EXCEL 2002 (XP)

LEVEL 1: THE FUNDAMENTALS

December 19, 2005

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LEVEL 1: THE FUNDAMENTALS

LESSON 1 -
EXPLORING EXCEL

In this lesson, you will learn how to:

- Start Excel
- Work with Excel windows
- Work with worksheets
- Use menu commands
- Display and hide toolbars
- Display hidden toolbar buttons
- Move and resize toolbars
- Change menu and toolbar options
- Use the task pane
- Exit Excel

STARTING EXCEL

Discussion

Microsoft Excel 2002 is a software application that can be used as a spreadsheet, database, or graphing program.

The electronic spreadsheet portion of Excel allows you to perform sophisticated calculations and create formulas that automatically calculate answers. The advantage of using formulas is that, when data in the worksheet changes, all the formulas recalculate automatically. This feature assists you in developing budgets, forecasting models, creating sales plans, making financial projections, calculating inventories, generating banking statements, and basically working with any format involving numbers. In addition, the **AutoCalculate** feature provides you with instant answers, using functions such as **Sum**, **Count**, and **Average**.

Excel's data management capability allows you to manipulate lists of information such as names, addresses, inventory items, prices, etc. Excel can sort lists and select specific pieces of information based on specified conditions.

You can use information created in an Excel spreadsheet or database to create an Excel chart. Chart types include column, bar, line, pie, area, doughnut, radar, surface, and bubble. All charts can be formatted using styles provided by Excel.

You can get help on an Excel task or feature in many ways. You can type a question into the **Ask a Question** box on the menu bar to get help with a specific feature. Another method of obtaining help is to use the Office Assistant Help facility. The Office Assistant is context-sensitive, which means that help for the current task is only a mouse click away. The Office Assistant may also appear automatically on your screen if Excel detects that you need help completing the current task. In addition, you can search detailed Help indexes by category or keyword. Other help features include smart tags. Smart tags appear when you perform certain actions and provide a menu of choices for dealing with those tasks.

You can use the **Start** menu to start Excel. Once the program starts, a brief copyright screen appears, and then the application window opens.

> The first time you open Excel after installation, the User Name dialog box may appear. You can enter your name and initials as necessary, and then select **OK**.

Procedures

1. Click the **Start** button on the taskbar.
2. Point to **Programs**.
3. Select **Microsoft Excel**.

WORKING WITH EXCEL WINDOWS

Discussion

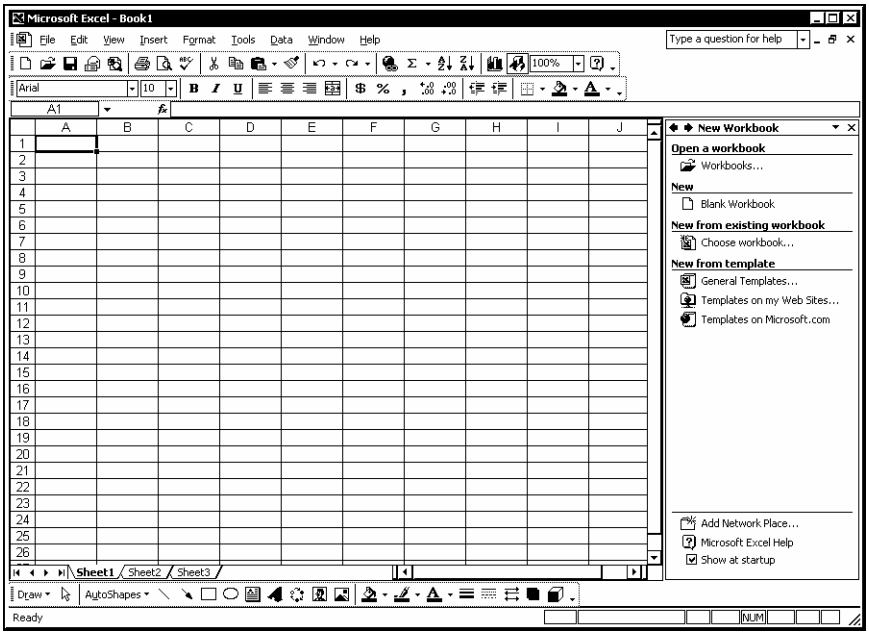
When Excel starts, the application window opens. The title bar, which appears at the top of the application window, displays the name of the current workbook and the name of the application. Under the title bar is the menu bar, which allows you to access various commands that are grouped according to function and to enter help questions in the **Ask a Question** box. Below the menu bar is a row containing two separate toolbars. The toolbar buttons provide shortcuts to many menu commands. Located below the toolbars, the formula bar displays the data in the active cell. You can edit this information as desired.

A new, blank workbook appears in the worksheet area and the task pane appears on the right side of the screen. The worksheet area consists of thousands of cells in which you can enter text, numbers, or formula expressions. The worksheet area also contains the tab scrolling buttons, worksheet tabs, tab split box, and scroll bars. The **New Workbook** task pane provides links for opening new or existing workbooks.

The status bar appears at the bottom of the application window and provides information on the current action you are performing or on a command you have selected.

Many of the objects in the Excel window (such as toolbar buttons) display brief descriptions called ScreenTips that pop up whenever you point to the object.

Several workbooks can be open at the same time. Each workbook displays its own application title bar, menus, toolbars, scroll bars, and status bar.



The Excel window

WORKING WITH WORKSHEETS

Discussion

Information in Excel is stored in a workbook. The first new workbook opened in a session is called **Book1**. A workbook is a collection of individual worksheets. Each worksheet has a name that appears in a worksheet tab at the bottom of the screen. These names appear as **Sheet1**, **Sheet2**, **Sheet3**, etc. You can change the default names, if desired.

Worksheets in a workbook are usually related to one another. For example, a company budget could have 13 worksheets, one for each month of the year, and one representing the total year. These 13 worksheets can all be stored in one workbook as a single file and then accessed as one unit.

A worksheet is a grid composed of columns and rows. The first 26 columns are labeled column A through column Z. Columns 27 through 52 are labeled column AA through column AZ. Column 53 is labeled BA. This pattern continues until the last column, which is labeled IV. The rows are numbered sequentially down the left side of the worksheet, starting at 1 and ending at 65,536.

The intersection of a row and a column is called a cell, which is the basic unit of the worksheet. Cells are used to store data entries. Each cell is referred to by its cell address. A cell address consists of the column letter and the row number. For example, the address of the cell in the first column and first row of a worksheet is A1.

The active, or current, cell is where you enter and edit data. The active cell has a thick black border around it and its address appears in the **Name** box on the left side of the formula bar. Only one cell can be active at a time. Excel also helps you identify the active cell by highlighting its corresponding column letter at the top of the worksheet and row number on the left side of the worksheet.

Often, you will want to select a range of cells or multiple cells. For example, you could select from cell A1 to cell A10 and format the data contained in those cells.

The scroll bars on the bottom and right side of the worksheet allow you to view parts of the worksheet that are not currently visible.

USING MENU COMMANDS

Discussion

The menu bar, located under the application title bar, provides access to all the features of Excel. Each menu contains commands grouped by function. When you select an item on the menu bar, a list of corresponding commands appears, from which you can select the desired command. Some menu commands are dimmed, which indicates that the command is not available for the current task.

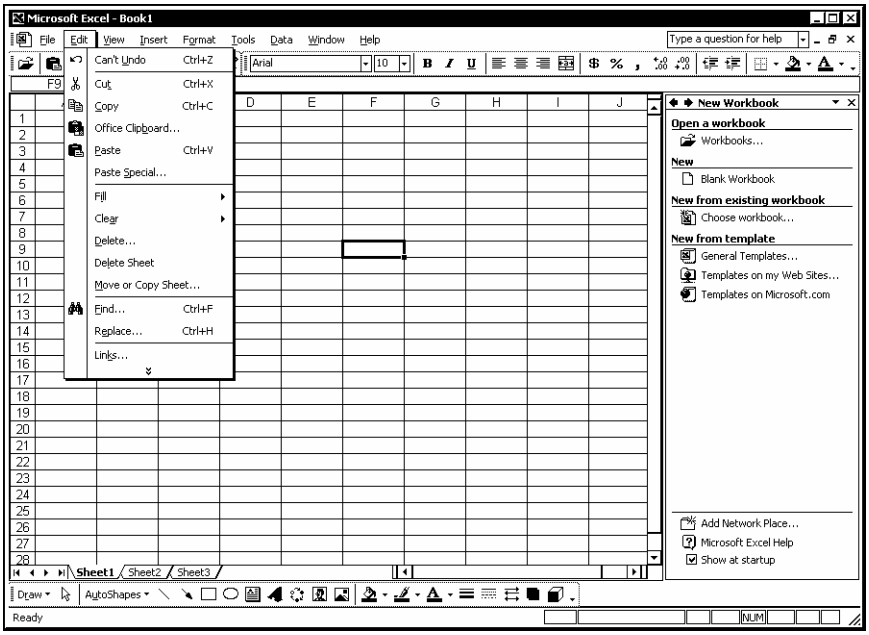
Each menu appears in two stages, a short menu and a full menu. When you first select a menu, the short menu appears and displays the most frequently used commands.

If a command does not appear on the short menu, you can click the double arrows that appear at the bottom of the menu. This action expands the short menu to display the full menu with all available commands. Once you have expanded a menu, all menus are expanded until you choose a command or perform an action. Other ways to expand a menu include double-clicking the menu name on the menu bar or hovering over the double arrows or menu name with the mouse pointer.

As soon as you select a command from the full menu, it is added to the short menu. In this way, your short menus are updated with the most frequently used commands. Commands stay on the short menu until you stop using them for a while or reset your data usage.

When a menu command is followed by an ellipsis (**...**), selecting it opens a dialog box in which additional information is entered. A menu command that displays a right-pointing triangle indicates a submenu. When you point to this command, the associated submenu cascades to the right.

In addition to the standard menus on the menu bar, Excel provides shortcut menus that are accessed by right-clicking a cell or an object, such as a toolbar. Shortcut menus provide commonly used commands and are context-sensitive. Therefore, the options available on a shortcut menu vary, depending on the object clicked.



The Edit short menu

> You can also use key combinations to execute menu commands. To display a menu, press the **[Alt]** key and the underlined letter of the menu name. You can then press the underlined letter of the desired command to perform an action.

> Some Office XP components are available on an **Install on First Use** basis. This term means that, although the component appears on the menu, it is not actually installed until the first time you use it. Office XP prompts you to install the component and then installs it from the original installation source.

Procedures

1. Click the desired menu.
2. To display the full menu, click the double arrow at the bottom of the short menu.
3. Click the desired command.

DISPLAYING AND HIDING TOOLBARS

Discussion

Toolbars provide shortcuts to menu commands. Each Excel toolbar is composed of buttons and pull-down lists. Each button executes a specific menu command.

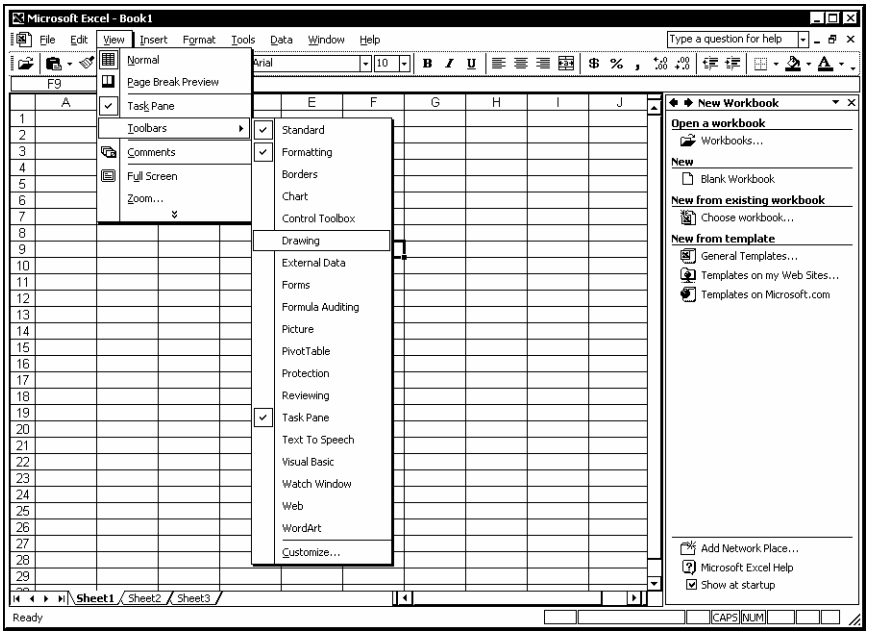
Excel provides several default toolbars, each of which groups related features. When Excel starts, the **Standard** and **Formatting** toolbars appear by default on the same row under the menu bar. The **Standard** toolbar contains buttons used for many general Excel functions, whereas the **Formatting** toolbar contains buttons and pull-down lists used to enhance the appearance of text and numbers. Additionally, task-specific toolbars may appear, depending upon the task you are performing.

You can choose to display one, several, or all the toolbars at any given time, or you can hide all the toolbars to create a larger working area.

Toolbars may be displayed as either docked or floating. A docked toolbar appears at one edge of the window, whereas a floating toolbar can be moved to any location on the screen. You can also change the size and shape of a floating toolbar. These options provide flexibility when you need to display several toolbars at once, or when you need to see all the available buttons on a docked toolbar.

When you point to a button on a toolbar, the name of the function associated with it appears. This description is referred to as a ScreenTip. Even if a toolbar button is dimmed (because it is not available for the current task), the ScreenTip still appears when you point to the button.

The **Toolbar Options** button at the right end of a toolbar can be used to display any hidden buttons that do not fit on the docked toolbar. In addition, you can customize any toolbar by adding or removing buttons.



Displaying a toolbar

> You can also display and hide toolbars by right-clicking any toolbar and selecting or deselecting toolbars as desired. A checkmark next to the name of a toolbar (selected) indicates that it is displayed.

> If you have hidden all the toolbars, you can redisplay one by selecting the **View** menu, pointing to the **Toolbars** command, and selecting the toolbar you want to display, or you can right-click the menu bar and select the desired toolbar.

Procedures

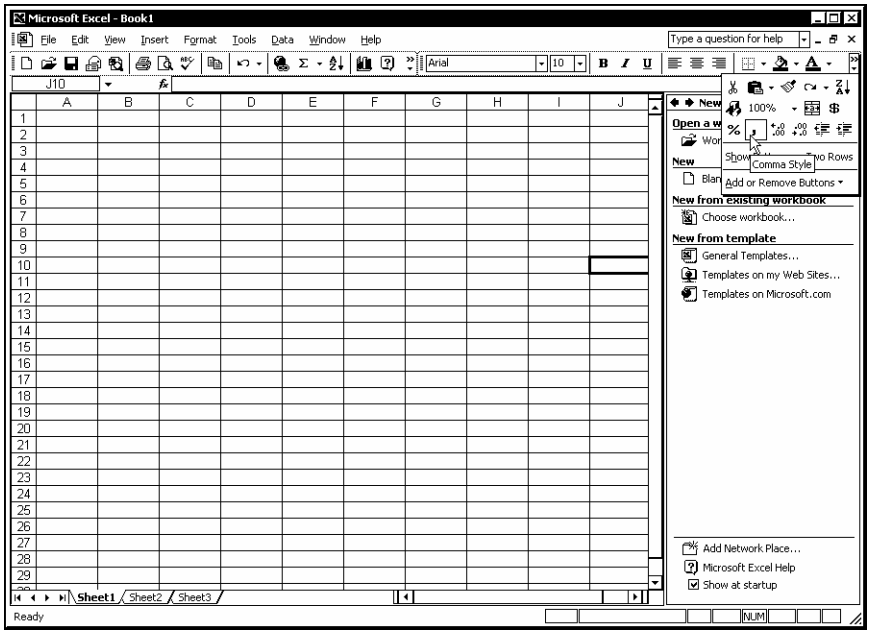
1. Select the **View** menu.
2. Point to the **Toolbars** command.
3. Select the toolbar you want to display or hide.

DISPLAYING HIDDEN TOOLBAR BUTTONS

Discussion

When Excel starts, the **Standard** and **Formatting** toolbars appear by default on the same row under the menu bar. Depending on your screen resolution, many toolbar buttons may not be visible. To view hidden toolbar buttons, a **Toolbar Options** button is provided at the far right of any toolbar. When a **Toolbar Options** button is clicked, a palette containing the hidden toolbar buttons appears.

By default, the **Standard** and **Formatting** toolbars display the most frequently used buttons. As soon as you select any hidden toolbar button, that button appears on the toolbar. If there is not enough room on the toolbar, one of the less frequently used buttons is hidden.



Selecting a hidden toolbar button

You can add and permanently remove a toolbar button by clicking the **Toolbar Options** button, pointing to the **Add or Remove Buttons** command, pointing to the desired toolbar, and selecting or deselecting the button from the list of buttons. The **Reset Toolbar** command at the bottom of the list returns the toolbar to its default settings.

Procedures

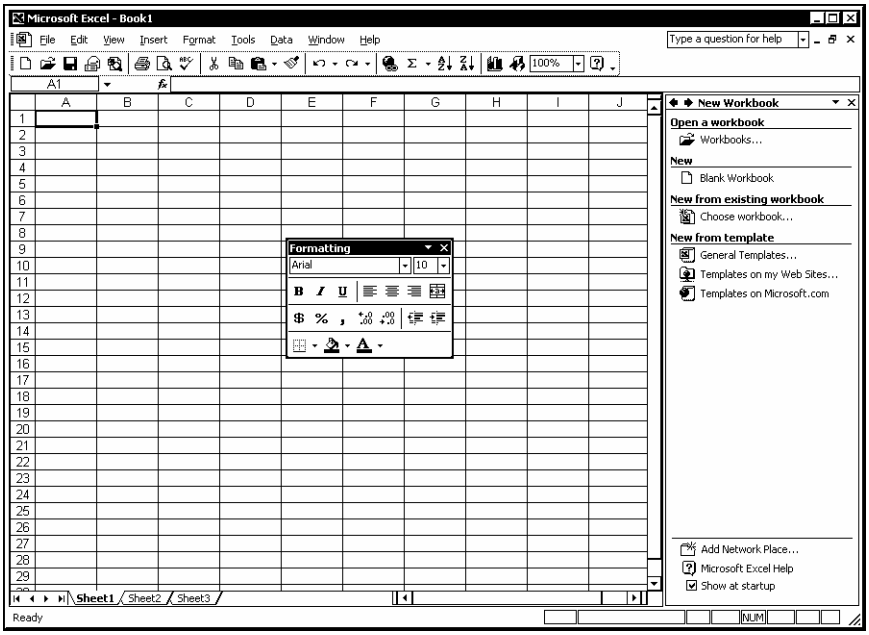
1. Click the **Toolbar Options** button or on any toolbar.
2. Click the hidden toolbar button you want to use.

MOVING AND RESIZING TOOLBARS

Discussion

You can move or resize toolbars to display more or less of the toolbar. For example, you may want to move or resize a toolbar when you need the toolbar to appear closer to your work area or when some of the buttons are hidden from view.

When a toolbar is docked, it displays a move handle (vertical bar) at the far left. You can use this handle to move or resize the toolbar. A floating toolbar can be moved using the toolbar title bar or resized by dragging any edge of the toolbar palette.



A floating toolbar

> Any toolbar can be docked beside another toolbar, and you can dock more than two toolbars on a single line. A **Toolbar Options** button appears on any docked toolbar and can be used to display any hidden toolbar buttons.

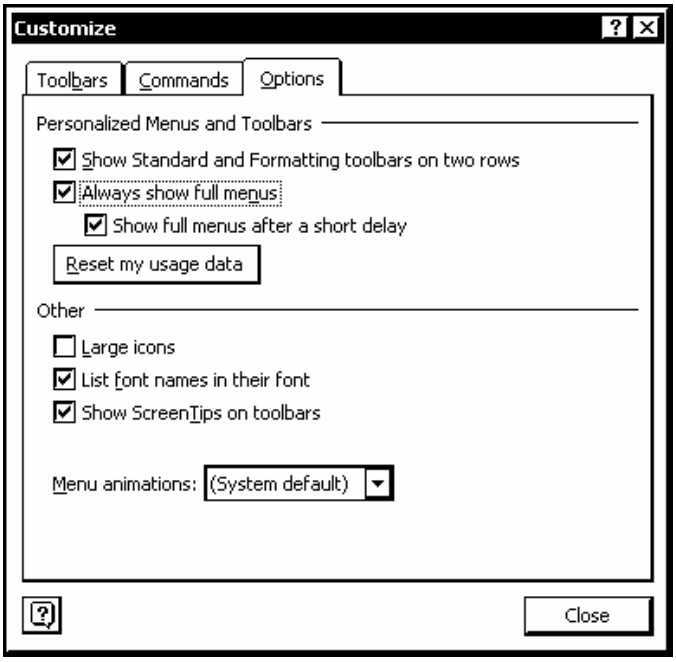
Procedures

1. Point to the move handle of the toolbar you want to move or resize.
2. To expand the toolbar, double-click the move handle.
3. Point to the move handle of the toolbar you want to move or resize.
4. To resize the toolbar, drag the move handle to the left or right as desired.
5. Point to the move handle of the toolbar you want to move or resize.
6. To move the toolbar, drag the move handle to the desired location.
7. To move a floating toolbar, point to the toolbar title bar and drag it to the desired location.
8. To resize a floating toolbar, point to any edge of the toolbar palette and drag it to the desired size.

CHANGING MENU AND TOOLBAR OPTIONS

Discussion

You can change menu and toolbar options in order to adjust the behavior of these objects. The **Options** page in the Customize dialog box allows you to select menu and toolbar preferences. You can choose to display the **Standard** and **Formatting** toolbars on separate rows by disabling the option that displays them both on one row. If you prefer to see full menus, you can disable the option to show recently used commands first. You can also reset any data usage changes that have occurred as a result of using the menus and toolbars.



Changing menu and toolbar options

	The **Show Standard and Formatting toolbars on two rows** and **Reset my usage data** options only affect Excel. All other options affect all Office XP applications.

	You can also separate the **Standard** and **Formatting** toolbars by clicking the **Toolbar Options** button and selecting the **Show Buttons on Two Rows** command.

Procedures

1. Select the **Tools** menu.
2. Select the **Customize** command.
3. Select the **Options** tab.
4. To change the display of the **Standard** and **Formatting** toolbars, select or deselect the **Show Standard and Formatting toolbars on two rows** option.
5. To restore toolbars and menus to the default, select **Reset my usage data**.
6. Select **Yes**.

7. To change the menu display, select or deselect the **Always show full menus** option.
8. Change additional options as desired.
9. Select **Close**.

USING THE TASK PANE

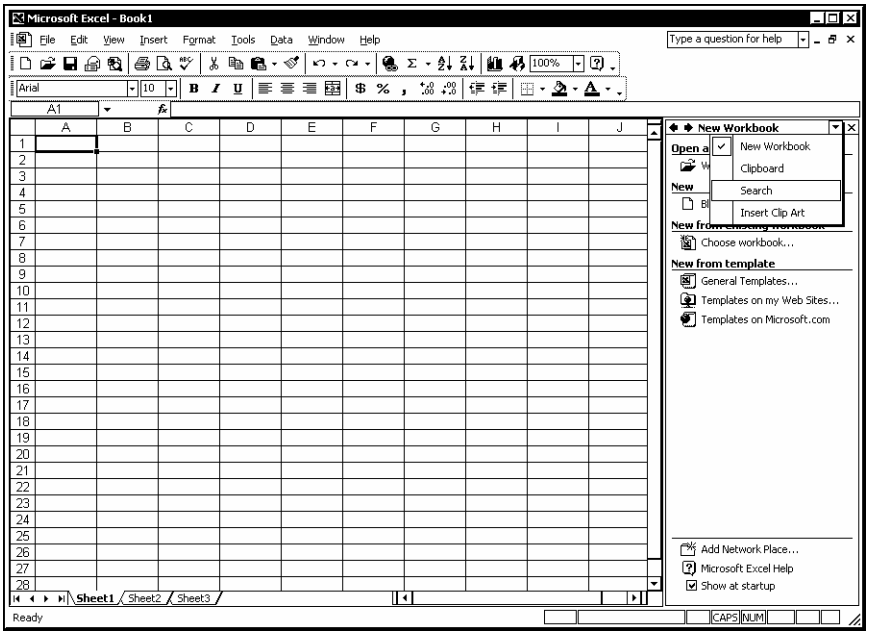
Discussion

The task pane provides links to many common tasks in Excel. For example, you can use the task pane to create a new, blank workbook or to reopen a recently modified one.

The task pane is actually comprised of several panes, which can be viewed using the **Other Task Panes** list. The name of the current pane appears in the task pane title bar. You can use the other task panes to find and insert clip art, search for files, and create and apply styles.

The **Back** and **Forward** buttons located on the task pane title bar navigate to previously viewed task panes. Blue text in the task pane indicates a link to an action or a dialog box.

You can hide or display the task pane according to your needs. Although the features in the task pane are useful, you may want to hide it to display a larger worksheet area. By default, the task pane appears each time you start Excel. You can disable this feature by deselecting the **Show at startup** option at the bottom of the **New Workbook** task pane.



Selecting a task pane

	Each task pane can be opened with a separate menu command. The **Task Pane** command on the **View** menu opens the most recently used task pane.

	You can change the size of the task pane by dragging the splitter bar (the border between the vertical scroll bar and the task pane) as needed.

Procedures

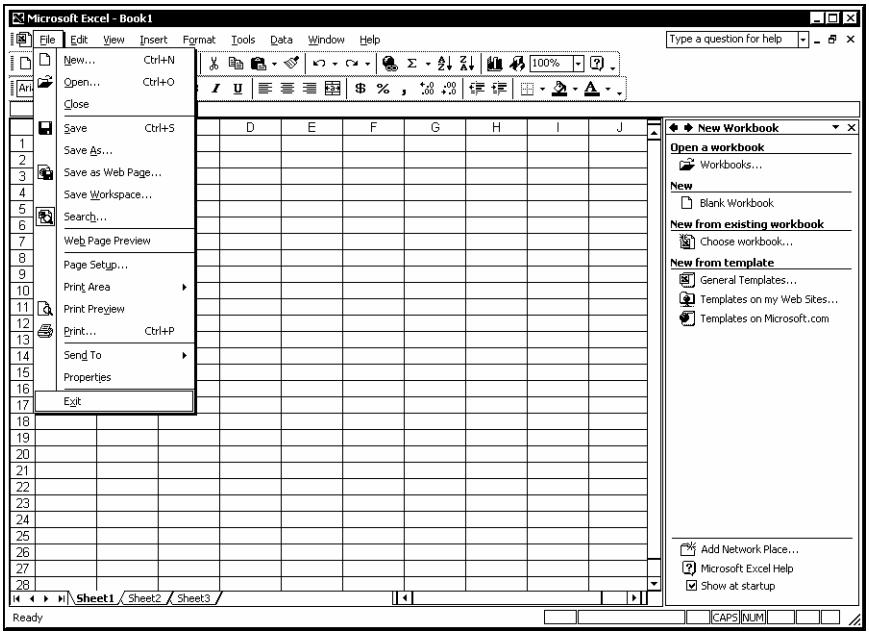
1. To view a different task pane, select the **Other Task Panes** list on the task pane title bar.
2. Select the desired task pane.
3. Click the **Back** or **Forward** button in the upper left corner of the task pane to return to a previous task pane.
4. To close the task pane, click the **Close** button in the upper right corner of the task pane.
5. To open the task pane, select the **View** menu.
6. Select the **Task Pane** command.

EXITING EXCEL

Discussion

When you have finished using Excel, you should exit the application properly, since Excel performs necessary housekeeping before it closes.

If the current workbook has been modified but not saved, an Excel dialog box or the Office Assistant prompts you to save the changes before exiting.



Exiting Excel

> You can also click the **Close** button on the far right of the application window title bar to exit Excel.

Procedures

1. Select the **File** menu.
2. Select the **Exit** command.

LESSON 2 -
USING BASIC WORKBOOK SKILLS

In this lesson, you will learn how to:

- Select a cell using the keyboard
- Scroll using the mouse
- Use the Go To dialog box
- Enter text into cells
- Enter numbers into cells
- Save a new workbook
- Close a workbook
- Create a new workbook
- Use a template
- Open an existing workbook
- Use data entry shortcuts
- Edit cell entries
- Check worksheet spelling
- Create a new folder
- Rename an existing workbook

SELECTING A CELL USING THE KEYBOARD

Discussion

When you open Excel, a blank workbook appears in the application window. You will notice a thick black border around the first cell in the upper left corner of the worksheet. This cell is known as the active cell. When data is entered, it appears in the active cell.

Each cell has an address. The address for the cell in the upper left corner is A1. When A1 is the active cell, the column heading, the letter A, and the row heading, the number 1, are both highlighted. The address A1 appears in the **Name** box, located on the left side of the formula bar, just above the column.

You can use the keyboard to select a cell and make it the active cell. When you press certain arrow keys or a combination of keys, the cell pointer moves to a new cell, making it the active cell.

When you open a new, blank workbook, the active cell is always cell A1.

Procedures

1. Press **[↓]** to move one cell down.
2. Press **[→]** to move one cell to the right.
3. Press **[←]** to move one cell to the left.
4. Press **[↑]** to move one cell up.
5. Press **[Ctrl+Home]** to move to the upper, left cell in the worksheet.
6. Press **[Page Down]** to move down one screen.
7. Press **[Page Up]** to move up one screen.
8. Press **[Alt+Page Down]** to move one screen to the right.
9. Press **[Alt+Page Up]** to move one screen to the left.

SCROLLING USING THE MOUSE

Discussion

You can use the mouse to move the active cell to a new cell; however, the cell to which you want to move is not always visible on the screen display. On larger worksheets, all the data may not fit on the screen display at once. The horizontal and vertical scroll bars allow you to scroll the display so that you can view other parts of the worksheet.

Scrolling with the mouse does not change the location of the active cell. You change the location of the active cell by selecting the desired cell. Any commands executed affect the active cell, not necessarily the cells in the part of the worksheet you are viewing. For example, if you click in cell A1, scroll to cell A50, and then press the **[Delete]** key, the contents of cell A1 will be deleted, not the contents of cell A50.

The horizontal and vertical scroll bars also provide shortcut menus, which allow you to scroll the worksheet. For example, the **Top** command on the vertical scroll bar shortcut menu scrolls the screen to row 1. Likewise, the **Left Edge** command on the horizontal scroll bar shortcut menu scrolls the screen to display column A.

Procedures

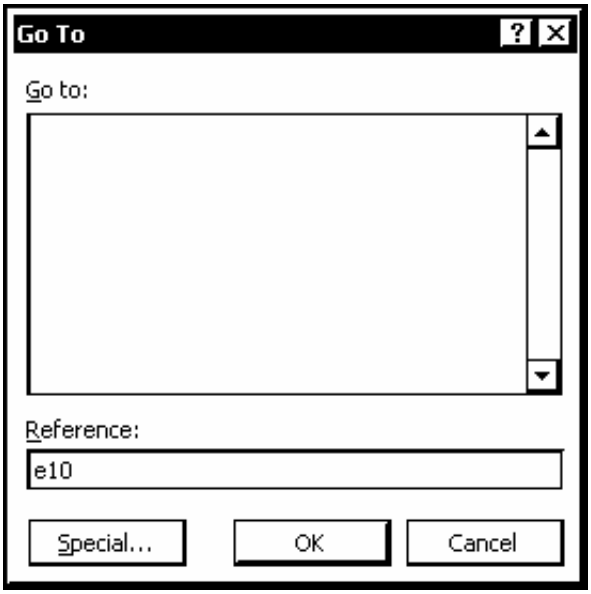
1. Click in the cell to which you want to move the active cell.
2. Click in the horizontal scroll bar to scroll the display one screen to the right.
3. Click the right arrow on the horizontal scroll bar to scroll the display one column to the right.
4. Drag the horizontal scroll box to the left end of the scroll bar to display column A.
5. Click in the vertical scroll bar to scroll the display down one screen.
6. Click the bottom arrow on the vertical scroll bar to scroll the display down one row.
7. Drag the vertical scroll box to the top of the scroll bar to display row 1.

USING THE GO TO DIALOG BOX

Discussion

In addition to using the mouse to move the active cell, you can use the Go To dialog box. You specify the cell to which you want to move, and Excel activates and displays that cell. This is especially helpful when moving around large worksheets containing data that is not always visible in the Excel window.

The **Go to** list in the Go To dialog box displays the last four references accessed with the **Go To** feature. You can use this list to quickly return to a recent Go To reference.



Using the Go To dialog box

You can also use the **[Ctrl+G]** key combination or the **[F5]** key to display the Go To dialog box.

Excel allows you to name cells for easy reference. If you name cells, those names will appear in the **Go to** list in the Go To dialog box. You can use this list to go to a named cell or cell range.

