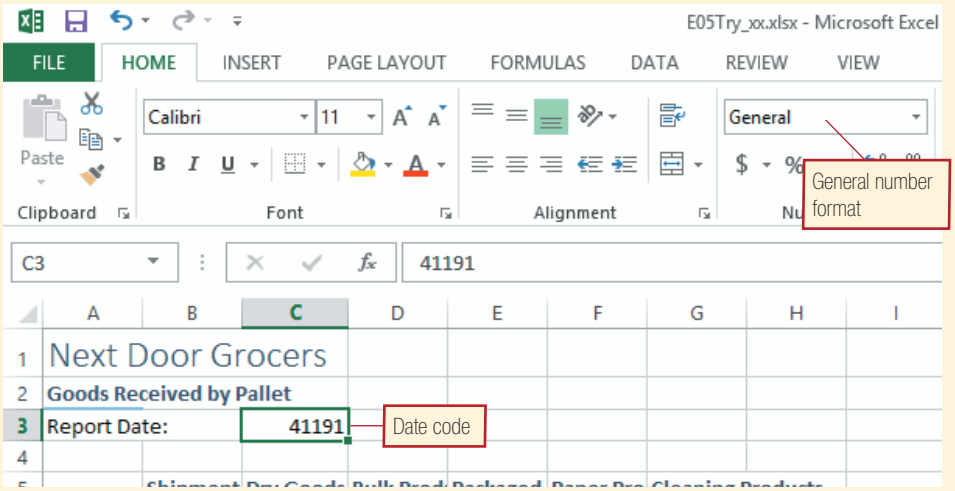
  ✓ *The current year is assumed for any date entry that doesn't include a year.*
- To enter today's date quickly, press CTRL + : and then press ENTER.
- To enter the current time, press CTRL + SHIFT + : and then press ENTER.

- After entering a date, you can change its number format as needed. For example, you can change the date 1/14/14 to display as January 14, 2014.
- To enter a time, follow a number with a or p to indicate AM or PM, like this: 10:43 p.
- You can enter a date and time in the same cell, like this: 10/16/14 2:31 p.

Try It! Entering Dates

1. Start Excel.
2. Open the **E05Try** file from the data files for this lesson.
3. Save the file as **E05Try_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
5. Click cell C3 to select it.
6. Press CTRL + ; , and then press ENTER to insert the current date. It appears in the mm/dd/yyyy format.
7. Click cell C3 to select it again.
8. Click HOME > Number Format drop-down arrow > General. The date code for the date appears in the cell. The date code that you see will vary depending on the date you entered.
9. Click HOME > Number Format drop-down arrow > Short Date.
10. Save the **E05Try_xx** file, and leave it open to use in the next Try It.

A date code



Keyboard shortcuts
Specific keyboard keys that you press together or in sequence to execute commands or apply settings.

Series
A list of sequential numbers, dates, times, or text.

Wrap text
A feature that causes long cell entries to appear on multiple lines.

Filling a Series

- A **series** is a sequence of numbers (such as 1, 2, 3), dates (such as 10/21/14, 10/22/14, 10/23/14), times (such as 2:30, 2:45, 3:00), or text (such as January, February, March). The feature or process for creating a series in Excel is called **Auto Fill.**
- To enter a series based on the active cell, drag the **fill handle**, a small square in the lower-right corner of the active cell that turns into a plus sign (+), over the range of cells you want to fill with the series.
- Excel can create some series automatically. For example, type January in a cell, and then drag the fill handle down or to the right to create the series January, February, March, and so on.
- A yellow ScreenTip appears under the mouse pointer, displaying the cell values of the series as you drag. The series values appear in the cells after you release the mouse button.
- To create an incremental series (i.e., 1, 3, 5, 7), enter the data for the first and second cells of a series, select the two cells, and then drag the fill handle over the range of cells to fill.
- You can also use the fill handle to copy formatting only (such as bold, italics, and so on) from one cell to adjacent cells, and not its value, or the value only without formatting. To do so, click the Auto Fill Options button that appears when you perform the fill, and then click Fill Formatting Only or Fill Without Formatting.

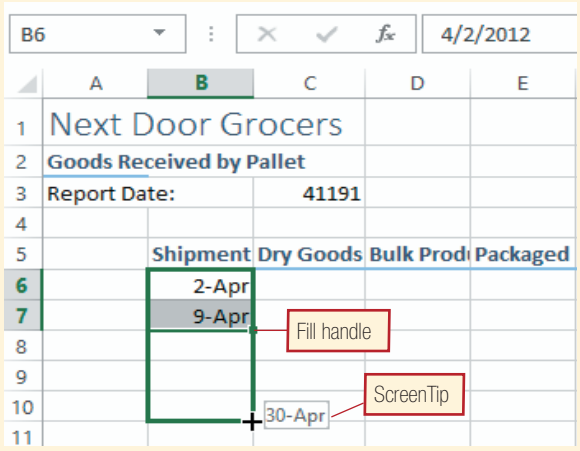
Try It! Filling in a Series

1. In the **E05Try_*xx*** file, click cell B6 to select it.
2. Type **4/2** and press ENTER. This enters the date with the format 2-Apr.
3. Type **4/9** and press ENTER. This is the second date in the sequence that you're entering.
4. Drag over the range B6:B7 to select it.
5. Drag the fill handle down until the ScreenTip reads *30-Apr*, and then release the mouse button.

   ✓ *When you enter dates with the abbreviated format used in steps 2 and 3, Excel applies the year specified by your current system date, so your results may vary from those shown in this chapter.*
6. Click cell C6 to select it.
7. Type **1** and press CTRL + ENTER.
8. Drag the fill handle right through cell G6, and then release the mouse button.

   ✓ *Notice that a single number just repeats and doesn't automatically increment.*
9. Click cell C7 to select it.
10. Type **2** and press ENTER.
11. Drag over the range C6:C7 to select it.

Filling a series



12. Drag the fill handle down until the ScreenTip reads *5*, and then release the mouse button.
13. With the range still selected, drag the fill handle right through column G. This fills the values across the columns, replacing the 1s already in row 6.
14. Save the **E05Try_*xx*** file, and leave it open to use in the next Try It.

Using Flash Fill

- When you have a series of labels in one column that you want to format, the Flash Fill feature in Excel can recognize the pattern in the text and change the format of the text for the series.
- Flash Fill can change the case of names that have been typed in lowercase to uppercase or change the format of phone numbers to include parentheses for the area code.
- Flash Fill only works when your text is in a single column.
- In the first cell next to the column you want to change, type the text the way you want it and press ENTER. Flash Fill begins to learn the pattern in the text.
- Next, type text into the second cell.

  ✓ *If you select another cell or click on the Ribbon before typing in the second cell, the Flash Fill feature will not be available.*

- When you type in the second cell, Flash Fill shows a preview of suggested changes for the rest of the series. Press ENTER to accept the suggestions.

  ✓ *To continue typing without using Flash Fill suggestions, press the ESC key .*

- You can use the Flash Fill Options button to accept or undo the suggestions.

  ✓ *If the Quick Analysis Lens displays, press the ESC key. You will learn about the Quick Analysis Lens in Chapter 2.*

- Flash Fill also can separate labels (such as names or addresses) into different columns or combine labels from several columns into one.
- When you want to separate first and last names that are in one column, use Flash Fill to create two new columns with first names in one column and last names in another column.
- When you want to combine first names, middle initials, and last names that are in three columns, use Flash Fill to create a new column with the complete name.
- Flash Fill is case sensitive and works best with consistent labels. For example, all of the last names in a series need to be lowercase for Flash Fill to change the names to be uppercase.

  ✓ *If the labels are not consistent, Flash Fill may not always separate the data elements correctly.*

Try It! Using Flash Fill

1. In the **E05Try_xx** file, click cell I6 and type the following cell entries, pressing ENTER after each:
   a. **Michael W. Penn**
   b. **Rosie L. Patton**
   c. **Jameson P. Falcon**
   d. **Jon D. Stalwart**
   e. **Mia A. Dawson**
2. Click cell J6 to select it, type **Penn, Michael W.**, and press ENTER.
3. In cell J7, type **Pa**. The Flash Fill preview suggestions appear.
4. Press ENTER to fill cells J7:J10 with the series of last names, a comma, first names, and middle initials.
5. Click the Flash Fill Options button > Undo Flash Fill.
6. Click the Undo button twice.
7. In cell J6, type **Michael**, and press ENTER.
8. In cell J7, type **Ro**, and press ENTER. Flash Fill fills the series of last names in cells J7:J10.
9. In cell K6, type **W.**, and press ENTER.
10. Click cell L6 to select it, type **Penn**, and press ENTER.
11. In cell L7, type **Pa**.
12. Click the Flash Fill Options button > Accept Suggestions.
13. Drag over the range J6:L10 to select it.
14. On the HOME tab, in the Editing group, click Clear > Clear All.
15. Save the **E05Try_xx** file, and leave it open to use in the next Try It.

Aligning Data in a Cell

- When you type a label, Excel automatically aligns it to the left of the cell. Excel aligns values and dates to the right by default.
- In addition, cell entries are aligned along the bottom edge of the cell.
- To improve the appearance of a worksheet, you can change the alignment (both vertically and horizontally) of column labels, row labels, and other data.
- To align data, select the cells to format and use the buttons in the Alignment group on the HOME tab.
- Align data between the top and bottom sides of a cell using the Top Align, Middle Align, or Bottom Align buttons.
- Align data between the left and right sides of a cell using the Align Left, Center, or Align Right buttons.

✓ *Use the Decrease Indent and Increase Indent buttons to add or remove space at the left end of the cell for left-aligned entries.*

Try It! Aligning Data in a Cell

1. In the **E05Try_xx** file, drag over the range B6:B10 to select it.
2. On the HOME tab, click the Align Text Left button.
3. Drag over the range C6:G10 to select it.
4. On the HOME tab, click the Center button.
5. Drag over the range A1:I1 to select it.
6. On the HOME tab, click Merge & Center (Merge & Center).
7. On the HOME tab, click Cell Styles > Accent5.

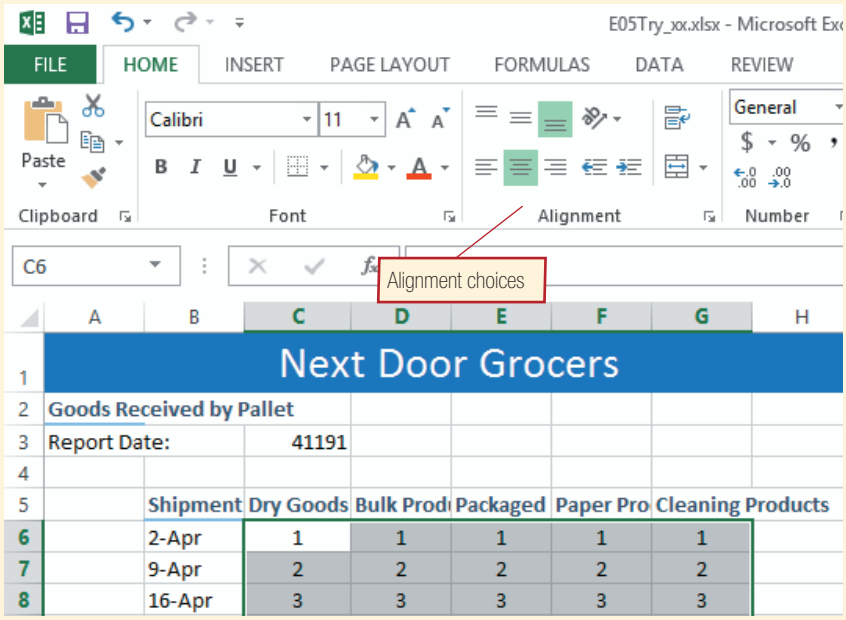
✓ *If you are working on a widescreen monitor, the Cell Styles button will change to the Styles gallery.*

8. On the HOME tab, click Increase Font Size five times.
9. On the HOME tab, click Middle Align.

✓ *You will only see a subtle vertical alignment change in cell A1 at this point.*

10. Save the **E05Try_xx** file, and leave it open to use in the next Try It.

Center aligned cells



Wrapping Text in Cells

- When a cell with a long label entry is too wide to display, you can use the **wrap text** feature to wrap the text to multiple lines.
- The Wrap Text button is in the Alignment group on the HOME tab of the Ribbon. Click it to apply and remove wrapping in the selected cell or range.
- Wrapping sometimes causes a line of text to break within a word, so you may need to adjust the column width for some columns after applying the wrapping.

Try It! Wrapping Text in Cells

1. In the **E05Try_xx** file, click cell A2 to select it.
2. On the HOME tab, click the Wrap Text button.
   - ✓ *You will correct the column widths soon.*
3. Drag over the range B5:I5 to select it.
4. On the HOME tab, click Wrap Text.
5. Save the **E05Try_xx** file, and leave it open to use in the next Try It.

