Starting Excel 2007

In order to use a program, you must start—or launch—it first.

Windows XP

1. Click the Windows **Start** button.

   The Start menu appears.

2. Point to **All Programs**.

   A menu appears. The programs and menus listed here will depend on the programs installed on your computer.

3. Point to **Microsoft Office**.

4. Select **Microsoft Office Excel 2007**.

   The Excel program screen appears.

Windows Vista

1. Click the Windows **Start** button.

   The Start menu appears.

2. Click **All Programs**.

   The left pane of the Start menu displays the programs and menus installed on your computer.

3. Click **Microsoft Office**.

4. Select **Microsoft Office Excel 2007**.

   The Excel 2007 program screen appears.

   Trap: Depending on how your computer is set up, the procedure for starting Excel 2007 might be a little different from the one described here.

Tips

✓ If you use Excel 2007 frequently, you might consider pinning it to the Start menu. To do this, right-click **Microsoft Office Excel 2007** in the All Programs menu and select **Pin to Start Menu**.

Exercise

- **Exercise File:** None required.
- **Exercise:** Review the new features in Microsoft Office Excel 2007.

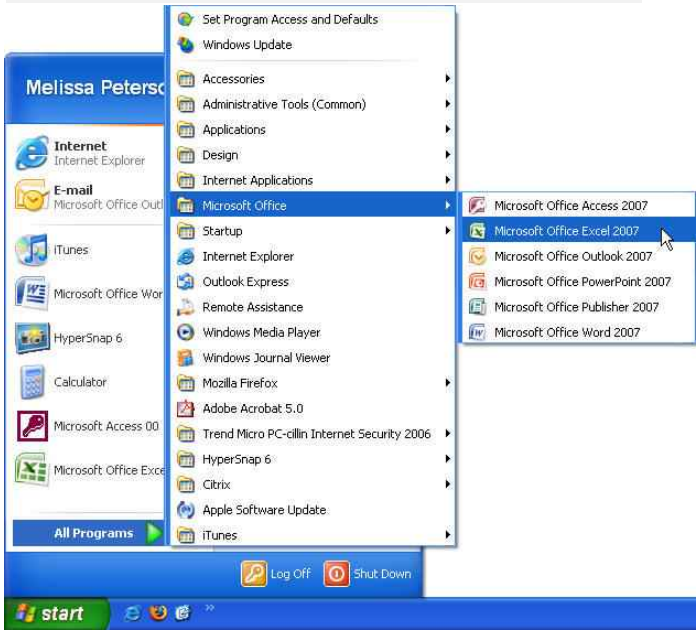


Figure 1-1: The All Programs menu in Windows XP.

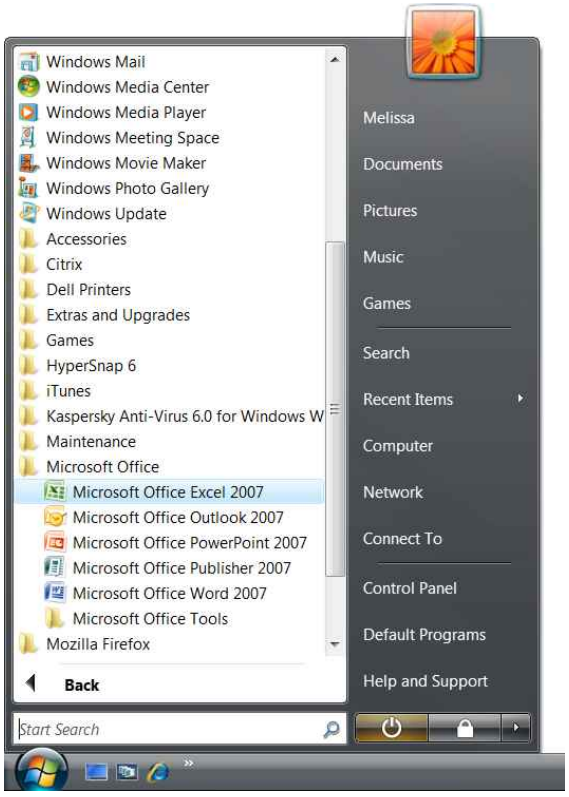


Figure 1-2: The All Programs menu in Windows Vista.

What's New in Excel 2007

Excel 2007 is very different from previous versions. The table below gives you an overview of what to expect.

Exercise

- **Exercise File:** None required.
- **Exercise:** Review the new features in Microsoft Office Excel 2007.

Table 1-1: What's New in Excel 2007

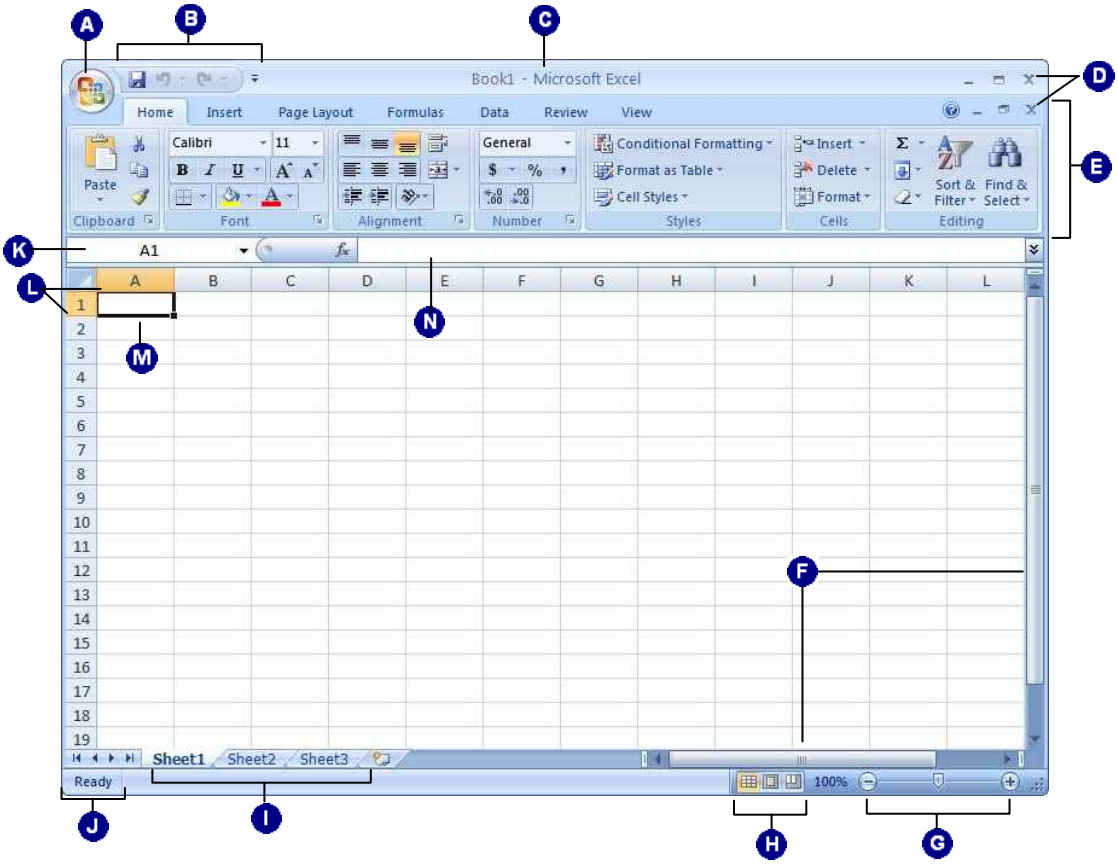
New user interface	The new results-oriented user interface (UI) is the most noticeable change in Excel 2007. Traditional menus and toolbars have been replaced by the Ribbon, a single mechanism that makes all the commands needed to perform a task readily available.
Live Preview	Allows you to preview how a formatting change will look before applying it. Simply point to the selection on the Ribbon or Mini Toolbar and Excel 2007 shows you a preview of what your worksheet would look like if the selected changes were applied.
XML compatibility	The new Excel XML format (.xlsx) is much smaller in file size and makes it easier to recover damaged or corrupted files. Files based on XML have the potential to be more robust and integrated with information systems and external data.
Improved styles and themes	Predefined styles and themes let you change the overall look and feel of a worksheet in just a few clicks. With Office themes, you can apply predefined formatting to workbooks and then share them with Word and PowerPoint to give your Office documents a unified look. You can even create your own corporate theme. Styles can be used to format specific items in Excel, such as tables and charts.
SmartArt	The new SmartArt graphics feature offers new diagram types and more layout options, and lets you convert text such as a bulleted list into a diagram.
Save as PDF	Now you can install an Excel add-in that allows you to save a workbook as a PDF without using third-party software. PDF format allows you to share your worksheet with users on any platform.
Document Inspector	Removes comments, tracked changes, metadata (document history such as the author and editors) and other information that you don't want to appear in the finished worksheet.
Digital Signature	Adding a digital signature to a workbook prevents inadvertent changes, ensuring that your content cannot be altered.
Better sharing capabilities	Microsoft Office SharePoint Server 2007 makes it easier to share and manage worksheets from within Excel.
Better conditional formatting	Conditional formatting allows you to analyze Excel data with just a few clicks. You can apply gradient colors, data bars, and icons to cells to visually represent relationships between your data.
Easier formula writing	An expandable formula bar and Function AutoComplete are among several features that make formula writing easier in Excel 2007.
Enhanced sorting and filtering	Now you can sort data by color and by up to 64 levels. You can also filter by color or date, display more than 1000 items in the AutoFilter drop-down list, filter by multiple items, and filter PivotTable data.
Improved tables (formerly Excel lists)	Among the improvements to tables: table header rows can be turned on or off; calculated columns have been added so you only have to enter a formula once; AutoFilter is turned on by default; and structured references allow you to use table column header names in formulas in place of cell references.
Better charts	Visual chart element pickers allow you to quickly edit chart elements such as titles and legends, OfficeArt allows you to format shapes with modern-looking 3-D effects, and clearer lines and charts make charts easier to read. In addition, sharing charts with other Office programs is easier than ever, because Word and PowerPoint now share Excel's chart features.
New PivotTable interface	With the new PivotTable user interface, dragging data to drop zones has been replaced by clicking the fields you want to see. You can now undo PivotTable actions, expand or collapse parts of the PivotTable with plus and minus drill-down indicators, and sort and filter data using simple buttons.
Easier connection to external data	Quicklaunch allows you to select from a list of data sources that your administrator has made available, instead of having to know the server or database names, and a connection manager allows you to view all the connections in a workbook.
New Page Layout view	With a new Page Layout view, you can see how your worksheet will look in a printed format while you work.