Procedures

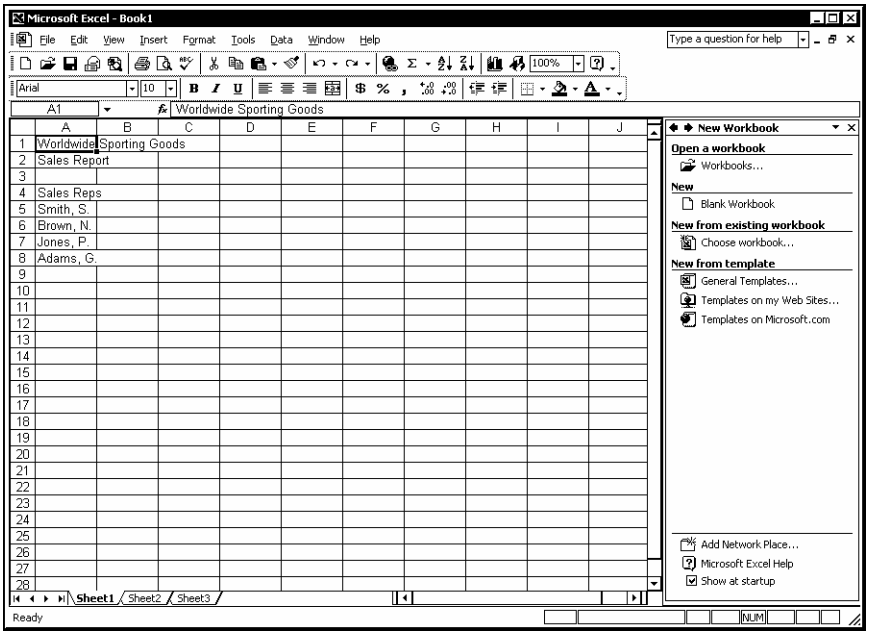
1. Select the **Edit** menu.
2. Select the **Go To** command.
3. Enter the address of the cell you want to activate in the **Reference** box.
4. Select **OK**.

ENTERING TEXT INTO CELLS

Discussion

In Excel, text is defined as letters or any combination of numbers and letters. For example, **Expenses**, **2nd Qtr**, and **BN9847** are all treated as text. Text automatically aligns to the left in a cell. If the text is too long to fit within a cell, the excess characters appear in the next cell to the right, as long as that cell is empty. If text has been entered into the adjacent cell, however, the long text entry appears truncated (i.e., as if the excess characters have been deleted). The characters are not actually deleted; they will appear if you widen the column containing the long text entry.

Text is always entered into the active cell. Therefore, you should be sure that the active cell is the appropriate cell before you start typing. If you press the **[Enter]** key when you finish typing an entry, the active cell automatically moves down one cell.



Entering text into a worksheet

When you are entering or editing cell data, the worksheet is in enter or edit mode, respectively. Pressing the **[Enter]** key (to retain your changes to the cell) or the **[Esc]** key (to revert to the previous cell entry) returns the worksheet to ready mode. The current mode appears in the status bar at the bottom of the application window.

You can also click the checkmark in the formula bar (to retain changes) or the **X** (to revert to the previous cell entry) instead of pressing the **[Enter]** or **[Esc]** key to exit enter or edit mode. Clicking the checkmark or the **X**, however, does not activate the next cell down.

Excel must be in ready mode in order for you to perform any action other than entering or editing the contents of the active cell.

Procedures

1. Move to the cell into which you want to enter text.
2. Type the desired text.
3. Press **[Enter]**.
4. Enter text into additional cells as desired.

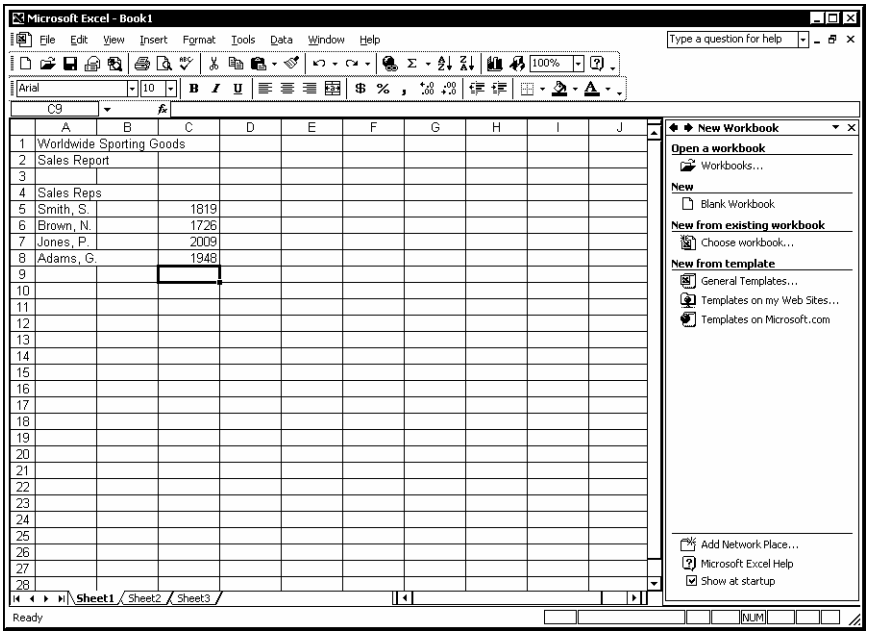
ENTERING NUMBERS INTO CELLS

Discussion

Numeric entries contain only numbers (such as **75**, **197**, and **206**) and are automatically aligned to the right side of the cell. An address such as **17 Maple Avenue** is considered a text entry, even though it begins with a number. You can type a minus sign before a number or enclose a number in parentheses to indicate a negative value. You can also type a period to indicate a decimal point and enter decimals. If you enter a decimal that ends in zero (0) such as 345.50, however, the ending zero is dropped, and the number displays as 345.5. A cell must be formatted to display a specific number of decimal places in order to display a decimal with ending zeroes.

Numbers can exist as independent values, or they can be used in formulas to calculate other values.

You can type dates into a worksheet. Excel treats dates as numbers so that it can perform calculations on them (such as determining how many days a bill is past due). When you enter a date into a cell, Excel formats the entry as a date, but stores it as a serial number that represents that date on the calendar.



Entering numbers

> You should be careful when using spaces with numbers. They are considered text and cannot be used in calculations. Dollar signs (**$**) and commas (**,**) are acceptable, as well as dashes, which are treated as minus signs.

> You can also click the checkmark in the formula bar instead of pressing the **[Enter]** key to exit enter mode.

> You can force Excel to treat a number as text by typing an apostrophe (**'**) as the first character in the cell. The apostrophe appears only on the formula bar; it does not appear within the cell, nor does it print.

Procedures

1. Move to the cell into which you want to enter a number.
2. Type the desired number.
3. Press **[Enter]**.
4. Enter numbers into additional cells as desired.

SAVING A NEW WORKBOOK

Discussion

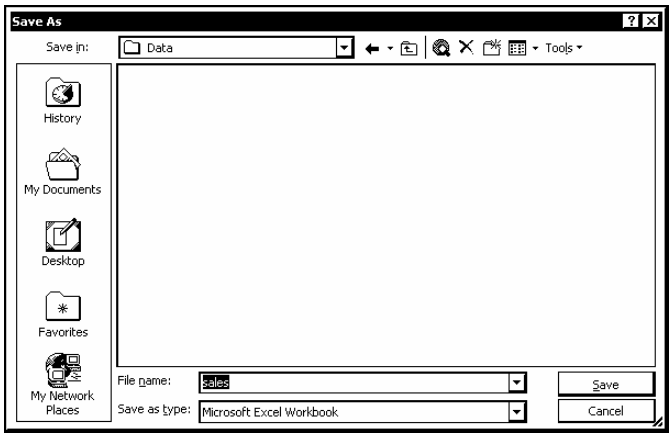
After creating a new workbook, you can save it to disk so that you can retrieve it at another time.

When you save a workbook for the first time, Excel opens the Save As dialog box, in which you enter the desired file name and location. A file name can consist of multiple words and should be descriptive enough for you to recognize the contents.

When you are naming a workbook, the following characters cannot be used in file names: forward slash (/), backslash (\), greater than symbol (>), less than symbol (<), asterisk (*****), quotation marks (**", "**), question marks (**?**), pipe symbol (|), colon (**:**), or semicolon (**;**). Excel automatically assigns the **.xls** extension when you save a file for the first time.

The default folder for saving workbooks is the **My Documents** folder. If you want to save the workbook in a different drive or folder, you can use the **Save in** list to select the desired location. The folders and files residing in the selected location appear in the list box below the **Save in** box. The Places Bar on the left side of the Save As dialog box contains shortcuts to various folders and can be used to quickly select a folder. The Save As dialog box can be resized like any other window to fit your needs.

Once a workbook has been saved, its file name appears in the application title bar. Subsequent saves do not display the Save As dialog box; instead, Excel updates the changes to the existing file each time you save the workbook.



The Save As dialog box

Depending upon your Windows settings, file extensions may or may not show in the Save As or Open dialog boxes. This setting is controlled by opening the Folder Options dialog box, selecting the **View** tab, and selecting or deselecting the **Hide file extensions for known file types** option. You can use My Computer to access the Folder Options dialog box.

If you save a workbook with a file name that already exists in the same location, you will be prompted to confirm that you want the new file to replace the existing one.

You can also save a new document by selecting the **File** menu and then selecting the **Save** command.

Procedures

1. Click the **Save** button  on the **Standard** toolbar.
2. Type the desired file name.
3. Select the **Save in** list.
4. Select the drive where you want to save the workbook.
5. Open the folder where you want to save the workbook.
6. Select **Save**.

CLOSING A WORKBOOK

Discussion

When you have finished working on a workbook, you can close it to remove it from the workbook window.

If you close a workbook without saving the most recent changes, Excel prompts you to save it. You can choose to save the changes made to the workbook, or you can close the workbook without saving the changes.

> You can also close an open workbook by clicking the **Close Window** button on the right side of the menu bar.

Procedures

1. Select the **File** menu.
2. Select the **Close** command.

CREATING A NEW WORKBOOK

Discussion

When you start Excel, you begin with a new workbook. Excel labels this workbook as **Book1** in the Excel title bar. Additional new workbooks can be created at any time.

When you create a new, blank workbook, it opens with pre-existing settings and formatting known as default settings. These defaults are saved in a template. All workbooks are based on templates. Template defaults include margin settings, numeric format, and font type and size.

A new Excel workbook is based on the **Workbook** template. This template is an all-purpose template used to create new workbooks, as well as other templates.

> The application title bar displays the current workbook. When you start Excel, **Book1** appears. When you create a new workbook, the name of the new workbook (e.g., **Book2**) appears in the title bar. You can change these default names when you save the file.

> Selecting the **File** menu and the **New** command displays the **New Workbook** task pane. You can also use the **Blank Workbook** link in the task pane to create a new, blank workbook. Creating a new, blank workbook with either the toolbar button or the task pane closes the task pane.

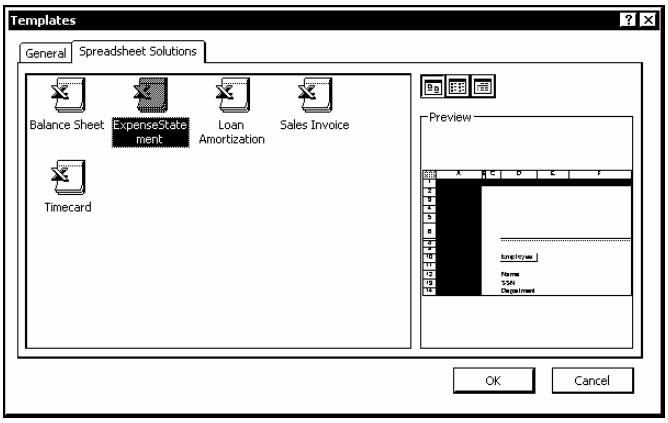
Procedures

1. Click the **New** button  on the **Standard** toolbar.

USING A TEMPLATE

Discussion

Excel provides various preformatted templates (such as expense reports, sales invoices, or purchase orders) that you can use to create new workbooks. Templates save you time in formatting workbooks and worksheet data. When you create a new workbook based on an existing template, the workbook opens with a variety of pre-existing formats and settings (such as margins, numeric formats, and fonts). An expense statement template, for example, allows you to enter your data into the template, which you then save as a new workbook without altering the original template. The template remains intact, available to use again and again.



Using a template

If Excel was installed on your computer using the typical installation procedures, you may have to install the templates.

Procedures

1. Select the **File** menu.
2. Select the **New** command.
3. Select the desired link under **New from template** on the **New Workbook** task pane.
4. Select the **Spreadsheet Solutions** tab.
5. Select the desired template.
6. Select **OK**.

OPENING AN EXISTING WORKBOOK

Discussion

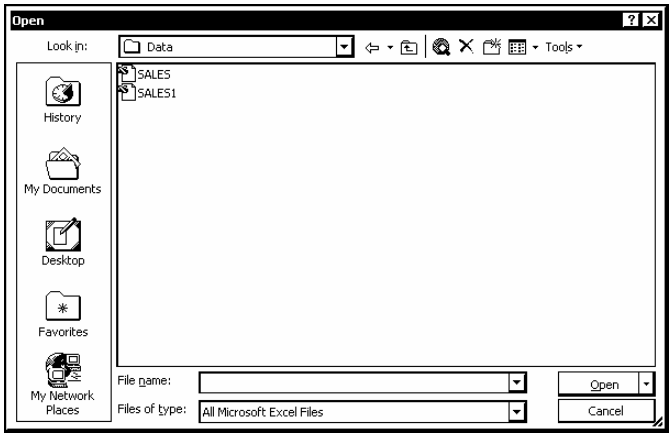
You can view or edit an existing workbook by opening it from disk. You do not need to remember the file name, because the Open dialog box displays a list of folders and files in the current drive and folder. You can select the desired workbook from the list, or you can type the name of the workbook you want to open.

If the workbook resides in a different drive or folder, you can use the **Look in** list to select the correct location. The folders and files residing in the selected location appear in the list box below the **Look in** box. You can resize the Open dialog box to view more of its contents.

In addition to using the **Look in** list to open workbooks, the Open dialog box contains a Places Bar on the left side of the dialog box. The Places Bar provides shortcuts to various folders containing commonly used files, as well as desktop options and recently opened files.

If you want to protect the original version of a workbook from modifications, you can use the **Open** list to open a copy of a workbook or to open the workbook as read-only. You can use the **Files of type** list in the Open dialog box to open a file created in another program, such as Lotus 1-2-3 or Quattro Pro.

You can also have more than one workbook open at a time.



Opening an existing workbook

	You can also open the Open dialog box by selecting **More workbooks** in the **New Workbook** task pane or by selecting the **File** menu and then the **Open** command.

	Excel displays the names of the four most recently opened workbooks at the bottom of the **File** menu and in the **Open a workbook** list at the top of the **New Workbook** task pane. When you click a file name in the list, the corresponding workbook opens.

	You can use the **Tools** menu in the Open dialog box to add the currently selected folder to the Places Bar.

Procedures

1. Click the **Open** button  on the **Standard** toolbar.
2. Select the **Look in** list.
3. Select the drive where the workbook you want to open is located.
4. Open the folder in which the workbook you want to open is located.
5. Select the name of the workbook you want to open.
6. Select **Open**.

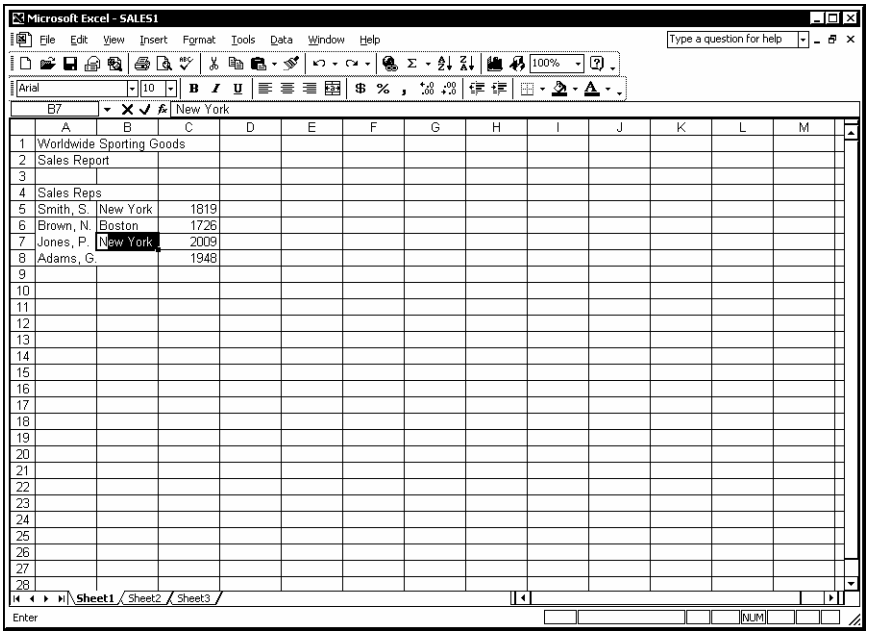
USING DATA ENTRY SHORTCUTS

Discussion

Excel includes shortcuts to help you perform certain data entry tasks. The **AutoComplete** and **Pick From List** features are shortcuts that save you time entering labels into a worksheet.

The **AutoComplete** feature helps speed up entry into a column containing text by completing the entry after you have typed a few characters. It is common to have to repeat entries when you are entering text into a column. For a column titled **Region**, possible entries might include **New York**, **Boston**, **Chicago**, etc. These entries are likely to be repeated more than once. As you type entries into a column, Excel automatically compiles a list of the entries. When you type the first few letters of a repeated entry in the same column, Excel finishes typing the entry for you. If you do not want to use the entry that Excel suggests, you simply continue typing.

The **Pick From List** feature is a quick way to enter text into a column because it allows you to select an entry from a list. Excel automatically compiles a list of the text entries in a column. When activated, the **Pick From List** feature displays a list of the available entries for the active column in alphabetical order. You can then select an entry from the list instead of having to retype each entry.



Using AutoComplete

> The **AutoComplete** and **Pick From List** features only work in columns containing text entries.

> If there is a blank row between entries in a column, the **AutoComplete** and **Pick From List** features for that column must be rebuilt for cells below the blank row by typing the entries again.

> You can disable the AutoComplete feature by selecting the **Tools** menu, the **Options** command, and the **Edit** tab; then, deselect the **Enable AutoComplete for cell values** option.

Procedures

1. Move to the cell in which you want to use the **AutoComplete** feature.
2. Begin typing the entry, until the desired completed entry appears in the cell.
3. Press **[Enter]**.
4. Right-click the cell in which you want to use the **Pick From List** feature.

5. Select the **Pick From List** command.
6. Select the desired entry.

EDITING CELL ENTRIES

Discussion

If a cell contains numerous characters, and you only want to change a few of them, it is more practical to edit the cell and change only the desired characters than to retype the entire entry. When you double-click a cell, the cell is placed in edit mode and its contents appear in the formula bar. You can then edit the contents in the formula bar or in the cell itself using the keyboard.

You can use the following keys to navigate and edit a cell in a worksheet:

Keys	Action
[Home]	Moves the insertion point to the beginning of the cell entry.
[End]	Moves the insertion point to the end of the cell entry.
[Right]	Moves the insertion point one character to the right in the cell entry.
[Left]	Moves the insertion point one character to the left in the cell entry.
[Backspace]	Deletes selected text or the character to the left of the insertion point.
[Delete]	Deletes selected text or the character to the right of the insertion point.

You also can use the mouse to position the insertion point and to select text.

If you type data into a cell that already has an entry, the new entry replaces the old one. You do not have to be in edit mode. You can use this method when it is easier to replace the entire contents of a cell, rather than to edit portions of it.

If you want to delete the entire entry in a cell, you can select the desired cell and press the **[Delete]** key to remove the entire cell entry. You do not have to be in edit mode. You can also select a range of cells and use the **[Delete]** key to delete the contents of multiple cells.

Procedures

1. Move to the cell with the data you want to replace.
2. Type the new data.
3. Press **[Enter]**.
4. Double-click the cell you want to edit.
5. Position the insertion point in the entry, either in the formula bar or in the cell.
6. Edit the entry as desired.
7. Make additional editing changes as desired.
8. Press **[Enter]**.
9. Move to the cell containing the entry you want to delete.
10. Press **[Delete]** to delete the entire cell entry.

CHECKING WORKSHEET SPELLING

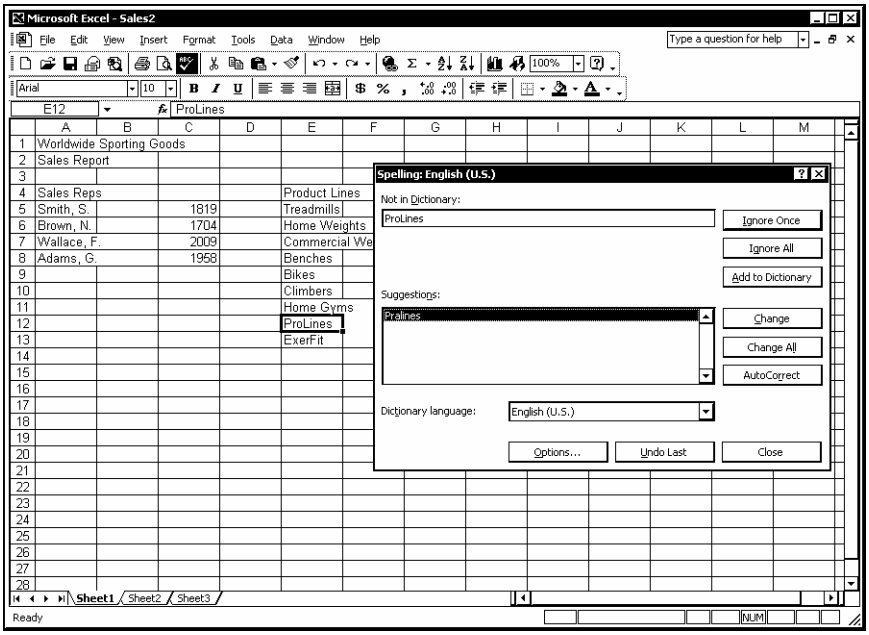
Discussion

Excel can check for misspelled words on a worksheet. Excel's spelling checker flags words as misspelled if they do not appear in the dictionary or do not match the spelling in the dictionary. You can check the spelling of your text using an English dictionary or that of another language. The **Dictionary language** list box allows you to select the language for the dictionary you want to use.

A word identified as misspelled appears in the Spelling dialog box, with possible correct spellings listed in the **Suggestions** list box. There are several alternatives when a word is identified as incorrect. You can select the correct spelling of the word in the **Suggestions** list box and use the **Change** or **Change All** button to change just the current occurrence or all occurrences of the misspelled word. However, if the list of possible alternative spellings in the **Suggestions** list box does not contain the correct spelling, you can type the correct spelling directly into the Spelling dialog box. If the word is correct, you can use the **Ignore Once** or **Ignore All** button to disregard just the current occurrence or all occurrences of the word. Another alternative for a correctly spelled word (such as a company name or technical term) is to use the **Add to Dictionary** button to add the word to the custom dictionary.

If you make a mistake during a spell check, you can use the **Undo** button in the Spelling dialog box to reverse the previous change.

You can check the spelling of the entire worksheet or of a range of selected cells.



Running the spelling checker

> Although you cannot edit the custom dictionary in Excel, you can use Microsoft Word to edit it or to create a new custom dictionary.

> You can also activate the spelling checker by selecting the **Tools** menu and the **Spelling** command.

> Unless multiple sheets are selected, the **Change**, **Change All**, **Ignore Once**, and **Ignore All** buttons only affect the current worksheet.

Procedures

1. Click the **Spelling** button on the **Standard** toolbar.
2. To change the spelling of an identified error, select the desired spelling from the **Suggestions** list box.
3. Select **Change** or **Change All**.
4. To ignore an identified error, select **Ignore Once** or **Ignore All**, as desired.

5. To edit an identified error, select the identified error in the **Not in Dictionary** box.
6. Type the correct spelling of the identified error.
7. Select **Change** or **Change All** as desired.
8. To add an identified word to the custom dictionary, select **Add to Dictionary**.
9. To reverse the previous change, select **Undo**.
10. To end the spell check before it is completed, select **Cancel** or **Close**.
11. When prompted, select **OK** to end a completed spell check.

CREATING A NEW FOLDER

Discussion

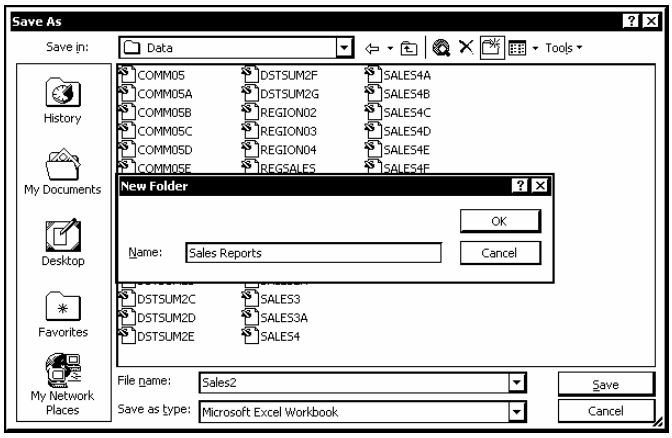
As you create and save different types of workbooks, you may want to organize them. Folders provide a method of organizing your workbooks, similar to using folders in a file cabinet. You can create folders that group together workbooks based upon different criteria, such as subjects, clients, or products.

You can create your folders within the **My Documents** folder or select another location to store your folders and workbooks.

The first time you open the Save As dialog box after starting Excel, the **My Documents** folder appears as the default folder. You can save documents to other folders or create new ones with the **Create New Folder** button.

New folders are created in the current (parent) folder. However, if you want to create a new folder in another location, you can use the Save As dialog box to navigate to that drive and folder before creating the new folder. For example, if you wish to create a folder named **Second Quarter Expenses** under the **Current Year** folder, you must first open the **Current Year** folder in the Save As dialog box.

You can create new folders using either the Save As or Open dialog box, all without leaving Excel.



Creating a new folder

> You can change the default location for saving and opening workbooks by selecting the **Tools** menu, the **Options** command, and the **General** page. Enter the location in the **Default file location** box.

> The following reserved characters cannot be used for naming folders: forward slash (/), backslash (\), greater than (>), less than (<), asterisk (*****), quotation mark (**"**), question mark (**?**), pipe symbol (|), and colon (**:**).

Procedures

1. Select the **File** menu.
2. Select the **Save As** command.
3. Select the **Save in** list.
4. Select the drive in which you want to create the new folder.
5. Open the folder in which you want to create the new folder.
6. Click the **Create New Folder** button  .
7. Type the desired folder name.
8. Select **OK**.
9. To return to the previous folder, click the **Up One Level** button  .

RENAMING AN EXISTING WORKBOOK

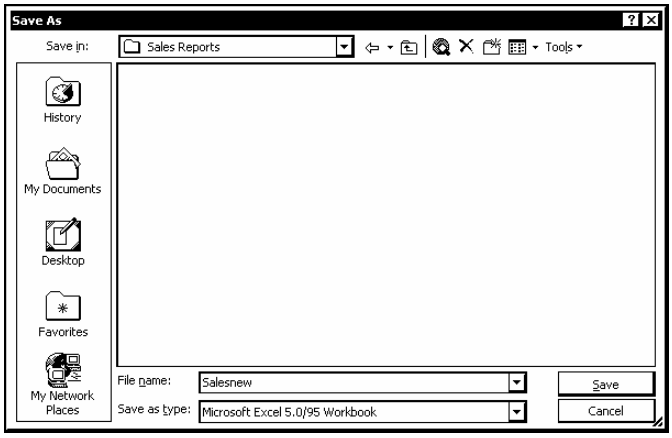
Discussion

Once a file has been saved Excel updates the existing, saved file with any changes each time you subsequently save the workbook.

There may be times, however, when you want to save the current workbook with a different workbook name and/or to a different location. This option allows you to modify a workbook and save the changes, but still keep the original workbook intact. You can use the Save As dialog box to save an existing workbook with a different file name or to a different location.

You can use the **Save as type** list to save the document in a format that can be read by other applications, such as Lotus 1-2-3, or an earlier version of Excel.

When you save an existing file with a new name, the original file automatically closes, and the file appears in the worksheet area with its new name in the title bar.



Renaming an existing workbook

Procedures

1. Select the **File** menu.
2. Select the **Save As** command.
3. Type the desired file name.
4. To change the file type, select the **Save as type** list.

5. Select the desired file type.
6. Open the folder in which you want to save the new document.
7. Select **Save**.

LESSON 3 -
WORKING WITH RANGES

In this lesson, you will learn how to:

- Work with ranges
- Select ranges with the keyboard
- Select ranges with the mouse
- Select non-adjacent ranges
- Enter values into a range
- Use the Auto Fill feature

WORKING WITH RANGES

Discussion

Many Excel commands are executed after selecting one or more cells. The command then effects all the selected cells. A group of selected cells is called a range. A range can contain adjacent or non-adjacent cells. A non-adjacent range consists of two or more separate blocks of cells that can be adjoining (contiguous), non-contiguous, or overlapping.

Ranges are identified by the addresses of the cells in the upper left and lower right corners of the selected block of cells, separated by a colon. For example, the range A4:C10 has cell A4 in the upper left corner and cell C10 in the lower right corner. To identify non-adjacent ranges, you must separate the range addresses with a comma. For example, A4:A10,C4:C10 refers to the range A4:A10 as well as the range C4:C10.

Selecting a range before executing a command is especially useful if you are using a toolbar or keyboard shortcut to perform an action. If a dialog box opens when you execute a menu command, however, you can specify the desired range in the dialog box. In this case, you do not have to select a range before you execute the command.

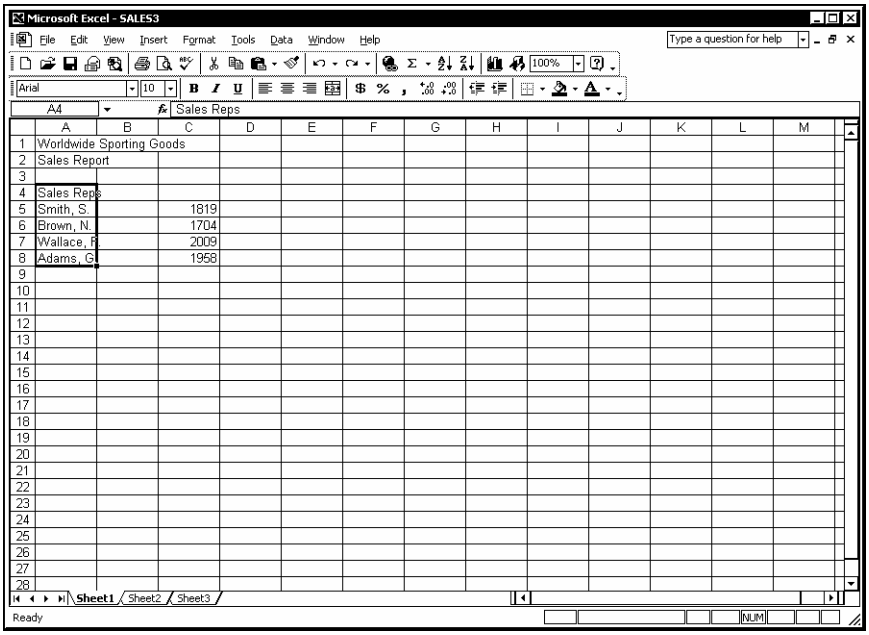
A selected range has a heavy black border around it, and all the cells within the range, except for the active cell, are shaded.

A range remains selected until another cell or range is selected.

SELECTING RANGES WITH THE KEYBOARD

Discussion

You can select ranges with the keyboard. Keyboard selection techniques are useful when you are working with small ranges. A range can be deselected by pressing any arrow key or by clicking any cell in the worksheet.



A selected range

> You can select a large range of cells quickly by pressing the **[Shift+Page Up]** or **[Shift+Page Down]** key combination.

Procedures

1. Move the active cell to the first cell in the range.
2. Hold **[Shift]** and press the desired arrow key as necessary to extend the selection.

SELECTING RANGES WITH THE MOUSE

Discussion

You can use the mouse to select a range. This method is especially effective when you are selecting large ranges in which you must scroll the display in order to see the last cell in the range. A range can be deselected by pressing any arrow key or by clicking any cell in the worksheet.

> You can select a large range quickly by clicking the upper left cell in the range, pressing the **[Shift]** key, and clicking the lower right cell in the range. All cells between the two corner cells are selected.

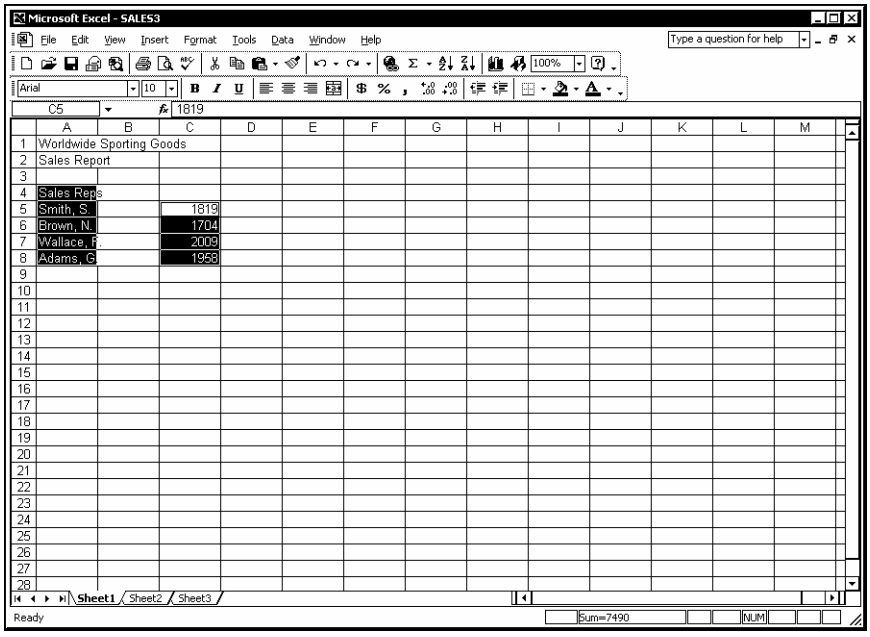
Procedures

1. Drag from the first cell in the range to the last.

SELECTING NON-ADJACENT RANGES

Discussion

You use the mouse in conjunction with the **[Ctrl]** key to add non-adjacent cells to a selected range. This method is useful when you want to execute a command that affects ranges in different sections of a worksheet. You may want to apply the same format to the titles in row 1 and the summary totals in row 10. By selecting the two non-adjacent ranges, you can apply the same format to both of the rows at once.