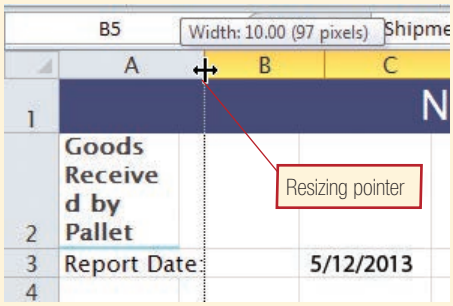
Changing Column Width and Row Height

- In a workbook file using the default Office theme, the default column width is 8.43 characters in the Calibri, 11 point font. The **default column width** varies in characters depending on the theme applied.
- You can quickly adjust a column to fit the longest entry in that column by double-clicking the right border of the column header, as you've seen in earlier lessons. Drag the right border to resize the width manually.
- The default row height in a workbook using the Office theme is 15 points.
- In some cases, such as when you apply a new number format, the column width increases automatically.
- In some cases, such as when you increase the font size of text or wrap text in a cell, the row height increases automatically.
- Double-click the bottom border of the row header to fit the row size automatically. Drag the border to resize it manually.
- Drag over multiple column or row headers or over cells in multiple columns or rows to resize all the selected rows or columns at once.
- Clicking the Format button in the Cells group on the HOME tab opens a menu with commands for automatically sizing (AutoFit Row Height and AutoFit Column Width) or manually sizing (Row Height and Column Width) rows and columns.

Try It! Changing Column Width and Row Height

1. In the **E05Try_xx** file, move the mouse pointer over the right border of the column A column header until you see the resizing pointer, which is a vertical bar with left and right arrows.
2. Drag right until the ScreenTip shows a width of 10.00, and then release the mouse button to finish resizing the column.
3. Drag over the range B5:G5 to select it.
4. On the HOME tab, click Format > Column Width.

Changing column width by dragging



(continued)

Try It! Changing Column Width and Row Height *(continued)*

5. Type **9.57** in the Column width text box of the Column Width dialog box, and then click OK.
6. Move the mouse pointer over the bottom border of the row 1 row header until you see the resizing pointer.
7. Drag down until the ScreenTip shows a height of 42.00, and then release the mouse button to finish resizing the row.
8. Save the **E05Try_xx** file, and leave it open to use in the next Try It.

Using Keyboard Shortcuts

- You can use **keyboard shortcuts**—combinations of two or more keys pressed together or in sequence—to perform many commands in Excel.
  - ✓ *Many keyboard shortcuts are the same as they've been in previous versions of Excel, such as CTRL + O to display the Open pane.*
- Several of the formatting choices have keyboard shortcuts, such as CTRL + B for applying bold. Move the mouse pointer over a Ribbon button, and the ScreenTip lists a keyboard shortcut if one exists.
- Pressing the ALT key displays **Key Tips**, which are keys you can press to select commands on the Ribbon.
- After pressing ALT, press the Key Tip for the desired Ribbon tab, and then the Key Tip for the command.
  - ✓ *The Help topic "Keyboard shortcuts in Excel 2013" explains Key Tips in detail and lists all the available keyboard shortcuts.*
- You learned earlier about keyboard techniques for navigating and making selections, such as using the arrow keys to move from cell to cell.

Try It! Using Keyboard Shortcuts

1. In the **E05Try_xx** file, click cell C3 to select it.
2. Press ALT. The tab Key Tips appear onscreen.
3. Press P. The Page Layout tab appears.
4. Press ALT twice to redisplay the tab Key Tips.
5. Press H. The HOME tab appears.
6. Press J. The Cell Styles gallery opens.
7. Press ↓ four times to select the 20%-Accent1 style, and then press ENTER.
8. Press ↓ three times and ← once to select cell B6.
9. Press and hold SHIFT and press ↓ four times to select the range B6:B10.
10. Press CTRL + B to apply bold to the selection.
11. Press CTRL + I to apply italics to the selection.
12. Press CTRL + S to save the file.
13. Press ALT + F to display the the Backstage view.
14. Press C to exit Excel.

Lesson 5—Practice

In this project, you will align data in cells, wrap text in cells, change column width and height, fill a series of cells with data, and use keyboard shortcuts.

DIRECTIONS

1. Start Excel, if necessary, and open the **E05Practice** file from the data files for this lesson.
2. Save the file as **E05Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click cell **J3**, type **7/6/14**, and press ENTER.
5. Click cell **D6**, type **Jan**, and press CTRL + ENTER.
6. Drag the **fill handle** right through cell **I6** to automatically fill with the series of month labels.
7. Drag over the range **D7:I7** to select it.
8. Drag the **fill handle** down through cell **I14**. This fills all the selected cells with the values from the selection.
9. Click cell **D14**, type **25**, and press TAB.
10. Type **50**, and press TAB.
11. Drag over the range **D14:E14** to select it.
12. Drag the **fill handle** right through cell **I14**. Excel fills the cells with a series that increments based on the first two entries.
13. Drag over the range **C6:J6** to select it.
14. Press ALT + H to select the HOME tab and display its Key Tips.
15. Press A + R to align the labels to the right.
16. Click cell **C3** to select it.
17. In the HOME tab, click **Wrap Text**.
18. Click cell **C7** to select it.
19. Type **Clark, Joe** and press ENTER.
20. In cell C8, type **Hi** and press ENTER. Flash Fill fills the range C8:C14 with the series.
21. Drag over the range A7:B14 to select it.
22. On the HOME tab, click **Clear** > **Clear Contents**.
23. Drag over the column headers for columns A and B to select them.
24. Move the mouse over the **column B** header right border until you see the resizing pointer, and drag left until the ScreenTip displays a width of **1.00**. Release the mouse button to resize the columns.
25. Click the **column J** header.
26. Double-click the **column J** header right border. This automatically AutoFits the selected column.
27. Drag over the column headers for columns D through I to select them.
28. On the HOME tab, click **Format** > **Column Width**.
29. Type **8.43** in the Column width text box in the Column Width dialog box, and then click **OK**.
30. Double-click the **column C** header right border to AutoFit the column.
31. Double-click the **row 3** and **row 6** header bottom borders to AutoFit the rows.
32. Click cell **C1** to select it.
33. On the HOME tab, click **Format** > **Row Height**.
34. Type **52** in the Row height text box in the Row Height dialog box, and then click **OK**.
35. On the HOME tab, click **Middle Align**. Press CTRL + S to save the file. Your worksheet should look like the one shown in Figure 5-1 on the next page.
36. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
37. Press ALT + F and then C to close the file.

Figure 5-1

	A	B	C	D	E	F	G	H	I	J
1			Serenity Health Club							
2										
3			Client Account Tracking							7/6/2014
4										
5				Payments by Month						
6			Client Name	Jan	Feb	Mar	Apr	May	Jun	Total
7			Clark, Joe	$150	$150	$150	$150	$150	$150	$900
8			Higgins, Mary	$150	$150	$150	$150	$150	$150	$900
9			Stevens, Gary	$150	$150	$150	$150	$150	$150	$900
10			Roberts, Paul	$150	$150	$150	$150	$150	$150	$900
11			Moyer, Anne	$150	$150	$150	$150	$150	$150	$900
12			Santos, Antonio	$150	$150	$150	$150	$150	$150	$900
13			Jones, Brett	$150	$150	$150	$150	$150	$150	$900
14			Stewart, Dorothy	$25	$50	$75	$100	$125	$150	$525
15										
16			Totals	$1,075	$1,100	$1,125	$1,150	$1,175	$1,200	$6,825
17										

Lesson 5—Apply

You are the Accounts Receivable Supervisor at the Serenity Health Club. You need to compile data on client payments and extra services sold in a worksheet and improve its formatting.

DIRECTIONS

1. Start Excel, if necessary, and open the **05Apply** file from the data files for this lesson.
2. Save the file as **E05Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click cell **A3**, type **7-6-14**, and press ENTER.
5. Click cell **G3** to select it.
6. Wrap the text and align the text right.
7. Click cell **A1** and top align the data.
8. Adjust the height of row 1 using AutoFit.
9. Click cell **C6** and fill to cell **G6** to fill with a series of label entries.
10. Click cell **A8**. Drag the **fill handle** down to **A11** to fill four week labels.
11. Select the range **C8:C9**.
12. Drag the **fill handle** down to cell **C11** to fill with a series of increasing values.
13. Click cell **B8**, type **Week 1**, and press ENTER.
14. In cell B9, type **Week 2**.
15. Drag the **fill handle** down to cell **B11** to fill the series of capitalized labels.
16. Select the range **A8:A11** and clear the contents of the cells.
17. Select the range **D8:D9**.
18. Drag the **fill handle** down to cell **D11** to fill a series of decreasing values.
19. Select the range **A5:G6**.
20. Wrap the text in the selection.
21. With the range still selected, apply bold to the entries.
22. With the range still selected, change the column width to **13.5**.

23. With the range still selected, apply Center alignment.
24. Resize row 7 to a height of **6.00**. A thin filled row or column like this is another method for creating a border.
25. Select the range **C11:G11** and apply the Underline style.
26. Go to cell **A1**. Your worksheet should look like the one in Figure 5-2.
27. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
28. Save and close the file, and exit Excel.

Figure 5-2

A	B	C	D	E	F	G
Serenity Health Club						
7/6/2014						Extra Services Sold
Service Name Service Code		Swedish Massage Serv001	Aromatherapy Massage Serv002	Hot Stone Massage Serv003	Exfoliating Salt Scrub Serv004	Aromatherapy Facial Serv005
	Week 1	$525	$600	$445	$75	$150
	Week 2	$550	$575	$550	$225	$300
	Week 3	$575	$550	$575	$300	$450
	Week 4	$600	$525	$425	$225	$300
		$2,250	$2,250	$1,995	$825	$1,200

Lesson 6

Working with Ranges

➤ What You Will Learn

Selecting Ranges
Entering Data by Range
Making a Range Entry Using a Collapse Dialog Box Button

WORDS TO KNOW

Contiguous range
A block of adjacent cells in a worksheet.

Noncontiguous range
Cells in a worksheet that act as a block, but are not necessarily adjacent to each other.

Collapse Dialog box button
A button in a dialog box that you click to downsize a dialog box to make a selection on the sheet, and then click again to restore the dialog box to its regular size.

Range
A block of cells in an Excel worksheet.

Software Skills Select a group of cells (a range) to copy, move, or erase the data in them in one step, or to quickly apply the same formatting throughout the range. You also can fill a range of cells with an entry, or perform calculations on cell ranges—creating sums and averages, for example. Some dialog boxes include a Collapse Dialog box button that enables you to specify a range entry in a text box.

What You Can Do

Selecting Ranges

- A **range** is an area made up of two or more cells.
- When you select cells A1, A2, and A3, for example, the range is indicated as A1:A3.
- The range A1:C5 is defined as a block of cells that includes all the cells in columns A through C in rows 1 through 5.
- A range of cells can be contiguous (all cells are adjacent to each other or in a solid block) or noncontiguous (not all cells are adjacent to each other).
- To select a **contiguous range**, drag over it. You also can click the first cell, press and hold SHIFT, and use the arrow keys to extend the selection or click the cell that's at the lower-right corner of the range to select.
- To select a **noncontiguous range**, select the first portion of the range. Then press and hold the CTRL key while dragging over additional areas or clicking additional cells. Release the CTRL key when finished selecting all the noncontiguous areas.
- When a range is selected, the active cell is displayed normally (with a white background), but the rest of the cells appear highlighted.

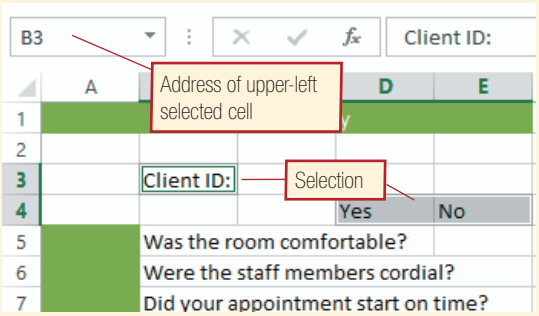
  ✓ *You also can assign a name to a range and use it to select or refer to the range. See "Using Named Ranges" in Lesson 13.*

- Clicking the column or row header selects the entire row or column. You also can press CTRL + SPACE to select the column holding the active cell or SHIFT + SPACE to select the row holding the active cell.

Try It! Selecting Ranges

1. Start Excel.
2. Open the **E06Try** file from the data files for this lesson.
3. Save the file as **E06Try_*xx*** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
5. With cell A1 selected, press and hold the SHIFT key while pressing → four times.
6. On the HOME tab, click Merge & Center Merge & Center.
7. Drag over the range A5:A10 to select it.