Understanding the Excel Program Screen

The Excel 2007 program screen may seem confusing and overwhelming at first. This lesson will help you become familiar with the Excel 2007 program screen as well as the new user interface.

Exercise Notes

- **Exercise File:** None required.
- **Exercise:** Understand and experiment with the different parts of the Microsoft Office Excel 2007 screen.



A	**Office Button:** Replaces the File menu found in previous versions of Excel.	H	**View buttons:** Use these buttons to quickly switch between Normal, Page Layout, and Page Break Preview views.
B	**Quick Access Toolbar:** Contains common commands such as Save and Undo. You can add more commands as well.	I	**Worksheet tabs:** Workbooks have three worksheets by default. You can move from one worksheet to another by clicking the worksheet tabs.
C	**Title bar:** Displays the name of the workbook you are working on and the name of the program you are using.	J	**Status bar:** Displays messages and feedback on the current state of Excel. Right-click the status bar to configure it.
D	**Close button:** Click the close button in the Title bar to exit the Excel program entirely, or click the close button in the Ribbon to close only the current workbook.	K	**Name box:** Displays the active cell address or object name. Click the list arrow to enter formulas.
E	**Ribbon:** The tabs and groups on the Ribbon replace the menus and toolbars found in previous versions of Excel.	L	**Row and column headings:** Cells are organized and referenced by row and column headings (for example, cell A1).
F	**Scroll bars:** Use the vertical and horizontal scroll bars to view different parts of the worksheet.	M	**Active cell:** You can enter or edit data in the active cell.
G	**Zoom slider:** Click and drag the slider to zoom in or out of a window. You can also use the + and – buttons.	N	**Formula Bar:** Allows you to view, enter, and edit data in the active cell. Displays values or formulas in the cell.

Understanding the Ribbon

Excel 2007 provides easy access to commands through the Ribbon, which replaces the menus and toolbars found in previous versions of Excel. The Ribbon keeps commands visible while you work instead of hiding them under menus or toolbars.

The Ribbon is made up of three basic components:

Tabs

Commands are organized into *tabs* on the Ribbon. Each tab contains a different set of commands. There are three different types of tabs:

- **Command tabs:** These tabs appear by default whenever you open the Excel program. In Excel 2007, the Home, Insert, Page Layout, Formulas, Data, Review, and View tabs appear by default.
- **Contextual tabs:** Contextual tabs appear whenever you perform a specific task and offer commands relative to only that task. For example, whenever you insert a table, the Design tab appears on the Ribbon.
- **Program tabs:** If you switch to a different authoring mode or view, such as Print Preview, program tabs replace the default command tabs that appear on the Ribbon.

Groups

The commands found on each tab are organized into *groups* of related commands. For example, the Font group contains commands used for formatting fonts. Click the Dialog Box Launcher () in the bottom-right corner of a group to display even more commands. Some groups also contain galleries that display several formatting options.

Buttons

One way to issue a command is by clicking its *button* on the Ribbon. Buttons are the smallest element of the Ribbon.

Tips

- ✓ You can hide the Ribbon so that only tab names appear, giving you more room in the program window. To do this, double-click the currently displayed command tab. To display the Ribbon again, click any tab.
- ✓ Based on the size of the program window, Excel changes the appearance and layout of the commands within the groups.

Exercise

- **Exercise File:** None required.
- **Exercise:** Click each tab on the Ribbon to view its commands.

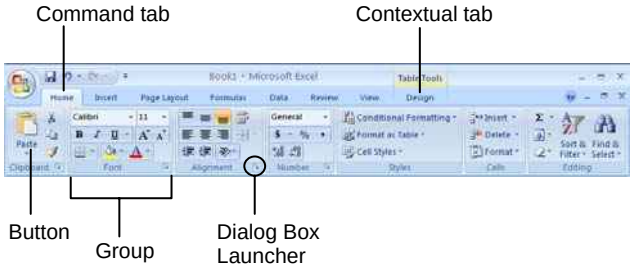


Figure 1-3: Ribbon elements.

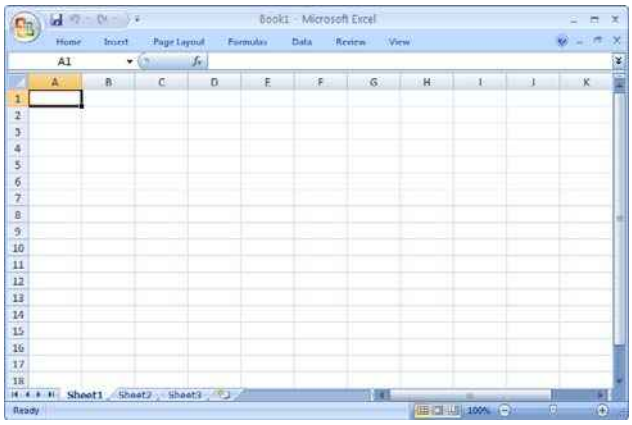


Figure 1-4: Hiding the Ribbon gives you more room in the program window.

Using the Office Button and Quick Access Toolbar

Near the Ribbon at the top of the program window are two other tools you can use to give commands in Excel 2007: The Office Button and the Quick Access Toolbar.

Office Button

The *Office Button* appears in the upper-left corner of the program window and contains basic file management commands including New, which creates a new file; Open, which opens a file; Save, which saves the currently opened file; and Close, which closes the currently opened file.

Tips

✓ The Office Button replaces the File menu found in previous versions of Excel.

Quick Access Toolbar

The *Quick Access Toolbar* appears to the right of the Office Button and provides easy access to the commands you use most frequently. By default, the Save, Undo and Redo buttons appear on the toolbar; however, you can customize this toolbar to meet your needs by adding or removing buttons.

1. Click the **Customize Quick Access Toolbar** button at the end of the Quick Access Toolbar.

   A list of commands you can add to the Quick Access Toolbar appears.

2. Select the commands you want to add or remove.

   The commands are added as buttons on the Quick Access Toolbar.

Tips

✓ You can change where the Quick Access Toolbar appears in the program window. To do this, click the **Customize Quick Access Toolbar** button at the end of the Quick Access Toolbar. Select **Show Below the Ribbon** or **Show Above the Ribbon**, depending on the toolbar's current location.

Exercise

- **Exercise File:** None required.
- **Exercise:** Click the Office Button to open it. Move the Quick Access Toolbar below the Ribbon, then move it back above the Ribbon.

Figure 1-5: The Office Button menu.

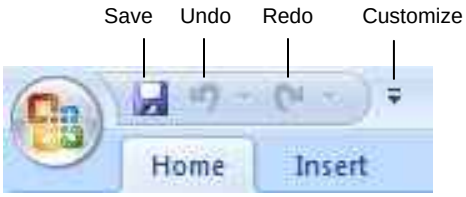


Figure 1-6: The Quick Access Toolbar.

Using Keyboard Commands

Another way to give commands in Excel 2007 is using the keyboard. There are two different types of keyboard commands in Excel 2007: keystroke shortcuts and Key Tips.

Keystroke shortcuts

Without a doubt, *keystroke shortcuts* are the fastest way to give commands in Excel 2007. They're especially great for issuing common commands, such as saving a workbook.

In order to issue a command using a keystroke shortcut, you simply press a combination of keys on your keyboard. For example, rather than clicking the Copy button on the Ribbon to copy a cell, you could press and hold the copy keystroke shortcut, <Ctrl> + <C>.