Selected non-adjacent ranges

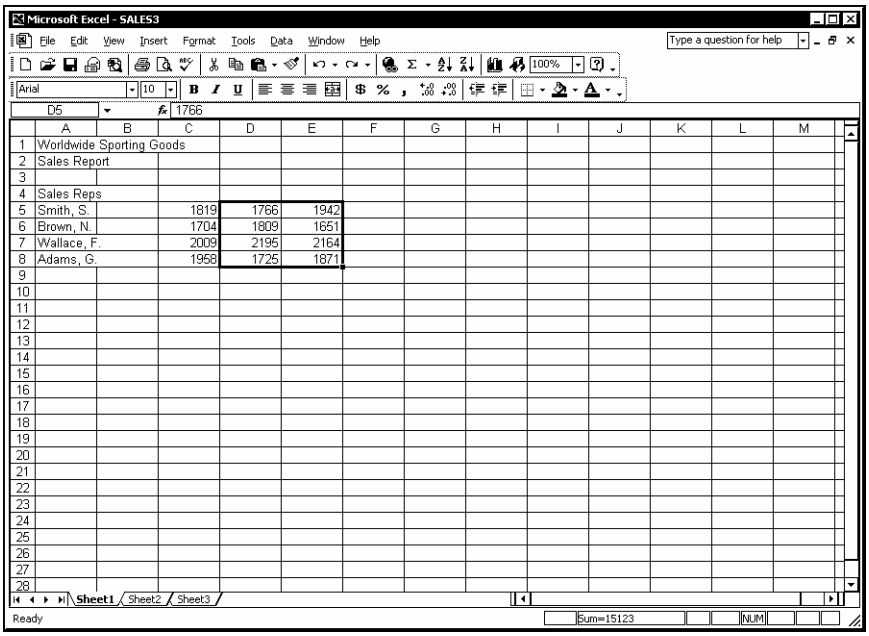
Procedures

1. Drag from the first cell in the range to the last adjacent cell.
2. Hold **[Ctrl]** and drag to select the non-adjacent range.

ENTERING VALUES INTO A RANGE

Discussion

You can quickly enter data into a selected range using the shortcut method. As you type each entry into the range and press the **[Enter]** key, the active cell automatically moves vertically to the next cell in the range, even if the range spans several columns. When the active cell reaches the last selected cell in the current column, it automatically moves to the first selected cell in the next column. In a non-adjacent range, when the active cell reaches the last cell at the bottom right corner of the first block of cells, it advances to the first cell at the top left corner of the next non-adjacent block of cells.



Entering values into a range

The active cell in a selected range appears without shading. Any data you enter appears in the active cell.

You can use another data entry shortcut to enter data horizontally across a row, without selecting the cells in the range. Type the data and use the **[Tab]** key to move horizontally to the next cell in the same row. After entering data in the last cell in the row, press the **[Enter]** key and the active cell automatically moves to the first column in the next row.

Procedures

1. Select the range into which you want to enter data.
2. Type the data into the first cell of the range.
3. Press **[Enter]**.
4. Continue entering data as desired.

USING THE AUTO FILL FEATURE

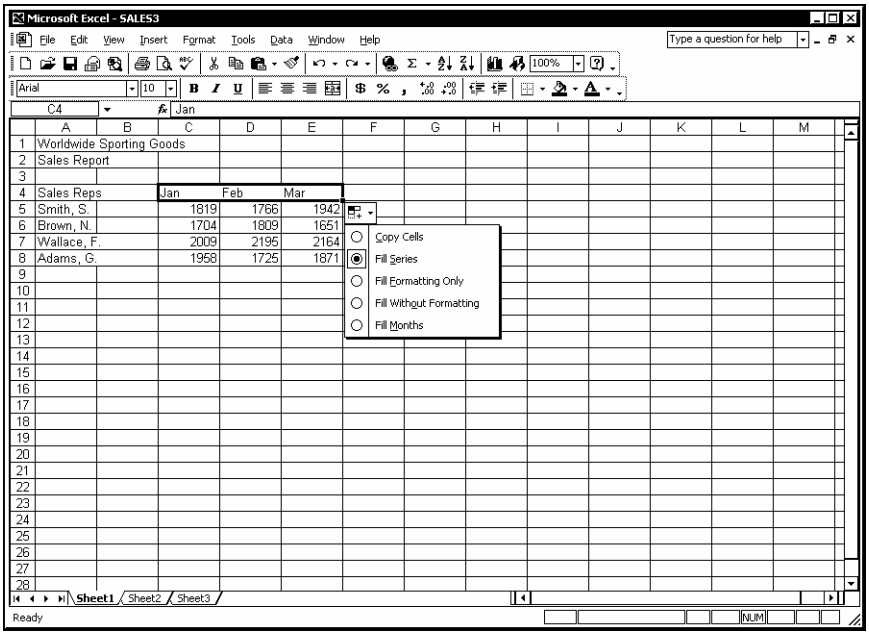
Discussion

You can use the **Auto Fill** feature in Excel to create a standard series of labels on a worksheet. Examples of standard series include months of the year, days of the week, and quarters of the year.

When you select a cell or range, a small, black box called the fill handle displays in the lower right corner of the cell or range. When the mouse pointer is positioned on the fill handle, it changes into a solid, black plus sign (+). If the cell contains a label that Excel recognizes as the first item in a standard series, a ScreenTip appears displaying the next item in the series as you drag the fill handle.

When you release the mouse button, Excel fills the range based on the contents of the first cell in the range, and the **Auto Fill Options** button appears in the lower right corner of the last cell. Clicking the **Auto Fill Options** button displays a list of available Auto Fill options.

Auto Fill options include: **Copy Cells**, which copies the first cell in the selected range instead of filling it; **Fill Formatting Only**, which copies the formatting only from the first cell without the contents; and **Fill Without Formatting**, which excludes the formatting of the first cell when filling the range. Other options may appear depending upon the text in the first cell.



Using Auto Fill options

If Excel does not recognize the label in the first cell as the beginning of a standard series, the cell contents are copied into the range instead.

The **Auto Fill Options** button automatically closes when you perform another action, such as entering data into another cell or saving the workbook.

Procedures

1. Select the cell containing the starting label in the series.
2. Point to the fill handle at the bottom right corner of the active cell.
3. Drag the fill handle to select the range you want to fill.
4. Click the **Auto Fill Options** button .
5. Select the desired Auto Fill option.

LESSON 4 -
CREATING SIMPLE FORMULAS

In this lesson, you will learn how to:

- Use formulas
- Enter formulas
- Use functions
- Use the AutoSum button
- Use the AutoSum List
- Enter basic functions
- Insert functions in formulas
- Edit functions
- Use the AutoCalculate feature
- Use range borders to modify formulas
- Check errors

USING FORMULAS

Discussion

Formulas are used to perform calculations on values entered into the cells of a worksheet. They consist of the addresses of the cells containing the values and the appropriate mathematical operators. Formulas always begin with an equal sign (=) because they contain cell addresses. The equal sign prevents Excel from interpreting the formula as text, since cell addresses begin with letters. For example, to add the numbers in cells A1 and A2, you would type the formula **=A1+A2**.

You enter the formula in the cell where you want the result to appear. Since formulas use cell addresses, they automatically recalculate whenever the value in any cell used in the formula changes. When a cell containing a formula is selected, the formula appears in the formula bar and the calculated results of the formula appear in the cell.

The mathematical operators that can be used in a formula are listed in the following table:

Operator	**Performs**
+ (plus sign)	Addition
- (minus sign)	Subtraction
* (asterisk)	Multiplication
/ (slash)	Division
( ) (parentheses)	Controls the order of mathematical operations; calculations within parentheses are performed first
% (percent)	Converts a number into a percentage; for example, when you type **10%**, Excel reads the value as .10
^ (caret)	Exponentiation; for example, when you type **2^3**, Excel reads the value as 2*2*2

When more than one operator appears in a formula, it is calculated using the standard mathematical order of precedence. This order determines which operations are carried out first. The order of precedence is as follows: parentheses, exponentiation, multiplication and division, addition and subtraction. For example, the result of **(8*7)+2** is 58, but the result of **8*(7+2)** is 72.

When multiplication and division or addition and subtraction appear in the same formula, they are evaluated from left to right as they appear in the formula.

Excel provides an **AutoCorrect** feature to help you correct formulas that contain errors. AutoCorrect identifies and offers suggestions on the most common mistakes made when entering formulas. For example, if a formula is entered as **=A1+B1+**, AutoCorrect will suggest the formula **=A1+B1**. If an error is found, you can either accept the correction provided or correct the formula yourself.

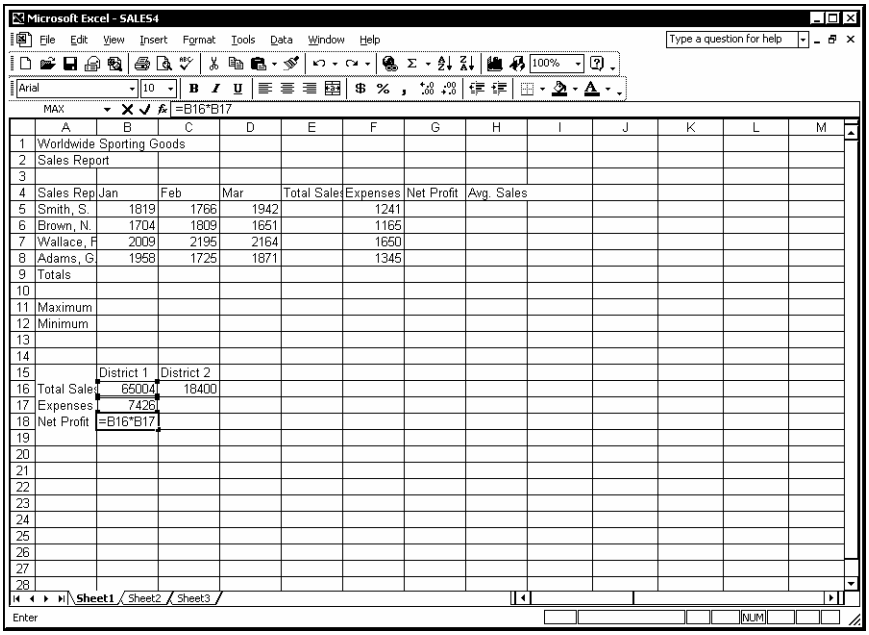
ENTERING FORMULAS

Discussion

Formulas begin with an equal sign (=) because they contain cell addresses. The equal sign prevents Excel from interpreting the formula as text, since all cell addresses begin with letters. You enter a formula in the cell where you want the result to appear.

When you enter a formula into a cell, you can either type the cell addresses referenced or use the mouse to select the cells and allow Excel to enter the cell addresses into the formula automatically. If the cell addresses that comprise a formula are not visible, it is more accurate to use the mouse to select the cell references while creating a formula. You only need to type the equal sign (=) to start the formula and then each of the arithmetic operators in the formula when appropriate.

As you type or select cell addresses, Excel places a colored border with squares at each corner around each referenced cell. Excel uses a different color border for each cell referenced in the formula.



Entering a formula

You can display the actual text entry entered into a cell (whether it is a number, label, or formula) by selecting the **Tools** menu, the **Options** command, and then the **Formulas** option on the **View** page. This option is useful as a teaching tool or when auditing a worksheet for formula errors.

Procedures

1. Select the cell into which you want to enter the formula.
2. Type an equal sign (=) to begin the formula.
3. Enter the first cell referenced in the formula.
4. Enter the first mathematical operator.
5. Enter the next cell referenced in the formula.
6. Continue entering cell references and mathematical operators as needed.
7. When you have finished creating the formula, press **[Enter]**.

USING FUNCTIONS

Discussion

Excel has built-in functions that are shortcuts for formulas. Functions are special prewritten formulas that perform an operation on values or ranges of values and return the result to a cell in the worksheet. You can use functions to simplify and shorten formulas in your worksheets, especially those that perform lengthy or complex calculations. Examples of functions include:

=SUM(B5:B8)
=AVERAGE(B5:B8)
=PMT(.08,C8,85000)
=ROUND(B5,2)

A function always starts with an equals sign (=) followed by the function's name and, enclosed in parentheses, its arguments. The function uses the arguments in its calculations. Arguments can be cell addresses, values, labels, or a combination of these; you can even use other functions or formulas as arguments.

Functions are most commonly used to perform calculations on a range of cells. For example, it is easier to use the =**SUM(A1:A7)** function to add the numbers in cells A1 through A7 than to type the formula **=A1+A2+A3+A4+A5+A6+A7**.

When you use a function, Excel provides help in the form of a function tooltip. The tooltip displays the structure of the function (i.e., the function name and the order of its required arguments).

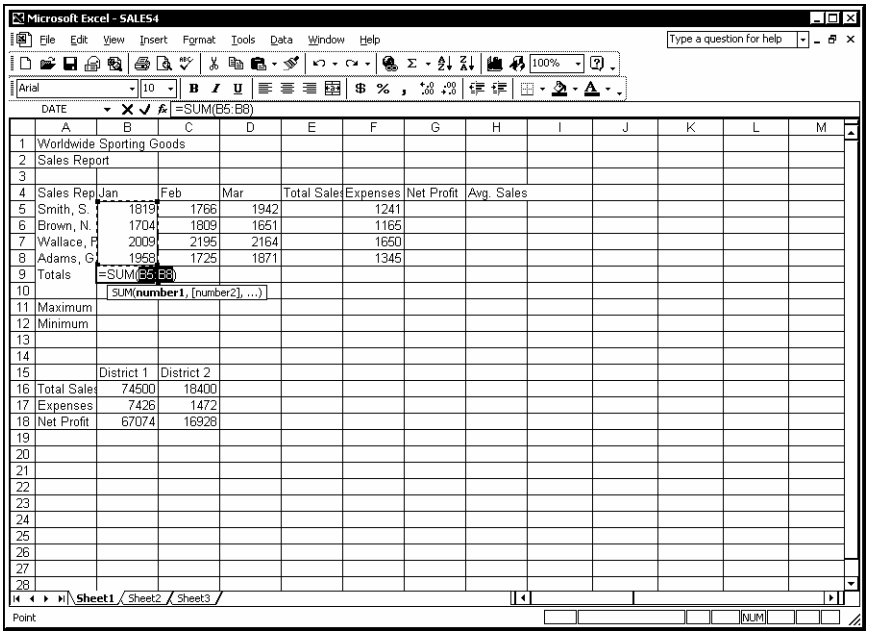
USING THE AUTOSUM BUTTON

Discussion

Excel has built-in functions that are shortcuts for formulas. The most commonly used function is the **SUM** function, which calculates the total of the values in a range of cells. Since the **SUM** function is used frequently, there is an **AutoSum** button on the **Standard** toolbar that enters the formula in the active cell for you. AutoSum is an easy way to sum values in a row or column of a worksheet.

When you click the **AutoSum** button, a suggested range for the function appears. A blinking, colored border called a range finder defines the suggested range. When you click the **AutoSum** button at the end of a row, the row of values to the left of the active cell is suggested. If you click the **AutoSum** button at the bottom of a column, the column of values above the active cell is suggested. If there are values both above and to the left of the active cell, the column of values above the active cell is suggested. This suggested range can be changed as needed.

The **AutoSum** button provides an arrow which, when clicked, displays a list of other functions you can perform on the cells within the selected range.



Using the AutoSum button

	Double-clicking the **AutoSum** button enters the result of the formula without having to press the **[Enter]** key.

	When you use the **AutoSum** button, a tooltip appears with information about the structure of the selected function.

Procedures

1. Select the cell into which you want to enter the formula.
2. Click the **AutoSum** button  .
3. Press **[Enter]**.

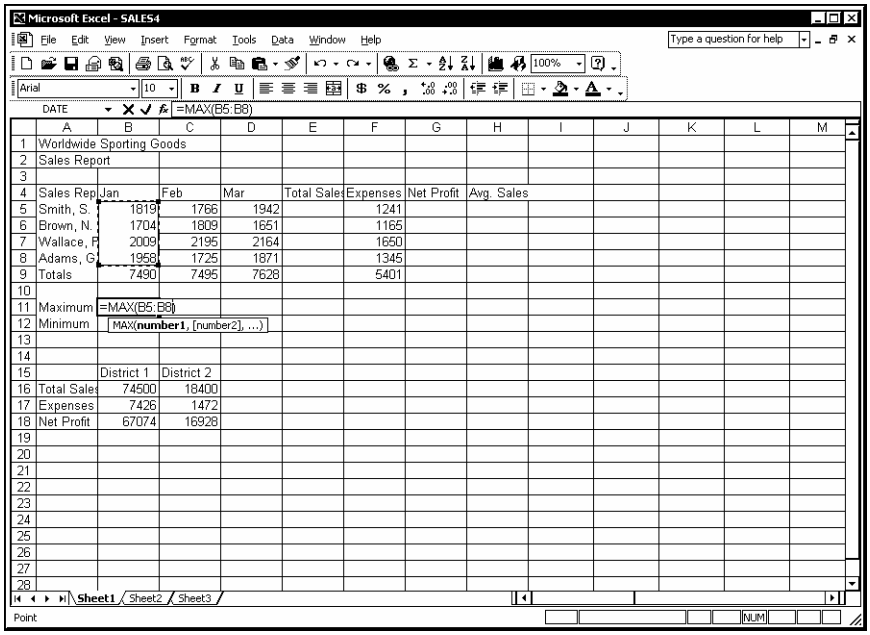
USING THE AUTOSUM LIST

Discussion

The **AutoSum** button provides an arrow, which displays a list of other functions you can perform on consecutively filled cells in a column or row. For example, it is easier to use the **Average** function from the **AutoSum** list to average the numbers in cells B1 through B7 than to type the formula **=AVERAGE(B1:B7)**.

Other commonly used functions in the **AutoSum** list are **Count**, **Max**, and **Min**. **Count** returns the number of cells containing numeric values, **Max** returns the highest value in the range, and **Min** returns the lowest.

AutoSum automatically uses the cell range immediately adjacent to the active cell for the suggested range. If this suggested range is incorrect, you can change it by dragging to select the cells containing the values you want to calculate.



Using the AutoSum list

> Another method of inserting a formula using the **AutoSum** list is to select the column or row of values, including the blank cell, to contain the formula. When you select a function from the **AutoSum** list, the formula is inserted without stopping to confirm the cell range.

> The **More Functions** command in the **AutoSum** list opens the Insert Function dialog box, which can be used to access all Excel functions.

Procedures

1. Select the cell into which you want to enter the formula.
2. Click the arrow on the **AutoSum** button  .
3. Select the desired function.
4. Drag to select the range you want to calculate, if necessary.
5. Press **[Enter]**.

ENTERING BASIC FUNCTIONS

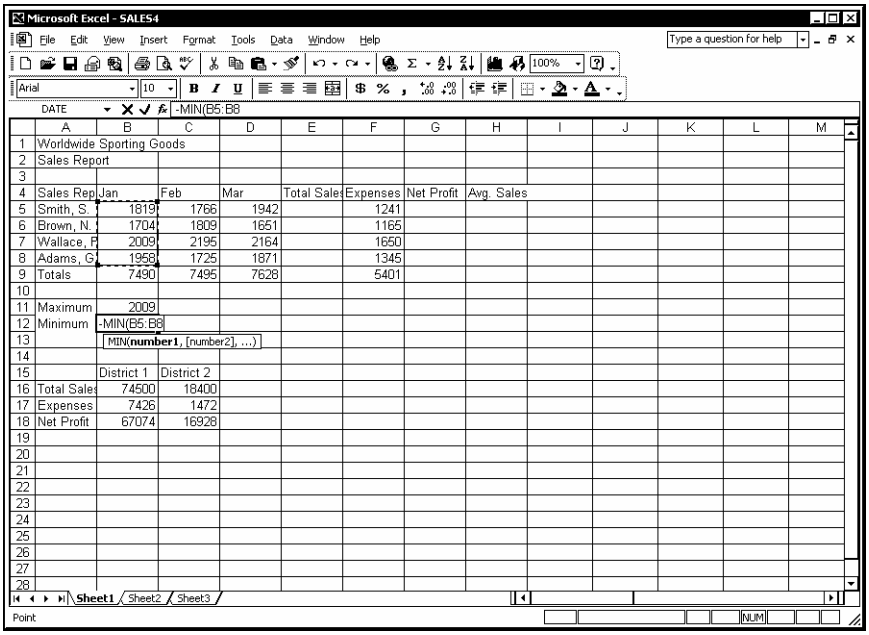
Discussion

Although the **AutoSum** list assists you in creating formulas for the most commonly used functions, you may want to manually enter a function.

The **SUM**, **AVERAGE**, **MAX**, **MIN**, and **COUNT** functions are entered with the same syntax, including beginning the function with an equal sign (=) and then typing the name of the function and an open parenthesis. You then enter the cell range by dragging to select the cells or by typing the first and last cells in the range. These functions are defined in the following table:

Function	Syntax	Description
SUM	=SUM(A1:A20)	Totals all the numbers in a range
AVERAGE	=AVERAGE(A1:A20)	Returns the average of a range of numbers; if a cell in the range is empty, it is not used in calculating the average; if a cell in the range contains the number zero, it is used in calculating the average

Function	Syntax	Description
MAX	=MAX(A1:A20)	Returns the highest value in a range of numbers
MIN	=MIN(A1:A20)	Returns the lowest value in a range of numbers
COUNT	=COUNT(A1:A20)	Returns the number of cells in the range that contain numbers



Entering a basic function

> You can enter a period (**.**) in place of a colon (**:**) when you are typing a function into a cell. When you press the **[Enter]** key, Excel automatically replaces the period (**.**) with a colon (**:**).

> The name of a function is not case-sensitive. For example, you can type **SUM**, **Sum**, or **sum** into a cell.

> If you do not type the ending parenthesis when entering a function, Excel will add it for you.

Procedures

1. Select the cell into which you want to enter the formula.
2. Type the desired formula.
3. Press **[Enter]**.

INSERTING FUNCTIONS IN FORMULAS

Discussion

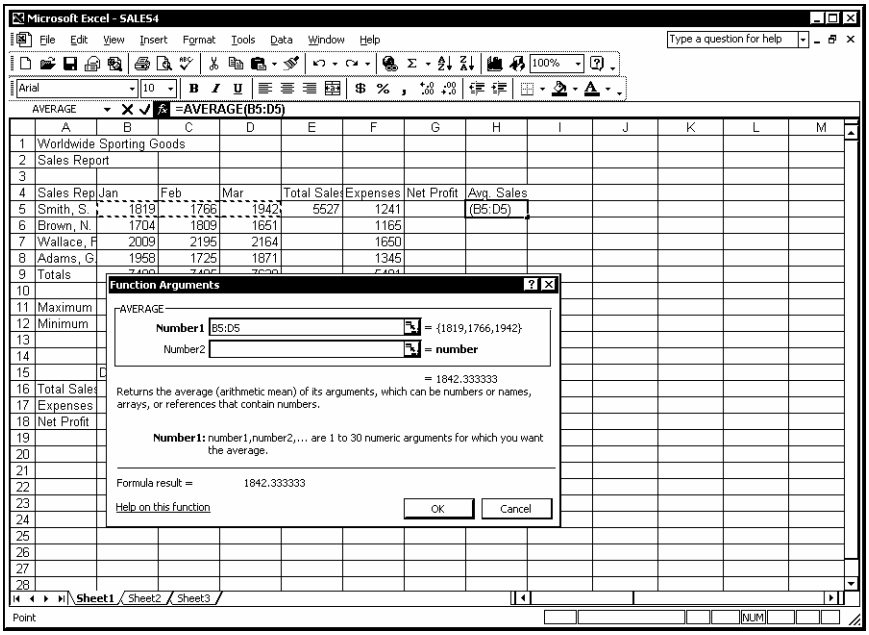
If you are not sure of the proper syntax of a function or if you need help entering a function into a formula, you can click the **Insert Function** button in the formula bar. The **Insert Function** button aids you in selecting the proper function.

The functions in the Insert Function dialog box are grouped by category. Selecting a category displays only the functions within that category. If you do not know the category, you can select the **All** option to display all the available functions in alphabetical order. When you highlight a function, its structure and description appear below the **Select a function** list.

After you have selected the desired function, the Function Arguments dialog box opens and displays an edit box for each argument in the function. You can enter a cell address, cell range, or numerical value for each argument into the corresponding edit box. An explanation of the selected function and an explanation of the selected argument appear below the list of edit boxes. As you fill in the arguments, the result of the formula appears below these explanations.

Each edit box contains a **Collapse Dialog** button, which can be clicked to collapse the Function Arguments dialog box to a title bar so that you can see the worksheet. You can then select the desired cell range, which appears in the collapsed edit box. After selecting the range in the worksheet, you can then use the **Expand Dialog** button to redisplay the full dialog box.

You can request help by selecting the **Help on this function** hyperlink in the Insert Function or Function Arguments dialog box.



Using the Function Arguments dialog box

Typing an equal sign into a cell displays a **Functions** list to the left of the formula bar. This list stores the most recently used formulas. Selecting a function from this list opens the Function Arguments dialog box; selecting **More Functions** opens the Insert Functions dialog box.

You do not have to collapse the Function Arguments dialog box to select cells in the worksheet.

You can also type a description of exactly what you want to do in the **Search for a function** box and then click the **Go** button in the Insert Function dialog box.

Procedures

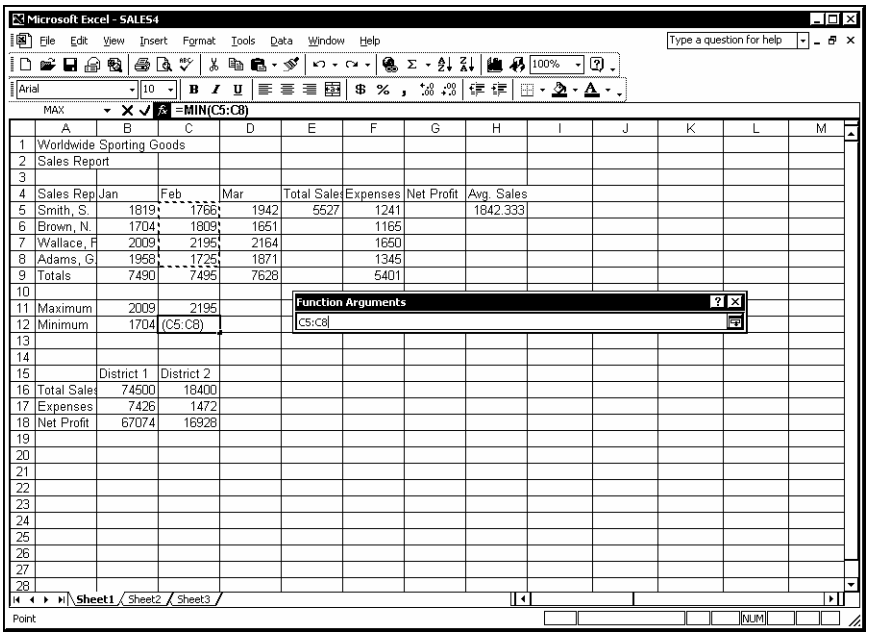
1. Select the cell into which you want to enter the formula.
2. Click the **Insert Function** button in the formula bar.
3. Select a category from the **Or select a category** list box.
4. Select the name of the function from the **Select a function** list box.
5. Select **OK**.

6. Click the **Number 1** edit box **Collapse Dialog** button .
7. Select the range you want to use in the calculation.
8. Click the **Expand Dialog** button .
9. Select **OK**.

EDITING FUNCTIONS

Discussion

The Function Arguments dialog box simplifies creating functions by clearly listing each necessary argument. You can also open the Function Arguments dialog box to edit the arguments of an existing function.



Editing a function

Procedures

1. Select the cell containing the function you want to edit.
2. Click the **Insert Function** button in the formula bar.

3. Select the **Collapse Dialog** button  for the argument you want to edit.
4. Drag the range you want to use in the calculation.
5. Click the **Expand Dialog** button  .
6. Select **OK**.

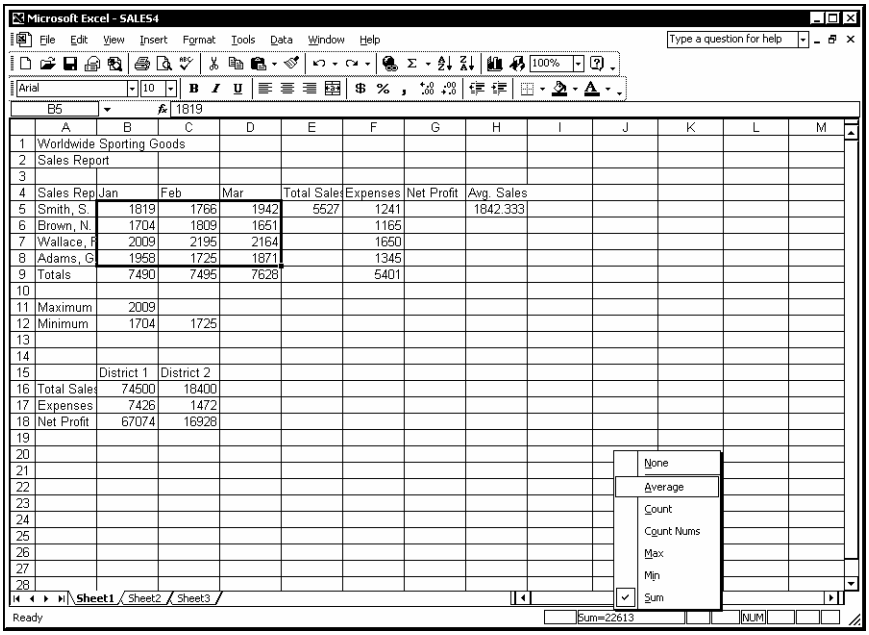
USING THE AUTOCALCULATE FEATURE

Discussion

The **AutoCalculate** feature performs a simple calculation on a selected range of cells without making you supply a formula. The result of the calculation appears on the status bar. AutoCalculate results are temporary and are not placed in the worksheet. AutoCalculate is helpful when you want to spot-check your worksheet for accuracy or need a quick answer to a basic calculation. The **AutoCalculate** functions are accessed by right-clicking the **AutoCalculate** box located on the status bar.

The **AutoCalculate** functions and their results are listed in the following table:

Function	**AutoCalculate Result**
None	Does not display a number
Average	Displays the average of the cells in the selected range
Count	Displays the number of cells in the selected range
Count Nums	Displays the number of cells in the selected range that contain numeric entries
Max	Displays the highest cell value in the selected range
Min	Displays the lowest cell value in the selected range
Sum	Displays the sum of the cells in the selected range



Using AutoCalculate

> Except for the **Count** function, AutoCalculate ignores all cells that do not contain a numeric entry.

> AutoCalculate can also calculate multiple, selected ranges.

Procedures

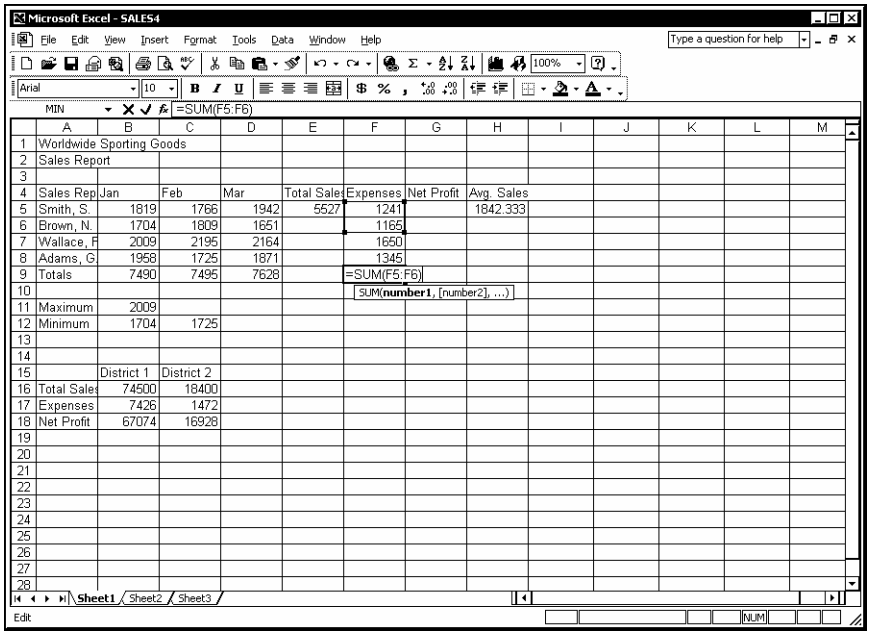
1. Select the range you want to use in the calculation.
2. Right-click the **AutoCalculate** box on the status bar.
3. Select the desired function.

USING RANGE BORDERS TO MODIFY FORMULAS

Discussion

When you create or edit a formula, Excel identifies its range references by displaying them with differently colored borders, with square handles at each corner.