A noncontiguous range selection



8. On the HOME tab, click Cell Styles, and then click Accent6.
9. Drag over the range D4:E4 to select it. Press and hold the CTRL key, and click cell B3.
10. On the HOME tab, click Cell Styles, and then click Accent6.
11. Click the column C column header to select the column.
12. On the HOME tab, click Cell Styles, and then click Accent6.
13. Drag over the range B5:B10 to select it.
14. On the HOME tab, click Wrap Text.
15. Move the mouse pointer over the right border of the column B column header and drag right until the ScreenTip shows a width of 20.00.
16. On the HOME tab, click Format > AutoFit Row Height.
17. Move the mouse pointer over the right border of the column C column header and drag left until the ScreenTip shows a width of 1.00.
18. Save the **E06Try_*xx*** file, and leave it open to use in the next Try It.

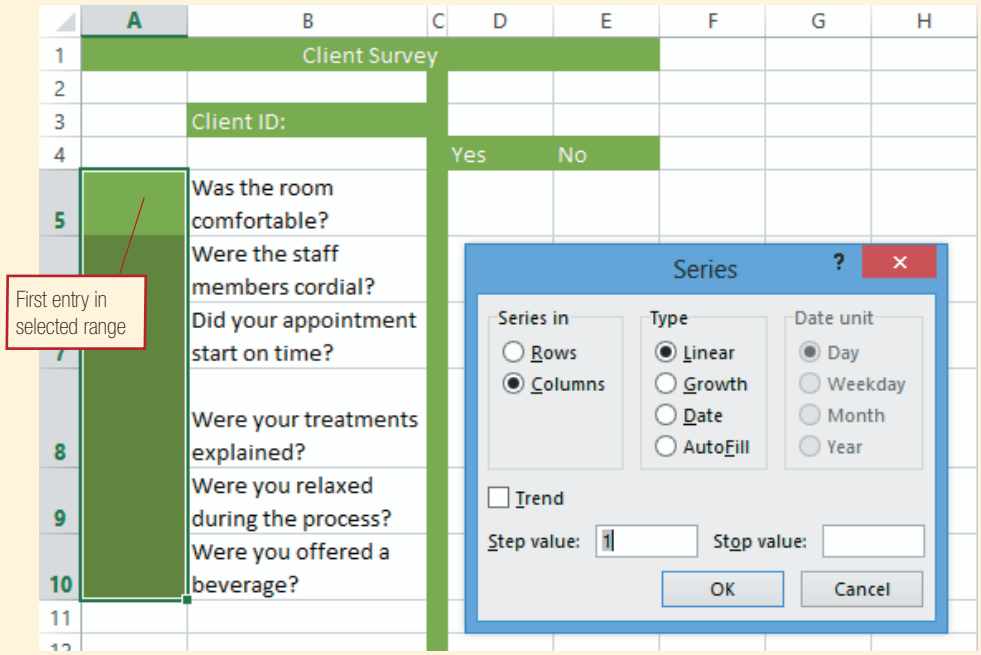
Entering Data by Range

- In the last lesson, you learned how to enter data by using the fill handle. There are a couple of other methods you can use to fill a range.
- To fill all the cells in a selected range with the same entry, first select the range. Then type the desired entry, and press CTRL + ENTER.
- The Fill button in the Editing group on the HOME tab offers choices that enable you to fill cells in the desired direction in a selected range and to create custom series. For example, you can click Down to fill down the column, or Right to fill across the row. Click Series to create a series to fill.

Try It! Entering Data by Range

1. In the **E06Try_xx** file, drag over the range A5:A10 to select it.
2. Type **1** and press ENTER.
3. On the HOME tab, click Fill > Series.
4. In the Series dialog box, make sure the Columns and Linear options are selected and that 1 appears in the Step value text box, and then click OK.
5. Drag over the range D5:D6 to select it.
6. Press and hold CTRL, and click cells E7, D8, D9, and E10.
   - ✓ *Be sure to release the CTRL key when you finish.*
7. Type **X**, and press CTRL + ENTER. Excel fills all the selected cells with the entry.
8. Save the changes to **E06Try_xx**, and leave it open to use in the next Try It.

Filling a range



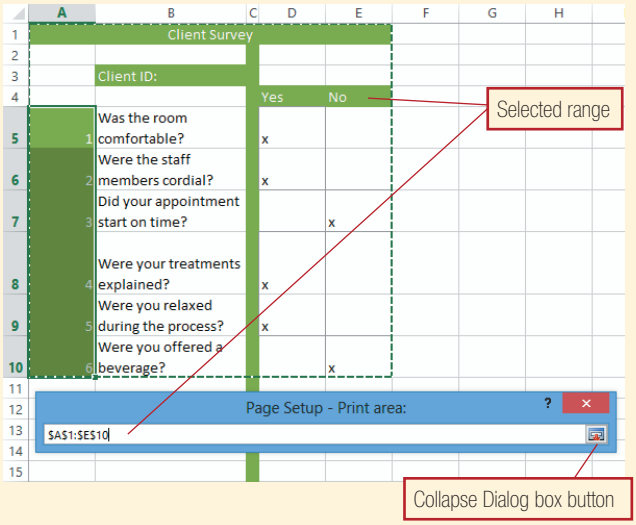
Making a Range Entry Using a Collapse Dialog Box Button

- You will most likely set options in Excel using the buttons on the Ribbon, however, occasionally, you may use a dialog box.
- Dialog boxes appear when you click the dialog box launcher within a particular group on the Ribbon.
- To enter cell addresses or ranges in a dialog box, you can click the **Collapse Dialog box button** on the right end of the text box to shrink the dialog box so you can see the worksheet and select the range, rather than type it.
- After selecting the range, click the Collapse Dialog button to restore the dialog box to its normal size, and then finalize your selections.

Try It! Making a Range Entry Using a Collapse Dialog Box Button

1. In the **E06Try_xx** file, on the PAGE LAYOUT tab, in the Page Setup group, click the dialog box launcher.
2. Click the Sheet tab.
3. Click the Collapse Dialog box button at the right end of the Print area text box.
4. Drag over the range A1:E10 to select it and enter it in the text box.
5. Click the Collapse Dialog box button again.
6. Click OK.
7. Save and close the file, and exit Excel.

Using the Collapse button



Lesson 6—Practice

In this project, you will select a range of cells and fill a series using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary, and open the **E06Practice** file from the data files for this lesson.
2. Save the file as **E06Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click cell **B25**, type **Frieda**, and press TAB.
5. Type **Randall**, and press ENTER.
6. Click cell B26, type **John**, and press TAB.
7. Type **Henson**, and press ENTER.
8. Drag over the range **A1:E1** to select it, and on the HOME tab, click **Merge & Center** Merge & Center.
9. Drag over the range **A2:E2** to select it, and on the HOME tab, click **Merge & Center** Merge & Center.
10. Drag over the range **A4:E5** to select it, and on the HOME tab, click **Cell Styles** > **Accent2**.
11. Drag over the range **A9:E9** to select it, and click **HOME** > **Cell Styles** > **Accent2**.
12. Drag over the range **A5:E5** to select it, and on the HOME tab, click **Wrap Text** > **Center**.
13. Click cell **A6** to select it.
14. Type **1**, and press ENTER.
15. Drag over the range **A6:E6** to select it.
16. On the HOME tab, click **Fill** > **Series**.
17. Make sure that the Rows and Linear options are selected and that **1** is entered as the Step value, and click **OK**.
18. Drag over the range **D11:D12** to select it.
19. Press and hold CTRL, and click cells **D15**, **D18**, **D21**, **D22**, and **D26**. Be sure to release CTRL after clicking the last cell.
20. Type **3**, and press CTRL + ENTER.
21. Click cell **D19** to select it.
22. Type **4**, and press CTRL + ENTER.

23. Select the range **D19:D20** to select it.
24. On the HOME tab, click **Fill** > **Down**.
25. Drag over the column headings for columns A through E.
26. Right-click the selected column headings, and click **Column Width**.
27. Type **13** in the Column width text box, and click **OK**.
28. Press CTRL + HOME. Your worksheet should look like the one in Figure 6-1.
29. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
30. Save and close the file, and exit Excel.

Figure 6-1

	A	B	C	D	E
1	Overview Academy				
2	Instructor Performance Ratings				
3					
4	Scale: 1-5				
5	Unacceptable	Needs Improvement	Acceptable	Exceeds Expectations	Outstanding
6	1	2	3	4	5
7					
8					
9	Course	First Name	Last Name	2013 Rating	2014 Rating
10	Band	Angela	Green		
11	Business	Markus	Wright	3	
12	Calculus	Vincent	Gambel	3	
13	Chemistry	Linda	Brown		
14	Computer Basi	Robert	Cardo		
15	Computer Grap	Phyllis	Weaver	3	
16	Computer Prog	Ramon	Ramirez		
17	English	Terry	Kaminsky		
18	Fine Arts	Stella	Andrews	3	
19	French	Francoise	Martine	4	
20	Geometry	Allen	Chang	4	
21	Health/Phys Ed	Axel	Jones	3	
22	History	Fred	Wilson	3	
23	Life Manageme	Stewart	Bing		
24	Science	Carl	Tyrell		
25	Social Studies	Frieda	Randall		
26	Spanish	John	Henson	3	

Lesson 6—Apply

You are the Principal of Overview Academy, a small private school. You want to create a worksheet to track instructor performance ratings from two prior years. You need to finish entering some of the worksheet data, including the ratings, apply some formatting, and specify the range to print.

DIRECTIONS

1. Start Excel, if necessary, and open the **E06Apply** file from the data files for this lesson.
2. Save the file as **E06Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Adjust the width of **column A** using AutoFit.
5. Drag over the range **A8:E8** to select it.
6. Open the **Format Cells** dialog box, and click the **Alignment** tab, if necessary.
7. Open the **Horizontal** drop-down list and click **Fill**. Then click **OK**. This fills the selected range with the symbol character in cell A8, another way of creating a border.
8. Select the following non-contiguous cells: **D10**, **E10**, **E17**, **E18**, **E22**, **E23**, and **E25**.
9. Type **4**, and press CTRL + ENTER.
10. Click cell **E11** to select it.
11. Type **5**, and press CTRL + ENTER.
12. Fill the range **E12:E14** with the same value.
13. Enter the following data in the blank cells in column D:
    a. **5**
    b. **5**
    c. **2**
    d. **2**
    e. **5**
    f. **5**
    g. **2**
14. Enter the following data in the blank cells in column E:
    a. **3**
    b. **3**
    c. **5**
    d. **5**
    e. **4**
    f. **3**
    g. **2**
15. Open the **Page Setup** dialog box, and on the **Sheet** tab, set the Print area to **A1:E26**. Your worksheet should look like the one in Figure 6-2 on the next page.
16. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
17. Save and close the file, and exit Excel.

Figure 6-2

	A	B	C	D	E
1	Overview Academy				
2	Instructor Performance Ratings				
3					
4	Scale: 1-5				
5	Unacceptable	Needs Improvement	Acceptable	Exceeds Expectations	Outstanding
6	1	2	3	4	5
7					
8					
9	Course	First Name	Last Name	2013 Rating	2014 Rating
10	Band	Angela	Green	4	4
11	Business	Markus	Wright	3	5
12	Calculus	Vincent	Gambel	3	5
13	Chemistry	Linda	Brown	5	5
14	Computer Basics	Robert	Cardo	5	5
15	Computer Graphics	Phyllis	Weaver	3	3
16	Computer Programming	Ramon	Ramirez	2	3
17	English	Terry	Kaminsky	2	4
18	Fine Arts	Stella	Andrews	3	4
19	French	Francoise	Martine	4	5
20	Geometry	Allen	Chang	4	5
21	Health/Phys Ed.	Axel	Jones	3	4
22	History	Fred	Wilson	3	4
23	Life Management	Stewart	Bing	5	4
24	Science	Carl	Tyrell	5	3
25	Social Studies	Frieda	Randall	2	4
26	Spanish	John	Henson	3	2

Lesson 7

Creating Formulas

➤ What You Will Learn

Software Skills Creating formulas to perform calculations in Excel provides one of its powerful benefits: automatic recalculation. When you make a change to a cell that is referenced in a formula, Excel automatically recalculates the formula to reflect the change and displays the new formula result.

What You Can Do

Entering a Formula

- A **formula** is a worksheet instruction that performs a calculation.
- Enter a formula in the cell where the result should display.
- As you type a formula, it displays in the cell and in the formula bar.
- If you enter a long formula in a cell, that text may not fully display in the formula bar. You can expand the formula bar (make it taller) by clicking the Expand Formula Bar button at the right end of the formula bar.
- When you select a cell that has a formula, the answer displays in the cell while the formula appears in the formula bar when the cell is selected.
- Use cell or range references, values, and mathematical operators in formulas.

  ✓ *A formula can also contain Excel's predefined functions, which are covered in Lesson 11, or use named ranges, which are covered in Lesson 13.*

- You must start each formula by typing the equal sign (=). For example, the formula =B2+B4+B6 adds together the values in those three cell locations.
- When you change the value in a cell that is referenced in a formula, the answer in the formula cell automatically changes.
- When typing a percentage as a value in a formula, you can enter it with the percent symbol or as a decimal.
- You can click a cell or drag a range to enter its address in the formula. This method can be more accurate than typing cell or range addresses.