Key Tips

New in Excel 2007, *Key Tips* appear whenever you press the <Alt> key. You can use Key Tips to perform just about any action in Excel, without ever having to use the mouse.

To issue a command using a Key Tip, first press the <Alt> key. Tiny letters and numbers, called *badges*, appear on the Office Button, the Quick Access Toolbar, and all of the tabs on the Ribbon. Depending on the tab or command you want to select, press the letter or number key indicated on the badge. Repeat this step as necessary until the desired command has been issued.

Exercise

- **Exercise File:** None required.
- **Exercise:** Memorize some common keystroke shortcuts. Then view Key Tips in the program.

Table 1-2: Common Keystroke Shortcuts

<Ctrl> + <O>	Opens a workbook.
<Ctrl> + <N>	Creates a new workbook.
<Ctrl> + <S>	Saves the current workbook.
<Ctrl> + <P>	Prints the worksheet.
<Ctrl> + <B>	Toggles bold font formatting.
<Ctrl> + <I>	Toggles italic font formatting.
<Ctrl> + <C>	Copies the selected cell, text or object.
<Ctrl> + <X>	Cuts the selected cell, text or object.
<Ctrl> + <V>	Pastes the selected cell, text or object.
<Ctrl> + <Home>	Moves the cell pointer to the beginning of the worksheet.
<Ctrl> + <End>	Moves the cell pointer to the end of the worksheet.

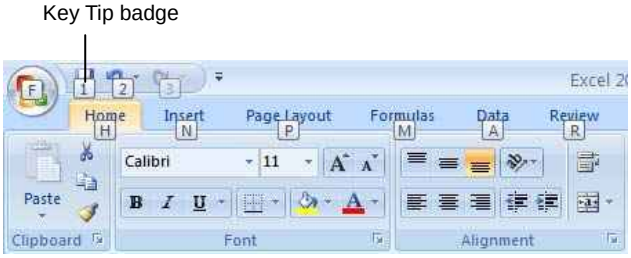


Figure 1-7: Press the <Alt> key to display Key Tips.

Using Contextual Menus and the Mini Toolbar

There are two tools that you can use in Excel 2007 that make relevant commands even more readily available: contextual menus and the Mini Toolbar.

Exercise

- **Exercise File:** None required.
- **Exercise:** Open a contextual menu in the main area and other parts of the program window.

Contextual menus

A *contextual menu* displays a list of commands related to a specific object or area. To open a contextual menu:

1. Right-click an object or area of the worksheet or program screen.

   A contextual menu appears, displaying commands that are relevant to the object or area that you right-clicked.

2. Select an option from the contextual menu, or click anywhere outside the contextual menu to close it without selecting anything.

Figure 1-8: A contextual menu.

The Mini Toolbar

New in Excel 2007 is the *Mini Toolbar*, which appears when you select text or data within a cell or the formula bar, and contains common text formatting commands.

1. Select text or data within a cell or the formula bar.

   The Mini Toolbar appears above the text or data you selected.

   Trap: Sometimes the Mini Toolbar can be hard to see due to its transparency. To make the Mini Toolbar more visible, point to it.

   Tip: A larger version of the Mini Toolbar also appears along with the contextual menu whenever you right-click an object or area.

2. Click the desired command on the Mini Toolbar or click anywhere outside the Mini Toolbar to close it.

   Tip: If you don't want the Mini Toolbar to appear every time, click the **Office Button** and click the **Excel Options** button. Click the **Personalize** category, uncheck the **Show Mini Toolbar on selection** check box, and click **OK**.

Figure 1-9: The Mini Toolbar.

Using Help

When you don't know how to do something in Excel 2007, look up your question in the Excel Help files. The Excel Help files can answer your questions, offer tips, and provide help for all of Excel's features.

Search for help

1. Click the **Microsoft Office Excel Help** button () on the Ribbon.

   The Excel Help window appears.

   Other Ways to Open the Help window: Press **<F1>**.

2. Type what you want to search for in the "Type words to search for" box and press **<Enter>**.

   A list of help topics appears.

3. Click the topic that best matches what you're looking for.

   Excel displays information regarding the selected topic.

Browse for help

1. Click the **Microsoft Office Excel Help** button () on the Ribbon.

   The Excel Help window appears.

2. Click the category that you want to browse.

   The topics within the selected category appear.

3. Click the topic that best matches what you're looking for.

   Excel displays information regarding the selected topic.

Choose the Help source

If you are connected to the Internet, Excel 2007 retrieves help from the Office Online database by default. You can easily change this to meet your needs.

1. Click the **Search** button list arrow in the Excel Help window.

   A list of help sources appears.

2. Select an option from the list.

   Now you can search from that source.

Exercise

- **Exercise File:** None required.
- **Exercise:** Search the term "formatting numbers". Browse topics in the "Worksheet and Excel table basics" category of Help. Search the term "formatting numbers" again using help files from this computer only.

Figure 1-10: The Excel Help window.

Table 1-3: Help buttons

	Back	Click here to move back to the previous help topic.
	Forward	Click here to move forward to the next help topic.
	Home	Click here to return to the Help home page.
	Print	Click here to print the current help topic.
	Change Font Size	Click here to change the size of the text in the Help window.
	Show Table of Contents	Click here to browse for help using the Table of Contents.
	Keep On Top	Click here to layer the Help window so that it appears behind all other Microsoft Office programs.

Tips

- ✓ When a standard search returns too many results, try searching offline to narrow things down a bit.
- ✓ Office 2007 offers enhanced ScreenTips for many buttons on the Ribbon. You can use these ScreenTips to learn more about what a button does and, where available, view a keystroke shortcut for the command. If you see the message “Press F1 for more help”, press <F1> to get more information relative to that command.
- ✓ When you are working in a dialog box, click the **Help** button () in the upper right-hand corner to get help regarding the commands in the dialog box.

Exiting Excel 2007

When you're finished using Excel 2007, you should exit it. *Exiting* a program closes it until you need to use it again.

1. Click the **Office Button**.

2. Click the **Exit Excel** button.

The Excel program closes.

Other Ways to Exit Excel:
If there is only one Excel program window open, click the **Close** button in the title bar.

Tips

✓ Having too many programs open at a time could slow down your computer, so it's a good idea to exit all programs that aren't being used.

Exercise

- **Exercise File:** None required.
- **Exercise:** Exit the Microsoft Office Excel 2007 program.

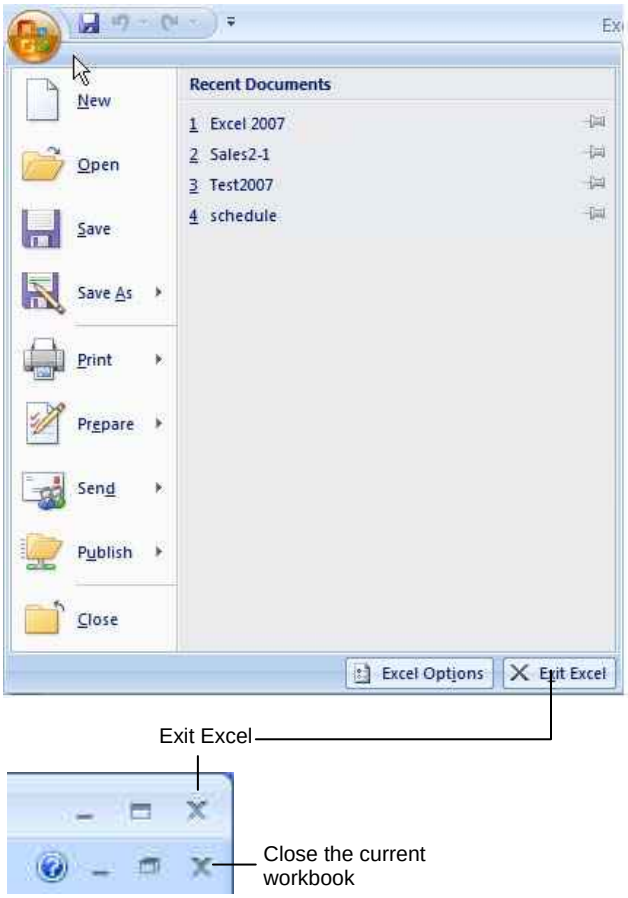


Figure 1-11: Two ways to Exit Excel.

Creating a New Workbook

Creating a new workbook is one of the most basic commands you need to know in Excel. A new workbook automatically appears upon starting Excel, but it's also helpful to know how to create a new workbook within the application. You can create a blank new workbook, such as the one that appears when you open Excel, or you can create a new workbook based on a template.

Create a new blank workbook

1. Click the **Office Button** and select **New**.

   The New Workbook dialog box appears. By default, the Blank Workbook option is already selected.

2. Make sure the **Blank Workbook** option is selected and click **Create**.

   The new blank workbook appears in the Excel application screen.

   Other Ways to Create a Blank Workbook: Double-click the **Blank Workbook** option. Or press **<Ctrl>** + **<N>**.