You can change the arguments in a formula by dragging a range border to include a different group of cells. You can move the range border to reference an entirely different range, or you can change the size of the border to include more or fewer cells. When you modify a range border, the corresponding range reference(s) in the formula change accordingly.



Using range borders to modify a formula

Procedures

1. Double-click the cell containing the formula you want to edit.
2. To move a range reference, drag its colored border to include the new range.
3. To change the size of a referenced range, drag the square range handle at any corner of the border in the desired direction to include more or fewer cells.
4. Press **[Enter]**.

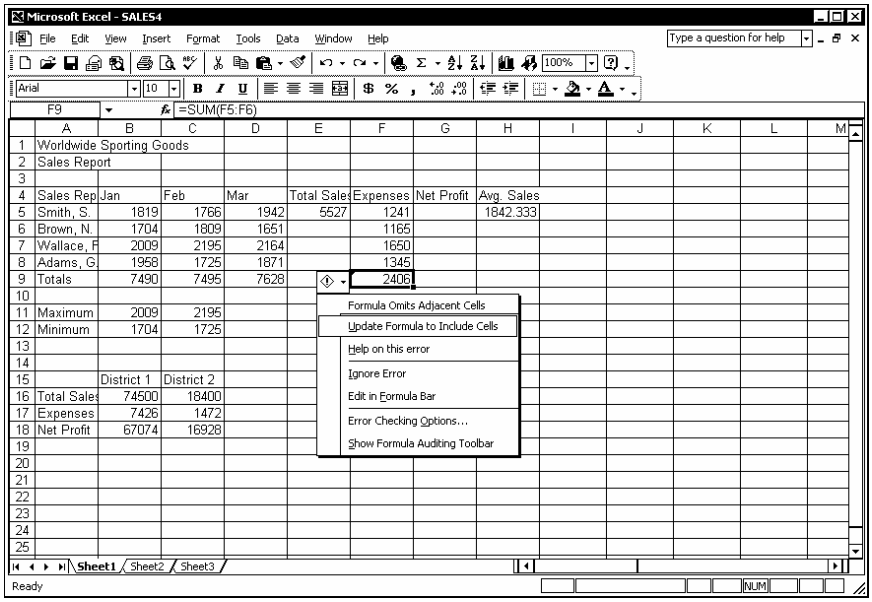
CHECKING ERRORS

Discussion

Excel provides an error checking feature that automatically checks your formulas against a pre-existing set of rules. If a formula breaks a rule, an error indicator appears in the form of a colored triangle in the corner of the cell containing the suspect formula.

The error checking feature compares formulas to preset rules. The rules include checking to see if a number is stored as text, if a formula uses a range that is inconsistent with the formulas next to it, or if the formula omits a cell in a continuous range.

When you click a cell with a green triangle in the upper left corner, the **Trace Error** button appears next to the cell. Pointing to the **Trace Error** button displays the reason the formula was flagged. Clicking the **Trace Error** button displays a list of error checking options from which you can choose to correct the error. Error checking options include selecting a suggested option to correct the error, getting an explanation of the error from Excel's help system, ignoring the error, viewing the error checking options, and showing the **Formula Auditing** toolbar.



Using error checking options

> The triangles and buttons that appear next to cells are also called smart tags.

> You can also view the error checking options by selecting the **Tools** menu, the **Options** command, and the **Error Checking** page. The automatic color for the triangle indicator is green, but you can use the **Error Indicator Color** list to select a different color.

Procedures

1. Select the cell with the green triangle in the upper, left corner.
2. Point to the **Trace Error** button  to see why the formula was identified as an error.
3. Click the **Trace Error** button  to view the error checking options.
4. Select the desired option.

LESSON 5 -
COPYING AND MOVING DATA

In this lesson, you will learn how to:

- Copy/Cut and paste data
- Use the Paste Options button
- Using the Paste list
- Use the Clipboard task pane
- Create an absolute reference
- Fill cells
- Use drag-and-drop editing
- Use Undo and Redo

COPYING/CUTTING AND PASTING DATA

Discussion

When you are creating a worksheet, you can save time by copying cell contents from one location to another. The **Copy** feature copies the selected cell contents to the Office Clipboard. The **Paste** feature pastes the contents from the Office Clipboard into the current selection on the worksheet.

When you copy cells that contain text or numbers, Excel creates an exact copy of the contents when they are pasted to another location. When you copy cells containing formulas, Excel adjusts the cell references to the row or column where the formula is pasted. For example, if the formula **=B1+B2+B3** calculates the total of three cells in column B and you copy that formula to the adjacent cell in column C, Excel adjusts the formula to **=C1+C2+C3** so that the total of the three corresponding cells in column C are calculated.

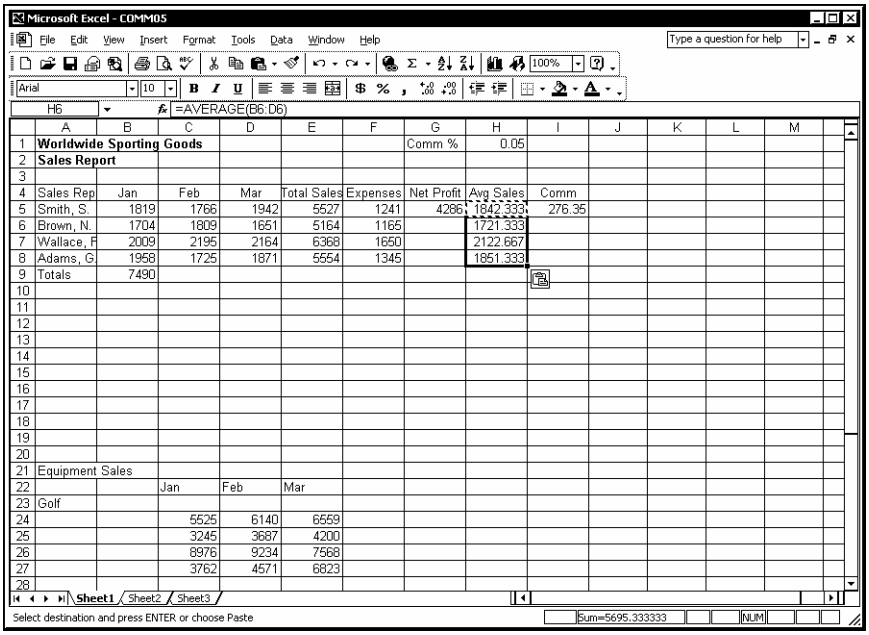
Excel assumes that the paste range exactly matches the copied range. For example, if the copied range consists of three cells, Excel assumes that the paste range will consist of three cells. As a result, you need only select the cell in the upper, left corner of the desired paste range to paste the entire copied range. If the copied range is a single cell and you select a paste range of multiple cells, the contents of the copied cell are pasted into each cell in the paste range.

You can also use the **Cut** and **Paste** features to move cell contents on a worksheet. The **Cut** feature cuts the cell contents from the worksheet, placing them on the Office Clipboard. The **Paste** feature pastes the contents of the Office Clipboard into the current selection. The contents of the cut range are then deleted from the worksheet.

When you move cells containing formulas, Excel does not adjust the cell references in the formulas. The formulas still refer to the original cells for the calculation. If you move both the formula and the cells containing the data, the cell references in the formula adjust to the new location of the data.

The **Paste** button on the **Standard** toolbar provides a **Paste** list. Clicking the **Paste** arrow displays a list of paste options. You can choose to paste a formula, paste the resulting value of a formula, paste a link, paste data without border formatting, or transpose a range of cells from a horizontal range to a vertical range or vice versa.

After an item has been pasted, the **Paste Options** button appears in the document next to the pasted text. You can use paste options to choose whether source or destination formatting should be applied, or you can press the **[Esc]** key to hide the button.



Copying and pasting data

> A blinking marquee remains around the copied range after it has been pasted to let you know which cells were copied. Pressing the **[Esc]** key removes the blinking marquee.

> If the Office Clipboard is set to appear automatically, the **Clipboard** task pane appears as soon as a second item is cut or copied.

> You should be careful when pasting data into a range, because pasting overwrites any existing cell contents in that range.

Procedures

1. Select the cell you want to copy.
2. Click the **Copy** button  on the **Standard** toolbar.
3. Select the range into which you want to paste the cell contents.
4. Click the **Paste** button  on the **Standard** toolbar.

5. Select the cell you want to cut.
6. Click the **Cut** button  on the **Standard** toolbar.
7. Select the range into which you want to paste the cell contents.
8. Click the **Paste** button  on the **Standard** toolbar.

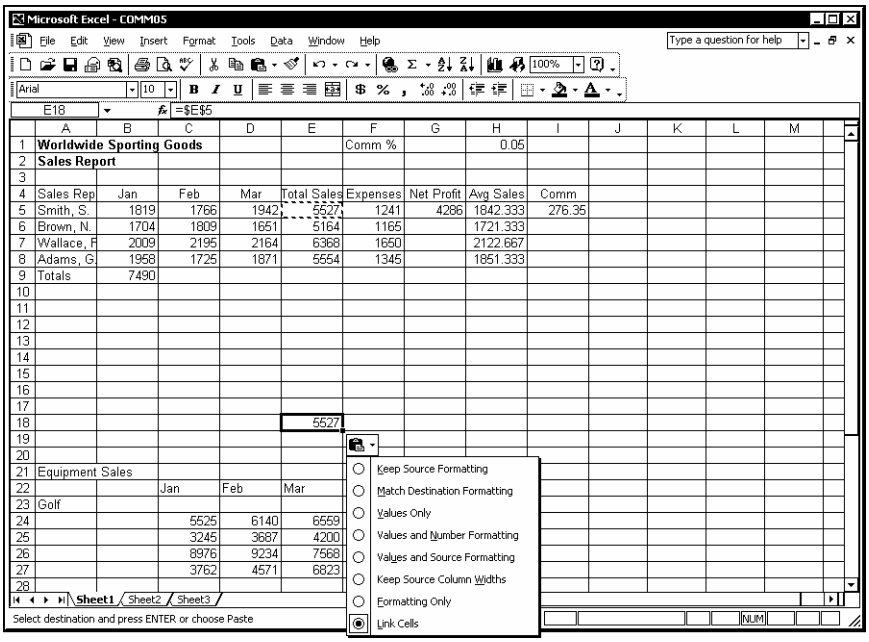
USING THE PASTE OPTIONS BUTTON

Discussion

The **Paste Options** button appears on the worksheet adjacent to the pasted cell or range of cells after you have pasted a cut or copied item. Paste options allow you to decide how formatting differences should be applied to the pasted cells. It also allows you to link the pasted data to the original cut or copied cell, if desired.

The available commands are determined by the data being pasted. When copying formatted text, you can select the **Keep Source Formatting** option to paste the text with its original formatting. When the **Match Destination Formatting** option is selected, the formatting in the paste location is applied to the pasted text. When pasting numeric data or a copied formula, you have additional options, such as pasting both values and source formatting, formatting only, or values only.

You can hide the **Paste Options** button by pressing the **[Esc]** key.



The Paste Options list

> The **Paste Options** button can be turned off by selecting the **Tools** menu and the **Options** command. In the Option dialog box, select the **Edit** page and deselect the **Show Paste Options buttons** option.

Procedures

1. Select the cell or range you want to move or copy.
2. Cut or copy the cells as desired.
3. Select the cell or range into which you want to paste the cut or copied contents.
4. Click the **Paste** button  .
5. Click the **Paste Options** button  .
6. Select the desired option.
7. To hide the **Paste Options** button, press **[Esc]**.

USING THE PASTE LIST

Discussion

When you copy text, numbers, or formulas, you can use the **Paste** button to paste the data into a new location. However, you can also use the **Paste** list to select other options for pasting text and formulas.

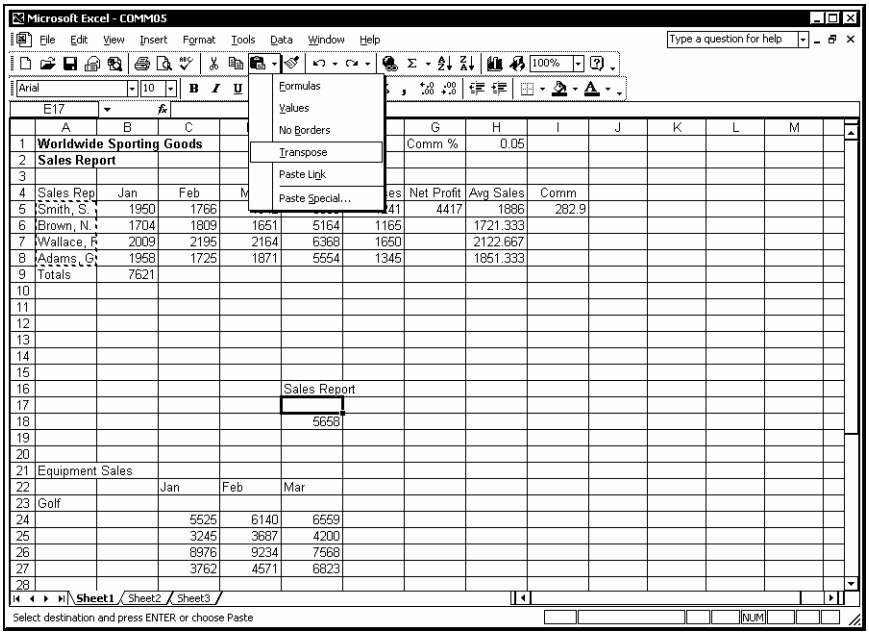
The **Formulas** command is the default paste command for the **Paste** button. Formulas are pasted into the new location and, if the referenced data is also copied, cell references are changed.

You can use the **Values** command to paste the results of a formula rather than the formula itself into a cell. This is useful if you want to paste just the current value of a formula and do not want the pasted data to be affected by new changes made to the original cell references.

The **No Borders** command allows you to copy a cell with borders and paste the contents of the cell without borders.

The **Transpose** command is used to switch a vertical range of cells to a horizontal range or visa versa. For example, you can copy the row headings in column A and transpose them to create column headings across row 15.

The **Paste Link** command pastes a link to the copied cell. If you paste cell B9 into cell D15 and select the **Paste Link** command, Excel pastes the link **=B9** into cell D15. Thereafter, cell D15 will always display the same value as cell B9.



The Paste list

> The **Paste Special** command in the **Paste** list opens the Paste Special dialog box, which provides additional options for pasting formats and data, and combining values.

Procedures

1. Select the cells you want to cut or copy.
2. Cut or copy the data as desired.
3. Select the cell or range into which you want to paste the cut or copied contents.
4. Click the arrow on the **Paste** button  .

5. Select the desired command.

USING THE CLIPBOARD TASK PANE

Discussion

The Office Clipboard stores multiple cut or copied items, including graphics, from various worksheets or other Windows programs. You can then paste the items into one or more worksheets.

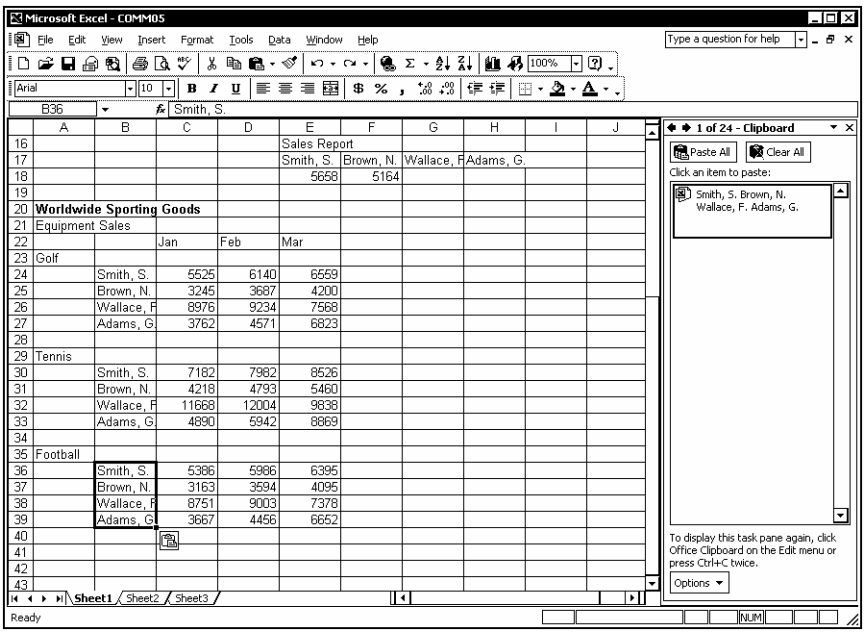
The Office Clipboard is accessed by opening the **Clipboard** task pane. When you first open the **Clipboard** task pane, it displays the last item cut or copied to the Windows Clipboard. As you continue to cut or copy items, they are collected on the **Clipboard** task pane and remain available to all Office XP products.

For each of the cut or copied items, the **Clipboard** task pane displays an icon and a portion of the text. You can click an item to paste it at the insertion point, or you can use the **Paste All** button to paste all the items at once. Right-clicking an item displays a shortcut menu containing options to paste or delete the item.

After pasting text, the **Paste Options** button appears in the worksheet, allowing you to control the formatting of the pasted item.

Once you have finished a particular copying sequence, you can clear the Office Clipboard of all items by clicking the **Clear All** button in the **Clipboard** task pane. In addition, the Office Clipboard clears automatically when you close all Office XP programs.

You can continue pasting text or numbers to different locations by clicking the item in the **Clipboard** task pane. Formulas, however, are not copied to the Office Clipboard; only the result of the formula is copied. Therefore, you can use the **Clipboard** task pane only to paste the resulting value into the destination cell, not the formula itself.



Using the Clipboard task pane

If the task pane is open, you can display the **Clipboard** task pane by selecting the **Clipboard** command from the **Other Task Panes** list on the task pane title bar.

You can also open the **Clipboard** task pane by pressing **[Ctrl+C]** twice, since the **Clipboard** task pane opens automatically as soon as a second item is cut or copied.

The **Clipboard** task pane stores up to 24 items. If you cut or copy more than 24 items, the oldest item on the Clipboard is removed. Undo cannot restore items removed from the Clipboard.

Procedures

1. Select the **Edit** menu.
2. Select the **Office Clipboard** command.
3. To clear all items from the Office Clipboard, click the **Clear All** button in the **Clipboard** task pane.
4. Cut or copy the item you want to paste.

5. Select the cell into which you want to paste the item.
6. Point to the item you want to paste in the **Clipboard** task pane.
7. Click the item to paste it into the current cell.
8. To paste all the items in the **Clipboard** task pane, click the **Paste All** button.
9. To remove an item from the Clipboard, right-click it in the **Clipboard** task pane.
10. Select the **Delete** command.

CREATING AN ABSOLUTE REFERENCE

Discussion

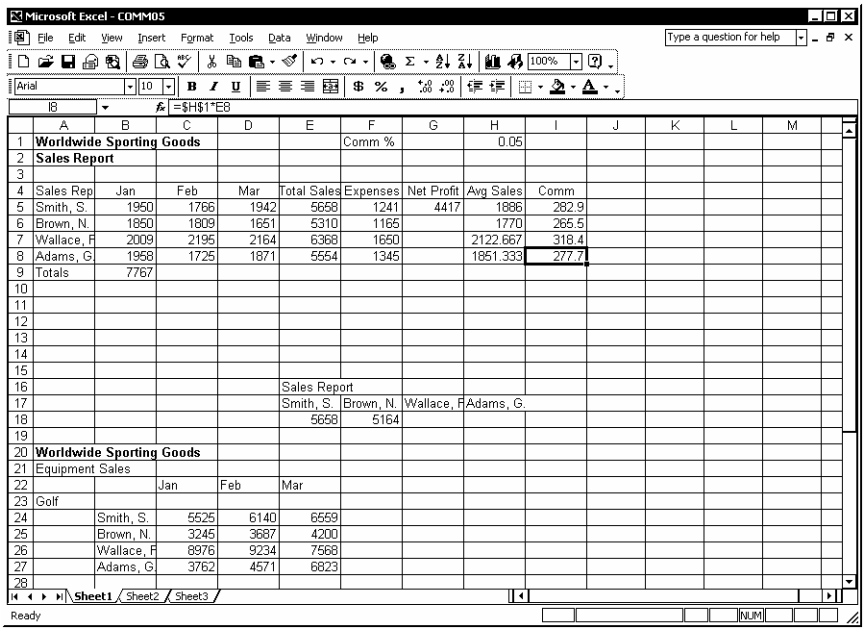
There are two basic types of cell references in Excel: relative and absolute. The difference between absolute and relative cell references becomes apparent when you copy formulas from one cell to another.

When you copy a formula containing relative references, the references are adjusted to the new location. For example, if you create a formula to total column A, and you then copy that formula to columns B and C, the cell references are adjusted to total the corresponding values in columns B and C. Relative references are the default.

Absolute references always refer to the same cell, regardless of where the formula is copied. Absolute cell references are useful when you do not want a cell reference to change whenever a formula is copied to another location. For example, if you create a formula to calculate the commission for a group of salespeople and the commission rate of 10% appears in cell C1, you want the formula to always refer to cell C1, no matter where it may be copied. Making the reference to cell C1 absolute ensures that the commission calculation is always based on cell C1, even if you copy the formula to another location. In addition, if the commission rate changes to 12%, you only have to change cell C1 from 10% to 12% and all commissions based on the formula will automatically update.

An absolute reference is designated by a dollar sign ($) before both the column letter and row number. You can also create a mixed reference by making only the column letter or only the row number absolute. You can type the dollar sign(s) ($) as you create the formula, or you can press the **[F4]** key after typing the cell reference and Excel will add both dollar signs ($) to make the cell reference absolute. You can continue to press the **[F4]** key to cycle through each of the four types of references:

Cell Entry	Type of Reference	Result
C1	Relative	Both the row number and column letter are adjusted when copied.
$C1	Mixed	The column letter is not adjusted when copied.
C$1	Mixed	The row number is not adjusted when copied.
C1	Absolute	Neither the column letter nor the row number is adjusted when copied.



Creating an absolute reference

To make an existing cell reference absolute or mixed, first select the cell containing the formula. Then, in the formula bar or in the cell itself, click anywhere in the cell reference you want to change and press the **[F4]** key as needed.

Procedures

1. Select the cell in which you want to enter the formula.
2. Type the desired formula.

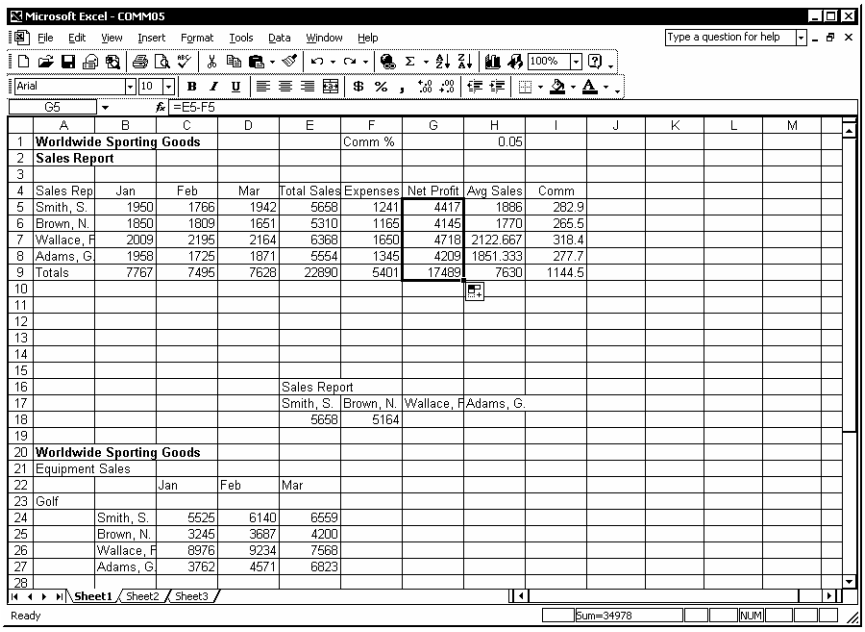
3. Click anywhere in the cell reference you want to make absolute, either in the formula bar or in the cell itself.
4. Press **[F4]** as needed, until the desired type of cell reference appears.
5. Press **[Enter]**.

FILLING CELLS

Discussion

If you want to copy the contents of a single cell to adjacent cells, you can fill the cells instead of copying and pasting. Filling cells combines the **Copy** and **Paste** features into one step. If the original cell contains text, the text is copied to the filled cells. If the original cell contains a formula, the cell references in the formula adjust to reflect the relative cell addresses.

To fill a column or a row, you drag the fill handle of the selected cell over the cell(s) you want to fill. When you drag the fill handle, the mouse pointer changes into a solid, black plus sign (+).



Filling cells

When the selected cells have been filled, the **Auto Fill Options** button appears. The **Auto Fill Options** button provides a list of available fill options.

> You should be careful when you fill cells because, if the cells you are filling already contain data, that data will be overwritten.

Procedures

1. Select the cell containing the data you want to copy.
2. Point to the fill handle at the bottom, right corner of the cell you want to copy.
3. Drag the fill handle over the range you want to fill.

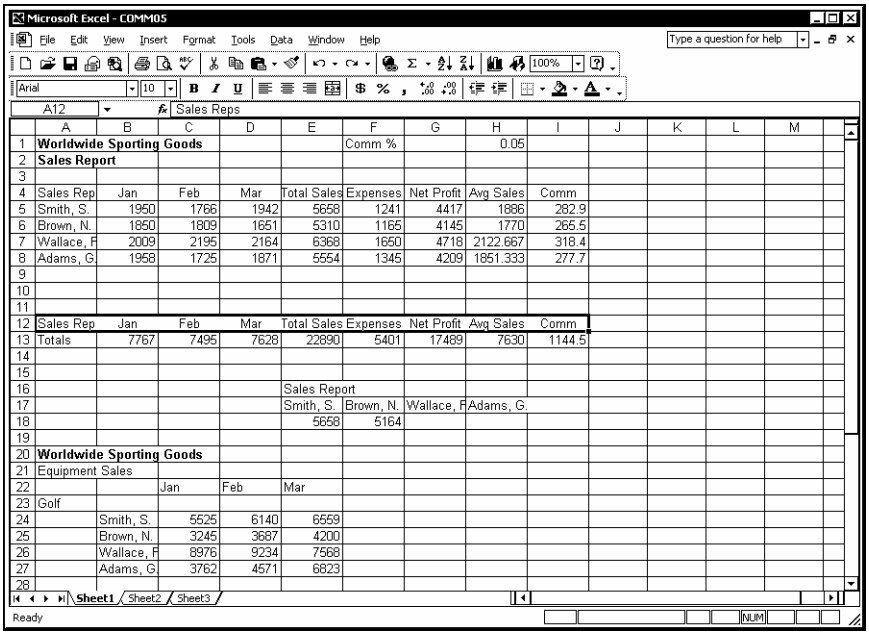
USING DRAG-AND-DROP EDITING

Discussion

Drag-and-drop editing allows you to use the mouse to move or copy data on a worksheet. The results are the same as cutting or copying and pasting data, except that nothing is saved to the Clipboard.

The range that you drag and drop must be a single block of cells. You cannot drag non-adjacent ranges.

When you use drag-and-drop editing to move cells that contain formulas, Excel does not adjust the cell references in the formulas; the formulas still use the original cells for calculation. However, when you use drag-and-drop editing to copy cells that contain formulas, Excel does adjust the cell references in the formulas to reflect the new location.



Using drag-and-drop editing

Procedures

1. Select the range you want to move.
2. Point to the border of the selected range.
3. Drag the range to the desired location.
4. Select the range you want to copy.
5. Point to the border of the selected range.
6. Hold **[Ctrl]** and drag the range to the desired location.

USING UNDO AND REDO

Discussion

The **Undo** feature allows you to reverse the results of the previous command or action.

Once you have used the **Undo** feature, the **Redo** feature becomes available. The **Redo** feature allows you to restore the results of the command or action you reversed with

the **Undo** feature. Both features can be accessed on the **Standard** toolbar or from the **Edit** menu.

You can also use the list arrow on the **Undo** or **Redo** button to undo or redo multiple actions. This feature is useful if you want to reverse a previous action, but have performed a number of actions subsequent to it. When you select an action to undo or redo, however, all the items performed after the selected action in the list are also reversed or redone.

The **Repeat** feature is related to the **Redo** feature but is only available from the **Edit** menu. You can use the **Repeat** feature to duplicate the previous action.

You can also undo and redo actions by selecting the **Edit** menu and then the **Undo** or **Redo** command. The action to be undone or redone appears as part of the command.

The results of some actions or commands are permanent and cannot be undone.

Procedures

1. To undo the previous command or action, click the **Undo** button  on the **Standard** toolbar.
2. To redo the undone command or action, click the **Redo** button  on the **Standard** toolbar.
3. To undo or redo multiple consecutive actions, click the arrow on the **Undo** button  or the **Redo** button  .
4. Select the action you want to undo or redo.

LESSON 6 -
WORKING WITH COLUMNS AND ROWS

In this lesson, you will learn how to:

- Select columns and rows
- Change the width of columns
- Change the height of rows
- Adjust columns automatically
- Hide columns and rows
- Unhide columns and rows
- Insert a column
- Insert a row
- Delete a column
- Delete a row

SELECTING COLUMNS AND ROWS

Discussion

Selecting a column selects the entire column, from row 1 to row 65,536, and selecting a row selects the entire row, from column A to column IV. You can select columns and rows to perform functions such as formatting, changing the width of more than one column at a time or the height of more than one row at a time, hiding columns or rows, and inserting and deleting columns or rows. When a column or row is selected, every cell in the column or row is highlighted, except for the first cell. This cell is the active cell.

> You can also select adjacent rows and columns by clicking the first row or column, holding the **[Shift]** key, and clicking the last row or column.

> When you are selecting a column or row, make sure that the mouse pointer is a single, black arrow rather than the black, double-headed arrow used to adjust column width and row height.

Procedures

1. To select a single column or row, click the desired column or row heading.
2. To select a range of adjacent columns or rows, drag across the desired column or row headings.
3. To select a non-adjacent range of columns or rows, select the first column or row to be included in the range.
4. Hold **[Ctrl]** and select the additional columns or rows.
5. To select all the columns and rows in a worksheet, click the **Select All** button (located to the left of the first column and above the first row).

CHANGING THE WIDTH OF COLUMNS

Discussion

When you create a new worksheet, approximately eight characters in the default font will fit within the default width of each column. You may need to adjust column width to accommodate the number of characters entered in the column cells or changes in the font size, as well as to save worksheet space.

If you change the font or number format in a worksheet, the text or numbers may become longer than the column is wide. Text will spill over into the next cell to the right, as long as that cell is empty. However, if there is an entry in the cell adjacent to a long text entry, the long text entry becomes truncated, and you must increase the column width in order to see the entire cell entry.

If, however, a cell contains a numeric entry that is longer than the column is wide, pound signs (#) appear. In other words, numeric entries do not spill over, and you must either increase the column width or decrease the font size in order to view the numeric entry.

When you increase or decrease column width, the column size and number of pixels appears in a ScreenTip to the right of the column you are resizing.

	When you click the line to the right of a column heading, a ScreenTip displays the width of the column in both points and pixels.

	If you are adjusting the width of a single column, it is not necessary to select it first.

Procedures

1. Select the columns with the width you want to change.
2. Drag the line to the right of any selected column heading to increase or decrease the width of all the selected columns.

CHANGING THE HEIGHT OF ROWS

Discussion

The height of rows in a worksheet automatically adjusts to fit the largest font in that row. The standard row height is 12.75 points. You can, however, manually increase or decrease row height as needed. You can increase row height to emphasize headings or totals. You also can decrease the height of a blank row to use it as a narrow separator row.

When you increase or decrease row height, the current row height in both points and pixels appears in a ScreenTip to the right of the row you are resizing.

	When you click the line below any row heading, a ScreenTip displays the height of the row in both points and pixels.

	If you are adjusting the height of a single row, it is not necessary to select the row first.

Procedures

1. Select the rows with the height you want to change.
2. Drag the line down to increase or up to decrease the height of the selected rows.

ADJUSTING COLUMNS AUTOMATICALLY

Discussion

You can use the **AutoFit** feature to automatically adjust column width to fit the widest entry in a column. This feature is useful when you want your columns and rows to expand or contract to neatly fit the column or row labels in large worksheets. As a result, you can save time, because you do not have to adjust each column or row individually.

> Be careful when you are automatically adjusting columns that contain very wide entries, such as long worksheet titles. The column width will adjust to display the entire title in one column.

> If you are adjusting the width of a single column, it is not necessary to select the column first.

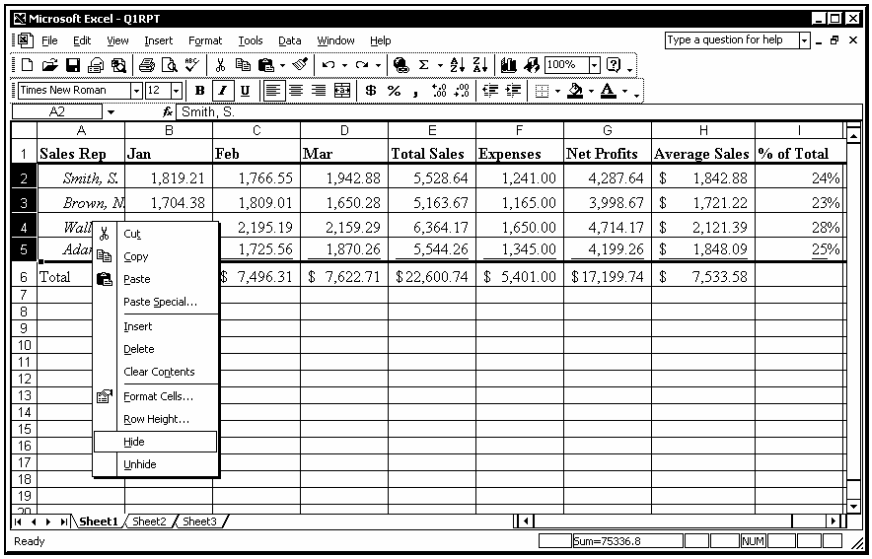
Procedures

1. Select the columns you want to adjust.
2. Double-click the line to the right of the heading of the column you want to AutoFit.