WORDS TO KNOW

Arithmetic (mathematical) operators
Symbols used in mathematical operations: **+** for addition, **-** for subtraction, ***** for multiplication, **/** for division, and **^** for exponentiation.

Formula
An instruction Excel uses to calculate a result.

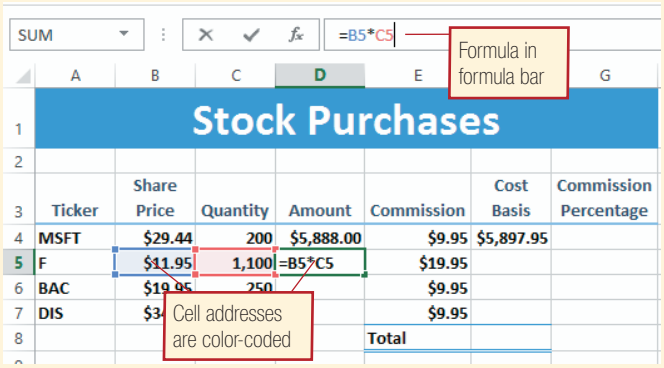
Order of precedence
The order in which Excel performs the mathematical operations specified in a formula, based on the types of mathematical operators used.

SUM function
A built-in calculation used to add a range of values together.

Try It! Entering a Formula

1. Start Excel.
2. Open the **E07Try** file from the data files for this lesson.
3. Save the file as **E07Try_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
5. Click cell F4 to select it.
6. Type **=D4+E4**, and press ENTER.
7. Click cell D5 to select it.
8. Type **=**, click cell B5, type *, and click cell C5.

Entering a formula



9. Press ENTER to finish the formula.
10. Save the **E07Try_xx** file, and leave it open to use in the next Try It.

Using Arithmetic Operators

- Use the following standard **arithmetic (mathematical) operators** in formulas:
  - \+ Addition
  - \- Subtraction
  - * Multiplication
  - / Division
  - ^ Exponentiation
- Excel performs mathematical operations in a particular order, called **order of precedence**. This is the order in which Excel calculates:
  1. Operations enclosed in parentheses.
  2. Exponentiation.
  3. Multiplication and division.
  4. Addition and subtraction.
- When a formula has multiple operators of the same precedence level, such as multiple multiplication operations, Excel performs the calculations from left to right.
- Keeping the order of mathematical operations in mind, the easiest way to control which part of a complex formula is calculated first is to use parentheses. Here are two examples:

  =8+3*5 result: 23

  Excel multiplies first, then adds.

  =(8+3)*5 result: 55

  Excel adds the values in parentheses, then multiplies.

Try It! Using Arithmetic Operators

1. In the **E07Try_xx** file, click cell G4 to select it.
2. Type **=E4/F4** and press ENTER.
3. Press ← to select cell F5.
4. Type **=B5*C5+E5** and press TAB.
   - ✓ *The formula you just entered is an alternate way of performing a calculation you created earlier. You could also enter this formula as **=D5+E5** to calculate the correct result.*
5. In cell G5, type **=E5/(B5*C5+E5)** and press ENTER.
   - ✓ *The formula you just entered is an alternate way of performing a calculation you created in cell G4. You could also enter this formula as **=E5/F5** to calculate the correct result.*
6. Save the **E07Try_xx** file, and leave it open to use in the next Try It.

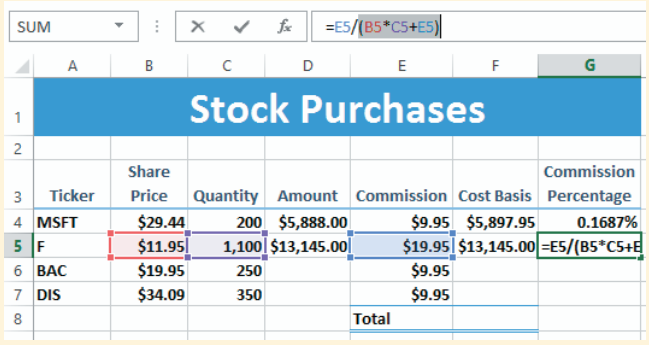
Editing a Formula

- Excel automatically provides assistance in correcting common mistakes in a formula (for example, omitting a closing parenthesis).
- You can edit a formula as needed to update its calculation or if you see an error message such as #NUM! or #REF! in the cell.
- Editing a formula works just like editing any other data in a cell. Click the cell, and then press F2 or double-click the cell to enter edit mode. Work in the cell or the formula bar to make the changes, and then press ENTER or click the Enter button ✓ on the formula bar to finish the entry.
  - ✓ *Function lock must be enabled to use the function keys.*

Try It! Editing a Formula

1. In the **E07Try_xx** file, click cell F5 to select it, and press F2 to enter edit mode.
   - ✓ *If needed, press the F Lock key to turn function lock on.*
2. In cell F5, drag over B5*C5, click cell D5 to replace the selection, and press TAB to finish the change.
3. With cell G5 selected, drag over (B5*C5+E5) in the formula bar to select it.
4. Type **F5** to replace the selected part of the formula, and press ENTER.
5. Save the **E07Try_xx** file, and leave it open to use in the next Try It.

Editing in the formula bar



Copying a Formula Using the Fill Handle

- You can use the fill feature to copy a formula that you've created to the cells below or to the right of it.
- Excel automatically adjusts cell addresses so the filled formulas apply to the correct data.
  - ✓ *Lesson 8 explains more about how and why Excel adjusts cell and range addresses.*
- Drag the fill handle over the range of cells to fill with the formula.
- Also use the Fill button in the Editing group on the HOME tab to fill formulas.

Try It! Copying a Formula Using the Fill Handle

1. In the **E07Try_xx** file, click cell D5 to select it.
2. Drag the fill handle down through cell D7 to fill the formula.
3. Click cell F5 to select it.
4. Drag the fill handle down through cell F7 to fill the formula.
5. Click cell G5 to select it.
6. Drag the fill handle down through cell G7 to fill the formula.
7. Save the **E07Try_xx** file, and leave it open to use in the next Try It.

Using the SUM Function

- The most basic and perhaps most often used function is the **SUM function**, which adds the values in the specified cells or range together.
- You can enter the SUM function by typing it into the cell just like any other cell entry. For example, you could enter =SUM(A6,A9,B12) or =SUM(A6:B9).

  ✓ *Formulas and functions are not case sensitive, so an entry like =sum(a6:b9) would calculate correctly. This book shows cell addresses, formulas, and functions in uppercase to make them easier to read in the text.*

- Enclose the cell addresses or range to sum in parentheses, and use commas to separate individual cell references.
- Enter the SUM function more quickly using one of the following three methods:
  - Press ALT + =.
  - Click the Sum button Σ in the Editing group on the HOME tab. Note that this button is also called the AutoSum.
  - Click the AutoSum button Σ AutoSum in the Function Library group on the FORMULAS tab.

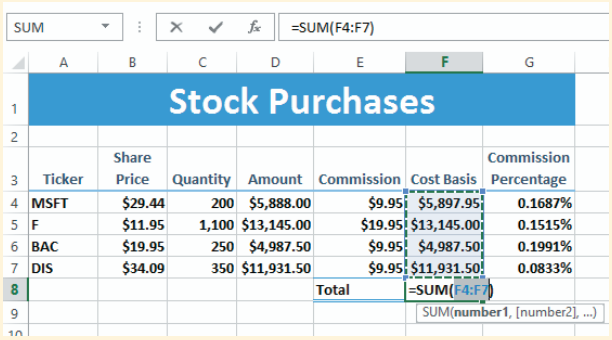
Try It! Using the Sum Function

1. In the **E07Try_xx** file, click cell F8 to select it.
2. On the HOME tab, click AutoSum Σ. Excel automatically starts the formula and selects the range above it.

   ✓ *If the selected range is incorrect, you can drag to change it.*

3. Press ENTER to finish the SUM formula.
4. Save and close the file, and exit Excel.

Summing a column of data



Lesson 7—Practice

In this project, you will add basic formulas to a spreadsheet using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary, and open the **E07Practice** file from the data files for this lesson.
2. Save the file as **E07Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click cell **B12**, type **=B8+B9+B10+B11**, and press ENTER twice.
5. Type **=B12/G12**, and press ENTER. Excel should display a #DIV/0! error message because cell G12 is currently empty.
6. Click cell **C12** to select it.
7. Type **=sum(C8:C11)**, and press ENTER.
8. Click cell **G8** to select it.
9. Type **=B8+C8+D8+E8+F8**, and press ENTER. Your worksheet should look like the one shown in Figure 7-1.
10. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
11. Save and close the file, and exit Excel.

Figure 7-1

	A	B	C	D	E	F	G
1	Serenity Health Club						
2							
3	9/4/2014						Extra Services Sold
4							
5	Service Name	Swedish Massage	Aromatherapy Massage	Hot Stone Massage	Exfoliating Salt Scrub	Aromatherapy Facial	Weekly Total
6	Service Code	Serv001	Serv002	Serv003	Serv004	Serv005	
7							
8	Week 1	$665	$600	$445	$400	$150	$2,260
9	Week 2	$550	$600	$550	$225	$300	
10	Week 3	$575	$550	$575	$300	$450	
11	Week 4	$600	$550	$625	$225	$300	
12	Total	$2,390	$2,300				
13							
14	Percentage	#DIV/0!					

Lesson 7—Apply

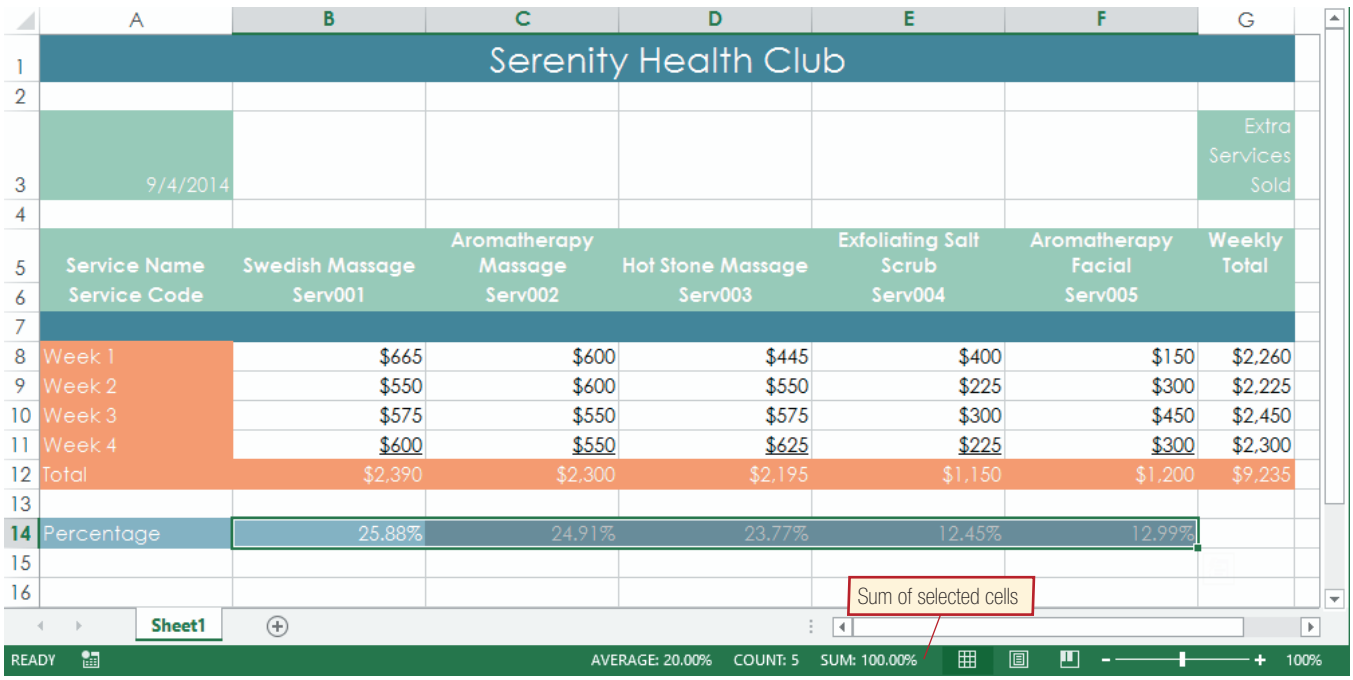
You are the Accounts Receivable Supervisor at the Serenity Health Club. You have some new data in a spreadsheet, and need to add basic formulas to calculate the data.

DIRECTIONS

1. Start Excel, if necessary, and open the **E07Apply** file from the data files for this lesson.
2. Save the file as **E07Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click cell **D12** to select it and sum the values in the cells above.
5. Drag the fill handle right through cell **G12** to fill the formula.
6. Click cell **G8** and double-click the fill handle to fill the entry down the column.
7. Click cell **B14** and drag the fill handle right through cell **F14**. When you release the mouse button, you should see the error message #DIV/0! in each of the filled cells. This is because Excel changed the reference to cell G12 and you don't want it to do that.
8. Edit each of the formulas in the range **C14:F14** to change the divisor (the right cell address) to **G12**.
9. Select the range **B14:F14**. Look in the status bar next to the view buttons. The sum displayed there should be 100.00%, meaning that the corrected formulas each accurately calculate the percentage of the total. Your worksheet should look like the one shown in Figure 7-2.