Create a workbook from a template

1. Click the **Office Button** and select **New**.

   The New Workbook dialog box appears. There are several ways you can create a new workbook from a template. Different categories are listed to the left:

   - **Blank and recent:** This category is selected by default. Select a template in the Recently Used Templates area and click **Create**.
   - **Installed Templates:** Click this category to view templates that were installed on your computer with Microsoft Office. Select the template from which you want to create a new workbook and click **Create**.
   - **My templates:** Select **My Templates** to open a dialog box that displays templates you have created and saved on your computer.
   - **New from existing:** Select **New from Existing** to open a dialog box that allows you to browse for a workbook on your computer that you want to base a new workbook on. This is essentially like creating a copy of an existing file.
   - **Microsoft Office Online:** Click a category to view templates that you can download from Office Online. Find the template you want to download and click **Download**.

Exercise

- **Exercise File:** None required.
- **Exercise:** Create a new blank workbook. Then create a new workbook from a Microsoft Office Online template.

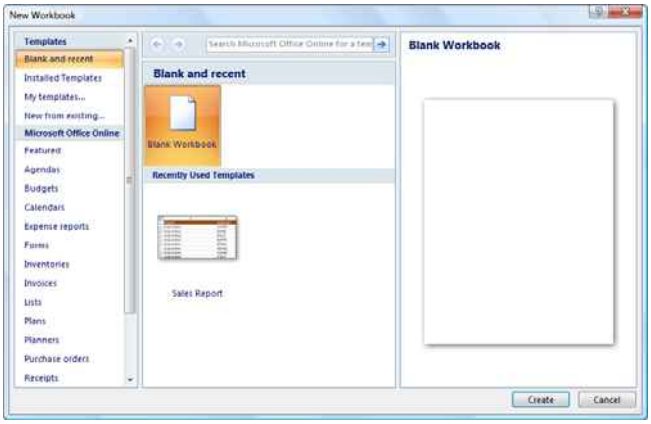


Figure 2-1: The New Workbook dialog box.

Opening a Workbook

Opening a workbook lets you work on a workbook that you or someone else has previously created and then saved. This lesson explains how to open a saved workbook.

Open a workbook

You can locate an Excel file on your computer and simply double-click it to open it, but you can also open a workbook from within the Excel program.

1. Click the **Office Button** and select **Open**.

   The Open dialog box appears. Next, you have to tell Excel where the file you want to open is located.

   Other Ways to Open a Workbook:
   Press **<Ctrl>** + **<O>**.

2. Navigate to the location of the saved file.

   The Open dialog box has several controls that make it easy to navigate to locations and find files on your computer:

   - **Address bar:** Click a link in the Address bar to open it. Click the arrow to the right of a link to open a list of folder within that location. Select a folder from the list to open it.
   - **Favorite Links:** Shortcuts to common locations on your computer, such as the Desktop and Documents Folder.
   - **Search box:** This searches the contents—including subfolders—of that window for the text that you type. If a file's name, file content, tags, or other file properties match the searched text, it will appear in the search results. Search results appear as you enter text in the search box.

3. Select the file you want to open and click **Open**.

   Excel displays the file in the application window.

Tips

- ✓ To open a workbook that has been used recently, click the **Office Button** and select a workbook from the Recent Documents menu.
- ✓ You can pin a workbook to the Recent Documents menu so that it is always available there. Click the **Office Button** and click the **Pin** button next to the workbook that you want to always be available. Click the workbook's **Pin** button again to unpin the workbook from the Recent Documents menu.

Exercise

- **Exercise File:** Sales2-1.xlsx
- **Exercise:** Open a previously-saved workbook.

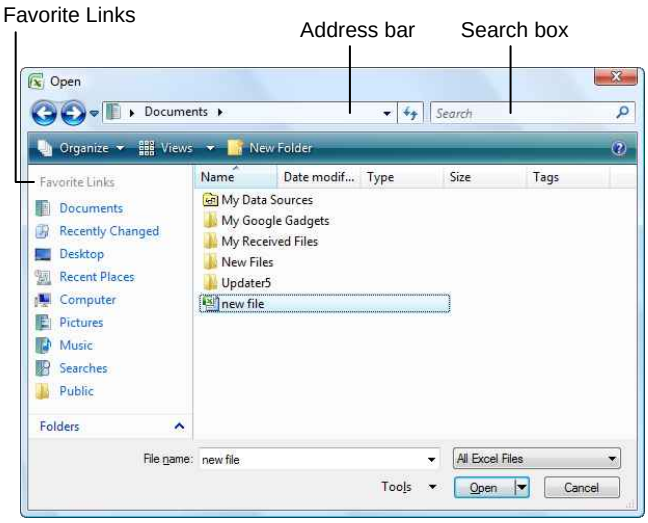


Figure 2-2: The Open dialog box. To open a file, you must first navigate to the folder where it is saved. Most new files are saved in the Documents folder by default.

Navigating a Worksheet

Before you start entering data into a worksheet, you need to learn how to move around in one. You must make a cell active by selecting it before you can enter information in it. You can make a cell active by using:

- **The Mouse:** Click any cell with the white cross pointer.
- **The Keyboard:** Move the cell pointer using the keyboard's arrow keys.

To help you know where you are in a worksheet, Excel displays row headings, indentified by numbers, on the left side of the worksheet, and column headings, identified by letters, at the top of the worksheet. Each cell in a worksheet has its own *cell address* made from its column letter and row number—such as cell A1, A2, B1, B2, etc. You can immediately find the address of a cell by looking at the *Name Box*, which shows the current cell address.

1. Click any **cell** to make it active.

The cell address appears in the name box.

Now that you're familiar with moving the cell pointer with the mouse, try using the keyboard.

2. Press **<Tab>**.

The active cell is one cell to the right of the previous cell. Refer to Table 2-1: Navigation Shortcuts for more information on navigating shortcuts.

Tips

- ✓ Excel 2007 worksheets have 1,048,576 rows and 16,384 columns! To view the off-screen portions of the worksheet, use the horizontal and vertical scroll bars.
- ✓ To select contents within a cell, double-click the cell, then click and drag to select the desired contents.
- ✓ Using the <Ctrl> key with arrow keys is very powerful. These key combinations jump to the edges of data. For example, if you have a group of data in columns A-G and another group in columns R-Z, <Ctrl> + <→> jumps between each group of data.

Exercise Notes

- **Exercise File:** Sales2-1.xlsx
- **Exercise:** Practice moving around in the worksheet using both the mouse and keyboard.

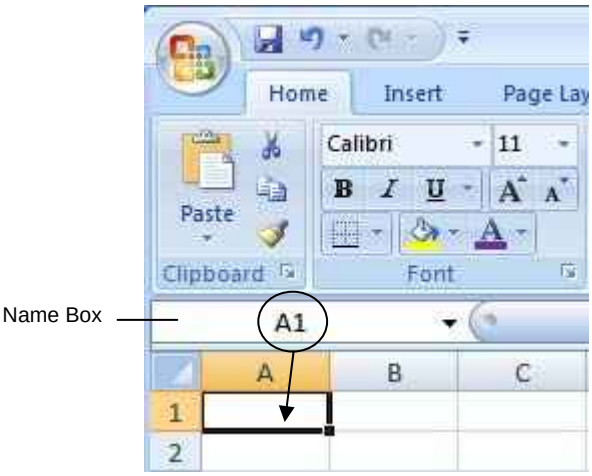


Figure 2-3: A cell address in the Name Box.

Table 2-1: Navigation Shortcuts

Press	To Move
→ or <Tab>	One cell to the right.
← or <Shift> + <Tab>	One cell to the left.
↑ or <Shift> + <Enter>	One cell up.
↓ or <Enter>	One cell down.
<Home>	To column A in the current row.
<Ctrl> + <Home>	To the first cell (A1) in the worksheet.
<Ctrl> + <End>	To the last cell with data in the worksheet.
<Page Up>	Up one screen.
<Page Down>	Down one screen.
<F5> or <Ctrl> + <G>	Opens the Go To dialog box where you can go to a specified cell address.

Entering Labels

Now that you're familiar with worksheet navigation in Excel, you're ready to start entering data. There are two basic types of information you can enter in a cell:

- **Labels:** Any type of text or information not used in calculations.
- **Values:** Any type of numerical data: numbers, percentages, fractions, currencies, dates, or times, usually used in formulas or calculations.

This lesson focuses on labels. Labels are used for worksheet, column, and row headings. They usually contain text, but can also consist of numerical information not used in calculations, such as serial numbers. Excel treats information beginning with a letter as a label and automatically left-aligns it inside the cell.

1. Click a cell where you want to add a label.

Don't worry if the cell already contains text—anything you type will replace the old cell contents.

2. Type the label, such as a row heading, in the cell.

3. Press the **<Enter>** or **<Tab>** key.

The cell entry is confirmed and the next cell down becomes active.

Other Ways to Confirm a Cell Entry:
Click the **Enter** button on the Formula Bar. Or, press the **<Tab>** key.