HIDING COLUMNS AND ROWS

Discussion

You can hide columns or rows to conceal the entries in them. For example, you may want to hide columns or rows that contain salary data. Hidden columns and rows do not appear in the worksheet and do not print. Any number in a hidden column or row is calculated, however, even though the column or row is hidden.



	A	B	C	D	E	F	G	H	I
1	Sales Rep	Jan	Feb	Mar	Total Sales	Expenses	Net Profits	Average Sales	% of Total
2	*Smith, S.*	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	$ 1,842.88	24%
3	*Brown, N.*	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	$ 1,721.22	23%
4	*Wall*		2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	$ 2,121.39	28%
5	*Ada*		1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	$ 1,848.09	25%
6	Total		$ 7,496.31	$ 7,622.71	$22,600.74	$ 5,401.00	$17,199.74	$ 7,533.58	

Hiding rows

> When you are selecting the columns or rows you want to hide, make sure that the mouse pointer is a single, black arrow rather than the black, double-headed arrow used to adjust column width and row height.

> You can also hide a column or row by dragging the line to the right of a column heading or below a row heading until the column or row is sized to **0.00**.

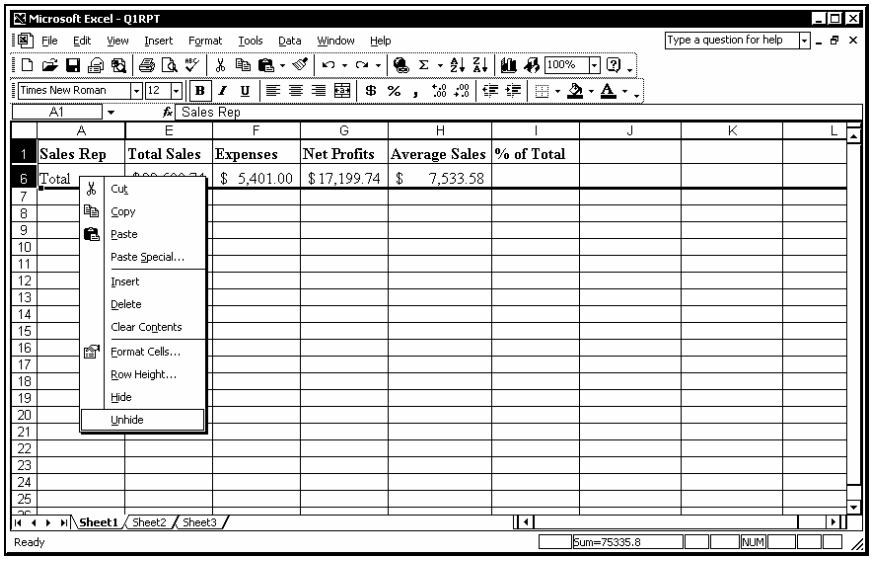
Procedures

1. Select the columns or rows you want to hide.
2. Right-click any one of the selected columns or rows.
3. Select the **Hide** command.

UNHIDING COLUMNS AND ROWS

Discussion

You can redisplay hidden columns and rows. For example, after making a presentation in which confidential information was hidden, you can unhide the columns or rows to work in your worksheet. Unhidden columns and rows are reset to the column width or row height prior to being hidden.



Unhiding rows

> When you are selecting the columns or rows you want to unhide, make sure that the mouse pointer is a single, black arrow rather than the black, double-headed arrow used to adjust column width and row height.

> If you have hidden several non-adjacent rows or columns, you can use the **Select All** button to quickly select the entire worksheet. You can then select the **Unhide** command from the row shortcut menu to display all rows or from the column shortcut menu to display all columns.

Procedures

1. Select a column or row on each side of the hidden columns or rows, so that the hidden columns or rows are included in the selection.
2. Right-click any one of the selected columns or rows.
3. Select the **Unhide** command.

INSERTING A COLUMN

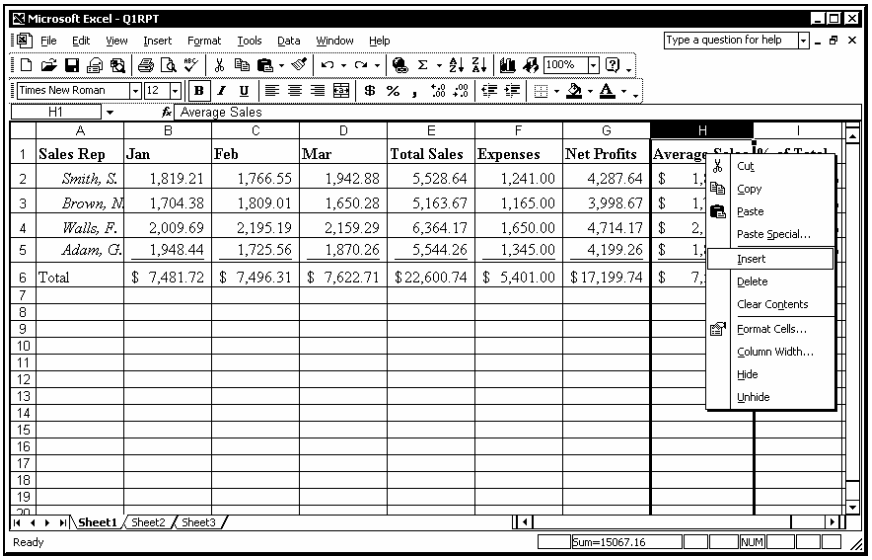
Discussion

You can insert columns into an existing worksheet to add new information or to create logical divisions in the worksheet data. Since columns are inserted from row 1 to row 65,536, you should verify that inserting a new column will not adversely affect any data above or below the current data. For example, you may have data in A1:G10 and A50:G60. If you insert a column between columns E and F, a blank column is inserted not only between the data in A1:G10, but also between the data in A50:G60.

When you insert a column, any formulas with ranges that include cells on both sides of the new column expand automatically to include the new column. For example, if you insert a new column between columns B and C, the **SUM** function **=SUM(B2:F2)** adjusts to **=SUM(B2:G2)**.

Columns are inserted to the left of the currently selected column. By selecting an entire column before you insert a new one, Excel automatically moves the selected column to the right and inserts a new, blank one. If you select multiple columns, Excel inserts the same number of columns into the worksheet.

Once you have inserted one or more columns, the **Insert Options** button appears to the right of the top cell in the new column(s). Clicking the **Insert Options** button displays a list of available formatting options. You can choose to format the newly inserted column the same as either the column to the left or the column to the right, or you can clear all formatting.



Inserting a column

> By default, the cells in an inserted column adopt the formatting of the cells in the column directly to the left.

> You can also insert columns by selecting the **Insert** menu and the **Columns** command; Excel will insert the same number of columns as are selected.

Procedures

1. Right-click the column heading to the left of which you want to insert a column.
2. Select the **Insert** command.
3. Click the **Insert Options** button  .
4. Select the desired option.

INSERT A ROW

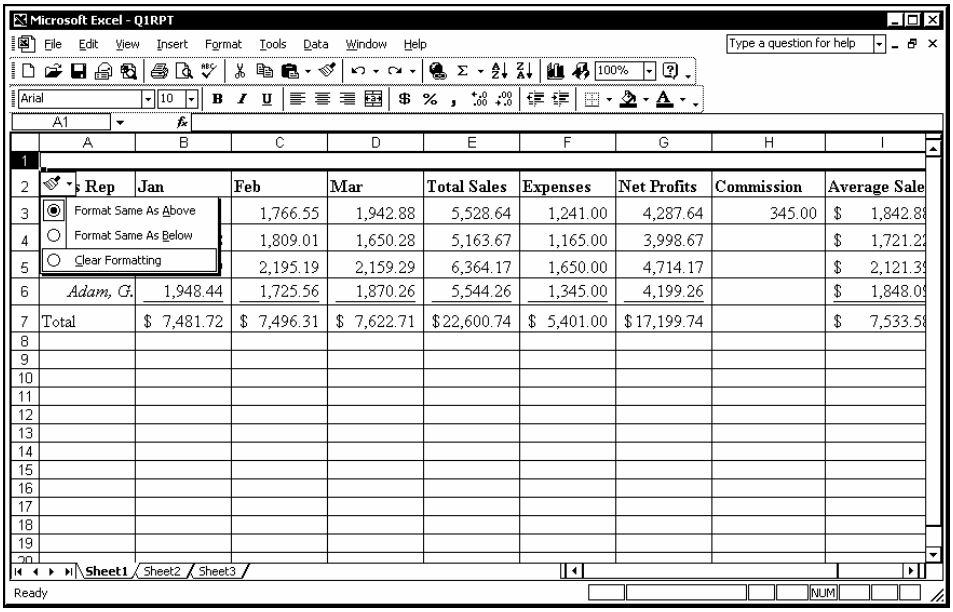
Discussion

You can insert rows into an existing worksheet to add new information or to create logical divisions of worksheet data. Since rows are inserted from column A to column IV, you should verify that inserting a new row will not adversely affect any data to the left or right of the current data. For example, you may have data in A1:G10 and P1:T10. If you insert a row between rows 5 and 6, a blank row is inserted not only between the data in A1:G10, but also between the data in P1:T10.

When you insert a row, any formulas with ranges that include cells both above and below the inserted row expand automatically to include the new row. For example, if you insert a new row between rows 4 and 5, the **SUM** function **=SUM(C3:C8)** adjusts to **=SUM(C3:C9)**.

Rows are inserted above the currently selected row. By selecting an entire row before you insert a new one, Excel automatically moves the selected row down and inserts a new, blank one. If you select multiple rows, Excel inserts the same number of rows into the worksheet.

Once you have inserted one or more rows, the **Insert Options** button appears below the first cell of the inserted row(s). Clicking the **Insert Options** button displays a list of available formatting options. You can choose to format the newly inserted row the same as either the row above or the row below, or you can clear all formatting.



Inserting a row

> The cells in an inserted row adopt the formatting of the cells in the row directly above the inserted rows, unless you choose a different formatting option from the **Insert Options** list.

> You can also insert rows by selecting **Insert** menu and then selecting the **Rows** command; Excel will insert the same number of rows as are selected.

Procedures

1. Right-click the row heading above which you want to insert a row.
2. Select the **Insert** command.
3. Click the **Insert Options** button .
4. Select the desired formatting option.

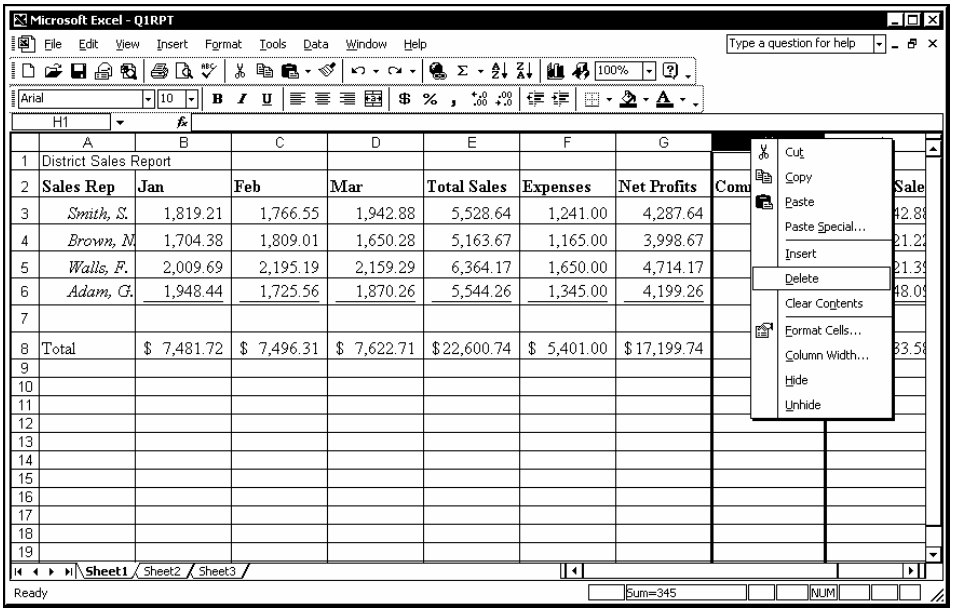
DELETING A COLUMN

Discussion

You can delete unwanted columns from a worksheet. When you delete a column, the entire column and its contents are removed, from row 1 through row 65,536. You should make sure that the column does not contain any data you want to keep. If you inadvertently delete a column, you can use the **Undo** button to undo the deletion.

When you delete a column, any formulas with ranges that include the deleted column adjust automatically. For example, if you delete column C, the **SUM** function **=SUM(B2:G2)** adjusts to **=SUM(B2:F2)**.

When deleting a column, you should select the entire column. Otherwise, a message box opens, in which you must indicate exactly what you want to delete.



Deleting a column

> Formulas that refer to specific cells in a deleted column display the error message **#REF!**. The formula must be edited to remove the reference to cells in the deleted column.

Procedures

1. Right-click the heading of the column you want to delete.
2. Select the **Delete** command.

DELETING A ROW

Discussion

You can delete unwanted rows from a worksheet. When you delete a row, the entire row and its contents are removed from column A through column IV. You should make sure that the row does not contain any data you want to keep. If you inadvertently delete a row, you can use the **Undo** button to undo the deletion.

When you delete a row, any formulas with ranges that include that row will adjust automatically. For example, if you delete row 5, the **SUM** function **=SUM(C2:C9)** adjusts to **=SUM(C2:C8)**.

When deleting rows, you should select the entire row. Otherwise, a message box opens, in which you must indicate exactly what you want to delete.

> Formulas that refer to specific cells in a deleted row display the error message **#REF!**. The formula must be edited to remove the reference to cells in the deleted row.

Procedures

1. Right-click the heading of the row you want to delete.
2. Select the **Delete** command.

LESSON 7 -
PRINTING

In this lesson, you will learn how to:

- Preview a worksheet
- Print the current worksheet
- Print a selected range
- Print multiple copies
- Print a page range

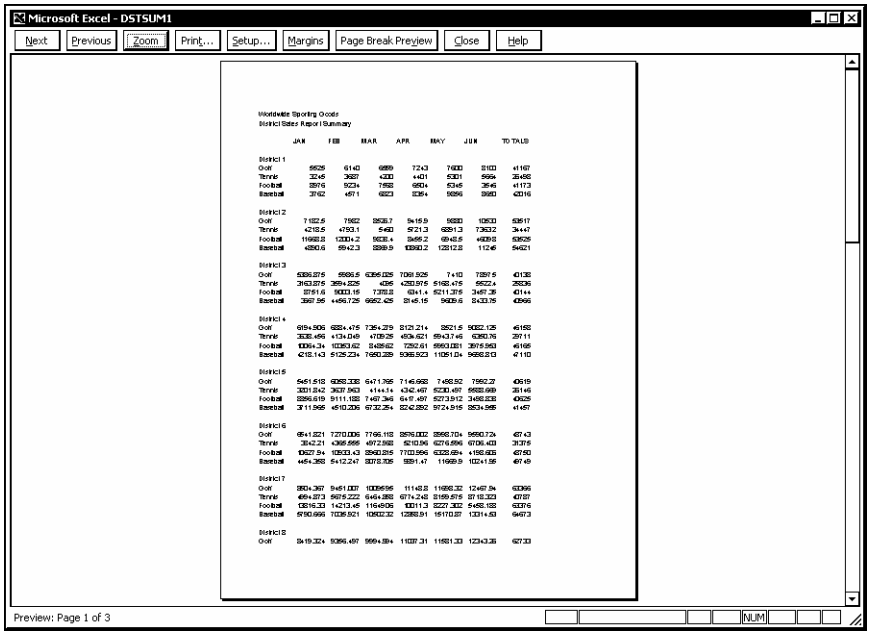
PREVIEWING A WORKSHEET

Discussion

Before printing, you can preview a worksheet. The **Print Preview** feature displays the worksheet as it will appear when printed, including all aspects of the layout. You can use the **Print Preview** feature to preview the appearance of your printed worksheet before printing it; thereby allowing you to make any additional changes.

The default view in print preview displays the full page, making the print difficult to read; however, you can increase the magnification of the worksheet by zooming print preview. This option makes the data easier to read. When the mouse pointer is positioned over the worksheet, it changes into a magnifying glass. When you click the worksheet with the magnifying glass, the magnification increases so that you can read the area of the worksheet you clicked. When you click the worksheet again, the magnification returns to full page view.

If your worksheet spans several pages, you can use the **Next** and **Previous** buttons in print preview to view the other pages.



Viewing a worksheet in print preview

> You can print directly from print preview by clicking the **Print** button.

> You can also open print preview from the Print dialog box by selecting the **Preview** button.

> After previewing a worksheet, dotted lines (which indicate page breaks) may appear on the worksheet. You can hide the page breaks by selecting the **Tools** menu, the **Options** command, and the **View** page; then deselect the **Page breaks** option under **Window options**.

Procedures

1. Click the **Print Preview** button  on the **Standard** toolbar.
2. Click the area of the worksheet you want to magnify.
3. Click anywhere in the worksheet to return to full page view.
4. Select **Next** to view the next page in a multiple page printout.
5. Select **Previous** to view the previous page in a multiple page printout.
6. Select **Close**.

PRINTING THE CURRENT WORKSHEET

Discussion

You can use the **Print** button on the **Standard** toolbar to quickly print the current worksheet. When you point to the **Print** button, the ScreenTip displays the name of the current printer. When you use the **Print** button, the current worksheet is sent directly to the printer, utilizing the current print settings. This feature is useful when you want to print one copy of a worksheet quickly.

> If you want to change print settings, you must use the Print dialog box. Print settings include specifying which pages to print, what to print, and how many copies you want to be printed. You can open the Print dialog box by selecting the **File** menu and the **Print** command.

> In addition to printing a worksheet, you can e-mail a copy of a worksheet or workbook to another person by selecting the **File** menu, the **Send To** command, and the desired **Mail Recipient** command. Depending upon your mail application, you can send the entire workbook as an attachment to a message, or you can send a worksheet as the message itself.

Procedures

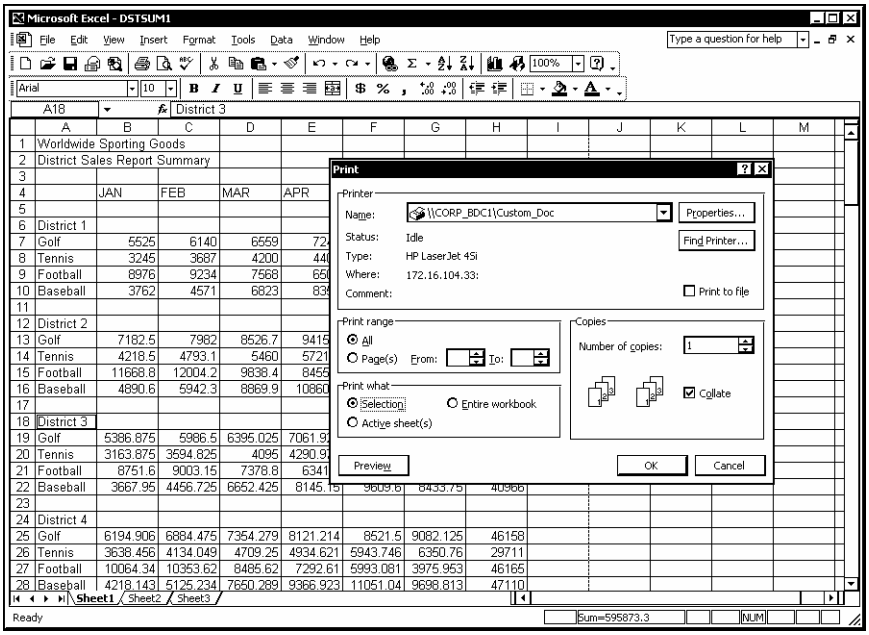
1. Click the **Print** button  on the **Standard** toolbar.

PRINTING A SELECTED RANGE

Discussion

You can print just a selected worksheet range. This option, available in the Print dialog box, is useful if you made changes only to a specific range after the entire worksheet had been printed. Other options in the Print dialog box allow you to print only the active sheet(s) or the entire workbook.

You can print multiple, non-adjacent ranges by holding the **[Ctrl]** key to select the desired cells. Each range, however, will print on a separate page.



Printing a selected range

> You can print multiple, non-adjacent ranges on one page by first hiding the rows and columns you do not want to print. You can then select one contiguous print range that includes all the cells you do want to print.

Procedures

1. Select the range you want to print.
2. Hold **[Ctrl]** and select additional ranges, if desired.
3. Select the **File** menu.
4. Select the **Print** command.
5. Select the **Selection** option under **Print what**.
6. Select **Preview** to preview the printout.
7. Select **Print**.

PRINTING MULTIPLE COPIES

Discussion

You may want to print multiple copies of a worksheet at one time. In the Print dialog box, you can select the number of copies you want to print.

If the **Collate** option is enabled, Excel will print all pages of each copy before starting the next copy. Otherwise, Excel prints all copies of the first page of the printout, then all copies of the second page, etc.

Procedures

1. Select the **File** menu.
2. Select the **Print** command.
3. Enter the number of copies you want to print in the **Number of copies** spin box.
4. Select **OK**.

PRINTING A PAGE RANGE

Discussion

The **Page(s)** option in the Print dialog box allows you to print only specified pages of a worksheet. This option is useful when you have made corrections only to certain pages, and you want to print only those corrected pages rather than the entire worksheet.

Procedures

1. Select the **File** menu.
2. Select the **Print** command.
3. Select the **From** box.
4. Type the page number from which you want to start printing.

5. Select the **To** box.
6. Type the page number at which you want to stop printing.
7. Select **OK**.

LESSON 8 -
USING PAGE SETUP

In this lesson, you will learn how to:

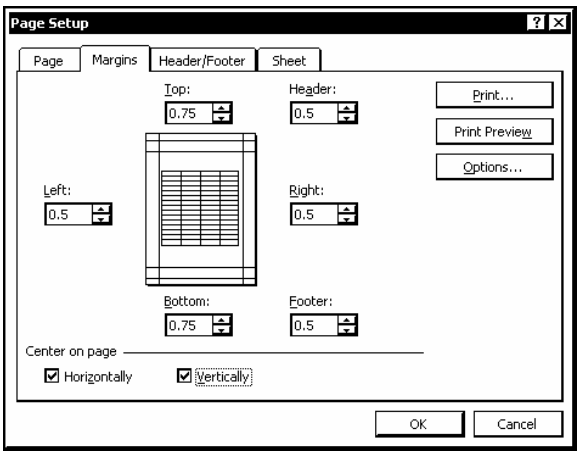
- Set margin and centering options
- Change the page orientation
- Create headers and footers
- Customize headers and footers
- Change print gridlines
- Repeat row and column labels
- Scale a worksheet
- Use Page Break Preview
- Set/Remove a print area

SETTING MARGIN AND CENTERING OPTIONS

Discussion

Margins define the printed area on a page. They control the amount of blank space between the printed data and the top, bottom, left, and right edges of the paper. By default, margins are measured in inches. The larger the margin measurement, the smaller the available area for printed data. For example, if all the margins are set to .5 inch, there is a half-inch of blank space around the printed data; but if all the margins are set to .25 inch, there is a quarter-inch of blank space around the printed data. The page with half-inch margins will have more blank space around the printed data and, as a result, a smaller available area for printed data. You can select different dimensions for the top, bottom, left, and right margins, if desired.

If the worksheet you are printing is smaller than the available area for printed data, the worksheet will not appear centered when printed. Rather than adjusting the top and left margins to center the worksheet, you can use the **Center on page** options to center a worksheet horizontally, vertically, or both horizontally and vertically, relative to the set margins.



The Page Setup dialog box

Procedures

1. Select the **File** menu.
2. Select the **Page Setup** command.
3. Select the **Margins** tab.
4. Enter the desired margin measurements.

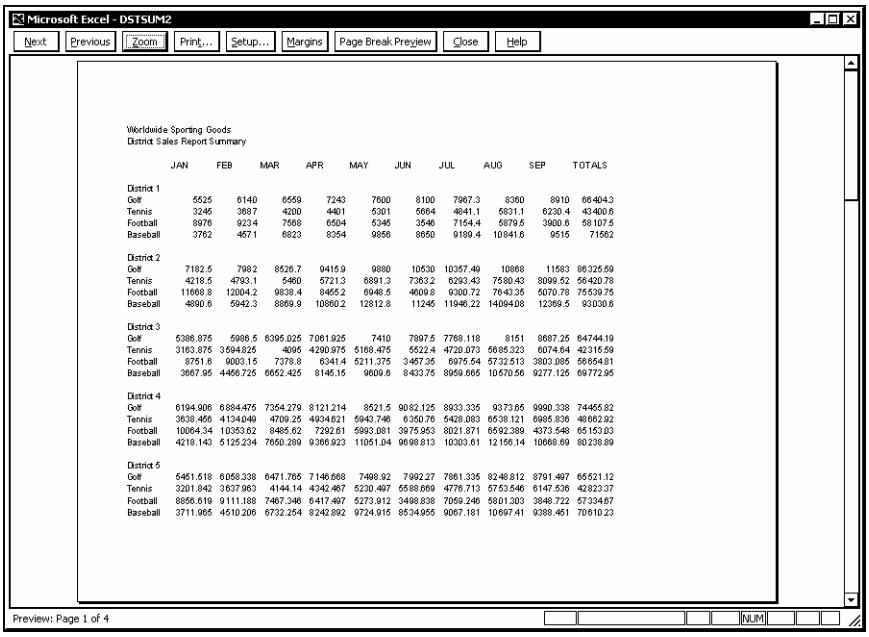
5. To center the worksheet between the left and right margin settings, select the **Horizontally** option.
6. To center the worksheet between the top and bottom margin settings, select the **Vertically** option.
7. Select **OK**.

CHANGING THE PAGE ORIENTATION

Discussion

In Excel, you can print your worksheet in either portrait or landscape orientation. In portrait orientation (the default), the shorter edge of the paper is at the top of the page. In landscape orientation, the longer edge of the paper is at the top of the page.

Since worksheets are often wider than they are long, they often fit better on a page with a landscape orientation.



A landscaped page

> Other options on the **Page** page in the Page Setup dialog box allow you to change the paper size and print quality.

Procedures

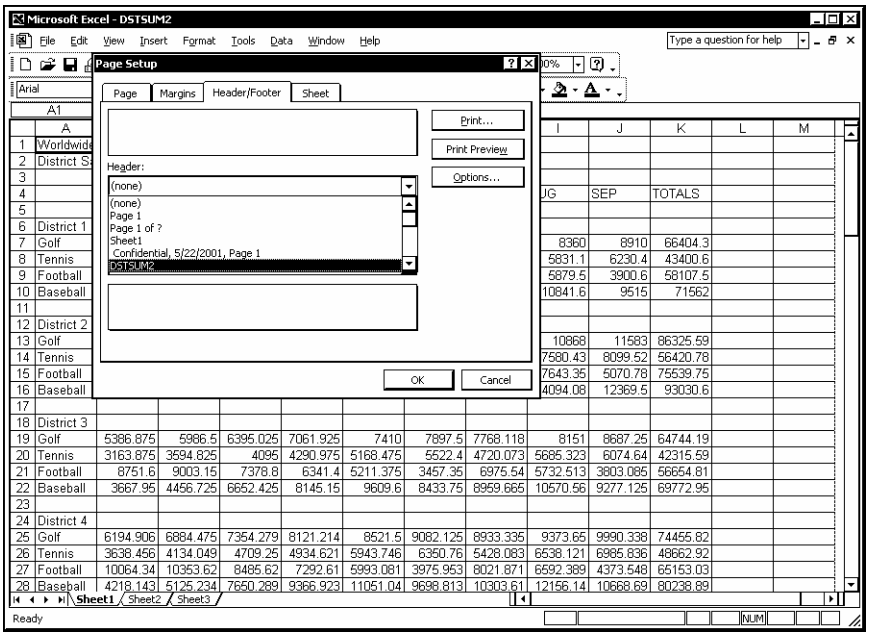
1. Select the **File** menu.
2. Select the **Page Setup** command.
3. Select the **Page** tab.
4. Under **Orientation**, select the **Portrait** or **Landscape** option.
5. Select **OK**.

CREATING HEADERS AND FOOTERS

Discussion

Headers print at the top and footers print at the bottom of every page in a printout. Headers and footers usually contain descriptive text, such as titles, dates, and/or page numbers.

Excel has several built-in headers and footers from which you can choose. These standard options include the sheet name, date, time, page number, file name, and preparer's name. Excel refers to the **Author** field on the **Summary** page of the Properties dialog box to determine the preparer's name.



Creating a header

	The **Summary** page of the Properties dialog box can be accessed by selecting the **File** menu, the **Properties** command, and then the **Summary** tab in the Properties dialog box.

	Page numbering is automatically set to start at **1**. You can change the starting number by selecting the **File** menu, the **Page Setup** command, and the **Page** tab; then enter the desired starting number in the **First page number** box.

Procedures

1. Select the **File** menu.
2. Select the **Page Setup** command.
3. Select the **Header/Footer** tab.
4. Select the **Header** or **Footer** list, as desired.
5. Select the desired header or footer text.
6. Select **OK**.

CUSTOMIZING HEADERS AND FOOTERS

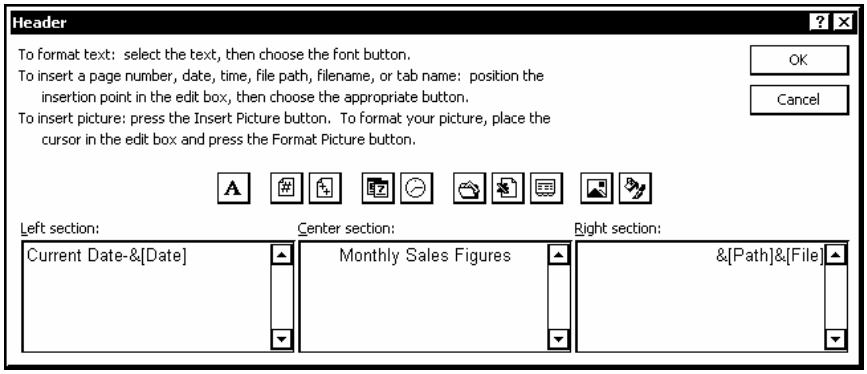
Discussion

In addition to Excel's default headers and footers, you can create customized headers and footers. You can type text (such as a title or name for the worksheet) in any of the three boxes in either the Header or the Footer dialog box. Excel also provides buttons that allow you to format header and footer text and to insert worksheet and file information. The buttons available in the Header and the Footer dialog boxes are listed in the following table:

Button	Description
	Allows you to format header and footer text
	Inserts the page number

Button	Description
	Inserts the total number of pages
	Inserts the date
	Inserts the time
	Inserts the path and file name
	Inserts the file name
	Inserts the sheet name
	Inserts a picture
	Allows you to format an inserted picture

The Header and the Footer dialog boxes provide three boxes that correspond to the left, center, and right sections of the printed page. Text entered into one of these boxes is aligned accordingly on the page.



Adding a custom header

Procedures

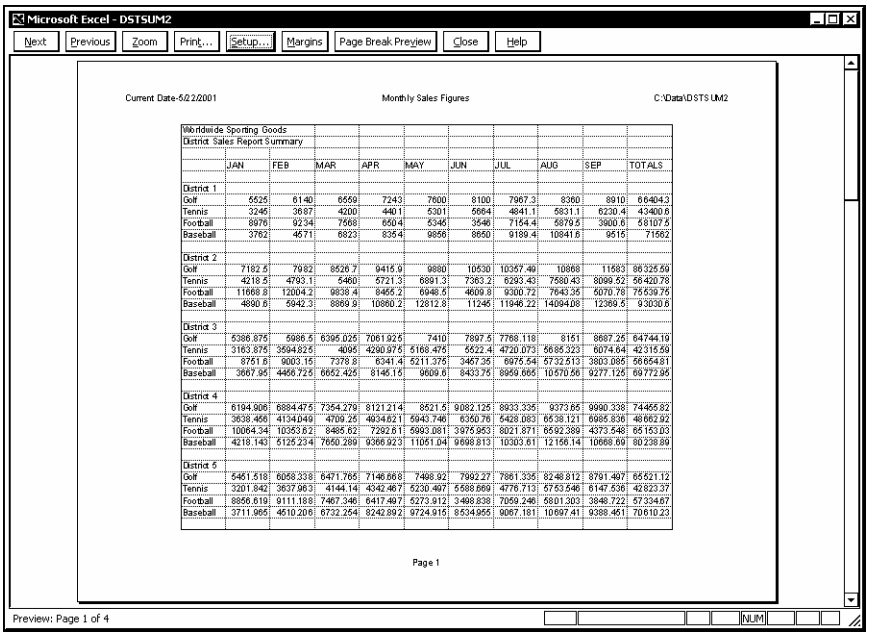
1. Select the **File** menu.
2. Select the **Page Setup** command.

3. Select the **Header/Footer** tab.
4. Select **Custom Header** or **Custom Footer**, as desired.
5. Select the desired section box.
6. Type the desired text, if applicable.
7. Click any button to insert the corresponding code or picture, if applicable.
8. Select **OK** to close the Header or Footer dialog box.
9. Select **OK** to close the Page Setup dialog box.