   ✓ *When you want to see a quick sum of cells without building a formula, drag over the cells and check the status bar.*
10. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
11. Save and close the file, and exit Excel.

Figure 7-2



Lesson 8

Copying and Pasting

➤ What You Will Learn

Copying and Pasting Data
Copying Formats
Copying Formulas Containing a Relative Reference
Copying Formulas Containing an Absolute Reference

Software Skills Excel provides many time-saving shortcuts to help you enter data and build formulas in your worksheets. For example, you can use the copy and paste features to reuse data and formulas in the same worksheet, in another worksheet, or in another workbook. You also can copy formats. When copying formulas, you need to understand how to keep a cell reference from changing if needed.

What You Can Do

Copying, Cutting, and Pasting Data

- When you **copy** data, the copy is placed on the **Clipboard.**
- After you copy data, **paste** it to place the copy from the Clipboard to the new location.
- You can copy labels, values, and formulas to another cell, a range of cells, another worksheet, or another workbook. You also can copy Excel data to documents created in other programs, such as Word.
- To copy a selected cell or range of data to a new location, use the Copy and Paste buttons in the Clipboard group on the HOME tab of the Ribbon.

  ✓ *CTRL + C and CTRL + V are the shortcuts for copying and pasting, respectively.*

- If the cells to which you want to copy data are adjacent to the original cell, you can use the fill handle to copy the data.
- Excel automatically copies the formats applied to data, which overrides any formatting in the destination cell.
- You can copy just the data and formulas without copying formatting.

  ✓ *Clicking the bottom half of the Paste button, with the arrow on it, displays a menu with additional paste options. For example, you can paste formulas, formulas with number formatting, keep the column widths, and so on.*

WORDS TO KNOW

Absolute reference
A cell address in a formula that will not change when you copy the formula to another location. Dollar signs indicate an absolute cell reference.

Clipboard
A Windows feature that holds data or graphics you cut or copy prior to pasting to another location.

Copy
The command used to place a copy of data from the selected cell or range on the Clipboard.

Format Painter
A tool that enables you to copy formatting from a cell and apply it to another cell or range.

Paste
The command used to place data from the Clipboard to a location on the worksheet.

Relative reference
A cell address that can change in a copied formula, so the new address is expressed in relation to the cell containing the copied ormula. For example, if you copy a relative reference to A5 one row down, it becomes A6.

- Pasting overwrites data in the destination cell or range.
- You can link data as you paste it so the data changes automatically whenever the original data changes. Lesson 36 explains how to link data.

Try It! Copying, Cutting, and Pasting Data

1. Start Excel.
2. Open the **E08Try** file from the data files for this lesson.
3. Save the file as **E08Try_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
5. Click cell H5 to select it.
6. On the HOME tab, click Cut.
7. Click cell E5 to select it.
8. On the HOME tab, click Paste.

Copied range

	A	B	C	D	E	F	G	H
1	Expense Analysis							
2								
3	Qtr 1							
4	Salesperson	Expenses	Accounts	Expense p	Amount Above or Below Median			
5	Jones	$ 3,500	6	583.3333	-1549.5			
6	Smith	$ 2,995	2					
7	Thomas	$ 6,599	4					
8	Weisbard	$ 8,055	5					
9	Vegas	$ 2,933	2					
10	Lewis	$ 7,800	4					
11	Median	$ 5,050						
12								
13	Qtr 1							
14	Salesperson	Expenses	Accounts	Expense p	Amount Above or Below Median			
15						(Ctrl)		
16								
17								

9. Drag over the range A3:E4 to select it.
10. On the HOME tab, click Copy.
11. Click cell A13 to select it.
12. On the HOME tab, click Paste.
13. Drag over the range A5:C11 to select it.
14. On the HOME tab, click Copy.
15. Click cell A15 to select it.
16. On the HOME tab, click the Paste drop-down arrow > Values. Excel pastes the range without pasting the formatting applied in the original range.
17. Press ESC to remove the selection marquee from the copied range.
    - ✓ *A selection marquee is a visible dashed line around a selected area.*
18. Click cell B21 to select it. You still need a formula in this cell, so you need to update it.
19. Type **=MEDIAN(B15:B20** and press ENTER. Excel automatically fills in the closing parenthesis for you.
20. Save the **E08Try_xx** file, and leave it open to use in the next Try It.

Copying Formats

- You can copy formatting from one cell to another, without copying the original cell's value.
- The Format Painter button in the Clipboard group on the HOME tab enables you to copy formatting from one cell to another.
- **Format Painter** copies a cell's font, font size, font color, border, fill color, number formats, column widths (in some cases), cell alignment, and conditional formatting (formatting that depends on the current value in a cell).
- Select the cell with the formatting to copy, and then on the HOME tab, in the Clipboard group, click Format Painter. Click a destination cell or drag over a destination range to apply formatting in that location.
- To paste the formatting to multiple areas, double-click the Format Painter button. It will remain on until you click it again or press ESC to turn it off.

Try It! Copying Formats

1. In the **E08Try_xx** file, click cell E4 to select it.
2. On the HOME tab, click Wrap Text.
3. On the HOME tab, click Format Painter.
4. Drag over cells A4:D4 to copy the wrapping to them.
5. Click the column header for column C, and drag its right border to the right to resize the column to a width of 9.00.
6. Click cell E4 to select it.
7. On the HOME tab, click Format Painter.
8. Drag over cells D14:E14 to copy the wrapping to them.
9. Click cell B5 to select it.
10. Double-click the Format Painter button.
11. Drag over cells D5:E11 to copy the number formatting.
12. Scroll down and drag over cells B15:B21 to copy the number formatting.
13. Press ESC.
14. Save the **E08Try_xx** file, and leave it open to use in the next Try It.

Copying Formulas Containing a Relative Reference

- Formulas often have **relative references** to cells. This means that if you copy the formula to another location, the cell reference changes to reflect the position of its copied location relative to the original location.
- For example, the formula =B4+B5 entered in column B becomes =C4+C5 when copied to column C, =D4+D5 when copied to column D, and so on.
- Relative references make it easy to copy formulas across a row to total values above, for example.
- Relative references also work best when you want to fill formulas across a row or down a column.

Try It! Copying Formulas Containing a Relative Reference

1. In the **E08Try_xx** file, scroll down so row 4 is the first row visible.
2. Click cell D5 to select it.
3. On the HOME tab, click Copy.
4. Drag over the range D6:D10 to select it.
5. Press ENTER. Excel pastes the formula to fill the destination range.

   ✓ *In some cases, you can select a range or click in the upper-left cell of a range and press ENTER to complete a paste rather than using the Paste button.*
6. Drag over the range D5:D10 to select it.

(continued)

Try It! Copying Formulas Containing a Relative Reference *(continued)*

A pasted formula with relative references

D5 =B5/C5

	A	B	C	D	E
4	Salesperson	Expenses	Accounts	Expense per Account	Amount Above or Below Median
5	Jones	$ 3,500	6	$ 583	$ (1,550)
6	Smith	$ 2,995	2	$ 1,498	
7	Thomas	$ 6,599	4	$ 1,650	
8	Weisbard	$ 8,055	5	$ 1,611	
9	Vegas	$ 2,933	2	$ 1,467	
10	Lewis	$ 7,800	4	$ 1,950	
11	Median	$ 5,050			

7. Press CTRL + C.
8. Click cell D15 to select it.
9. Press CTRL + V.
10. Click cell B15 to select it.
11. Type **4240** and press ENTER. The value in cell D15 recalculates as you'd expect.
12. Click cell D15 to select it. The cell references in the formula have been updated to refer correctly to other cells on row 15.
13. Save the **E08Try_xx** file, and leave it open to use in the next Try It.

Copying Formulas Containing an Absolute Reference

- Sometimes, you do not want a cell reference to change when you copy the formula, so you need to create an **absolute reference**.
- To make a cell reference absolute, enter a dollar sign ($) before both the column letter and row number of that cell in the formula.
- For example, the formula =$B$4+$B$5 contained in a cell in column B remains =$B$4+$B$5 when copied to column C. The cell addresses do not adjust based on the new formula location.
- You can also create mixed cell references, where the column letter part of a cell address is absolute, and the row number is relative, or vice-versa.
- For example, the formula =B$4+B$5 contained in a cell in column B changes to =C$4+C$5 when copied to any cell in column C. The cell addresses partially adjust based on the new formula location.
- Press the F4 key as you type a cell reference in a formula to change to an absolute reference. Pressing F4 additional times cycles through the mixed references and then returns to a relative reference.

Try It! Copying a Formula Using an Absolute Reference

1. In the **E08Try_xx** file, click cell E5 to select it.
2. Drag the fill handle down through cell E10 to fill the formula. Cell E8 displays an error message, so you know there must be a problem with the copied formula.
3. Click cell E5 to select it again. Notice that it subtracts the median value calculated in cell B11 from Jones' expenses. You need for each of the formulas in the column to subtract the value in B11 rather than changing, so you need to change to an absolute reference for cell B11.

Copying a formula with an absolute reference

	A	B	C	D	E	F
1	Expense Analysis					
2			Absolute reference			
3	Qtr 1					
4	Salesperson	Expenses	Accounts	Expense per Account	Amount Above or Below Median	
5	Jones	$ 3,500	6	$ 583	$ (1,550)	
6	Smith	$ 2,995	2	$ 1,498	$ (2,055)	
7	Thomas	$ 6,599	4	$ 1,650	$ 1,550	
8	Weisbard	$ 8,055	5	$ 1,611	$ 3,006	
9	Vegas	$ 2,933	2	$ 1,467	$ (2,117)	
10	Lewis	$ 7,800	4	$ 1,950	$ 2,751	
11	Median	$ 5,050				
12						

(continued)

Try It! **Copying a Formula Using an Absolute Reference** *(continued)*

4. Press F2 to enter edit mode.
5. Press F4 to add dollar signs for the row letter and column number for cell B11 in the formula, and then press ENTER to finish the change.
6. Click cell E5 to select it.
7. Drag the fill handle down through cell E10 to fill the formula. Now it fills correctly.
8. With the range E5:E10 still selected, on the HOME tab, click Copy.
9. Click cell E15 to select it.
10. On the HOME tab, click Paste. Look at the formula bar. The absolute reference in the formula still refers to cell B11, but for this set of data, you need for it to refer to cell B21.
11. Click cell E15 to select it.
12. Use the method of your choice to change the absolute reference in the formula from $B$11 to **$B$21**.
13. With cell E15 selected, drag the fill handle down through cell E20 to fill the formula.
14. Save and close the file, and exit Excel.

Lesson 8—Practice

In this project, you will copy and paste formatting and formulas using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary, and open the **E08Practice** file from the data files for this lesson.
2. Save the file as **E08Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right for each sheet, and change back to **Normal** view.
4. Click cell **D9** to select it.
5. Click **HOME** > **Copy**.
6. Drag over the range **D10:D19** to select it.
7. On the HOME tab, click **Paste**.
8. Drag over the range **J9:K19** to select it.
9. On the HOME tab, click **Copy**.
10. Click cell **B9** to select it.
11. On the HOME tab, click **Paste**.
12. Drag over the range J9:K19 to select it and clear the contents. Your worksheet should look like the one shown in Figure 8-1 on the next page.
13. **With your teacher's permission,** print both worksheets. Submit the printouts or the file for grading as required.
14. Save and close the file, and exit Excel.

Figure 8-1

	A	B	C	D	E	F	G
1	Voyager Travel Adventures						
2							
3	Eco Wilderness Adventure						
4	Tell City Thrill Seekers Club			Discount amount			35%
5	10/6/14-10/12/14			Commission			0
6							
7							
8	Item	Their Cost per Unit	Units	Their Total Cost	Our Cost per Unit	Our Total Cost	Our Profit
9	Bus to white water launch point (30 adventurers, max)	$1,125	1	$1,125	731.25		
10	White water raft, first day (4 adventurers max)	$450	3	$1,350			
11	White water raft, second day (4 adventurers max)	$450	3	$1,350			
12	River gear rental	$110	12	$1,320			
13	Transportation of gear to hike point	$1,500	1	$1,500			
14	Camping gear rental per person	$25	12	$300			
15	Hiking guides (1 per 4 adventurers), three days	$150	9	$1,350			
16	Rock climbing gear rental per person	$125	12	$1,500			
17	Food and water, per person	$275	12	$3,300			
18	Bus return trip (30 adventurers, max)	$1,675	1	$1,675			
19	Adventurer's insurance	$315	12	$3,780			
20				$18,550		0	0

Lesson 8—Apply

As an Adventure Coordinator for Voyager Travel Adventures, you make all the arrangements necessary to create a unique and thrilling adventure vacation for your clients. Today, the Tell City Thrill Seekers Club has asked for an estimate of expenses per person for a special trip that combines white water rafting, back country hiking, and rock climbing. You have started both a trip budget for the club and a profit worksheet. To complete the two worksheets, you need to copy formulas, data, and formatting.