If the label is too large to fit in the cell, the text spills into the cell to the right, as long as that cell is empty. If not, Excel truncates the text; it's still there—you just can't see it.

Tips

- ✓ Click the **Cancel** button on the Formula Bar to cancel typing and return the cell to its previous state.
- ✓ If you want to start a label with a number, type an apostrophe before the number to prevent Excel from recognizing the number as a value.
- ✓ AutoComplete can help you enter labels. Enter the first few characters of a label; Excel displays the label if it appears previously in the column. Press **<Enter>** to accept the entry or resume typing to ignore the suggestion.
- ✓ Labels that are wider than the column in which they are entered automatically overlap the cell in the next column over. Resize the width of the column to fix this problem, something we'll cover later on.

Exercise Notes

- **Exercise File:** Sales2-1.xlsx
- **Exercise:** Type the label "Sales and Expenses" in cell A1 and the labels "Supplies", "Office", "Salaries", "Utilities", and "Total" in the cell range A7:A11.

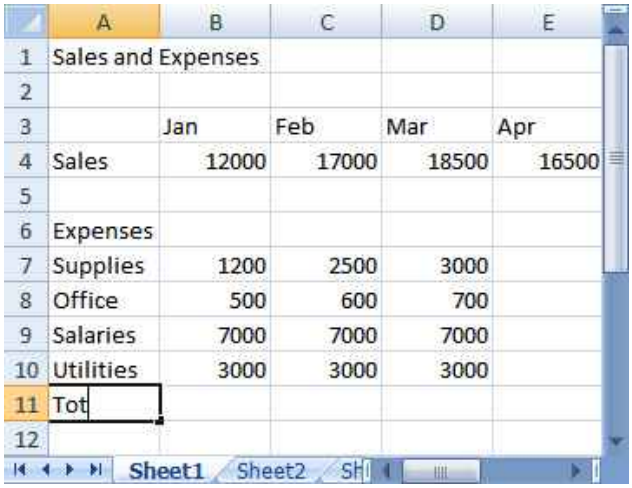


Figure 2-4: Entering a label in a cell.

Entering Values

Now that you know how to enter labels, it's time to work with the other basic type of worksheet information: values. Values are the numerical data in a worksheet that are used in calculations. A value can be any type of numerical information: numbers, percentages, fractions, currencies, dates, and times.

Entering values in a worksheet is no different from entering labels—you simply type the value and confirm the entry.

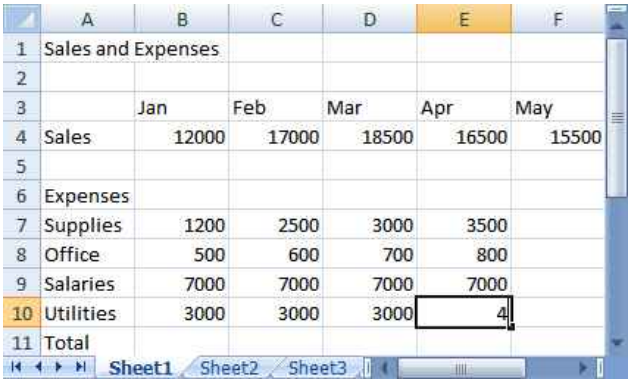
1. Click a **cell** and type a value.
2. Press **<Enter>** or **<Tab>** to confirm the entry.

Tips

- ✓ Excel treats information that contains numbers, dates or times as a value and automatically right-aligns it in the cell.
- ✓ Values don't have to contain only numbers. You can also use numerical punctuation such as a period or a dollar sign.
- ✓ You can reformat dates after entering them. For example, if you enter 4/4/07, you can easily reformat to April 4, 2007.

Exercise Notes

- **Exercise File:** Sales2-2.xlsx
- **Exercise:** Enter the following values in the cell range E7:E10: 3500, 800, 7000, 4000.



	A	B	C	D	E	F
1	Sales and Expenses					
2						
3		Jan	Feb	Mar	Apr	May
4	Sales	12000	17000	18500	16500	15500
5						
6	Expenses					
7	Supplies	1200	2500	3000	3500	
8	Office	500	600	700	800	
9	Salaries	7000	7000	7000	7000	
10	Utilities	3000	3000	3000	4	
11	Total					

Sheet1 Sheet2 Sheet3

Figure 2-5: Entering a value in a cell.

Selecting a Cell Range

To work with a range of cells, you need to know how to select multiple cells.

1. Click the first cell you want to select in the cell range and hold the mouse button.
2. Drag to select multiple cells.

   As you drag, the selected cells are highlighted.
3. Release the mouse button.

   The cell range is selected.

   Other Ways to Select a Cell Range:
   Press and hold the **<Shift>** key and use the arrow keys to select multiple cells.

Tips

- ✓ To select all the cells in a worksheet, click the **Select All** button where the row and column headers come together, or press **<Ctrl>** + **<A>**.
- ✓ To select multiple non-adjacent cells, select a cell or cell range and hold down the **<Ctrl>** key while you select other cells.

Exercise Notes

- **Exercise File:** Sales2-3.xlsx
- **Exercise:** Select the cell range E7:E10.

Click to select the entire worksheet.

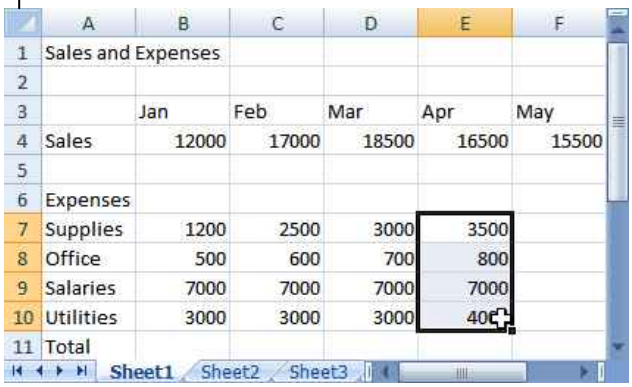


Figure 2-6: Selecting a range of cells with the mouse.

Overview of Formulas and Using AutoSum

This lesson introduces what spreadsheet programs are really all about: formulas.

Formula overview

Formulas are values, but unlike regular values, formulas contain information to perform a numerical calculation, such as adding, subtracting, or multiplying.

All formulas must start with an equal sign (=). Then you must specify two more types of information: the values you want to calculate and the arithmetic operator(s) or function name(s) you want to use to calculate the values. Formulas can contain numbers, like 5 or 8, but more often they reference the contents of cells. For example, the formula =A5+A6 adds the values in cells A5 and A6. Using these *cell references* is advantageous because if you change the values in the referenced cells, the formula result updates automatically to take the new values into account.

You're already familiar with some of the arithmetic operators used in Excel formulas, such as the plus sign (+). Functions are pre-made formulas that you can use as shortcuts or to perform calculations that are more complicated. For example, the PMT function calculates loan payments based on an interest rate, the length of the loan, and the principal amount of the loan.

AutoSum

SUM is a common Excel function used to find the total of a range of cells. Excel has a shortcut button, called AutoSum, that can insert the formula for you.

1. Click a **cell** next to the column or row of numbers you want to sum.

2. Click the **Home** tab and click the **AutoSum** button in the Editing group.

   The SUM function appears in the cell and a moving dotted line appears around the cell range that Excel thinks you want to sum. If the range is not correct, click and drag to select the correct range.

   ✅ **Tip:** Click the **AutoSum** button list arrow to choose from other common functions, such as Average.

3. Press the **<Enter>** key to confirm the action.

   The cell range is totaled in the cell. If you change a value in the summed range, the formula will automatically update to show the new sum.

Exercise Notes

- **Exercise File:** Sales2-3.xlsx.
- **Exercise:** AutoSum the column B expense values in cell B11.

Figure 2-7: The AutoSum button in the Editing group.

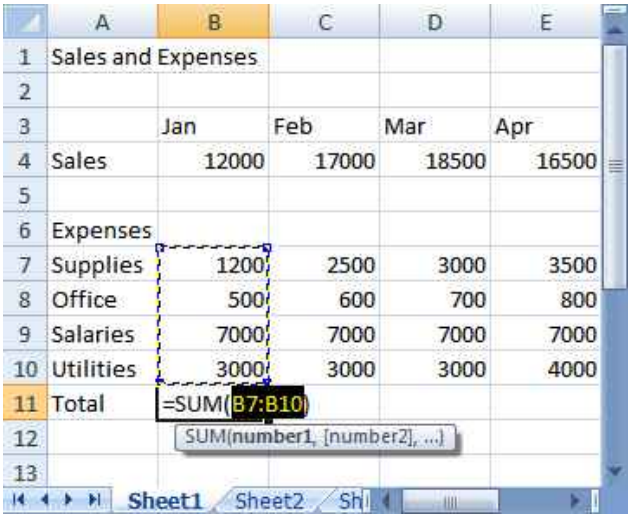


Figure 2-8: Using the SUM function in a formula to sum a range of cells.