CHANGING PRINT GRIDLINES

Discussion

Gridlines are the horizontal and vertical lines that define the cells in the worksheet window. They make a worksheet easier to read because they separate the rows and columns. You can print a worksheet with or without the gridlines. If you enable the **Gridlines** option, the lines will print on the entire worksheet.



Printing with gridlines

To add lines only in specific areas of a printed worksheet, you can use the **Borders** feature.

Gridlines will not print, even if selected, if the **Draft quality** option is selected on the **Sheet** page of the Page Setup dialog box.

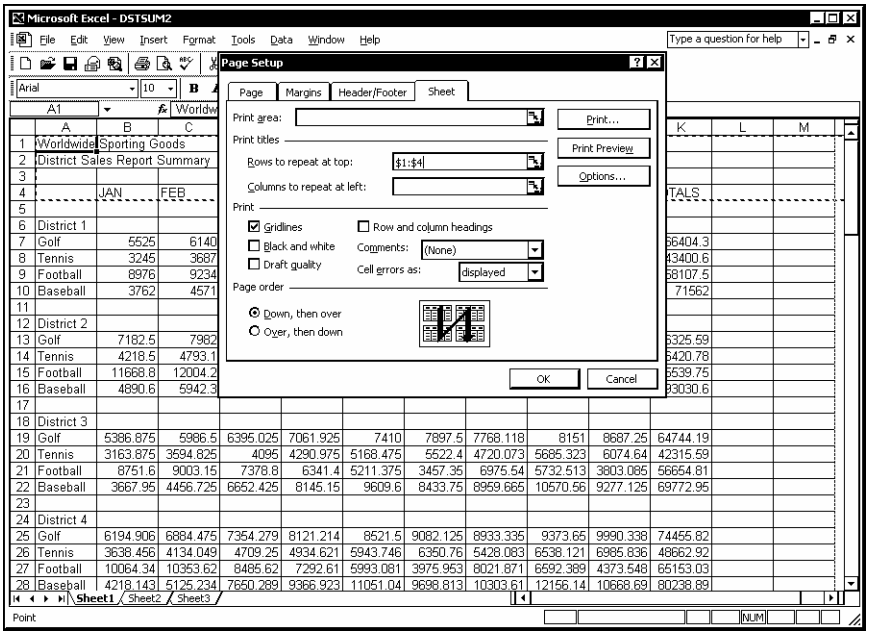
Procedures

1. Select the **File** menu.
2. Select the **Page Setup** command.
3. Select the **Sheet** tab.
4. Select or deselect the **Gridlines** option.
5. Select **OK**.

REPEATING ROW AND COLUMN LABELS

Discussion

When printing multiple pages of a worksheet, you may want the column or row labels to print on every printed page. For example, if the months of the year appear as row labels on a worksheet and the columns of numbers expand to more than one page, you may want the months of the year (row labels) to print on every page. Excel can repeat the row labels at the top or the column labels at the left side of every page. When selecting rows or columns to repeat, you can select a single row or column or several adjacent rows or columns.



Repeating row labels

Procedures

1. Select the **File** menu.
2. Select the **Page Setup** command.
3. Select the **Sheet** tab.
4. Select the desired row or column **Collapse Dialog** button under **Print titles**.
5. To repeat the labels in a single row or column, click anywhere in the row or column, or drag to select multiple rows or columns.
6. Click the **Expand Dialog** button.
7. Select **OK**.

SCALING A WORKSHEET

Discussion

Excel automatically inserts horizontal and vertical page breaks as needed to accommodate the selected paper size. You can force Excel to fit more or less data on a page by scaling the font size of the data.

Excel provides two scaling methods you can use to adjust the amount of print on a page. You can adjust the font size to a percentage of its original size. The default percentage is 100%, which uses the font sizes you have selected for your data. By changing the scaling to 75%, Excel adjusts each font size used to 3/4 of its original size.

Another scaling method is to specify the number of horizontal and vertical pages on which the document should fit. Using this method, you can precisely control your printout. Excel then automatically selects the proper scaling percentage needed to fit the specified number of pages.

> Scaling the worksheet does not affect the font size applied to the data; the worksheet data is scaled only for printing.

Procedures

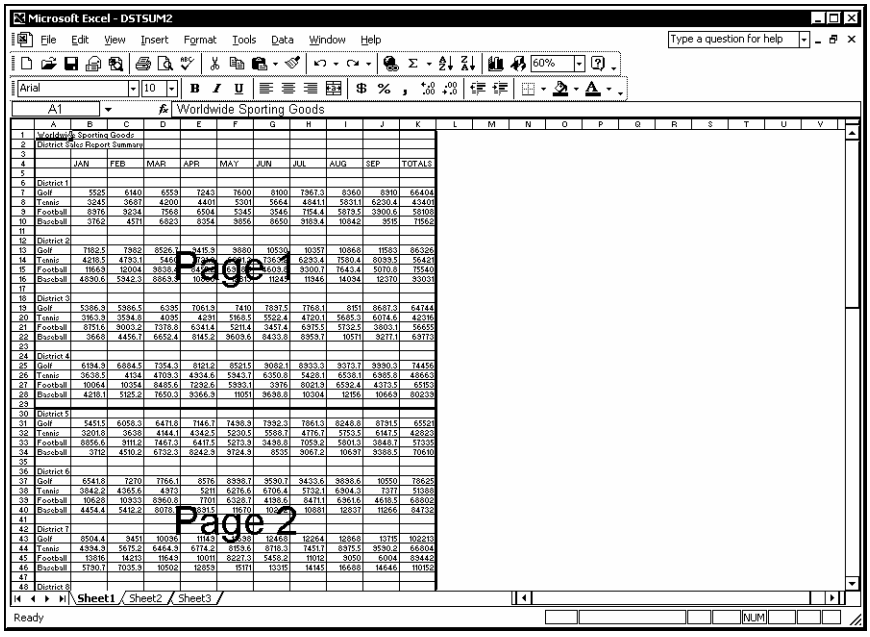
1. Select the **File** menu.
2. Select the **Page Setup** command.
3. Select the **Page** tab.
4. Select the desired **Scaling** option.
5. Select additional options, as desired.
6. Select **OK**.

USING PAGE BREAK PREVIEW

Discussion

After viewing a worksheet in print preview, you may want to change where the automatic page breaks occur. The **Page Break Preview** feature allows you to move

page breaks so that you can control which information is displayed on each page. You can manipulate both horizontal and vertical page breaks. If you adjust a page break to include more rows or columns on a page, Excel automatically scales the data on all the printed pages to fit the designated page.



Page Break Preview

When you use the **Page Break Preview** feature, the Welcome to Page Break Preview dialog box opens. You can select the **Do not show this dialog again** option so that it does not open in the future.

You can also view and adjust page breaks by selecting the **Page Break Preview** button in the print preview window.

To remove a page break, select the cell to the right of a vertical page break or the cell below a horizontal page break, then select the **Insert** menu and then the **Remove Page Break** command.

Procedures

1. Select the **View** menu.
2. Select the **Page Break Preview** command.

3. Select **OK** to close the Welcome to Page Break Preview dialog box, if necessary.
4. Scroll to display the page break you want to change.
5. Drag the page break to the desired position.
6. Select the **View** menu.
7. Select the **Normal** command.

SETTING/REMOVING A PRINT AREA

Discussion

By default, Excel prints the entire worksheet. You can also designate a specific range of cells to print. This is called the print area. When you designate a print area, only the print area is printed.

A print area can contain multiple ranges. When you include multiple, non-adjacent ranges in a print area, each range prints on a separate page, in the order in which it was selected. As a result, you can use the **Print Area** feature to print districts 5 and 6 on the first page and districts 1 and 2 on the second page.

The shortcut menu in page break preview provides commands for selecting a print area, adding to an existing print area, and resetting a print area. It also provides a command for resetting all page breaks, which removes any print area settings.

When using print areas, it is a good idea to set the row and/or column labels in the worksheet to repeat. You may also want to print page numbers in the header or footer. The print area is saved with the workbook.

You can specify print areas for each worksheet in a workbook and then print all the selected print areas by selecting the **Entire workbook** option in the Print dialog box.

You can also set the print area on the **Sheet** page in the Page Setup dialog box. You can also use the **File** menu and the **Print Area** command in normal view to set or clear the print area.

Procedures

1. Select the **View** menu.
2. Select the **Page Break Preview** command.
3. Select **OK** to close the Welcome to Page Break Preview dialog box, if necessary.
4. Select the first print area.
5. Right-click in the selection.
6. Select the **Set Print Area** command.
7. Select the next print area.
8. Right-click in the selection.
9. Select the **Add to Print Area** command.

LESSON 9 -
FORMATTING NUMBERS

In this lesson, you will learn how to:

- Use number formats
- Use the Currency style
- Use the Percent style
- Use the Comma style
- Change decimal places

USING NUMBER FORMATS

Discussion

You can format cells to change the way numbers and text appear in the worksheet. Formatting does not change the underlying value of a cell. That underlying value appears on the formula bar when the cell is selected and is what is used in calculations.

Formatting improves the overall appearance of a worksheet and makes numbers easier to read. Using formatting, you can add features such as dollar signs (**$**), percent symbols (**%**), and commas (**,**), as well as specify a fixed number of decimal places.

You can apply formats to a cell before or after you enter the data. Formatting can be applied to one cell; a range of cells, columns, or rows; or the entire worksheet. Once applied, a format is attached to the cell and any number entered into that cell is formatted accordingly. Deleting the contents of a cell does not remove its formatting. However, you can apply another format to the cell or you can clear its format.

The **General** style is the default format for a cell with a numeric entry. This style displays the number to the greatest precision possible, with no additional formatting (such as commas (**,**) or dollar signs (**$**)).

If a number formatted with the **General** style is longer than the cell is wide, Excel rounds it to fit the width of the cell. Although the number is rounded in the cell, all calculations are performed using the entire number, which appears in the formula bar. If a number formatted with a style other than **General** is too long to fit into the cell, the cell entry appears as a series of pound signs (#); as always, the entire number appears in the formula bar. To view the number in the cell, you can point to it and the number will appear in a ScreenTip, or you can increase the column width or change the cell formatting as necessary.

You can use buttons available on the **Formatting** toolbar to apply preset number styles. You can also use the **Number** page in the Format Cells dialog box to format numbers.

The **Number** page in the Format Cells dialog box provides various number categories, such as **Fraction**, **Scientific**, **Date**, and **Time**. Some categories include options for selecting currency symbols, specifying the number of decimal places, and determining how negative numbers are displayed. The **Special** category provides formats for numbers that are not calculated. These formats are used for numbers that are frequently found in lists, such as social security numbers, telephone numbers, and zip codes. The **Zip Code** format is especially valuable when you want to enter zip codes with leading zeroes (such as 08003), since Excel normally removes leading zeros from a number. The **Text** category is used for numbers that you want treated as text (i.e., you do not want to use them for calculations).

> You can remove number formatting by selecting the **Edit** menu, pointing to **Clear**, and then selecting the **Formats** command. Selecting **All** from the **Clear** submenu clears both the contents and format from selected cells.

> The buttons on the **Formatting** toolbar apply the **Comma**, **Currency**, and **Percent** styles from the Style dialog box. You can modify the style applied by each button by changing its formats in the Style dialog box.

> You can open the **Number** page in the Format Cells dialog box by selecting the **Format** menu, the **Cells** command, and then the **Number** tab.

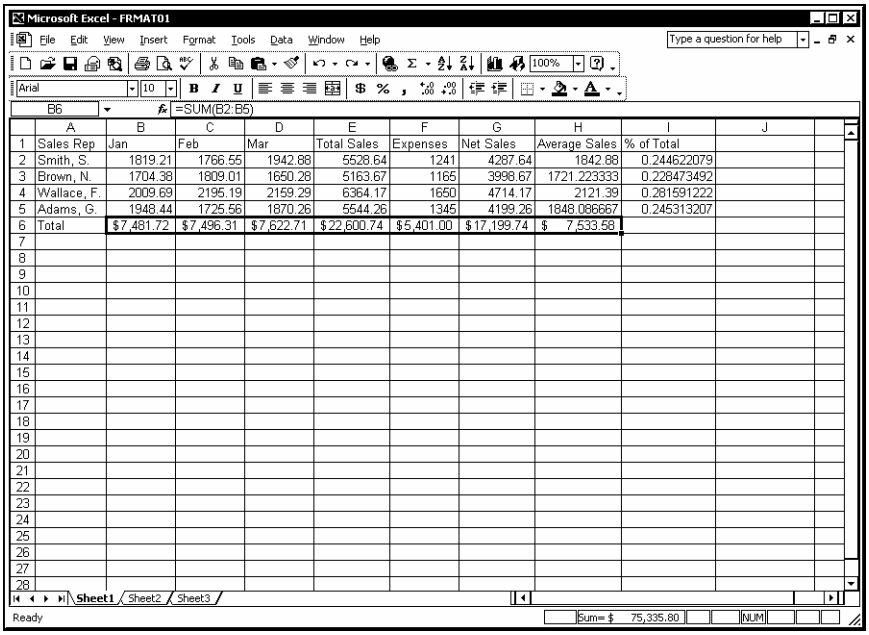
USING THE CURRENCY STYLE

Discussion

You can use the **Currency** style to display numbers with dollar signs (**$**) and commas (**,**). For example, you may want the number 7496.31 to appear as $7,496.31. By default, the **Currency** style has two decimal places and uses the comma (**,**) as a thousands separator.

$7,496.31

The Currency style



	A	B	C	D	E	F	G	H	I	J
1	Sales Rep	Jan	Feb	Mar	Total Sales	Expenses	Net Sales	Average Sales	% of Total	
2	Smith, S.	1819.21	1766.55	1942.88	5528.64	1241	4287.64	1842.88	0.244622079	
3	Brown, N.	1704.38	1809.01	1650.28	5163.67	1165	3998.67	1721.223333	0.228473492	
4	Wallace, F.	2009.69	2195.19	2159.29	6364.17	1650	4714.17	2121.39	0.281591222	
5	Adams, G.	1948.44	1725.56	1870.26	5544.26	1345	4199.26	1848.086667	0.245313207	
6	Total	$7,481.72	$7,496.31	$7,622.71	$22,600.74	$5,401.00	$17,199.74	$ 7,533.58		

Applying the Currency style

> You can also apply the **Currency** style to a range by selecting the **Format** menu, the **Cells** command, and then the **Number** tab. On the **Number** page, you can select the number of decimal places, the currency symbol you want to display, and how you want negative numbers to appear.

> The **Currency** style uses the **Accounting** format, which aligns currency symbols, decimal places, and numbers (including negative numbers in parentheses).

Procedures

1. Select the cells you want to format.

2. Click the **Currency Style** button  on the **Formatting** toolbar.

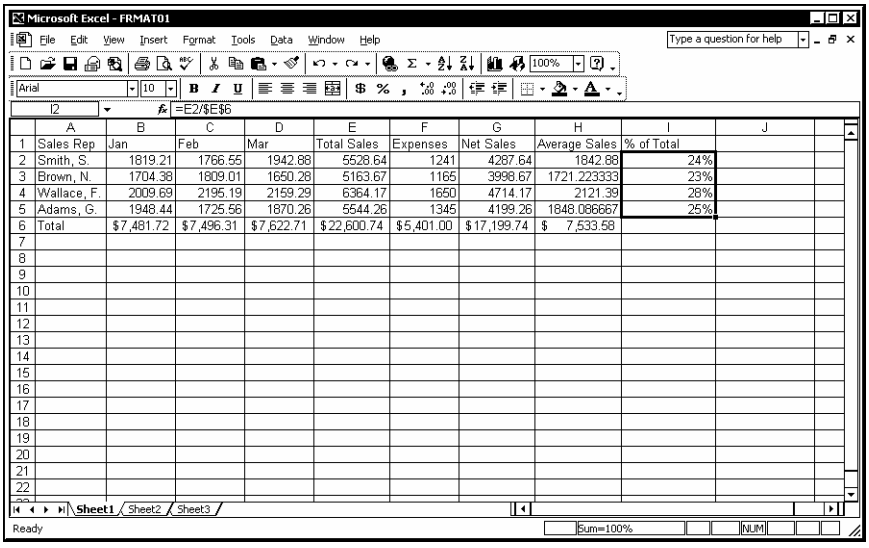
USING THE PERCENT STYLE

Discussion

You can use the **Percent** style to display numbers as percentages. For example, you may want the value 0.56 to appear as 56%. The **Percent** style multiplies the value in the cell(s) by 100, adds a percent sign (**%**), and displays the number with no decimal places.

24%

The Percent style



	A	B	C	D	E	F	G	H	I	J
1	Sales Rep	Jan	Feb	Mar	Total Sales	Expenses	Net Sales	Average Sales	% of Total	
2	Smith, S.	1819.21	1766.55	1942.88	5528.64	1241	4287.64	1842.88	24%	
3	Brown, N.	1704.38	1809.01	1650.28	5163.67	1165	3998.67	1721.223333	23%	
4	Wallace, F.	2009.69	2195.19	2159.29	6364.17	1650	4714.17	2121.39	28%	
5	Adams, G.	1948.44	1725.56	1870.26	5544.26	1345	4199.26	1848.086667	25%	
6	Total	$7,481.72	$7,496.31	$7,622.71	$22,600.74	$5,401.00	$17,199.74	$ 7,533.58		

Applying the Percent style

> You can also apply the **Percent** style to a range by selecting the **Format** menu, the **Cells** command, and then the **Number** tab. On the **Number** page, you can select the number of decimal places you want to display.

Procedures

1. Select the cells you want to format.
2. Click the **Percent Style** button  on the **Formatting** toolbar.

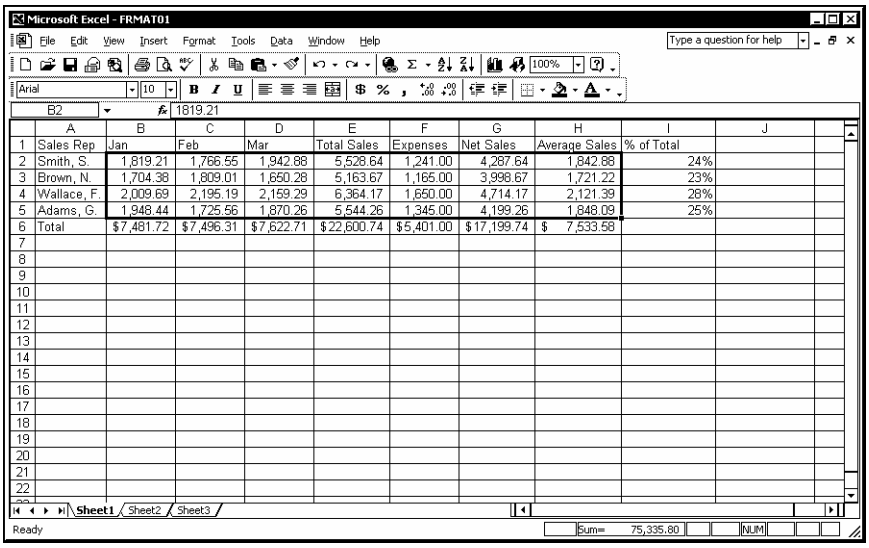
USING THE COMMA STYLE

Discussion

You can use the **Comma** style to display numbers with a comma (**,**) as the thousands separator. For example, you may want the number 3456087.08 to appear as 3,456,087.08. In addition, a number formatted with the **Comma** style displays two decimal places by default.

1,766.55

The Comma style



	A	B	C	D	E	F	G	H	I	J
1	Sales Rep	Jan	Feb	Mar	Total Sales	Expenses	Net Sales	Average Sales	% of Total	
2	Smith, S.	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	1,842.88	24%	
3	Brown, N.	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	1,721.22	23%	
4	Wallace, F.	2,009.69	2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	2,121.39	28%	
5	Adams, G.	1,948.44	1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	1,848.09	25%	
6	Total	$7,481.72	$7,496.31	$7,622.71	$22,600.74	$5,401.00	$17,199.74	$ 7,533.58		

Applying the Comma style

> You can also apply the **Comma** style by selecting the **Format** menu, the **Cells** command, the **Number** page, the **Number** category, and then the **Use 1000 Separator (,)** option.

> The **Comma** style uses the **Accounting** format without the currency symbol. This style aligns decimal places and numbers (including negative numbers in parentheses).

Procedures

1. Select the cells you want to format.

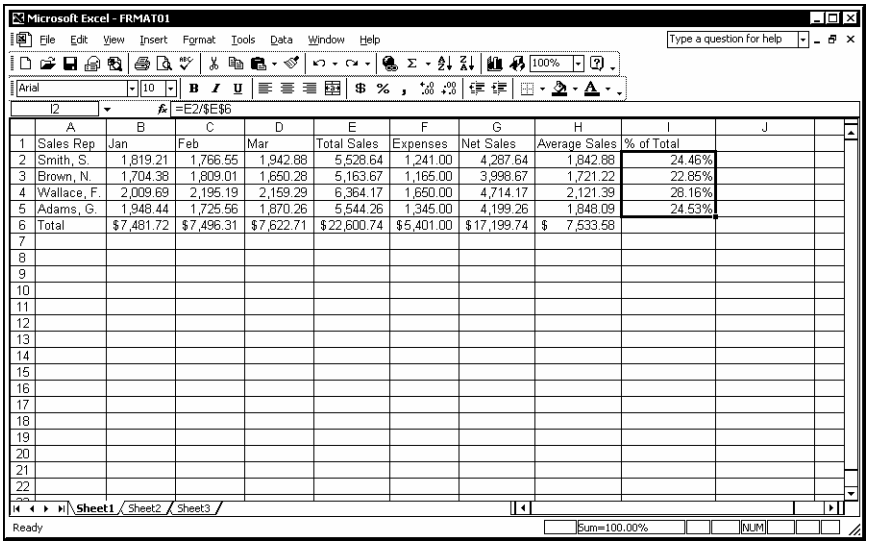
2. Click the **Comma Style** button , on the **Formatting** toolbar.

CHANGING DECIMAL PLACES

Discussion

You can increase or decrease the number of decimal places displayed in a number. For example, with one decimal place displayed, the number 34.5432 appears as 34.5. With two decimal places displayed, it appears as 34.54.

Increasing or decreasing the number of decimal places only affects the display. The original number, 34.5432, is still used in calculations.



	A	B	C	D	E	F	G	H	I	J
1	Sales Rep	Jan	Feb	Mar	Total Sales	Expenses	Net Sales	Average Sales	% of Total	
2	Smith, S.	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	1,842.88	24.46%	
3	Brown, N.	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	1,721.22	22.85%	
4	Wallace, F.	2,009.69	2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	2,121.39	28.16%	
5	Adams, G.	1,948.44	1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	1,848.09	24.53%	
6	Total	$7,481.72	$7,496.31	$7,622.71	$22,600.74	$5,401.00	$17,199.74	$ 7,533.58		

Increasing the number of decimal places

> You can also use the **Numbers** page in the Format Cells dialog box to increase or decrease the number of decimal places.

> Because the stored number is used in calculations, results displayed in the worksheet may appear to be incorrect. For example, if you sum two cells containing 1.25 and 1.45, the result is 2.7. However, if you format the cells to display only one decimal place, then 1.3 and 1.5 appear to incorrectly total 2.7.

Procedures

1. Select the cells you want to format.
2. Click the **Increase Decimal** button  or the **Decrease Decimal** button  on the **Formatting** toolbar as desired.

LESSON 10 -
FORMATTING TEXT

In this lesson, you will learn how to:

- Format cell text
- Change an existing font
- Modify the font size
- Use bold and italics
- Underline text
- Change the font color
- Rotate text in a cell
- Wrap text in a cell
- Shrink text in a cell
- Change cell alignment
- Change text indentation

FORMATTING CELL TEXT

Discussion

You can format text in a cell in various ways. You can change the font (the overall appearance); the font size (the amount of space the text occupies on the printed page); and the font style (bolding, italics, etc.).

In addition, you can also add underlining, color, and special effects to text. Special effects include text orientation, wrapping text within a cell, shrinking text to fit into a cell, and merging text into a selected number of cells. These options can greatly enhance the overall appearance of a worksheet.

In addition to applying a format to the entire cell, you can apply formats to selected characters within a cell. As a result, the characters in a cell can appear in multiple fonts or font sizes, or you can bold just one word in a cell.

If a format has been applied to the entire cell, deleting the cell contents does not remove the format from the cell.

	You can remove text formatting from cells by selecting the **Edit** menu and then the **Clear** command. Selecting **All** from the **Clear** submenu clears both contents and format from selected cells.

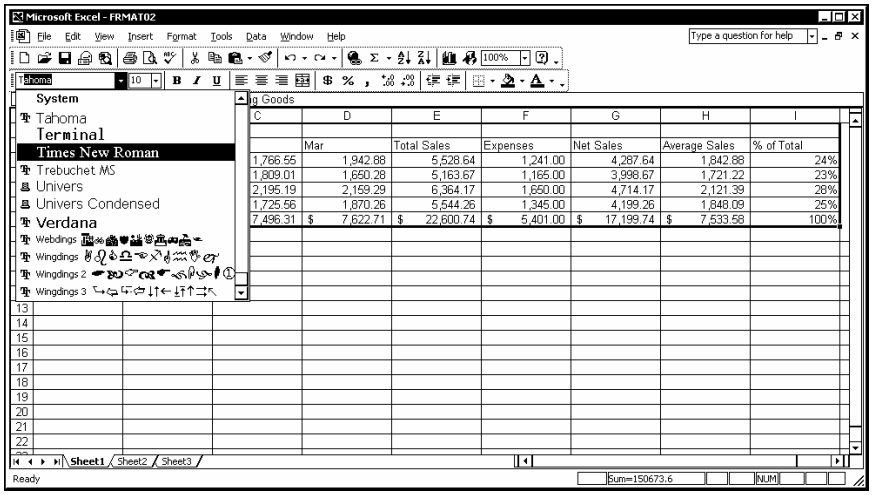
	Font formats can be applied to cells containing numbers as well.

CHANGING AN EXISTING FONT

Discussion

Changing the font changes the appearance of text and numbers in your worksheet. For example, you can change the font from **Arial** to **Times New Roman**. Since font changes are attached to the cell and not to the entry, you can change the font before or after you enter information into a cell.

The **Font** list on the **Formatting** toolbar allows you to quickly change the font of selected text.



Changing the font of existing text

> You can change the default font used for new workbooks by selecting the **Tools** menu, the **Options** command, the **General** page, and then the desired font from the **Standard font** list. The default font change will not become effective until you quit and reopen Excel.

> You can also apply different fonts within a cell by selecting the desired cell text before applying the font.

Procedures

1. Select the cells you want to format.
2. Click the arrow on the **Font** box on the **Formatting** toolbar.
3. Select the desired font.

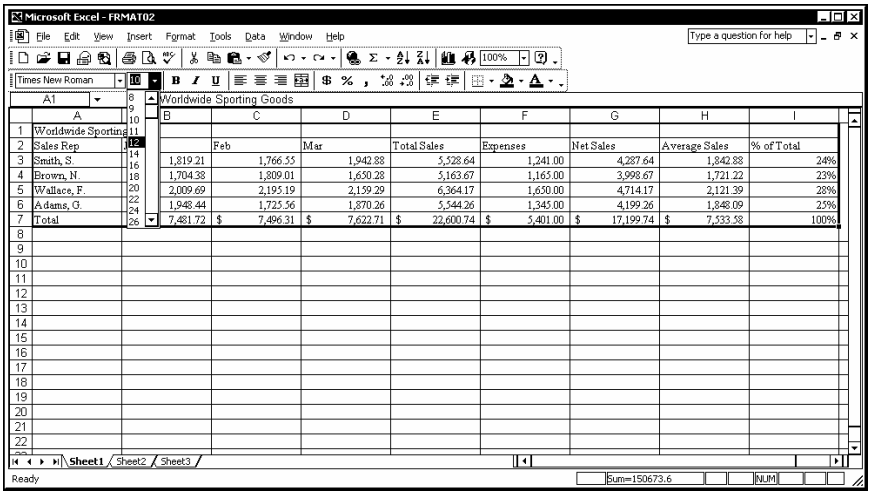
MODIFYING THE FONT SIZE

Discussion

The size of the font determines how small or large the text appears. The larger the font size, the larger the characters. For example, characters with a font size of 14 appear larger than those with a font size of 12.

Font size is measured in points. For purposes of comparison, 72 points equals one inch in height, whereas 36 points equals one-half inch in height. When you apply a font size to an entire cell, you can change the font size before or after you enter data into the cell. However, you can also format text in the same cell with different font sizes. You can use different font sizes to emphasize titles, de-emphasize notes, or improve the readability of a worksheet.

The **Font Size** list on the **Formatting** toolbar allows you to quickly change the font size of selected text.



	A	B	C	D	E	F	G	H	I
1	Worldwide Sporting								
2	Sales Rep		Feb	Mar	Total Sales	Expenses	Net Sales	Average Sales	% of Total
3	Smith, S.	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	1,842.88	24%
4	Brown, N.	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	1,721.22	23%
5	Wallace, F.	2,009.69	2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	2,121.39	28%
6	Adams, O.	1,948.44	1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	1,848.09	25%
7	Total	$ 7,481.72	$ 7,496.31	$ 7,622.71	$ 22,600.74	$ 5,401.00	$ 17,199.74	$ 7,533.58	100%

Changing the font size of existing text

> You can change the default font size used for new workbooks by selecting the **Tools** menu, the **Options** command, the **General** page, and then the desired font from the **Size** list. The default font size change does not become effective until you quit and reopen Excel.

Procedures

1. Select the cells you want to format.
2. Click the arrow on the **Font Size** box on the **Formatting** toolbar.
3. Select the desired font size.

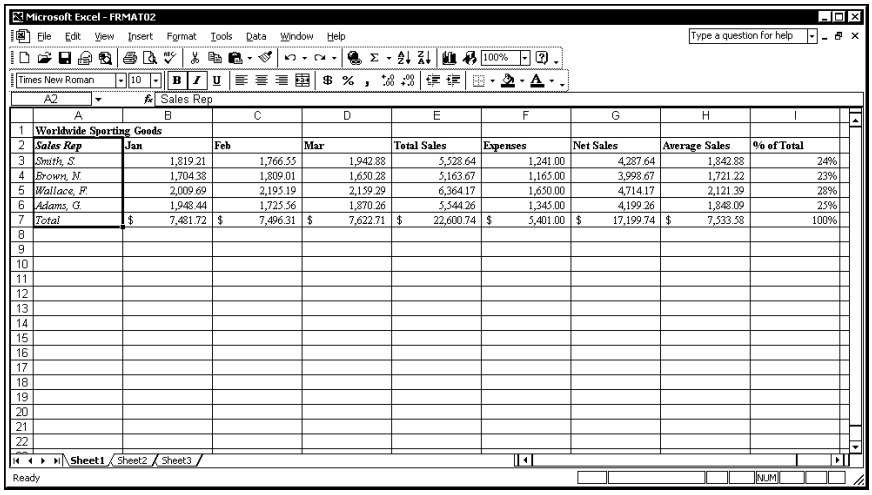
USING BOLD AND ITALICS

Discussion

You can use the **Bold** and **Italic** buttons on the **Formatting** toolbar to quickly format cells.

Bolding emphasizes cell entries by making the characters darker. For example, you may want to bold the name of your company. After you have applied bolding to a cell, any data entered into that cell is bolded.

Italicizing emphasizes cell entries by slanting the characters to the right. For example, you may want to italicize the column or row headings of a worksheet. After you have applied italics to a cell, any data entered into that cell is italicized.



	A	B	C	D	E	F	G	H	I
1	**Worldwide Sporting Goods**								
2	***Sales Rep***	**Jan**	**Feb**	**Mar**	**Total Sales**	**Expenses**	**Net Sales**	**Average Sales**	**% of Total**
3	*Smith, S.*	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	1,842.88	24%
4	*Brown, N.*	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	1,721.22	23%
5	*Wallace, F.*	2,009.69	2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	2,121.39	28%
6	*Adams, G.*	1,948.44	1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	1,848.09	25%
7	*Total*	$ 7,481.72	$ 7,496.31	$ 7,622.71	$ 22,600.74	$ 5,401.00	$ 17,199.74	$ 7,533.58	100%

Bolding and italicizing cell entries

> The **Bold** and **Italic** buttons are toggles. If you select a cell to which one of these formats has been applied and then click the corresponding button, that format is removed.

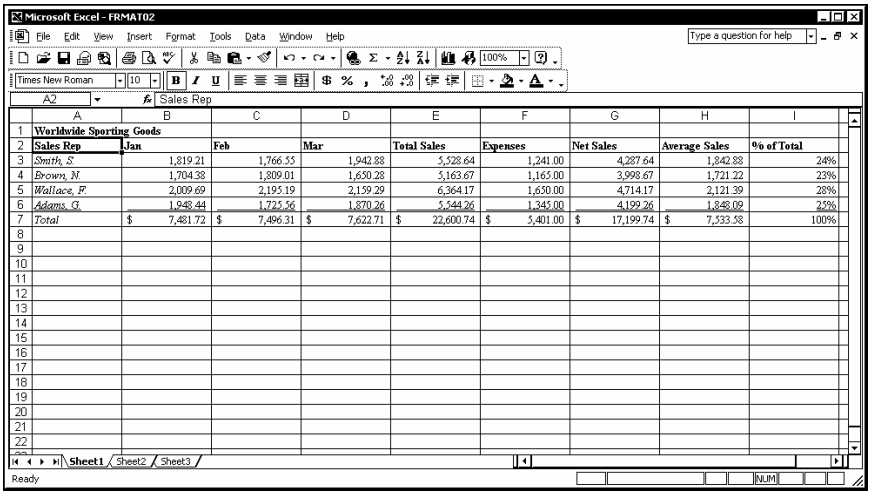
Procedures

1. Select the cells you want to format.
2. Click the **Bold** button **B** or the **Italic** button ***I*** on the **Formatting** toolbar as desired.