DIRECTIONS

1. Start Excel, if necessary, and open the **E08Apply** file from the data files for this lesson.
2. Save the file as **E08Apply_*xx*** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right for each sheet, and change back to **Normal** view.
4. Click cell **I9** to select it, and copy the formula.
5. Click cell **E9** to select it, and paste the formula. An error message appears in cell E9, so you know there's a problem with the formula. Notice that to calculate the discounted price, the formula has to use the discount percentage in cell G4. That cell reference needs to be changed to an absolute reference for the formula to copy correctly.
6. In Edit mode, change the **C4** cell reference, to an absolute reference to cell **G4**.
7. Also in Edit mode, change the **#REF!** cell reference to **B9**.
8. Copy cell **E9** and paste it to the range **E10:E19**.

9. Delete the contents of cell **I9**.
10. Enter the formula **=C9*E9** in cell **F9**. Copy or fill the formula down through cell **F19**.
11. Enter the formula **=D9-F9** in cell **G9**. Copy or fill the formula down through cell **G19**.
12. Select cells **F20:G20**, and apply the **Total** cell style to them.
13. Click cell **G5**, and apply the **Currency** number format to it.
14. Click the cell range **F20:G20**, and apply the **Currency** number format. Apply the Total cell style to the same range. Your worksheet should look like the one shown in Figure 8-2.
15. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
16. Save and close the file, and exit Excel.

Figure 8-2

	A	B	C	D	E	F	G
1	Voyager Travel Adventures						
2							
3	Eco Wilderness Adventure						
4	Tell City Thrill Seekers Club			Discount amount			35%
5	10/6/14-10/12/14			Commission			$649.25
6							
7							
8	Item	Their Cost per Unit	Units	Their Total Cost	Our Cost per Unit	Our Total Cost	Our Profit
9	Bus to white water launch point (30 adventurers, max)	$1,125	1	$1,125	$731.25	$731.25	$393.75
10	White water raft, first day (4 adventurers max)	$450	3	$1,350	$292.50	$877.50	$472.50
11	White water raft, second day (4 adventurers max)	$450	3	$1,350	$292.50	$877.50	$472.50
12	River gear rental	$110	12	$1,320	$71.50	$858.00	$462.00
13	Transportation of gear to hike point	$1,500	1	$1,500	$975.00	$975.00	$525.00
14	Camping gear rental per person	$25	12	$300	$16.25	$195.00	$105.00
15	Hiking guides (1 per 4 adventurers), three days	$150	9	$1,350	$97.50	$877.50	$472.50
16	Rock climbing gear rental per person	$125	12	$1,500	$81.25	$975.00	$525.00
17	Food and water, per person	$275	12	$3,300	$178.75	$2,145.00	$1,155.00
18	Bus return trip (30 adventurers, max)	$1,675	1	$1,675	$1,088.75	$1,088.75	$586.25
19	Adventurer's insurance	$315	12	$3,780	$204.75	$2,457.00	$1,323.00
20				**$18,550**		**$12,057.50**	**$6,492.50**

Lesson 9

Techniques for Moving Data

➤ What You Will Learn

Inserting and Deleting Cells
Inserting, Deleting, Hiding, and Unhiding Columns and Rows
Cutting and Pasting Data
Using Drag-and-Drop Editing
Transposing Columns and Rows

WORDS TO KNOW

Cut
The command used to remove data from a cell or range of cells and place it on the Clipboard.

Drag-and-drop
A method used to move or copy the contents of a range of cells by dragging the border of a selection from one location in a worksheet and dropping it in another location.

Transpose
A method to rearrange data by switching the positions of columns and rows.

Software Skills After you create a worksheet, you may want to rearrange data or add more information. For example, you may need to insert additional rows to a section of your worksheet because new employees have joined a department or been promoted. With Excel's editing features, you can easily add, delete, and rearrange cells and entire rows and columns. You can also move or drag and drop sections of the worksheet with ease.

What You Can Do

Inserting and Deleting Cells

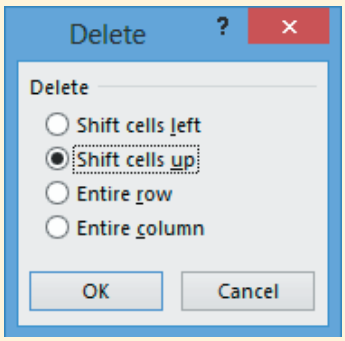
- You can insert or delete cells when necessary to change the arrangement of the data on the worksheet.
- When you select a cell or range of cells, you can use the Insert and Delete buttons in the Cells group on the HOME tab to insert and delete cells. You also can click the drop-down arrows for these buttons for more commands, or right-click a selected cell and use the Insert and Delete commands on the shortcut menu.
- The Insert or Delete button will add or remove the number of cells specified by your selection.
- When you insert a cell in a worksheet, existing cells shift their position down. For example, if you select cell B2 and then insert a cell, the data that was in cell B3 is shifted down and becomes cell B4.
- When you select a range of cells and then click the Insert or Delete buttons, the Insert or Delete dialog box will open.
- You can choose the direction to shift the surrounding cells in the Insert or Delete dialog box, for example, right or down.

- After inserting a cell or group of cells, you can use the Format Options button to choose whether or not formatting should be applied to the new cell(s).
- When you delete a cell, existing cells shift left or up to close the gap. Any data in the rows or columns you select for deletion is erased.

Try It! Inserting and Deleting Cells

1. Start Excel.
2. Open the **E09Try** file from the data files for this lesson.
3. Save the workbook as **E09Try_xx** in the location where your teacher instructs you to store the files for this lesson.
4. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal.
5. Click cell C6 to select it.
6. On the HOME tab, in the Cells group, click the Insert button.
   - ✓ *Be sure to click the top part of the Insert button, not the drop-down arrow on the bottom part.*
7. Click the Insert Options button next to the cell, and click Format Same As Below.
8. Type **3091**, and press CTRL + ENTER. Notice that the number is formatted for currency.
9. Right-click on cell C6, select delete, make sure Shift cells up is selected, and click OK.
10. Save the **E09Try_xx** file, and leave it open to use in the next Try It.

The Delete dialog box



Inserting, Deleting, Hiding, and Unhiding Columns and Rows

- You can insert or delete columns or rows when necessary to change the arrangement of the data on the worksheet.
- When you select a row or column, or multiple rows or columns, you can use the Insert and Delete buttons in the Cells group on the HOME tab to insert and delete columns and rows. You also can right-click a selected column or row's heading and use the Insert and Delete commands on the shortcut menu.
  - ✓ *Drag over multiple row or column headings to select multiple rows or columns. Then, using the shortcut menu to insert or delete will add or remove the number of rows or columns specified by your selection.*
- When you insert column(s) in a worksheet, existing columns shift their position to the right. For example, if you select column C and then insert two columns, the data that was in column C is shifted to the right and becomes column E.
- If you insert row(s) in a worksheet, existing rows are shifted down to accommodate the newly inserted row(s). For example, if you select row 8 and insert two rows, the data that was in row 8 is shifted down to row 10.
- After inserting a column or row, you can use the Insert Options button to choose whether or not formatting from a nearby row or column should be applied to the new rows or columns.
- When you delete a column or row, existing columns and rows shift left or up to close the gap. Any data in the rows or columns you select for deletion is erased.
- You can also hide columns or rows temporarily and then redisplay them as needed. Right-click the column/row heading and click Hide. Drag over headings surrounding the hidden row/column, right-click, and click Unhide.

Try It! Inserting, Deleting, Hiding, and Unhiding Columns and Rows

1. In the **E09Try_*xx*** file, right-click the column B column heading and click Hide on the shortcut menu.
2. Drag across column headings A though C and right-click the selected headings. Click Unhide on the shortcut menu.
3. Click the column B column heading to select the column.
4. On the HOME tab, click Delete. Excel removes the column.

   ✓ *Be sure to click the top part of the Delete button, not the drop-down arrow on the bottom part.*
5. Click the column C column heading to select it.
6. On the HOME tab, click Insert.

   ✓ *Be sure to click the top part of the Insert button, not the drop-down arrow on the bottom part.*
7. Make the following entries in the new column, starting in cell C3:

   February
   8282
   9087
   10443
   9731
   8367
8. Fill the formulas from cells B9 and B10 to the right to cells C9 and C10.
9. Right-click the row 8 row heading and click Hide on the shortcut menu.
10. Drag across row headings 7 though 9 and right-click the selected headings. Click Unhide on the shortcut menu.
11. Click the row 8 row heading to select it.
12. On the HOME tab, click Insert.
13. Make the following entries in the new row, starting in cell A8:

    Vegas
    8042
    6639
    8088
14. Save the **E09Try_*xx*** file, and leave it open to use in the next Try It.

Cutting and Pasting Data

- To move data from one place in the worksheet to another, use the Cut and Paste options in the Clipboard group on the HOME tab. This removes the data from its original location.
- When you **cut** data from a location, it is temporarily stored on the Clipboard. That data is then copied from the Clipboard to the new location when you paste.
- If data already exists in the location you wish to paste to, Excel overwrites it.
- Instead of overwriting data with the Paste command, you can insert the cut cells and have Excel shift cells with existing data down or to the right.
- When you move data, its formatting moves with it. You can override this and move just the data using choices on the Paste button's drop-down list.

Try It! Cutting and Pasting Data

1. In the **E09Try_xx** file, drag over the range **A8:E9** to select it.
2. On the HOME tab, in the Clipboard group, click Cut.
3. Click cell G4 to select it.
4. On the HOME tab, in the Clipboard group, click Paste.
   - ✓ *Be sure to click the top part of the Paste button, not the drop-down arrow on the bottom part.*
5. Save the changes to **E09Try_xx** file, and leave it open to use in the next Try It.

Using Drag-and-Drop Editing

- The **drag-and-drop** feature enables you to use the mouse to copy or move a range of cells simply by dragging them.
- To use drag-and-drop, select a range to copy or move, and then you use the border surrounding the range to drag the data to a different location. When you release the mouse button, the data is "dropped" in that location.
- An outline of the selection appears as you drag it to its new location on the worksheet.
- You can use drag-and-drop to move data and to copy it. To copy data using drag-and-drop, simply hold down the CTRL key as you drag.
- Insert, delete, move, and copy operations may affect formulas, so you should check the formulas after you have used drag-and-drop to be sure that they are correct.
- When a drag-and-drop action does not move data correctly, use the Undo feature to undo it.

Try It! Using Drag-and-Drop Editing

1. In the **E09Try_xx** file, drag over the range A7:E7 to select it.
2. Point to the border of the selection. When the mouse pointer changes to a four-headed arrow, drag down one row. When the ScreenTip reads A8:E8, release the mouse button.
3. Drag over the range G4:K4 to select it.
4. Use drag-and-drop to move the selection to row 7 of the sales data.
5. Click the row 9 row heading to select it.
6. On the HOME tab, click Delete.
7. Save the changes to **E09Try_xx** file, and leave it open to use in the next Try It.

Moving a range with drag-and-drop

	A	B	C	D	E
1	Sales Review				
2					
3	Salesperson	January	February	March	Total
4	Jones	$7,659	$8,282	$12,000	$27,941
5	Smith	$9,930	$9,087	$3,930	$22,947
6	Thomas	$5,909	$10,443	$6,965	$23,317
7	Weisbard	$5,056	$9,731	$7,933	$22,720
8					
9	Lewis	$7,698	$8,367	$10,111	$26,176
10	Total	$36,252	$45,910	$40,939	$123,101
11	Average	$7,250	$9,182	$8,188	$24,620

A8:E8

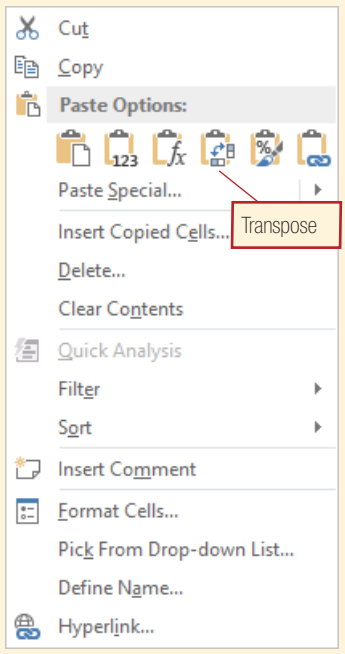
Transposing Columns and Rows

- You can use the **transpose** feature to rearrange the columns and rows of data in a worksheet.
- To use the transpose feature, select the data you want to transpose, which can include row or column labels, and then copy it.
  - ✓ *You must use Copy with the transpose feature; you cannot use Cut.*
- Transposed data must be placed in blank cells.
- To place the transposed data, right-click the first cell where you want the tranposed data to be pasted, and choose Transpose in the Paste Options menu.
- Transposing may affect formulas, so you should check the formulas after you have used the transpose feature to be sure that they are correct.
- When a transpose action does not move data correctly, use the Undo feature to undo it.