Entering Formulas

This lesson takes a look at entering formulas manually, instead of using a shortcut like the AutoSum button.

A formula starts with an equal sign, followed by:

- Values or cell references joined by an operator.

  Example: =A1+A2.

- A function name followed by parentheses containing function arguments.

  Example: =SUM(A1:A2).

Try entering a formula yourself.

1. Click a cell where you want to enter a formula.
2. Type =, then enter the formula.

   You can also enter the formula in the Formula Bar.
3. Press the **<Enter>** key.

The formula calculates the result and displays it in the cell where you entered it. See Table 2-2: Examples of Operators, References, and Formulas for examples of common formulas in Excel.

Other Ways to Enter a Function:
Select the cell where you want to insert the function. Click the **Insert Function** button in the Formula Bar or click the **Formulas** tab on the Ribbon and click the **Insert Function** button. Select the function you want to use and click **OK**. Enter the function arguments and click **OK**.

Tips

✓ You can adjust the size of the Formula Bar. Click and drag the rounded edge of the Name Box to adjust it horizontally. To adjust it vertically, click and drag the bottom border of the Formula Bar or click the Expand Formula Bar button at the end of the Formula Bar.

✓ You can use the Formula AutoComplete feature to help you create and edit complex formulas. Type an = (equal sign) in a cell or the Formula Bar and start typing the formula. As you do this, a list appears of functions and names that fit with the text you entered. Select an item from the list to insert it into the formula.

Exercise Notes

- **Exercise File:** Sales2-4.xlsx.
- **Exercise:** Manually enter a SUM formula in cell C11 to total the expense values in column C.

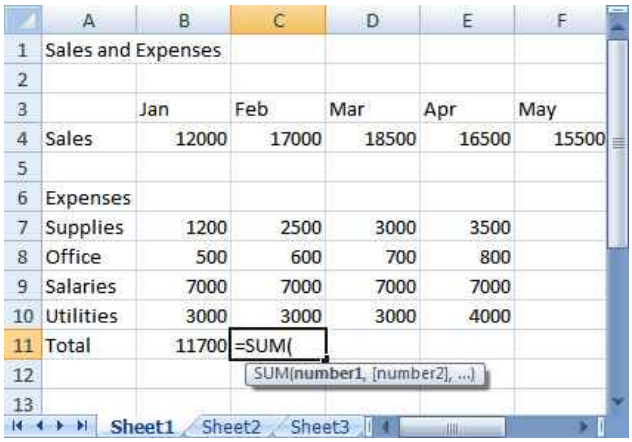


Figure 2-9: Manually entering a formula.

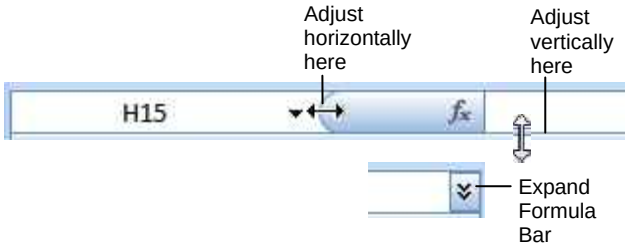


Figure 2-10: Adjusting the size of the Formula bar.

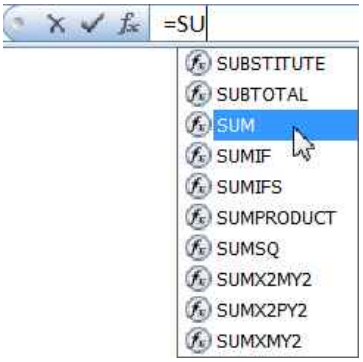


Figure 2-11: The Formula AutoComplete feature appears as you enter a formula in the Formula bar.

Table 2-2: Examples of Operators, References, and Formulas

Operator or Function Name	Purpose	Example
=	All formulas must start with an equal sign.	
+	Performs addition between values.	 =A1+B1
-	Performs subtraction between values.	 =A1-B1
*	Performs multiplication between values.	 =B1*2
/	Performs division between values.	 =A1/C2
SUM	Adds all the numbers in a range.	 =SUM(A1:A3)
AVERAGE	Calculates the average of all the numbers in a range.	 =AVERAGE(A2,B1,C3)
COUNT	Counts the number of items in a range.	 =COUNT(A2:C3)

Using AutoFill

AutoFill is a great way to quickly enter sequential numbers, months or days. AutoFill looks at cells that you have already filled in and makes a guess about how you would want to fill in the rest of the series. For example, imagine you're entering all twelve months as labels in a worksheet. With AutoFill, you only have to enter January and February and AutoFill will enter the rest for you.

1. Select a cell or cell range that contains the data and increment you want to use.

Excel can detect patterns pretty easily. A series of 1, 2, 3, 4 is easy to detect, as is 5, 10, 15, 20. It can also detect a pattern with mixed numbers and letters, such as UPV-3592, UPV-3593, UPV-3594. See Table 2-3: Examples of AutoFill for more information.

2. Position the mouse pointer over the fill handle (the tiny box in the cell's lower-right corner) until the pointer changes to a plus sign **+**.

3. Click and drag the fill handle to the cells that you want to AutoFill with the information.

As you click and drag, a screen tip appears previewing the value that will be entered in the cell once you release the mouse button.

✅ **Tip:** AutoFill is also a quick way to copy cells.

✅ Tips

- ✓ If you select only one cell, that same value is copied to the adjacent cells when you AutoFill—unless Excel recognizes it as a date or time, in which case it will fill in the next logical date or time period.
- ✓ If you use AutoFill to copy a cell containing a formula with a cell reference, such as =A3, the filled cells will contain updated formulas that are relative to their location. For example, if you AutoFill the formula =A3 from cell D5 to cell E5, cell E5 will be filled with the formula =B3.
- ✓ If you're working with a data series that increases by increments other than one (such as every-other day or every-other month), select the cells that show Excel the increment to use when filling the data series. For example, if you enter 3 and 5 in adjacent cells, select both cells and AutoFill the next cell; Excel will enter 7 in that next cell.
- ✓ After using AutoFill the AutoFill Options button appears.  Click this button to view different ways to perform or complete the AutoFill.

🕮 Exercise Notes

- **Exercise File:** Sales2-5.xlsx.
- **Exercise:** Use AutoFill to fill in the months in row 3. Labels should start with Jan in column B and end with June in column G. Use AutoFill to copy cell range E7:E10 over to column F, then copy cell C11 over to columns D, E, and F.

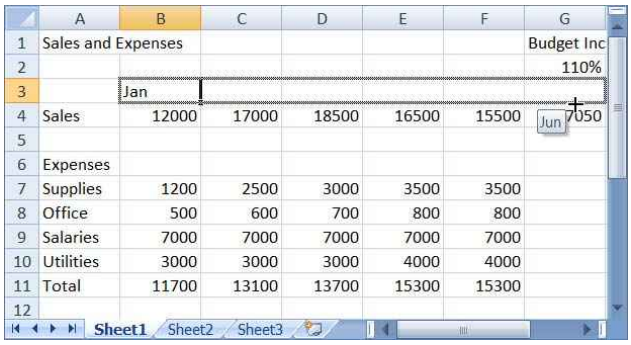
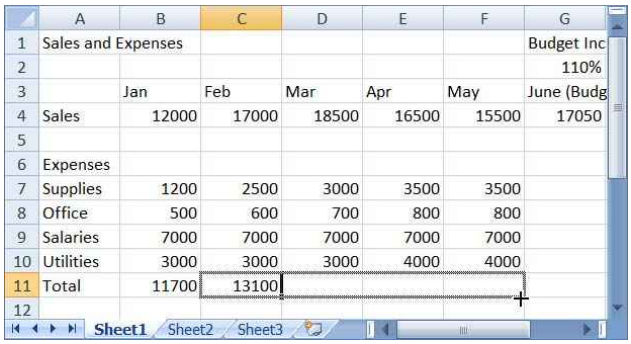


Figure 2-12: In this example, AutoFill fills in months after January into the selected cells. Notice that a screen tip appears to show the content being filled into the cells.



In this example, AutoFill copies the formula from C11 into the other cells.

Figure 2-13: Copying a formula using the AutoFill feature.

Table 2-3: Examples of AutoFill

Selected Cell(s)	AutoFill Entries in Next Three Cells
January	February, March, April
5:00	6:00, 7:00, 8:00
Quarter 1	Quarter 2, Quarter 3, Quarter 4
5 **10**	15 20 25

Understanding Absolute and Relative Cell References

A cell reference identifies a cell or cell range and tells Excel which values to use in a formula. There are two types of cell references.

- **Relative:** Relative references (like A1) tell Excel how to find another cell starting from the cell that contains the formula. Using a relative reference is like giving someone directions that explain where to go from where they are currently standing. When a formula containing relative references is moved, it will reference new cells based on their location to the formula.

  For example, if cell A2 contained the formula =A1, and you copied and pasted the formula to cell B2, the formula in B2 would read =B1 because the reference is relative to the location of the formula.