UNDERLINING TEXT

Discussion

Underlining emphasizes words and numbers in cells. For example, you may want to emphasize a title or the headings in a row or column. Underlining adds a line below the characters in a cell, not the cell itself. After you have applied underlining to a cell, any data entered into that cell is underlined.



	A	B	C	D	E	F	G	H	I
1	**Worldwide Sporting Goods**								
2	**Sales Rep**	**Jan**	**Feb**	**Mar**	**Total Sales**	**Expenses**	**Net Sales**	**Average Sales**	**% of Total**
3	*Smith, S.*	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	1,842.88	24%
4	*Brown, N.*	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	1,721.22	23%
5	*Wallace, F.*	2,009.69	2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	2,121.39	28%
6	*Adams, G.*	1,948.44	1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	1,848.09	25%
7	*Total*	$ 7,481.72	$ 7,496.31	$ 7,622.71	$ 22,600.74	$ 5,401.00	$ 17,199.74	$ 7,533.58	100%

Adding underlines

> The **Underline** button is a toggle. If you select a cell that is underlined and then click the **Underline** button, the underline is removed.

> You can also apply a **Single**, **Double**, **Single Accounting**, or **Double Accounting** underline by first selecting the cells you want to format and then selecting the corresponding option on the **Font** page in the Format Cells dialog box.

Procedures

1. Select the cells you want to format.
2. Click the **Underline** button  on the **Formatting** toolbar.

CHANGING THE FONT COLOR

Discussion

Color emphasizes words and numbers in cells. For example, the color red can be used to emphasize all the cells that contain negative values.

Although color appears on the screen, it does not print unless you have a color printer. Colors print as shades of gray when you use a black and white printer.

You can change the font color in a single cell or in a range of cells. After you have changed the font color of a cell, any data entered into that cell appears in the selected color.

The **Font Color** button has two components. The **Font Color** button always displays the most recently used color. To apply that color to selected cells, you only have to click the button. You can also use the **Font Color** button arrow to display the color palette and choose a different color.

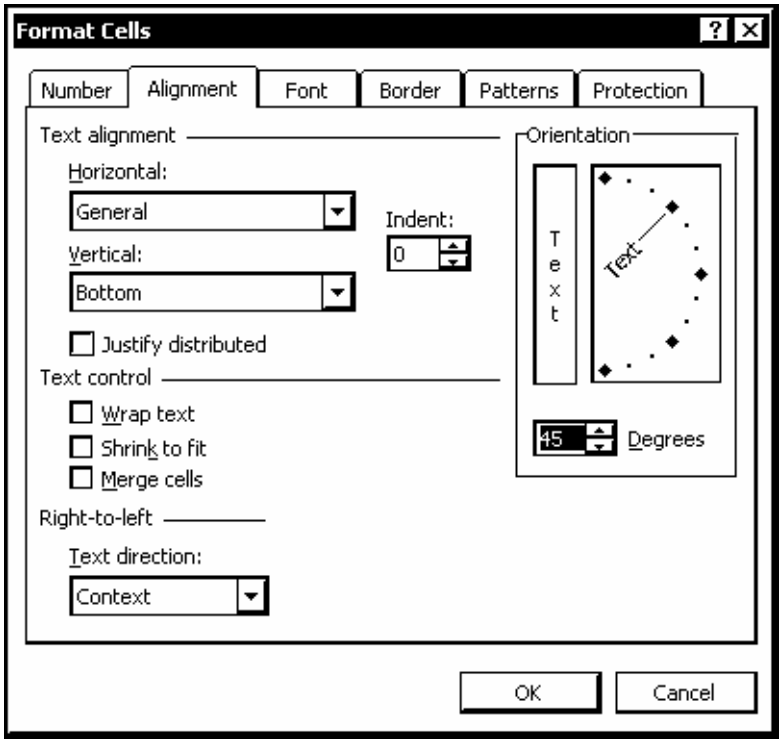
Procedures

1. Select the cells you want to format.
2. Click the arrow on the **Font Color** button  on the **Formatting** toolbar.
3. Select the desired color.

ROTATING TEXT IN A CELL

Discussion

The orientation of text in a cell can be changed to enhance the appearance of a worksheet. If a column label is much wider than is necessary to fit the column data, you can rotate the column label text rather than widen the column to fit the data. Text can be rotated in one-degree increments, anywhere from +90 to -90 degrees.



Rotating text in a cell

> You can also rotate the text in a cell by dragging the **Text** indicator to the desired position or clicking one of the degree points in the **Text** indicator box.

> Vertical cell borders applied to cells containing rotated text are rotated to the same degree as the text.

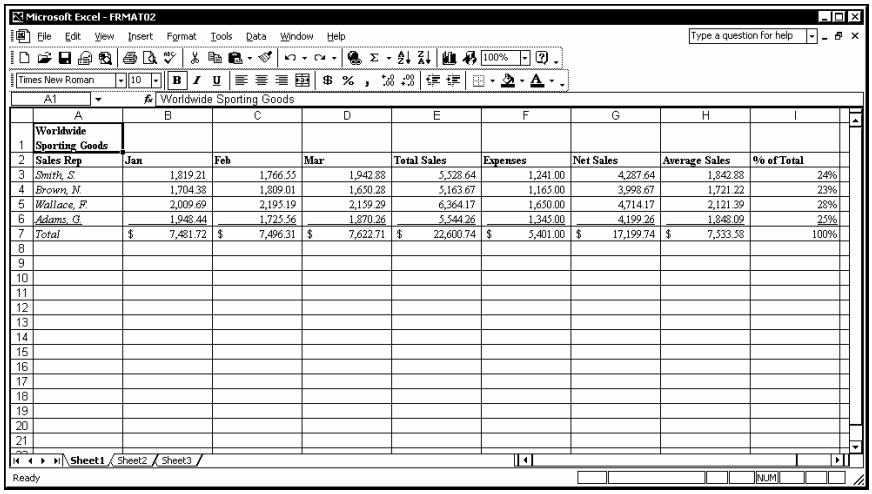
Procedures

1. Select the cells containing the text you want to rotate.
2. Select the **Format** menu.
3. Select the **Cells** command.
4. Select the **Alignment** tab.
5. Enter the number of degrees by which you want to rotate the text in the **Degrees** box under **Orientation**.
6. Select **OK**.

WRAPPING TEXT IN A CELL

Discussion

When text is too long to fit into the cell, you can change the column width to accommodate the text. This type of change increases the total width of the worksheet, however, and takes up extra space on both the screen and the printed page. As an alternative to changing the column width, you can wrap the text in the cell. This option enables you to view all the text in the cell, without altering the column width.



	A	B	C	D	E	F	G	H	I
1	**Worldwide Sporting Goods**								
2	**Sales Rep**	**Jan**	**Feb**	**Mar**	**Total Sales**	**Expenses**	**Net Sales**	**Average Sales**	**% of Total**
3	*Smith, S.*	1,819.21	1,766.55	1,942.88	5,528.64	1,241.00	4,287.64	1,842.88	24%
4	*Brown, N.*	1,704.38	1,809.01	1,650.28	5,163.67	1,165.00	3,998.67	1,721.22	23%
5	*Wallace, F.*	2,009.69	2,195.19	2,159.29	6,364.17	1,650.00	4,714.17	2,121.39	28%
6	*Adams, G.*	1,948.44	1,725.56	1,870.26	5,544.26	1,345.00	4,199.26	1,848.09	25%
7	*Total*	$ 7,481.72	$ 7,496.31	$ 7,622.71	$ 22,600.74	$ 5,401.00	$ 17,199.74	$ 7,533.58	100%
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									

Wrapped text

Procedures

1. Select the cells containing the text you want to wrap.
2. Select the **Format** menu.
3. Select the **Cells** command.
4. Select the **Alignment** tab.
5. Select the **Wrap text** option under **Text control**.
6. Select **OK**.

SHRINKING TEXT IN A CELL

Discussion

When text does not fit into a cell, the column width or row height often has to be changed to accommodate the text. This type of change increases the total width or length of the worksheet, however, and takes up extra space. As an alternative to changing the column width or row height, you can shrink the text to fit the cell. This option reduces the size of the text, thereby enabling you to view all the text in the cell without altering the column width or height.

Procedures

1. Select the cells containing the text you want to shrink.
2. Select the **Format** menu.
3. Select the **Cells** command.
4. Select the **Alignment** tab.
5. Select the **Shrink to fit** option under **Text control**.
6. Select **OK**.

CHANGING CELL ALIGNMENT

Discussion

When you enter information into a cell, text is automatically aligned to the left edge of the cell and numbers are automatically aligned to the right. You can change the alignment of text and numbers to improve the appearance of your worksheet.

Text and numbers can be left-aligned, right-aligned, or centered in a cell. For example, you may want to right align text at the top of a column of numbers to match the alignment of the numbers. Alignment changes are attached to the cell and affect any data entered into it.

Certain number styles determine cell alignment. Therefore, you may not be able to change the way some formatted numbers are aligned, unless you remove the number style. If you format a number using the **Currency Style** or **Comma Style** button on the **Formatting** toolbar, you cannot change its alignment. These styles apply the **Accounting** style, which includes an alignment that cannot be changed. You can, however, change the alignment of numbers when the **Currency** or **Number** format has been applied from the **Number** page in the Format Cells dialog box.

24%	**Jan**	**1,942.88**
A left-aligned cell	*A centered cell*	*A right-aligned cell*

You can access the **Number** page in the Format Cells dialog box by selecting the **Format** menu, the **Cells** command, and then the **Number** tab.

You can also horizontally align text and numbers using the **Horizontal** list on the **Alignment** page in the Format Cells dialog box. You can use the **Distribute (Indent)** and **Justify** options to equally distribute text within a cell. The **Fill** option repeats a label across selected cells.

Procedures

1. Select the cells you want to align.
2. Click the **Align Left** button  , the **Center** button  , or the **Align Right** button  on the **Formatting** toolbar.

CHANGING TEXT INDENTATION

Discussion

Excel allows you to change text indentation within a cell. You may want to increase the indent of cell text for emphasis or to indicate a level of less importance, such as a subtopic.

You can also decrease text indentation, or you can restore the indented text all the way to the left edge of the cell. For example, you may have a subtopic under a major topic that has itself become a major topic. You can decrease the indentation of the subtopic all the way to the left edge of the cell to make the subtopic a major topic.

> You can use the **Indent** spin box on the **Alignment** page in the Format Cells dialog box to specify the number of characters to indent. To set a specific indent, you must select an **Indent** alignment option from the **Horizontal** list. The **Distributed (Indent)** option allows you to indent text from both the left and right edges of a cell.

Procedures

1. Select the cells containing the indentation you want to change.
2. Click the **Increase Indent** button  or the **Decrease Indent** button  on the **Formatting** toolbar as desired.

LESSON 11 -
FORMATTING CELLS

In this lesson, you will learn how to:

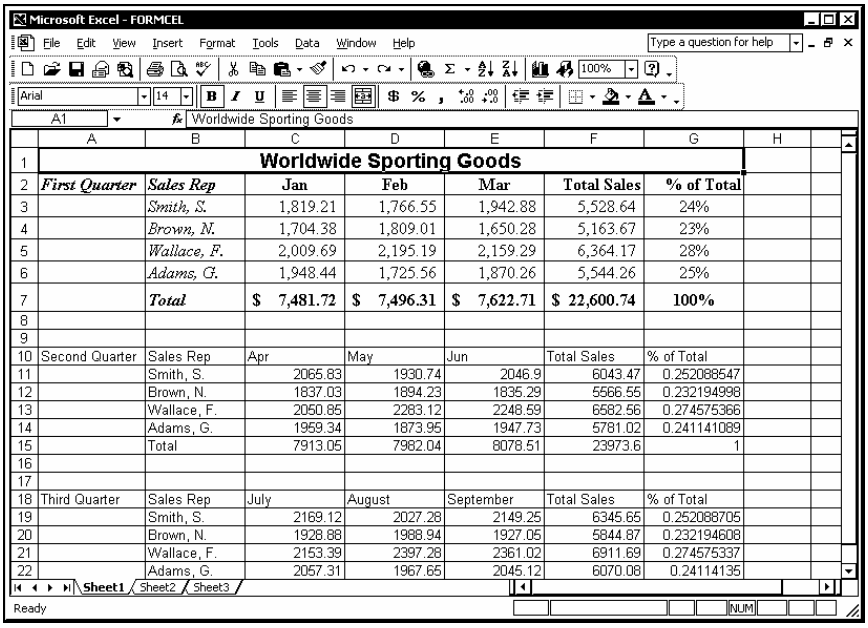
- Use the Merge and Center button
- Change the vertical alignment
- Split cells
- Use the Borders button
- Draw cell borders
- Use the Fill Color button
- Paste formats
- Use the Format Painter button
- Copy formats to non-adjacent cells
- Clear formats
- Insert selected cells
- Insert cut or copied cells
- Delete selected cells

USING THE MERGE AND CENTER BUTTON

Discussion

You can select several cells, merge them into one cell, and horizontally center the entry across several columns in a worksheet (when you want to center a title above several columns in a worksheet, for instance). The **Merge and Center** button performs both actions on selected cells with one click. Once you have merged and centered cells, you can change the alignment of the merged cell as desired.

You can also use the **Merge and Center** button to merge cells vertically in a column; Excel centers the cell contents horizontally within the merged cell, but not vertically.



	A	B	C	D	E	F	G	H
1			**Worldwide Sporting Goods**					
2	***First Quarter***	***Sales Rep***	**Jan**	**Feb**	**Mar**	**Total Sales**	**% of Total**	
3		*Smith, S.*	1,819.21	1,766.55	1,942.88	5,528.64	24%	
4		*Brown, N.*	1,704.38	1,809.01	1,650.28	5,163.67	23%	
5		*Wallace, F.*	2,009.69	2,195.19	2,159.29	6,364.17	28%	
6		*Adams, G.*	1,948.44	1,725.56	1,870.26	5,544.26	25%	
7		***Total***	**$ 7,481.72**	**$ 7,496.31**	**$ 7,622.71**	**$ 22,600.74**	**100%**	
8								
9								
10	Second Quarter	Sales Rep	Apr	May	Jun	Total Sales	% of Total	
11		Smith, S.	2065.83	1930.74	2046.9	6043.47	0.252088547	
12		Brown, N.	1837.03	1894.23	1835.29	5566.55	0.232194998	
13		Wallace, F.	2050.85	2283.12	2248.59	6582.56	0.274575366	
14		Adams, G.	1959.34	1873.95	1947.73	5781.02	0.241141089	
15		Total	7913.05	7982.04	8078.51	23973.6	1	
16								
17								
18	Third Quarter	Sales Rep	July	August	September	Total Sales	% of Total	
19		Smith, S.	2169.12	2027.28	2149.25	6345.65	0.252088705	
20		Brown, N.	1928.88	1988.94	1927.05	5844.87	0.232194608	
21		Wallace, F.	2153.39	2397.28	2361.02	6911.69	0.274575337	
22		Adams, G.	2057.31	1967.65	2045.12	6070.08	0.24114135	

Merging and centering a cell entry

When you merge and center cells, the actual text is still located in the cell in which it was entered, even though it appears to have moved.

You can also center an entry across a range of cells without merging the cells. Type the entry in the far left cell and then select the range of cells across which you want to center it. Select the **Format** menu, the **Cells** command, the **Alignment** tab, and then **Center Across Selection** from the **Horizontal** list.

Procedures

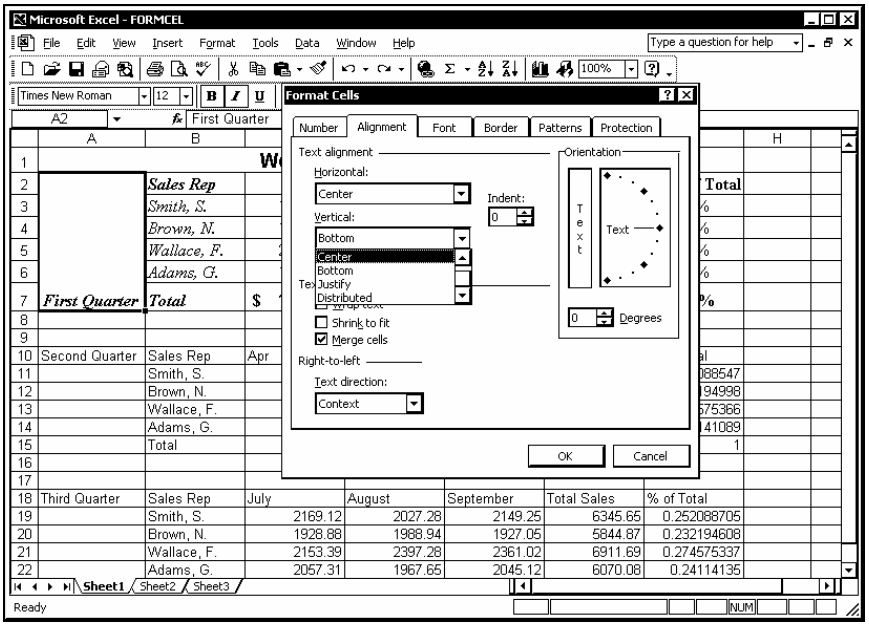
1. Select the cells you want to merge and center.

2. Click the **Merge and Center** button on the **Formatting** toolbar.

CHANGING THE VERTICAL ALIGNMENT

Discussion

By default, data vertically aligns to the bottom of a cell. If you increase the height of a row or join cells in a row, you may want to change the vertical alignment of the cell contents. For example, you may want to vertically center a label in a merged cell that spans several rows. You can also vertically align cell contents to the top or bottom of a cell, or you can justify or distribute the cell contents.



Changing the vertical alignment

Procedures

1. Select the cells containing the text you want to vertically align.
2. Select the **Format** menu.
3. Select the **Cells** command.
4. Select the **Alignment** tab.
5. Select the **Vertical** list under **Text alignment**.
6. Select the desired vertical alignment.
7. Select **OK**.

SPLITTING CELLS

Discussion

After cells in a worksheet have been merged and centered, you can use the **Merge and Center** button to split the merged cell back into the original, individual cells. This option is useful when you want to see how the worksheet will appear with a title centered above multiple columns, or if you inadvertently centered and merged cells incorrectly.

	You can also split merged and centered cells by selecting the **Format** menu, the **Cells** command, the **Alignment** tab, and then the **Merge Cells** option to deselect it.

	You do not have to split a merged cell back to its original cells in order to insert or delete a column or row within the range of the merged cell. The merged cell automatically resizes to fit the change.

Procedures

1. Select the merged cell you want to split.
2. Click the **Merge and Center** button  .

USING THE BORDERS BUTTON

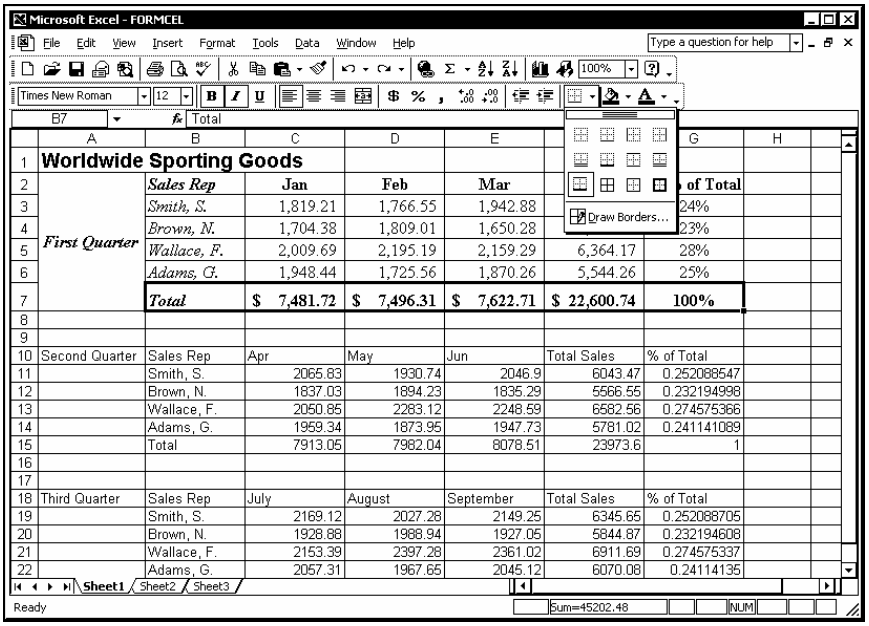
Discussion

Cell borders are visible, printable lines you can add to cells in a worksheet. For example, you may want wide lines to appear under the column headings, row titles, and row totals of a worksheet to emphasize them.

Excel provides twelve border styles that apply lines of varying widths and edges to a cell. In addition, you can add cell borders to an entire range of cells. A border is attached to a cell and appears regardless of the cell entry.

The **Borders** button has two components. The **Borders** button always displays the most recently selected border style. To apply the current border style to the selected cells, you can simply click the **Borders** button. Clicking the arrow to the right of the **Borders** button displays a palette of border styles from which you can select a different border style.

You can also use the gray bar at the top of the **Borders** list to drag the palette into the workspace as a floating toolbar. The **Borders** palette will then remain open as you add borders to the worksheet.



Applying cell borders

Cell borders are visible lines that print with the worksheet, as opposed to cell gridlines, which are the light gray lines that appear by default on screen, but do not print.

You can clear cell borders by selecting the cells containing the borders you want to clear and then clicking **No Border** button (the upper, left button in the **Borders** palette).

You can also add borders to selected cells by selecting the **Format** menu, the **Cells** command, and the **Borders** tab. You can select the border style and color and then click any of the available buttons or click at the desired cell location in the preview box to add or remove borders as desired.

Procedures

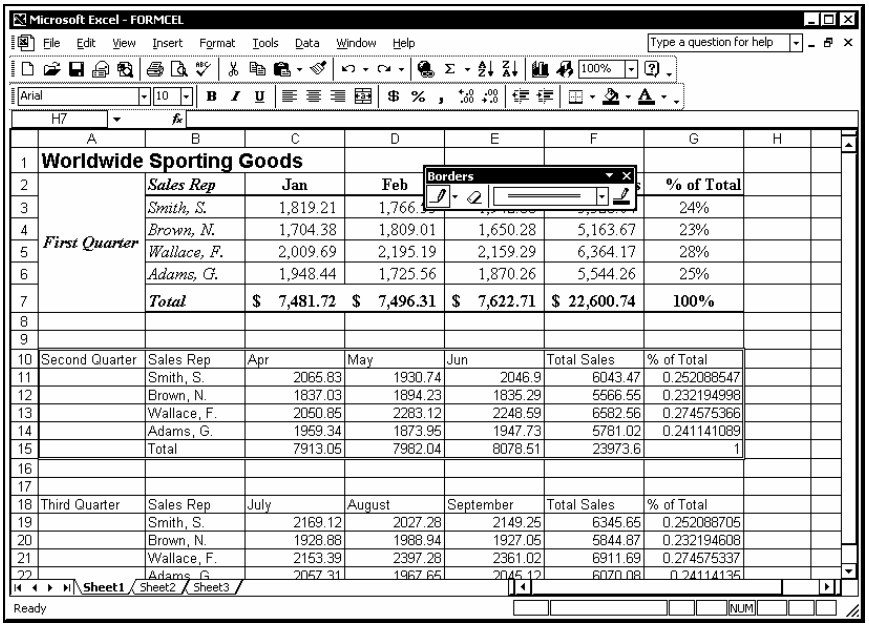
1. Select the cells to which you want to add a border.
2. Click the arrow on the **Borders** button  on the **Formatting** toolbar.
3. Select the desired border style.

DRAWING CELL BORDERS

Discussion

The **Borders** toolbar allows you to easily create cell borders by drawing them. You can draw borders around individual cells, around a range of cells, or diagonally through a cell. In addition, you can draw only a top, side, or bottom border or any combination of borders as desired. You can also erase borders, removing the entire border or only individual borders as desired. You do not have to select a cell or range before drawing or erasing borders.

A variety of line widths, styles, and colors can be applied to borders. Applying different colors or line styles to cells or ranges can help differentiate or emphasize various sections of your worksheet. For example, you might want to border various sales regions in the color blue and then border the region with the highest sales figures in red. In addition, you could quickly draw a double line border around one particular sales representative within a region.



Drawing cell borders

When the **Draw Border** button on the **Borders** toolbar is activated, the mouse pointer displays a pencil. When the **Erase Border** button on the **Borders** toolbar is activated, the mouse pointer displays an eraser.

You can place text above and below a diagonal line in a cell. First, type text to appear above the diagonal line and press the **[Alt+Enter]** key combination to end the line. Then, type the text to appear below the diagonal line. In the **Alignment** page of the Format cells dialog box, select **Center** from the **Horizontal** list and **Distributed** from the **Vertical** list. Then, draw the diagonal line in the cell and size the height of the row as needed.

When you have finished using the **Draw Border** or **Erase Border** feature, click the corresponding button again to deactivate it.

Procedures

1. Click the arrow on the **Borders** button  .
2. Select the **Draw Borders** command.

3. Select the **Line Style** or **Line Color** list as desired.
4. Select the desired line style or color option.
5. Select the arrow on the **Draw Border** button  .
6. Select the desired draw border option.
7. Select the cells to which you want to add a border.
8. Click the **Draw Border** button  to deactivate it.
9. Click the **Erase Border** button  .
10. Select the cells from which you want to remove a border.
11. Click the **Erase Border** button  to deactivate it.

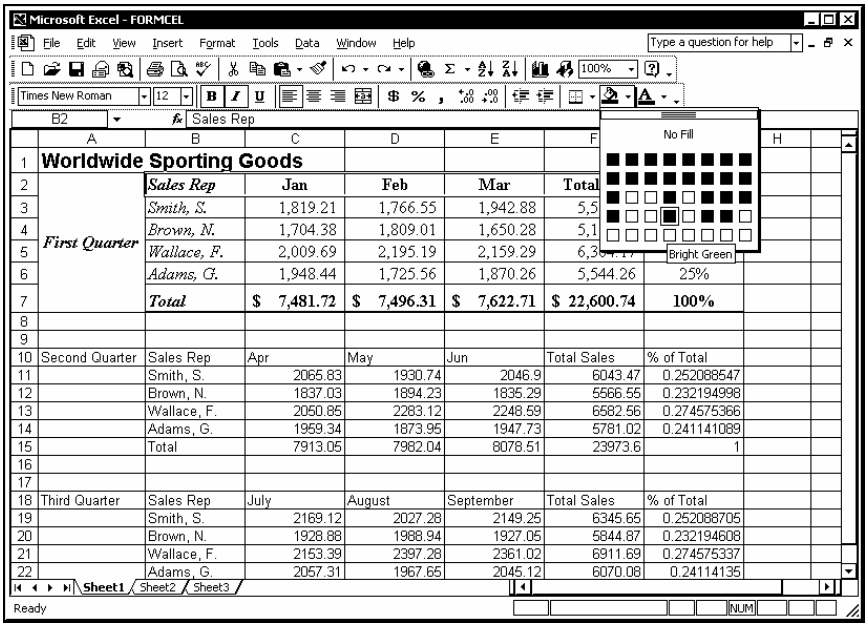
USING THE FILL COLOR BUTTON

Discussion

You can use the **Fill Color** button to add shading to a cell background. Shading allows you to make items such as column headings distinct from the rest of the worksheet.

Although color appears on screen, it does not print unless you have a color printer. (Colors print as shades of gray on a black and white printer.)

The **Fill Color** button has two components. The **Fill Color** button always displays the most recently selected color. To apply the color displayed on the **Fill Color** button to selected cells, you can simply click the **Fill Color** button. Clicking the **Fill Color** arrow displays a color palette, from which you can select a different color.



Applying a fill color

> You can clear cell shading by selecting the cell containing the shading you want to clear and choosing the **No Fill** option from the color palette.

Procedures

1. Select the cells to which you want to add a color.
2. Click the arrow on the **Fill Color** button  on the **Formatting** toolbar.
3. Select the desired color.

PASTING FORMATS

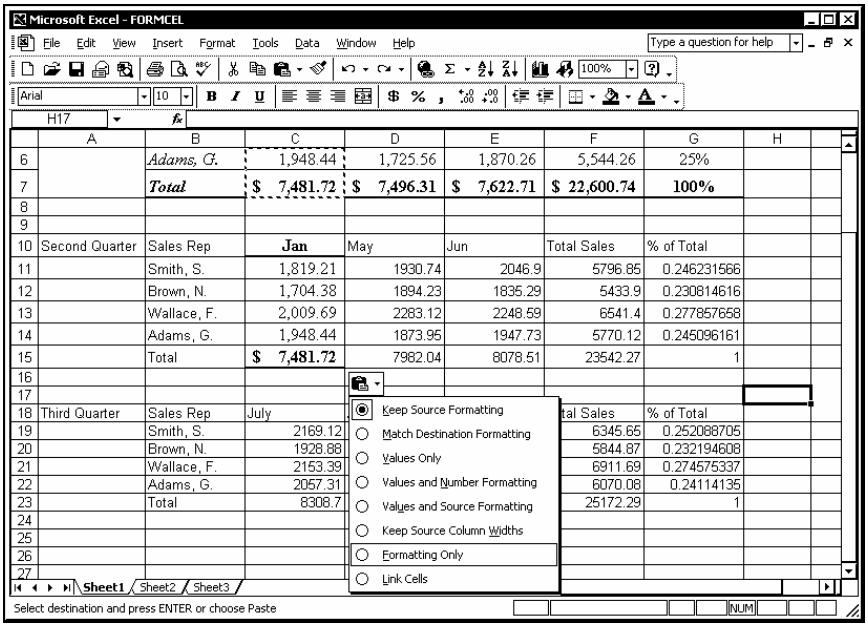
Discussion

You can use the **Paste Options** feature to quickly copy formatting from one cell to another. When you paste copied cells, the **Paste Options** button appears next to the

paste range. Clicking the **Paste Options** button displays a list of available formatting options for the pasted cells.

You can paste the formatting from the copied cell to the contents of another cell or to a blank cell. When you paste formatting to a blank cell and then enter data, the data is automatically formatted accordingly.

The **Paste Options** button also allows you to apply the column widths of the copied cells to the pasted cells, thereby eliminating the need to manually adjust column widths.



Pasting formats only

> You can also use the **Format Painter** button to copy and paste formats.

> You can also use the **Paste Special** feature to copy and paste formats. Paste Special is available from the **Paste** button list on the **Standard** toolbar and from the **Edit** menu.

Procedures

1. Select the cells containing the formatting you want to copy.
2. Click the **Copy** button  .

3. Select the upper, left cell of the paste range.
4. Click the **Paste** button  .
5. Click the **Paste Options** button  to select formatting options.
6. Select the **Formatting Only** option.

USING THE FORMAT PAINTER BUTTON

Discussion

The **Format Painter** button copies formats from one cell or range to another cell or range. This button relieves you from having to apply each format individually to each cell or range. For example, if you apply bolding, italics, underlining, and shading to a cell, you can use the **Format Painter** button to apply all of these formats at one time to another cell or range.

> You can use the **Undo** button to reverse the effects of the Format Painter.

> The Format Painter overwrites all formats in the cell to which it is applied. As a result, if you copy a format from a cell containing text to a cell containing numbers, you will lose the number formatting in the pasted cell.

Procedures

1. Select the cells containing the formatting you want to copy.
2. Click the **Format Painter** button  on the **Standard** toolbar.
3. Select the cells to which you want to apply the formatting.

COPYING FORMATS TO NON-ADJACENT CELLS

Discussion

You can use the Format Painter to copy cell formatting to one or more non-adjacent cells, without having to click the **Format Painter** button each time. For example, you may want to copy the formats from cells A1:A5 to both A10:A15 and A20:A25.

> To copy formatting to a range of cells with the same number of rows and columns as the copied cells, it is not necessary to select the paste range; you can simply click the upper, left cell of the paste range to paste the formatting to the entire range.

> If the range of cells you want to copy and the range of cells you want to format have a different number of rows or columns, you may not achieve the desired results. In that case, you can copy and paste the formats in several incremental steps.

Procedures

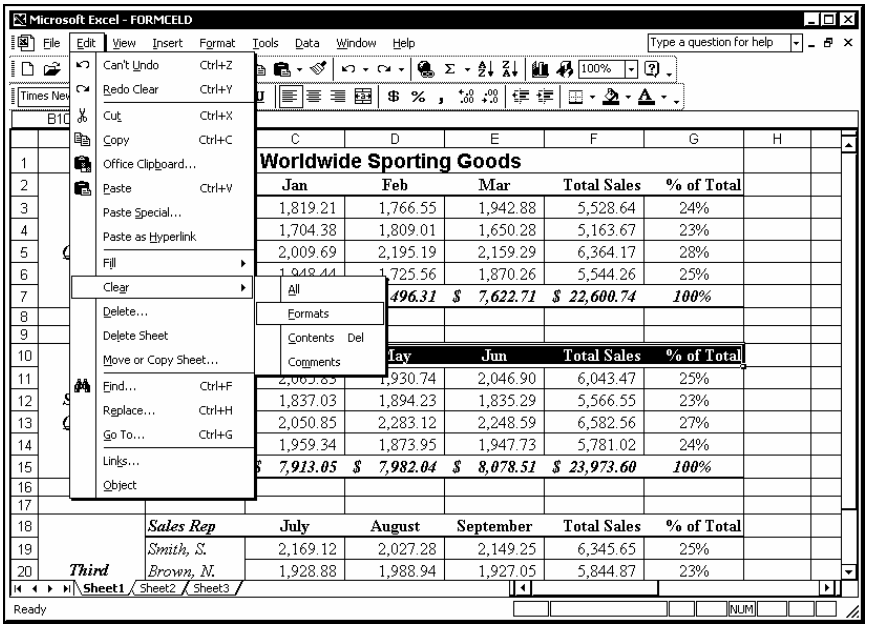
1. Select the cells containing the formatting you want to copy.
2. Double-click the **Format Painter** button  on the **Standard** toolbar.
3. Drag to select all the cells to which you want to apply the formatting.
4. Click the **Format Painter** button  to deselect it.