Try It! Transposing Columns and Rows

1. In the **E09Try_*xx*** file, select the cell range A3:D8.
2. On the HOME tab, in the Clipboard group, click Copy.
3. Right-click cell A13.
4. In the Paste Options menu, click Transpose. The column headings have now been transposed to row headings, and vice versa. Notice that the data has been transposed also.
5. Save and close the file, and exit Excel.

The Transpose button in the Paste Options drop-down menu



Lesson 9—Practice

In this project, you will insert, delete, hide, and unhide columns and rows using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary, and open the **E09Practice** file from the data files for this lesson.
2. Save the file as **E09Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click the **row 14** row heading to select it.
5. On the HOME tab, click **Insert** .
6. Click the **row 4** row heading to select it.
7. Move the mouse pointer over the border of the selection, press and hold CTRL, and drag the selection down to **row 15**. When you release the mouse button, Excel copies the selection.
8. Click cell **A15** to select it, type **Hourly Employees**, and press ENTER.
9. Click the **column D** column heading to select it.
10. On the HOME tab, click **Delete** .
11. Right-click the **row 14** row heading and select **Hide**.
12. Click the row headings for **rows 13-15**, right-click, and select **Unhide**.
13. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
14. Save and close the file, and exit Excel.

Lesson 9—Apply

You are the Payroll Manager at Whole Grains Bread. The conversion to an in-house payroll system is next week, and you want to test out a payroll worksheet the staff will use to collect and enter payroll data in the computer system. You need to finish entering data and formulas in the worksheet. This will require adding, deleting, hiding, and unhiding rows and columns, and moving data by cutting and pasting and drag-and-drop techniques. You also will transpose the hourly employee data to show a different way of presenting this information.

DIRECTIONS

1. Start Excel, if necessary, and open the **E09Apply** file from the data files for this lesson.
2. Save the file as **E09Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Select the range **B5:J13** and move it left one column.
5. Select the range **B16:H24** and move it left one column.
6. Adjust column widths as needed.
7. Select the range **G5:I13**, press and hold the CTRL key, and use drag-and-drop to copy the data to the range **H16:J24**.

   ✓ *When using drag-and-drop to copy data, remember to use the CTRL key.*
8. Select **row 12**, and insert a new row.
9. Cut the range **A22:D22**, and paste it in the new **row 12**.

10. In row 12, change the Rate to **765**. For the rest of the columns, fill the formulas down from the row above to row 12.
11. Delete **row 22**.
12. Select **row 15** and hide the row.
13. Select **column B** and hide the column.
14. Select the cell range **A17:J24**.
15. On the HOME tab, in the Clipboard group, click **Copy**.
16. Right-click cell **A27**.
17. In the Paste Options menu, click **Transpose**. Adjust the column widths, if necessary. Your worksheet should look like the one shown in Figure 9-1.
18. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
19. Save and close the file, and exit Excel.

Figure 9-1

Whole Grains Bread

Home Office Payroll

Salaried Employees

Employee Name	Rate	Regular Hours	Gross Pay	Fed Tax	SS Tax	State Tax	Net Pay
Anthony Splendoria	$ 2,175.00	40.00	$2,175.00	$ 543.75	$ 169.65	$ 65.25	$1,396.35
Eileen Costello	$ 1,895.00	40.00	$1,895.00	$ 473.75	$ 147.81	$ 56.85	$1,216.59
Carol Chen	$ 895.00	40.00	$ 895.00	$ 223.75	$ 69.81	$ 26.85	$ 574.59
Marty Gonzales	$ 684.00	40.00	$ 684.00	$ 171.00	$ 53.35	$ 20.52	$ 439.13
Maria Nachez	$ 1,665.00	40.00	$1,665.00	$ 416.25	$ 129.87	$ 49.95	$1,068.93
Mika Gritada	$ 1,023.00	40.00	$1,023.00	$ 255.75	$ 79.79	$ 30.69	$ 656.77
Vickie Helms	$ 765.00	40.00	$ 765.00	$ 191.25	$ 59.67	$ 22.95	$ 491.13
Randall Lohr	$ 1,545.00	40.00	$1,545.00	$ 386.25	$ 120.51	$ 46.35	$ 991.89
Abe Rittenhouse	$ 1,231.00	40.00	$1,231.00	$ 307.75	$ 96.02	$ 36.93	$ 790.30

Hourly Employees

Employee Name	Rate	Regular Hours	Overtime Hours	Gross Pay	Fed Tax	SS Tax	State Tax	Net Pay
Thomas Cortese	$ 8.25	40.00	2.00	$ 354.75	$ 53.21	$ 27.67	$ 10.64	$ 263.22
Javier Cortez	$ 7.75	40.00	3.00	$ 344.88	$ 51.73	$ 26.90	$ 10.35	$ 255.90
Allen Gaines	$ 7.25	40.00	6.00	$ 355.25	$ 53.29	$ 27.71	$ 10.66	$ 263.60
Freda Gage	$ 8.00	40.00	3.00	$ 356.00	$ 53.40	$ 27.77	$ 10.68	$ 264.15
Isiah Herron	$ 10.95	40.00	5.50	$ 528.34	$ 79.25	$ 41.21	$ 15.85	$ 392.03
Thomas Kaminski	$ 9.75	40.00	4.00	$ 448.50	$ 67.28	$ 34.98	$ 13.46	$ 332.79
Chris Nakao	$ 11.25	40.00	3.00	$ 500.63	$ 75.09	$ 39.05	$ 15.02	$ 371.46

Employee Name	Javier Cortez	Allen Gaines	Freda Gage	Isiah Herron	Thomas Kaminski	Chris Nakao
Employee ID	21154	23455	27855	33252	37881	29958
Rate	$ 7.75	$ 7.25	$ 8.00	$ 10.95	$ 9.75	$ 11.25
Regular Hours	40.00	40.00	40.00	40.00	40.00	40.00
Overtime Hours	3.00	6.00	3.00	5.50	4.00	3.00
Gross Pay	$ 344.88	$ 355.25	$ 356.00	$ 528.34	$ 448.50	$ 500.63
Fed Tax	$ 51.73	$ 53.29	$ 53.40	$ 79.25	$ 67.28	$ 75.09
SS Tax	$ 26.90	$ 27.71	$ 27.77	$ 41.21	$ 34.98	$ 39.05
State Tax	$ 10.35	$ 10.66	$ 10.68	$ 15.85	$ 13.46	$ 15.02
Net Pay	$ 255.90	$ 263.60	$ 264.15	$ 392.03	$ 332.79	$ 371.46

Lesson 10

Sheet, Display, and Print Operations

➤ What You Will Learn

Software Skills A few of the options available for adjusting a printout make a great difference in how easy it is to read the worksheet data. Repeating rows or columns with labels on multipage printouts ensures that the data will be identified on every page; choosing the right page orientation ensures enough columns will fit on screen; and scaling a printout to fit to a specified number of pages helps ensure that rows or columns aren't "orphaned" from the rest of the data. You might also want to display and print formulas to review them and preview the worksheet so you can see how it will look when printed.

What You Can Do

Displaying, Printing, and Hiding Formulas

- The **Show Formulas** command displays formulas in cells in which they are entered rather than formula results.
- Showing formulas enables you to review the worksheet to ensure that the formulas refer to the correct cells and ranges and accurately perform the desired calculations.
- Print the worksheet with the formulas displayed to create a printout of the formulas for later reference.
- Use the Show Formulas button in the Formula Auditing group on the FORMULAS tab to turn formula display on and off. You also can press CTRL + `.

  ✓ *The accent grave character (`) is on the same key as the tilde, typically found to the left of the 1 on the row of numbers at the top of the keyboard or beside the Spacebar in rarer cases.*

WORDS TO KNOW

Orientation
The position for displaying and printing text either horizontally across the shorter side of a page, the default Portrait orientation, or along the wider side of the page, Landscape orientation.

Print titles
Row and column labels that reprint on each page of a printout.

Scale
Adjust the size proportionately.

Show Formulas
A command that enables you to display the formulas in a worksheet so that you can check them.

Try It! Displaying, Printing, and Hiding Formulas

1. Start Excel, if necessary, and open the **E10Try** file from the data files for this lesson.
2. Save the file as **E10Try_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Scroll down so that row 105 is visible.
4. Click FORMULAS > Show Formulas .
5. Click FILE > Print.
6. Under Settings, click No Scaling > Custom Scaling > Fit Sheet on One Page.

✓ *It's often necessary to scale the sheet when formulas are displayed because the formula display makes the columns wider.*

7. **With your teacher's permission**, print the worksheet by clicking the Print button. Otherwise, click the Back button .
8. Press CTRL + ` to toggle off the formula display.

✓ *The ` is usually above the TAB key.*

9. Save the **E10Try_xx** file, and leave it open to use in the next Try It.

Formulas displayed in worksheet

	A	B	C	D	E	F
94	KLAC	KLA-Tencor	32.25	1:29pm	5.482B	3.356
95	MGM	MGM Resorts International	12.42	1:29pm	5.481B	-37.953
96	CEA	China Eastern Air	48.25	1:12pm	5.441B	0
97	FLS	Flowserve Corp.	96.88	1:29pm	5.431B	25.771
98	LM	Legg Mason Inc.	33.09	1:29pm	5.411B	3.915
99	RDY	Dr. Reddy's Labor	31.6	1:28pm	5.335B	2.587
100	AIG	American International	39.49	1:29pm	5.334B	-9.384
101	ATI	Allegheny Technology	53.28	1:29pm	5.250B	2.216
102						
103						
104						
105	Averages		=AVERAGE(C4:C101)			=AVERAGE(F4:F101)
106						
107						

Printing Titles

- Using the Sheet tab of the Page Setup dialog box, you can specify rows or columns with the **print titles** that need to appear on every page of a printout.

  ✓ *Print titles do not affect or replace worksheet headers or footers.*

- You also can use the Print Titles button in the Page Setup group of the PAGE LAYOUT tab on the Ribbon to add print titles.

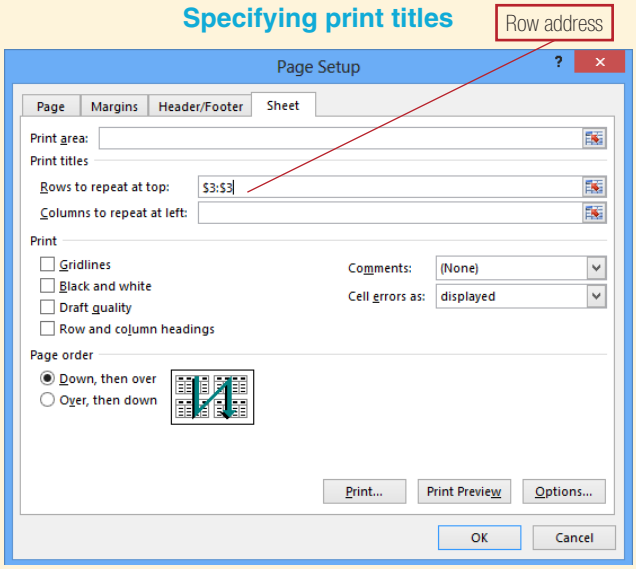
  ✓ *Click the dialog box launcher for the Page Setup group to open the Page Setup dialog box.*

- The row and column labels make it possible for you to identify the data on every page, which is useful when the sheet has many rows or many columns of information.

Try It! Printing Titles

1. In the **E10Try_xx** file, add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to Normal view.
2. Click PAGE LAYOUT > Print Titles.
3. On the Sheet tab in the Page Setup dialog box, click in the Rows to repeat at top text box, click the Collapse Dialog box button, and then click the row 3 row header. The row address for row 3, which holds the labels for the columns of data, appears in the box.
4. Click OK.
5. Save the **E10Try_xx** file, and leave it open to use in the next Try It.

Specifying print titles



Changing Orientation

- You can change the **orientation** to help a worksheet fit better on paper.
- The default orientation is Portrait (tall or vertical).
- Changing to Landscape (wide or horizontal) orientation allows for more columns to fit on each page when a worksheet has many columns.
- Change orientation on the Page tab of the Page Setup dialog box, or use the Orientation button choices in the Page Setup group of the PAGE LAYOUT tab.

Try It! Changing Orientation

1. In the **E10Try_xx** file, click PAGE LAYOUT > Orientation > Landscape.
2. Save the **E10Try_xx** file, and leave it open to use in the next Try It.

Scaling to Fit

- You can **scale** the data to print to a larger or smaller size to help it fill a page or print on fewer pages.
- Specify scaling in the Scaling section of the Page tab of the Page Setup dialog box.
- You can scale the printout to a percentage of normal size, or specify how many pages wide and tall it should be.