- **Absolute:** Absolute references (like $A$1) always refer to the same cell address, even if the formula is moved.

  For example, if cell A2 contained the formula =$A$1, and you copied and pasted the formula to cell B2, the formula in B2 would still read =$A$1.

Create a relative cell reference in a formula

Relative cell addresses are usually the desired way to reference other cells in formulas, which is why they are the default method used by Excel to reference cells.

1. Click the cell you want to reference, for example click cell B4.

   Other Ways to Create a Relative Cell Reference in a Formula:
   Type the address of the cell, for example type B4.

Create an absolute cell reference in a formula

If you want a cell reference to always refer to a particular cell address, you need to use an absolute cell reference.

1. Press and hold the **<F4>** key as you click the cell you want to reference.

   Dollar signs $ are added to the cell reference.

   Other Ways to Add an Absolute Cell Reference in a Formula:
   Type the address of the cell with $ (dollar signs) before every reference heading. (For example, type $B$4).

Exercise Notes

- **Exercise File:** Sales 2-6.xlsx.
- **Exercise:** Enter the formula =F7*$G$2 in cell G7. Copy cell G7 to cells G8:G10. Copy cell F11 over to cell G11.

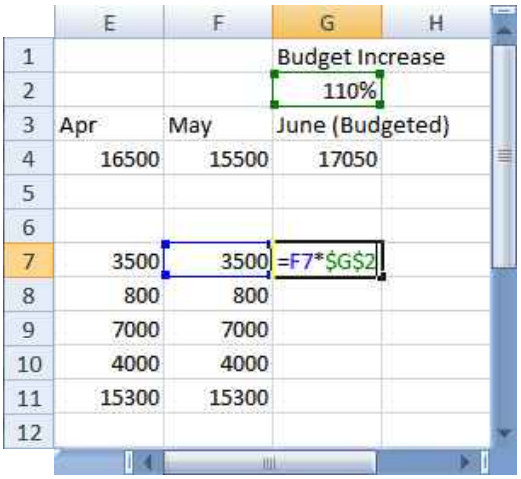


Figure 2-14: A formula with a relative (F7) and an absolute ($G$2) cell reference.

Here the formula from the previous figure has been filled down. The F7 reference has changed to F8 because it was relative, while $G$2 stayed the same because it was absolute.

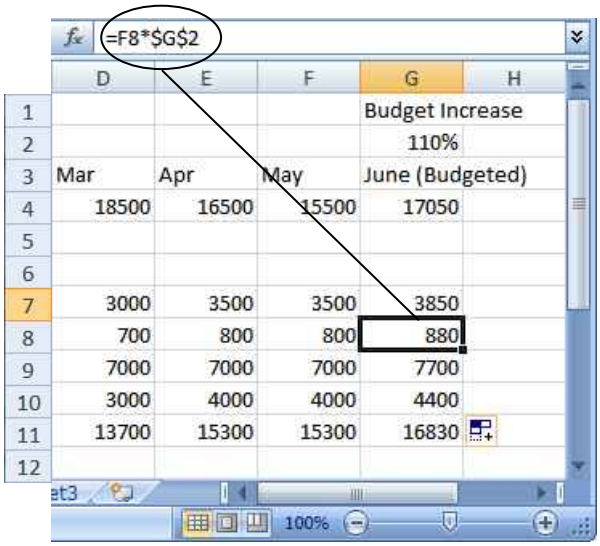


Figure 2-15: Relative vs. absolute cell references.

Using Undo, Redo and Repeat

The undo, redo, and repeat commands are very useful commands for working with cell contents and cell formatting.

Undo a single action

Undo does just that—it undoes any actions as though they never happened.

1. Click the **Undo** button on the Quick Access Toolbar.

   Your last action is undone. For example, if you had deleted an item and then decided you wanted to keep it after all, undo would make it reappear.

   Other Ways to Undo:
   Press **<Ctrl>** + **<Z>**.

Undo multiple actions

1. Click the **Undo** button list arrow on the Quick Access Toolbar.

   A list of the last actions in Excel appears. To undo multiple actions, point to the command you want to undo. For example, to undo the last three actions, point at the third action in the list. Each action done before the one you select is also undone.

   Tip: You can undo up to 100 actions in Excel, even after saving the workbook.

2. Click the last action you want to undo in the list.

   The command you select and all subsequent actions are undone.

Redo an action

Redo is the opposite of undo: it redoes an action you have undone. For example, if you decide that you do, after all, want to delete an item that you have just brought back with undo, you can redo the delete action.

1. Click the **Redo** button on the Quick Access Toolbar.

   The last action you undid is redone.

   Other Ways to Redo an Action:
   Press **<Ctrl>** + **<Y>**.

   Tip: Click the **Redo** button list arrow to redo multiple actions.

Exercise Notes

- **Exercise File:** Sales2-7.xlsx.
- **Exercise:** Type “Monthly” in cell A2 and press <Enter>. Undo the typing. Then redo the typing.

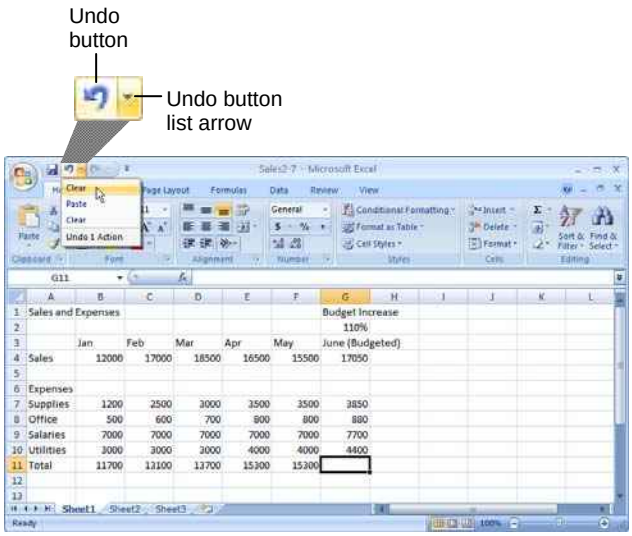


Figure 2-16: The Undo and Redo buttons.

Repeat an action

Repeat is different from redo, because repeat applies the last command to any selected text. For example, rather than applying bold formatting by clicking the Bold button repeatedly, you can repeat the bold command with the keystroke shortcut or Repeat button.

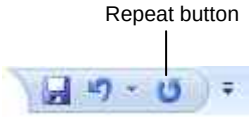


Figure 2-17: The Repeat button on the Quick Access Toolbar. This does not appear on the Quick Access Toolbar by default in Excel.

1. Press **<F4>**.

   The command is repeated.

   Other Ways to Repeat a Command:
   Add the Repeat command to the Quick Access Toolbar. Then, click the **Repeat** button on the Quick Access Toolbar to repeat the command.

Saving a Workbook

After you've created a workbook, you need to save it if you want to use it again. Also, if you make changes to a workbook you'll want to save it. You can even save a copy of an existing workbook with a new name, to a different location, or using a different file type.

Save a new workbook

1. Click the **Save** button on the Quick Access Toolbar.

   The Save As dialog box appears.

   Other Ways to Save:
   Press **<Ctrl>** + **<S>**. Or, click the **Office Button** and select **Save**.

2. Specify the drive and/or folder where you want to save your workbook.

   The Save As dialog box has several controls that make it easy to navigate to locations on your computer:

   - **Address bar:** Click a link in the Address bar to open it. Click the arrow to the right of a link to open a list of folder within that location. Select a folder from the list to open it.
   - **Favorite Links:** Shortcuts to common locations on your computer, such as the Desktop and Documents Folder.
   - **Folders List:** View the hierarchy of drives and folders on your computer by expanding the Folders list.

3. Enter the file name in the File name text box.

4. Click **Save**.

Exercise Notes

- **Exercise File:** None required.
- **Exercise:** Create a new workbook and save it with the file name "Saved Workbook." Type your name in cell A1 and save the workbook with a new name: "Updated Workbook".

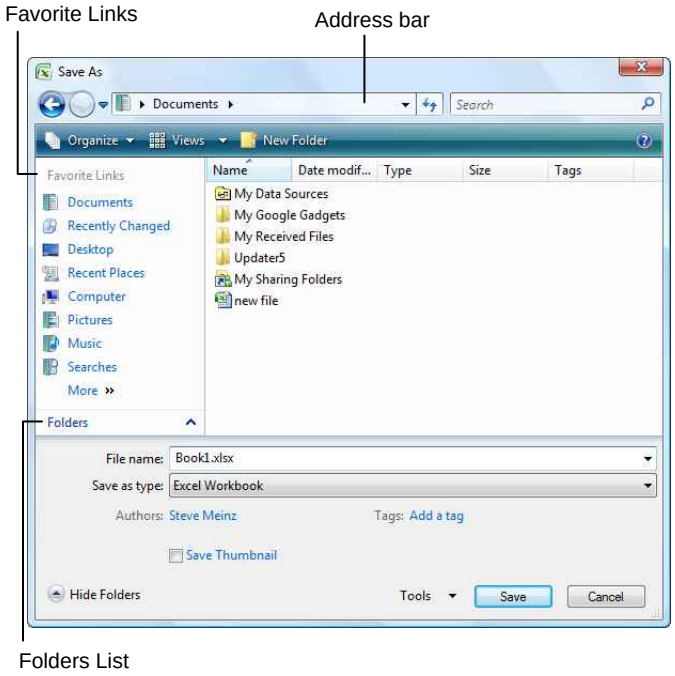


Figure 2-18: The Save As dialog box. New files are saved in the Documents folder by default.