  ✓ *For many worksheets, changing to Landscape orientation and then scaling to 1 page wide prevents orphaned columns on a nearly blank page.*

- You also can use the choices in the Scale to Fit group on the Page Layout tab to specify the printout Width and Height in number of pages or a Scale percentage.

Try It! **Scaling to Fit**

1. In the **E10Try_*xx*** file, click the Page Layout tab, and then click the dialog box launcher for the Scale to Fit group.
2. On the Page sheet, click the Fit to button, and then adjust the accompanying text box entries to set up the printout to be 1 page(s) wide by 2 tall.
3. Click the Print Preview button.
4. At the bottom of Backstage view, click the Next Page (right arrow) button to display the second page of the printout.
5. Save the **E10Try_*xx*** file, and leave it open to use in the next Try It.

Previewing and Printing a Worksheet

- You may print the selected worksheet(s), an entire workbook, or a selected data range.
  - ✓ *You learn how to print an entire workbook and a selected range in Lesson 20.*
- When you choose FILE > Print, the the Backstage view automatically shows you a preview of the printout. Review it carefully and adjust print settings there before printing.
- Settings you can change appear in the middle column of the Backstage view. These include specifying how many copies to print, what printer to use, page orientation, page size, margins, and scaling.

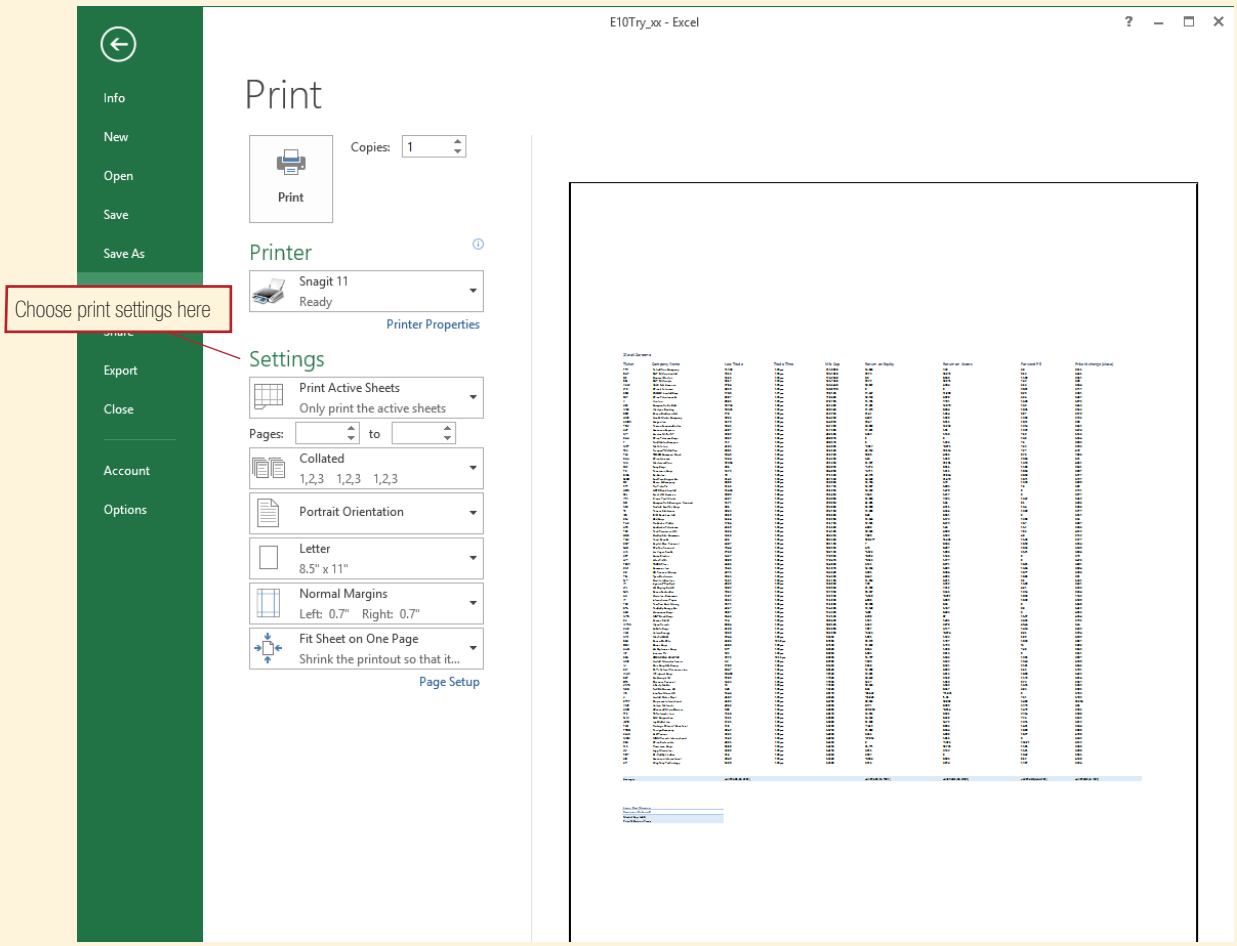
Try It! **Previewing and Printing a Worksheet**

1. In the **E10Try_*xx*** file, click FILE > Print.
2. In the Settings area, in the Orientation option, check that Portrait Orientation is selected.
3. Under Settings, click the Page Setup link.
4. In the Page Setup dialog box, click the Margins tab.
5. Click the Horizontally and Vertically check boxes under Center on page to select them, and then click OK.
6. Review the changes in the preview.
7. **With your teacher's permission,** print the worksheet by clicking the Print button. Otherwise, click the Back button to return to your document.
8. Save and close the file, and exit Excel.
   - ✓ *Notice that when you save a file from the Backstage view, you exit the Backstage view.*

(continued)

Try It! Previewing and Printing a Worksheet *(continued)*

Preparing and previewing before printing



Lesson 10—Practice

In this project, you will review and print formulas, change the page orientation and scaling, and preview and print a worksheet using the skills you learned in this lesson.

DIRECTIONS

1. Start Excel, if necessary, and open the **E10Practice** file from the data files for this lesson.
2. Save the file as **E10Practice_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Click **FORMULAS** > **Show Formulas**  . The formulas instead of the formula results are now displayed on the worksheet.
5. Click **FILE** > **Print**.
6. Under Settings, click **Portrait Orientation** > **Landscape Orientation**.
7. Under Settings, click **No Scaling** > **Fit Sheet on One Page**.
8. **With your teacher's permission**, print the chart sheet. Submit the printout or the file for grading as required.
9. Save and close the file, and exit Excel.

Lesson 10—Apply

You are the Chief Financial Officer for Hyland Manufacturing. You are finalizing the company's balance sheet for fiscal year 2014. You want to review and print the formulas, and preview and print the finished worksheet.

DIRECTIONS

1. Start Excel, if necessary, and open the **E10Apply** file from the data files for this lesson.
2. Save the file as **E10Apply_xx** in the location where your teacher instructs you to store the files for this lesson.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Display formulas instead of formula results on the worksheet.
5. Change the print settings so that the sheet fits on one page.
6. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required.
7. Save and close the file, and exit Excel.

End-of-Chapter Activities

➤ Excel Chapter 1—Critical Thinking

Safety Consulting Services

You have recently started your own business providing safety consulting services to large businesses. You need to create a worksheet to help you track, report, and bill work for each client at two billing rates. You will create and format the sheet, and then enter example data to test how it works.

DIRECTIONS

1. Start Excel, if necessary, and create a new, blank file if necessary.
2. Save the file as **ECT01_*xx*** in the location where your teacher instructs you to store the files for this chapter.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Enter the following data:

A1	**Timesheet**
A3	**Client Name**
A5	**Rate A**
A6	**Rate B**
B5	**50**
B6	**75**
D5	**Weekly Retainer**
F5	**1750**
A8	**Day**
B8	**Date**
C8	**Hours Rate A**
D8	**Hours Rate B**
E8	**Amount Rate A**
F8	**Amount Rate B**
G8	**Total**
D17	**Total**
D18	**Percentage of Retainer**

5. Enter **Monday** in cell **A9**. Fill the days Monday through Sunday down through cell A15.
6. Enter **4/2/14** in cell **B9**. Fill the date entry down the column through 4/8/2014 in cell B15.
7. Insert a column to the left of **column C**.
8. Enter **Monday 4/2/2014** in cell **C9** of the new column C.
9. Enter **Tuesday 4/3/2014** in cell **C10**.
10. Use Flash Fill to fill the series in the range **C9:C15** with the day and date combined.
11. Delete **column C**.
12. Enter the formula **=C9*$B$5** in cell **E9**. Fill the formula down through cell E15.
13. Enter the formula **=D9*$B$6** in cell **F9**. Fill the formula down through cell F15.
14. In cell **G9**, enter a formula that adds the values in cells **E9** and **F9**. Fill the formula down through cell G15.
15. In cell **E17**, enter a formula with the SUM function that totals the values above. Fill the formula right through cell **G17**.
16. In cell **G18**, enter a formula that divides the overall total in cell **G17** by the weekly retainer amount in cell **F5**.
17. Apply the **Ion** theme to the file.
18. Apply the **Title** cell style to cell A1, and merge and center cells **A1:G1**.
19. Apply the **60%-Accent1** style to the label in cell **A3**, then copy the formatting to the other labels in the document (except for the dates).
20. Wrap and center align the range **A8:G8**. Adjust column widths as necessary to display all text.
21. Merge the range **D18:F18**.
22. In cells **B5**, **B6**, and **F5**, apply the **Currency** format with zero decimal places to the entries.
23. Apply the **Currency** format with two decimal places to all the other cells calculating dollar values.

24. Format cell **G18** as a **Percentage** with one decimal place.
25. Enter the following sample data to test the sheet:

    C9 **2.25**
    D9 **4.5**
    C10 **2**
    D10 **1.25**
26. **With your teacher's permission**, print the worksheet. Submit the printout or the file for grading as required. Your worksheet should look like the one in Illustration 1A.
27. Save and close the file, and exit Excel.

Illustration 1A

	A	B	C	D	E	F	G
1	Timesheet						
2							
3	Client Name						
4							
5	Rate A	$50		Weekly Retainer		$1,750	
6	Rate B	$75					
7							
8	Day	Date	Hours Rate A	Hours Rate B	Amount Rate A	Amount Rate B	Total
9	Monday	4/2/2014	2.25	4.50	$112.50	$337.50	$450.00
10	Tuesday	4/3/2014	2.00	1.25	$100.00	$93.75	$193.75
11	Wednesday	4/4/2014			$0.00	$0.00	$0.00
12	Thursday	4/5/2014			$0.00	$0.00	$0.00
13	Friday	4/6/2014			$0.00	$0.00	$0.00
14	Saturday	4/7/2014			$0.00	$0.00	$0.00
15	Sunday	4/8/2014			$0.00	$0.00	$0.00
16							
17				Total	$212.50	$431.25	$643.75
18				Percentage of Retainer			36.8%

➤ Excel Chapter 1—Portfolio Builder

Personal Budget

You want to save for a car and need to get a better handle on your income and expenses in order to do so. In this project, you finish a basic budget worksheet by adding formulas and by making sure items are arranged properly. You'll apply attractive formatting and adjust the print settings.

DIRECTIONS

1. Start Excel, if necessary, and open the **EPB01** file from the data files for this chapter.
2. Save the file as **EPB01_*xx*** in the location where your teacher instructs you to store the files for this chapter.
3. Add a header that has your name at the left, the date code in the center, and the page number code at the right, and change back to **Normal** view.
4. Insert a column to the left of **column C**.
5. Use Flash Fill to fill the range **C9:C12** with the combined text from columns A and B.
6. Copy the data from the range **C9:C12** and paste it to the range **A9:A12**.
7. Resize **column A**.
8. Delete **columns B** and **C**.
9. Enter the formula **=B5+B6** in cell **B7**. Fill the formula across through cell G7.
10. In cell **B13**, enter a formula that sums **B9:B12**. Fill the formula across through cell G13.
11. Insert a blank row above the *Expenses* row.
12. Review the items in the *Expenses* section. You realize that the Gifts row really belongs in the *Income* area.
13. Insert a new row 6, drag-and-drop row 13 to row 6, and then delete the blank row 13.
14. Click cell **B8**, and review its formula in comparison with the original formula you created in step 4. Because it totals specific cells, it does not include the Gifts data that you have moved to the *Income* section. Edit the formula to correct the calculation, and then copy or fill it across the row.
15. In cell **B15**, enter a formula that subtracts the expense subtotal from the income subtotal. Fill the formula across through cell G15.
16. Add a blank row above the *Surplus* row.
17. Apply a different theme to the workbook.
18. Format the labels as desired and apply the **Accounting** format with zero decimal places to the numeric data.
19. Hide row 2.
20. Display formulas.
21. Preview the sheet, scaling to fit the sheet on one page with the formulas displayed.
22. **With your teacher's permission**, print the worksheet. Submit the printouts or the file for grading as required.
23. Save and close the file, and exit Excel.