Save workbook changes

Once you make changes to a workbook you've saved before, you need to save it again.

1. Click the **Save** button on the Quick Access Toolbar.

   Any changes you have made to the workbook are saved.

   Other Ways to Save:
   Press **<Ctrl>** + **<S>**. Or, click the **Office Button** and select **Save**.

Save a workbook under a different name and/or location

You can save another copy of a saved document using a new name or in a new location.

1. Click the **Office Button** and select **Save As**.

   The Save As dialog box appears.

2. Enter a different name for the file in the File name text box. And/or navigate to a new location to save the file.

3. Click **Save**.

Save a workbook as a different file type

Just as some people can speak several languages, Excel can read and write in other file formats. Saving a copy of a workbook in a different file type makes it easier to share information between programs.

1. Click the **Office Button** and select **Save As**.

   The Save As dialog box appears.

2. Click the **Save as type** list arrow and select a file format.

3. Click **Save**.

Table 2-4: Common Excel File Formats

File Type	Description
Excel Workbook (.xlsx)	The default format for Excel 2007 workbooks.
Excel Macro-Enabled Workbook (.xlsm)	This file format supports macros in Excel 2007.
Excel 97- Excel 2003 Workbook (.xls)	Workbooks in this format can be used by all versions of Excel. Does not support XML.
PDF (.pdf)	Use this format for files you want to share, but do not want to be changed. Requires an Excel add-in.
Web page (.htm, .html)	This format is used to create Web pages.
XML Data (.xml)	This file type is used exclusively for XML-enabled workbooks.

Previewing and Printing a Worksheet

Once you have created a worksheet, you can print copy of it—if your computer is connected to a printer. Before you do this, it's a good idea to preview how it's going to look.

Preview a worksheet

1. Click the **Office Button** and point to the **Print** list arrow.

   A list of print options appears in the right pane of the Office Button.

2. Select **Print Preview**.

   The document is shown in Preview mode. Notice that the Ribbon changes to display only the Print Preview tab.

   Tip: Use the commands on the Print Preview tab to adjust print and page setup settings. Click the **Zoom** button to enlarge the worksheet.

3. Click the **Close Print Preview** button.

   Tip: You can print directly from the Print Preview window by clicking the Print button in the Print group on the Print Preview tab.

   Other Ways to Preview a Worksheet: New in Excel 2007, you can click the **Page Layout View** button on the Status Bar to change views and get a better idea of how the worksheet will be laid out when printed.

Quick Print a worksheet

Quick printing a worksheet bypasses the Print dialog box and sends the worksheet directly to the printer.

1. Click the **Office Button**, point to the **Print** arrow and select **Quick Print**.

Print a worksheet

1. Click the **Office Button** and select **Print**.

   The Print dialog box appears. Specify printing options such as the number of copies to print.

   Other Ways to Print: Press **<Ctrl>** + **<P>**.

2. Specify printing options, then click **OK**.

Exercise Notes

- **Exercise File:** Sales2-8.xlsx.
- **Exercise:** Preview the Sales2-8 worksheet. Zoom in on the previewed worksheet. Close the Preview mode. Print the worksheet.

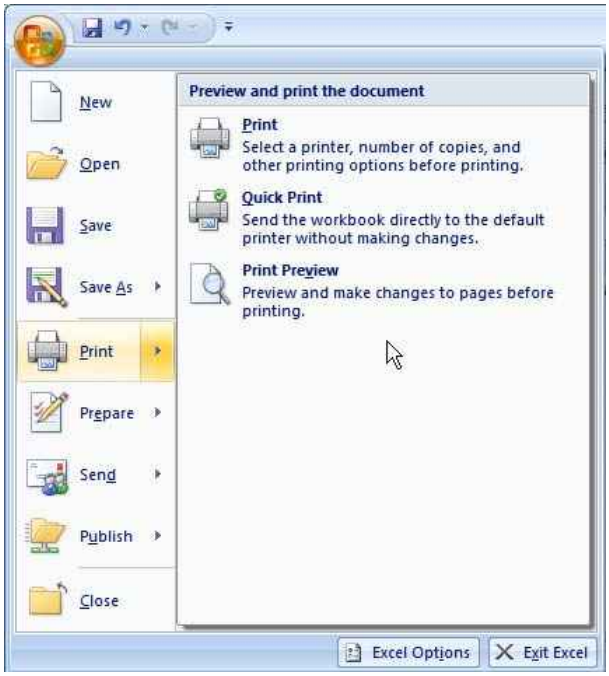


Figure 2-19: A list of print options.

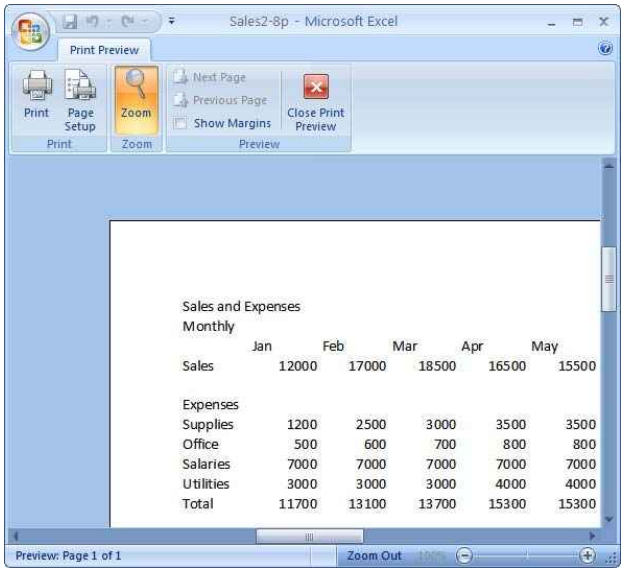


Figure 2-20: A worksheet shown in print preview.

Closing a Workbook

When you're done working on a workbook, you need to close it.

1. Click the **Office Button** and select **Close**.

The workbook closes. You can access the file again by opening it later.

Other Ways to Close a Workbook: Press **<Ctrl>** + **<W>**. Or, click the **Close** button in the upper right corner of the workbook window (not the one even farther up in the corner in the title bar).

Tip: If you have multiple workbooks open, clicking the active workbook's **Close** button only closes that one workbook. The other workbooks remain open in the window until you click their close buttons as well.

Trap: The close button located in the title bar closes only the active workbook if there is more than workbook open. However, if there is only one open, it closes it *and* causes you to exit the Excel program entirely.

Exercise Notes

- **Exercise File:** Any open workbook.
- **Exercise:** Close all open workbooks.

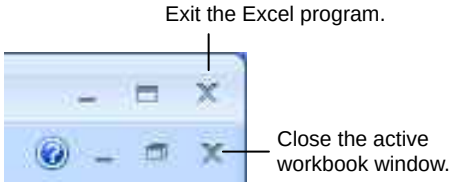


Figure 2-21: The Close button.

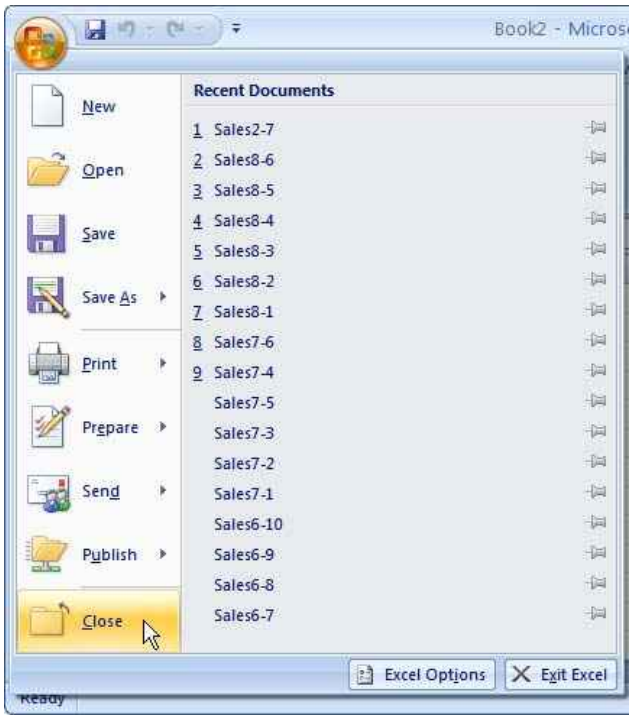


Figure 2-22: Closing a workbook.