CLEARING FORMATS

Discussion

You can clear all the formats in a cell or range in one step. Clearing formats removes all formatting attached to the cell or range, including number formats, font formats, cell borders, and shading.

To clear only a single format, such as bolding, you should remove that format individually.



Clearing formats

> If you clear a cell format unintentionally, you can use the **Undo** button to reverse the clear action.

Procedures

1. Select the cells containing the formats you want to clear.
2. Select the **Edit** menu.
3. Point to the **Clear** command.
4. Select the **Formats** command.

INSERTING SELECTED CELLS

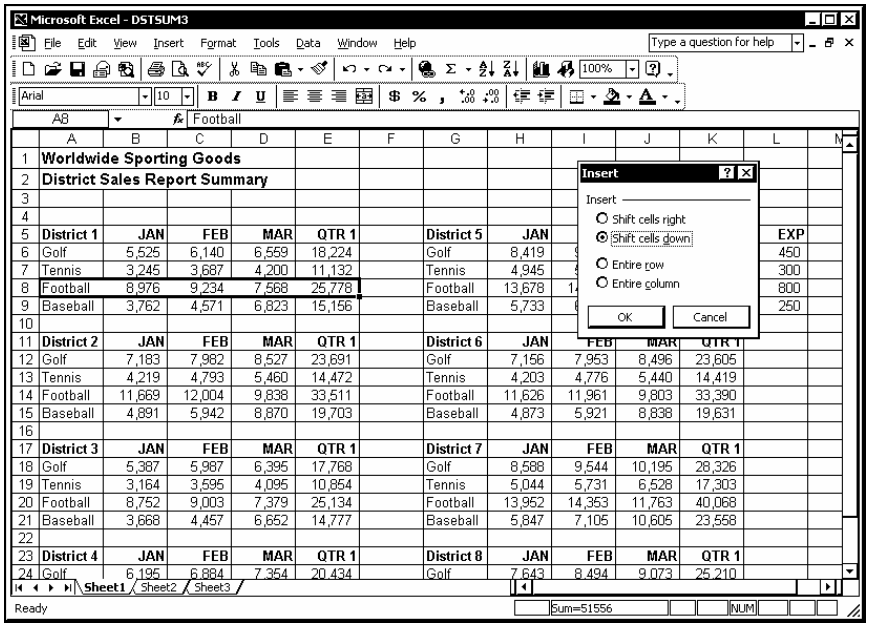
Discussion

Individual cells can be inserted into a worksheet. This feature is helpful if you keep different types of data in different areas of the same worksheet, and need to insert a row or column in one section of data without affecting the rest of the worksheet.

When an entire row is inserted, all columns in the worksheet are affected. Conversely, when an entire column is inserted, all rows in the worksheet are affected. Inserting selected cells only affects the selected rows or columns in the worksheet.

When you insert cells, you choose whether to shift the existing cells down or to the right. Shifting cells down affects the rows to which the existing cells will move, and shifting the cells to the right affects the columns to which the existing cells will move. Therefore, if you insert cells B7:D7 and shift the cells down, cells will be inserted into row 7 only in columns B, C, and D. Even though you can change the direction in which to shift existing cells, Excel usually selects the correct alternative based upon your selection.

After inserting cells, the **Insert Options** button appears at the end of the inserted range. By default, inserted cells adopt the formatting of the row above or column to the left. The **Insert Options** list allows you to format the inserted cells the same as the opposite adjacent row or column, as well as to clear all formatting from the inserted cells.



Inserting selected cells

If you do not like the way the cells were inserted, you can use the **Undo** button to remove them.

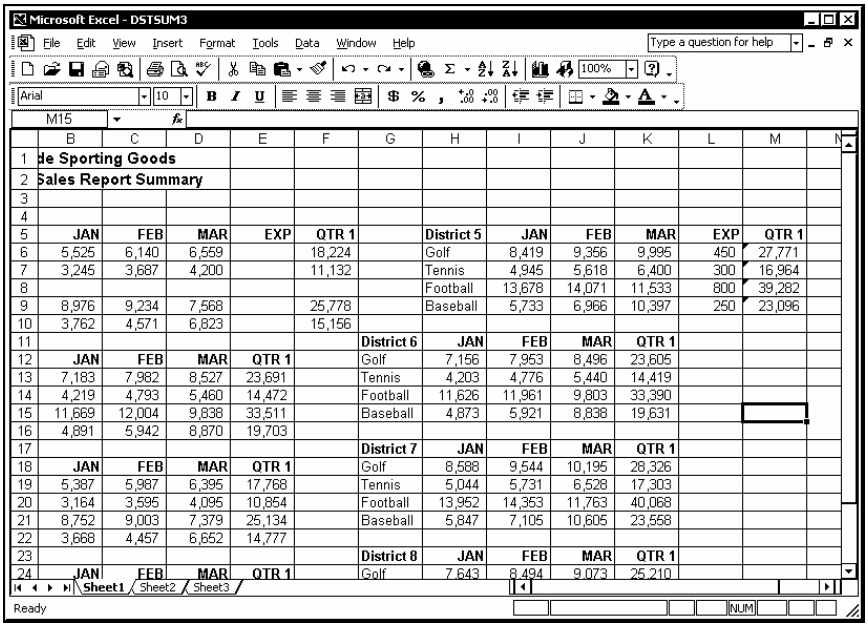
Procedures

1. Select the cells in which you want the inserted cells to appear.
2. Select the **Insert** menu.
3. Select the **Cells** command.
4. Select the desired option, if necessary.
5. Select **OK**.

INSERTING CUT OR COPIED CELLS

Discussion

In addition to inserting new blank cells, you can cut or copy cells and insert them elsewhere in a worksheet. When the cell contents are inserted, the adjacent cells shift down or to the right accordingly. This feature is useful if you keep different types of data in different areas of the same worksheet and want to move or copy cells without inserting a whole row or column.



	B	C	D	E	F	G	H	I	J	K	L	M
1	de Sporting Goods											
2	Sales Report Summary											
3												
4												
5	JAN	FEB	MAR	EXP	QTR 1		District 5	JAN	FEB	MAR	EXP	QTR 1
6	5,525	6,140	6,559		18,224		Golf	8,419	9,356	9,995	450	27,771
7	3,245	3,687	4,200		11,132		Tennis	4,945	5,618	6,400	300	16,964
8							Football	13,678	14,071	11,533	800	39,282
9	8,976	9,234	7,568		25,778		Baseball	5,733	6,966	10,397	250	23,096
10	3,762	4,571	6,823		15,156							
11						District 6	JAN	FEB	MAR	QTR 1		
12	JAN	FEB	MAR	QTR 1		Golf	7,156	7,953	8,496	23,605		
13	7,183	7,982	8,527	23,691		Tennis	4,203	4,776	5,440	14,419		
14	4,219	4,793	5,460	14,472		Football	11,626	11,961	9,803	33,390		
15	11,869	12,004	9,838	33,511		Baseball	4,873	5,921	8,838	19,631		
16	4,891	5,942	8,870	19,703								
17						District 7	JAN	FEB	MAR	QTR 1		
18	JAN	FEB	MAR	QTR 1		Golf	8,588	9,544	10,195	28,326		
19	5,387	5,987	6,395	17,768		Tennis	5,044	5,731	6,528	17,303		
20	3,164	3,595	4,095	10,854		Football	13,952	14,353	11,763	40,068		
21	8,752	9,003	7,379	25,134		Baseball	5,847	7,105	10,605	23,558		
22	3,668	4,457	6,652	14,777								
23						District 8	JAN	FEB	MAR	QTR 1		
24	JAN	FEB	MAR	QTR 1		Golf	7,643	8,494	9,073	25,210		

Inserting copied cells

> The command to insert cells on the **Insert** menu displays either **Cut Cells** or **Copied Cells**, as applicable.

Procedures

1. Select the cells you want to cut or copy.
2. Cut or copy the cells, as desired.
3. Select the upper, left cell of the range in which you want the inserted cells to appear.
4. Select the **Insert** menu.
5. Select the **Cut Cells** or **Copied Cells** command, as applicable.

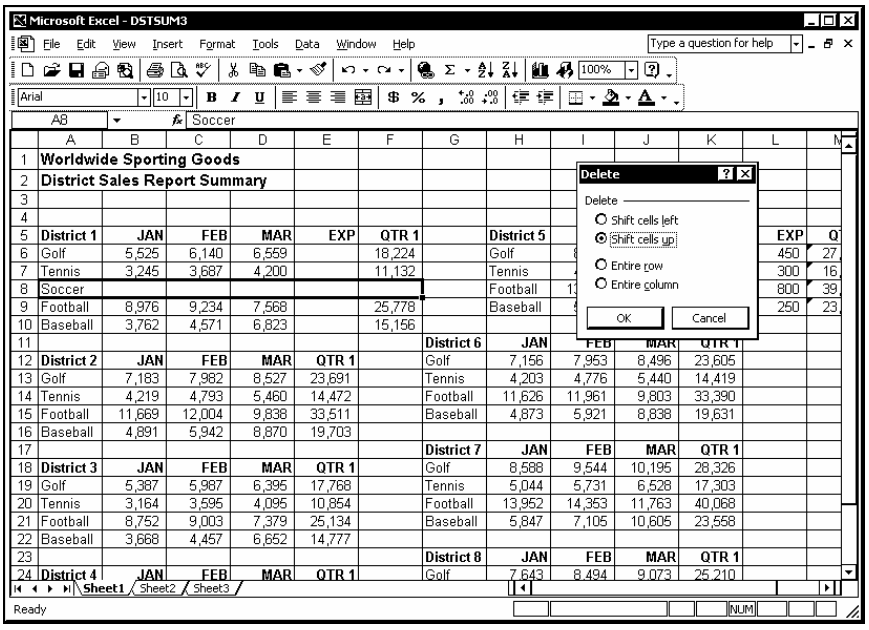
DELETING SELECTED CELLS

Discussion

Cells can be deleted from a worksheet. This feature is valuable if you keep different types of data in different areas of the same sheet, and need to delete data in one section of the worksheet without affecting the rest of the worksheet.

Unlike deleting entire rows and columns, deleting selected cells only affects the selected rows or columns.

When you delete cells, you can choose to shift the remaining cells up or to the left. Shifting the cells up affects the rows to which the remaining cells will move, and shifting the cells to the left affects the columns to which the remaining cells will move. If you delete cells C9:E9 and shift the cells up, the cells in row 9 will be deleted only from columns C, D, and E. Even though you can change the direction in which to shift the remaining cells, Excel usually selects the correct alternative based upon your selection.



Deleting selected cells

If you do not like the way the cells were deleted, you can use the **Undo** button to reinsert them.

Procedures

1. Select the cells you want to delete.
2. Select the **Edit** menu.
3. Select the **Delete** command.
4. Select the desired option.
5. Select **OK**.

LESSON 12 -
USING AUTOMATIC FORMATTING AND STYLES

In this lesson, you will learn how to:

- Use automatic formatting features
- Apply an AutoFormat
- Change AutoFormat options
- Extend list formats and formulas
- Create a style by example
- Apply a style
- Create a new style
- Edit an existing style
- Merge styles

USING AUTOMATIC FORMATTING FEATURES

Discussion

Although formatting data in a worksheet can give it a professional appearance, it can also be a time-consuming process. Excel includes many automatic formatting features that you can use to save time. One such feature is AutoFormat, which allows you to select a preset AutoFormat and apply it to your worksheet.

Another feature, which uses the **Extend list formats and formulas** option, automatically repeats the existing formatting pattern when new data is entered.

In addition, you can create a style that applies a combination of formats at the same time. For example, if you always format a **Totals** row with a currency format, no decimal places, a 12-point Times New Roman bold font, a gray fill color, and a border above and below the cell, you can save this format combination as a style. Whenever you apply the style, all the formats are applied at one time to the selected cells.

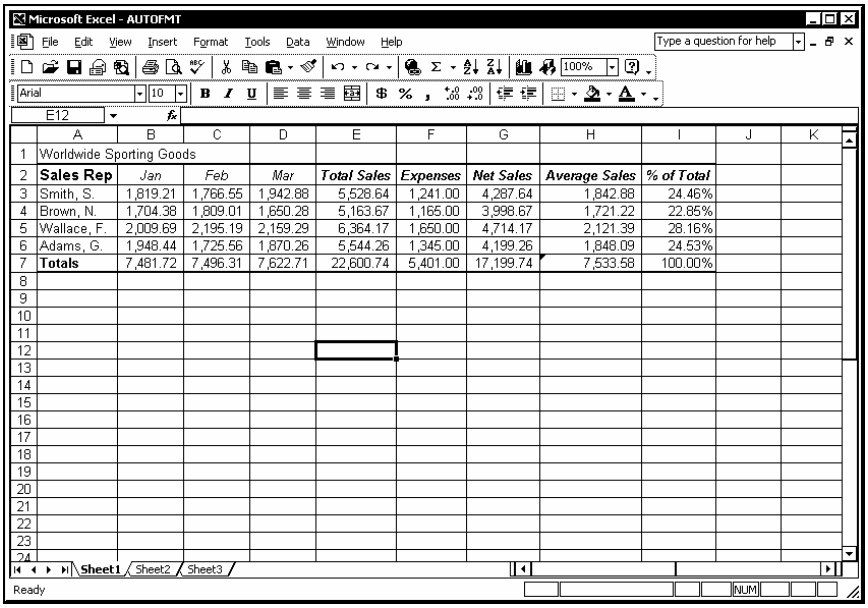
Although styles are saved to the current workbook only, you can merge styles created in another workbook to the workbook in which you are currently working.

APPLYING AN AUTOFORMAT

Discussion

You can use the **AutoFormat** feature to assign preset formats to a range of cells. AutoFormats create attractive, professional-looking table designs in a worksheet. AutoFormats can include border styles; number formats; shading; and specified fonts, column widths, and row heights.

AutoFormats are designed to format worksheet data that contains certain features, such as column and row headings, total rows, and detail data. AutoFormats may not work properly with other types of worksheet layouts. When applying an AutoFormat, you can select either a range of cells or a single cell in a range.



An AutoFormatted table

> If you do not like an applied AutoFormat, you can use the **Undo** button to remove it.

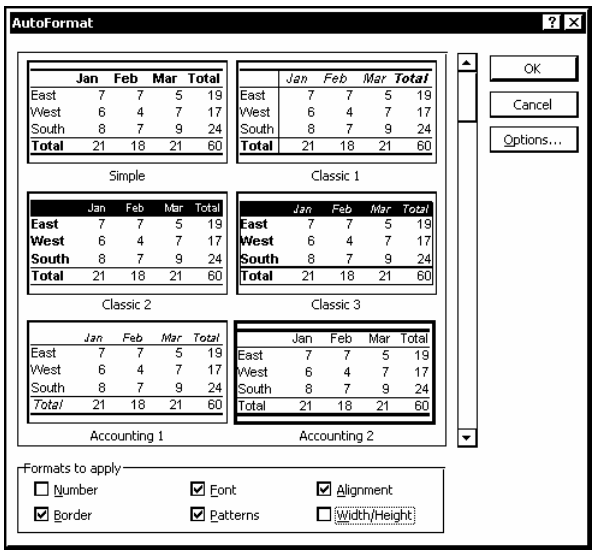
Procedures

1. Select the cells you want to format.
2. Select the **Format** menu.
3. Select the **AutoFormat** command.
4. Select the desired AutoFormat.
5. Select **OK**.

CHANGING AUTOFORMAT OPTIONS

Discussion

If you do not want to apply all the formats included with an AutoFormat, you can select which formats you want to disable. The available formats, grouped by type, are **Number**, **Border**, **Font**, **Patterns**, **Alignment**, and **Width/Height**. By default, all the formats are enabled.



Selecting AutoFormat options

Procedures

1. Select the cells you want to format.
2. Select the **Format** menu.
3. Select the **AutoFormat** command.
4. Select the desired AutoFormat.
5. Select **Options**.
6. Deselect the formats you do not want to apply.
7. Select **OK**.

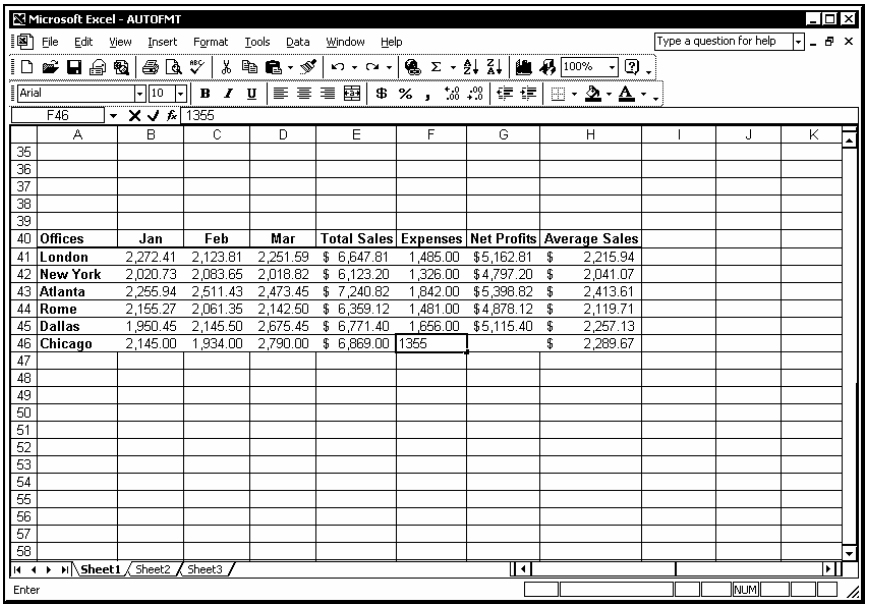
EXTENDING LIST FORMATS AND FORMULAS

Discussion

When you add new data to the next row in a list, Excel automatically applies the formatting and formulas from the previous row. Enabled by default, this feature can be disabled using the **Extend list formats and formulas** option on the **Edit** page in the Options dialog box.

To extend the formats and formulas to a new row in a list, the formats and formulas must exist in at least three of the preceding five rows of the list. Therefore, to take

advantage of this time-saving feature, you must enter the first three rows of data along with the necessary formulas, and then format the list. As you enter the next new row of data, Excel will automatically extend the formatting and formulas as you type.



	Offices	Jan	Feb	Mar	Total Sales	Expenses	Net Profits	Average Sales
41	London	2,272.41	2,123.81	2,251.59	$ 6,647.81	1,485.00	$5,162.81	$ 2,215.94
42	New York	2,020.73	2,083.65	2,018.82	$ 6,123.20	1,326.00	$4,797.20	$ 2,041.07
43	Atlanta	2,255.94	2,511.43	2,473.45	$ 7,240.82	1,842.00	$5,398.82	$ 2,413.61
44	Rome	2,155.27	2,061.35	2,142.50	$ 6,359.12	1,481.00	$4,878.12	$ 2,119.71
45	Dallas	1,950.45	2,145.50	2,675.45	$ 6,771.40	1,656.00	$5,115.40	$ 2,257.13
46	Chicago	2,145.00	1,934.00	2,790.00	$ 6,869.00	1355		$ 2,289.67

Extending list formats and formulas

If you are using different formatting on alternate rows of a list, you must repeat one of the formats on at least three rows for Excel to extend the formats and formulas to a new row.

When typing data across a row, you can use the **[Tab]** key instead of the **[Enter]** key to move to the next cell. The **[Tab]** key moves the active cell to the right instead of down. When you have finished entering a row of data, press the **[Enter]** key to move the active cell to the first column of the next row in the list. You can also use the **[Tab]** key to move horizontally in a selected range.

Procedures

1. Select the **Tools** menu.
2. Select the **Options** command.
3. Select the **Edit** tab.
4. Select the **Extend list formats and formulas** option, if necessary.

5. Select **OK**.
6. Select the first cell in the next row of a list in which formatting and formulas exist on at least three of the preceding five rows.
7. Type the desired data.

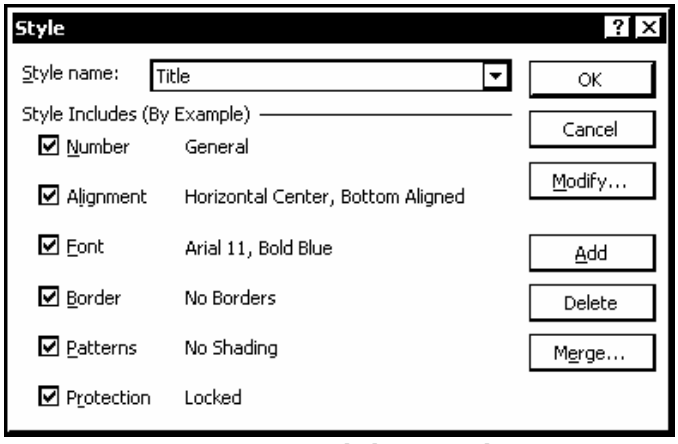
CREATING A STYLE BY EXAMPLE

Discussion

A style is a group of formats applied to one or more cells. Styles are useful, because they allow you to apply more than one format at one time. For example, if you want to format a title in a worksheet with a variety of cell formats (such as color, pattern, alignment, font, and number formatting), you can use a style to apply them all at once, rather than having to apply each format individually.

A style can include any combination of number formats, font size and style, text alignment, text color, background color, borders, and protection. The use of styles ensures consistency throughout a worksheet.

The easiest way to create a style is by example. Before creating a style by example, the desired formats must have been applied to at least one cell in the worksheet. These formats can then be used to create a new style. For example, if one cell in a worksheet is formatted with the desired number and font formats, you can use the attributes applied to that cell to create a style by example.



Creating a style by example

You can change the formats included in a style at any time.

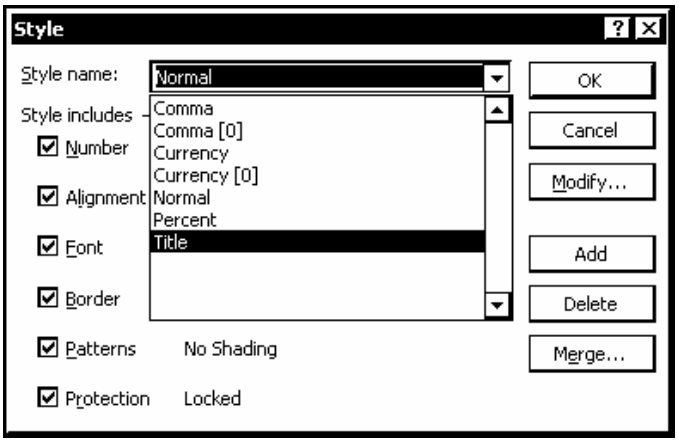
Procedures

1. Select the cell containing the formats you want to include in the style.
2. Select the **Format** menu.
3. Select the **Style** command.
4. Type the desired name for the style.
5. Select **OK**.

APPLYING A STYLE

Discussion

Once a style has been created, the style name appears in the **Style name** list in the Style dialog box. You can apply the style to any cells on any worksheet in the workbook. For example, in a sales worksheet, you can apply the same style to any cell in which sales are higher than projected.



Selecting a style to apply

Whenever you select a style in the Style dialog box, a list of the formats included with that style appears under **Style includes**.

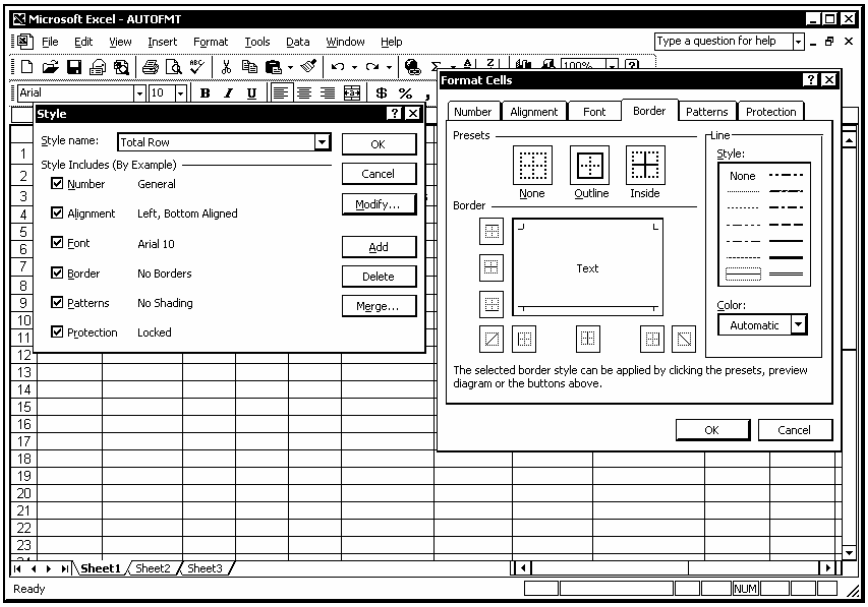
Procedures

1. Select the cells to which you want to apply the style.
2. Select the **Format** menu.
3. Select the **Style** command.
4. Select the **Style name** list.
5. Select the style you want to apply.
6. Select **OK**.

CREATING A NEW STYLE

Discussion

You can also use the Style dialog box to create a new style. When creating a new style, Excel opens the Format Cells dialog box, from which you can select any desired formats. For example, you can create a style for the title rows in a worksheet that includes number, font, pattern, border, and protection attributes. When you close the Style dialog box, the active cell is formatted with the newly created style.



Creating a new style

You can deselect any group of formats under **Style includes** in the Style dialog box.

Procedures

1. Select the cell for which you want to create a new style.
2. Select the **Format** menu.
3. Select the **Style** command.
4. Type the desired name for the style.
5. Select **Modify**.
6. Select the **Number** tab.
7. Select the desired number format and options as desired.
8. Select the **Alignment** tab.
9. Select the desired alignment list under **Text alignment**.
10. Select the desired option.
11. Select the **Font** tab.
12. Select the desired options.
13. Select the **Border** tab.
14. Select the desired options.
15. Select the **Patterns** tab.
16. Select the desired options.
17. Select the **Protection** tab.
18. Select the desired options.
19. Select **OK**.
20. Select **OK**.

EDITING AN EXISTING STYLE

Discussion

You can modify an existing style. After you have modified a style, all the cells formatted with that style are automatically updated to reflect the modifications. For example, if a style is applied to all the column headings in a worksheet, you can modify the style in one cell and all the column headings update as well.

Procedures

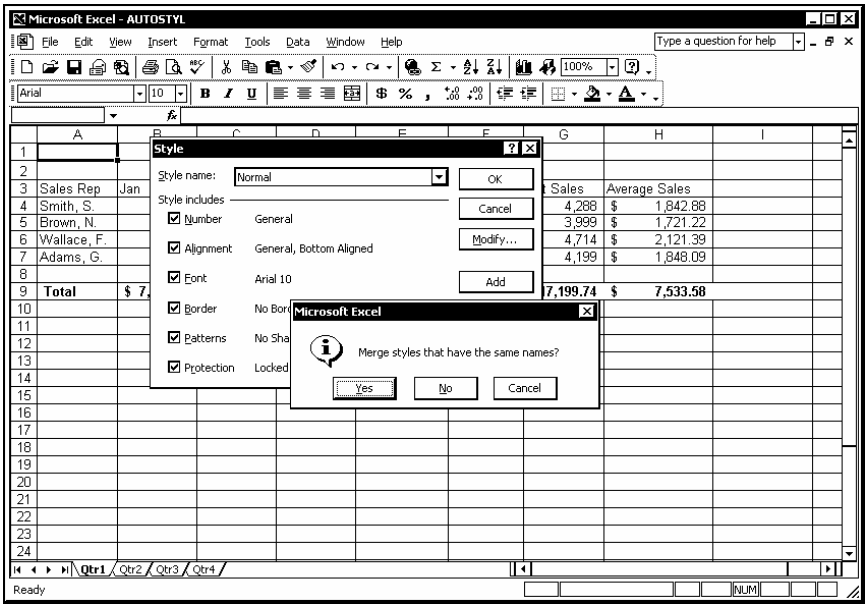
1. Select any cell to which the style you want to modify has been applied.
2. Select the **Format** menu.
3. Select the **Style** command.
4. Select **Modify**.
5. Select the tab where the attributes you want to change appear.
6. Change the desired options.
7. Select **OK**.
8. Select **OK**.

MERGING STYLES

Discussion

Styles are saved only to the current workbook. You can, however, merge one or more styles from another workbook into your present workbook. Merging styles saves time when you need to create the same styles over and over. For example, if you create a sales worksheet every month, you can merge the styles created in one monthly worksheet into another.

In order to merge styles, both workbooks must be open. If the workbook into which you are merging contains a style with the same name as a style in the workbook from which you are merging, you can choose whether or not to replace the existing styles.



Merging styles

> **!** You cannot selectively replace styles; all styles with the same names will be replaced.

☑ Procedures

1. Open the workbook that contains the styles you want to merge, as well as the workbook into which you want to merge the styles.
2. Display the workbook into which you want to merge styles.
3. Select the **Format** menu.
4. Select the **Style** command.
5. Select **Merge**.
6. Select the workbook from which you want to merge styles.
7. Select **OK**.
8. If a Microsoft Excel message box appears, select **Yes** to replace the styles in the current workbook with the merged styles or select **No** to merge styles without replacing.
9. Select **OK**.

LESSON 13 -
USING ONLINE HELP

In this lesson, you will learn how to:

- Work with online Help
- View ScreenTips
- Use Help Contents
- Use Help window features
- Use the Help Answer Wizard
- Use the Help Index

WORKING WITH ONLINE HELP

Discussion

If you need assistance on any Excel topic or task, you can use Excel's extensive Help facility. There are several ways in which you can get help: the Office Assistant, Ask a Question, and the Microsoft Excel Help dialog box.

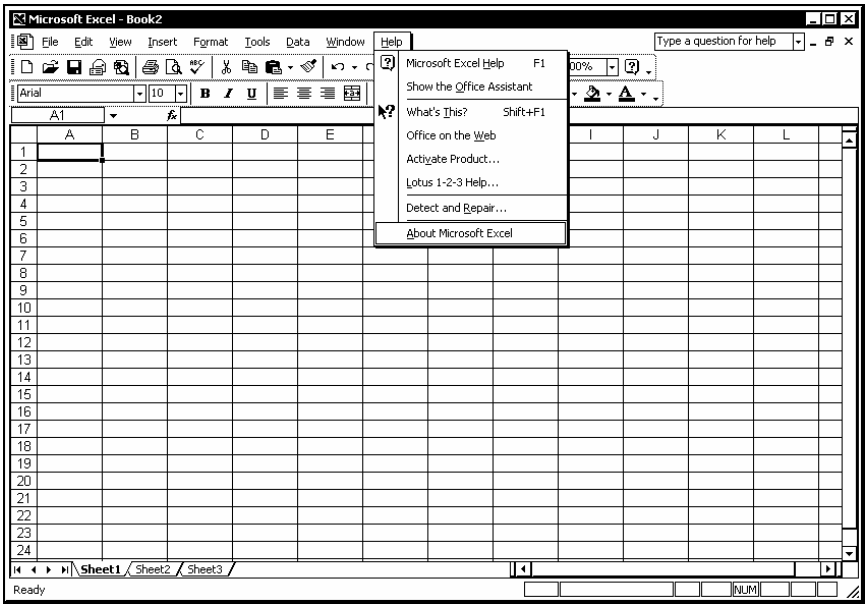
Excel provides assistance through the **Microsoft Excel Help** command, which launches the Office Assistant, if it is enabled. If the Office Assistant is disabled, you can directly access the Help window, which includes the Contents, Index, and Answer Wizard components. These components allow you to scroll through a table of contents, search for a specific word or phrase based on a keyword, or search based on a question you type, respectively.

The **What's This?** command can be used to display a ScreenTip. The **Lotus 1-2-3 Help** command provides instructions and demos, as well as Excel equivalents for Lotus 1-2-3 commands.

If you have access to the Internet, you can use the **Office on the Web** command to connect to the Microsoft Office web site, from where you can download free programs, access on-line support, and get the latest Microsoft product information. The **Activate Product** command provides an on-line method of purchasing and downloading Microsoft software and updates.

The **Detect and Repair** command reviews the previous install process and finds and fixes problems that may have developed during or since the initial software installation. However, this feature cannot repair corrupted data files.

You can use the **About Microsoft Excel** command to view copyright and licensing information about the program. The About Microsoft Excel window contains a **System Info** button, which displays information about your computer, and a **Disabled Items** button, which displays any items that prevent Excel from functioning properly. A **Tech Support** button provides help on getting product support.



The Help menu

> If the Office Assistant is enabled, you can disable it by deselecting the **Use the Office Assistant** option on the **Options** page in the Office Assistant dialog box.

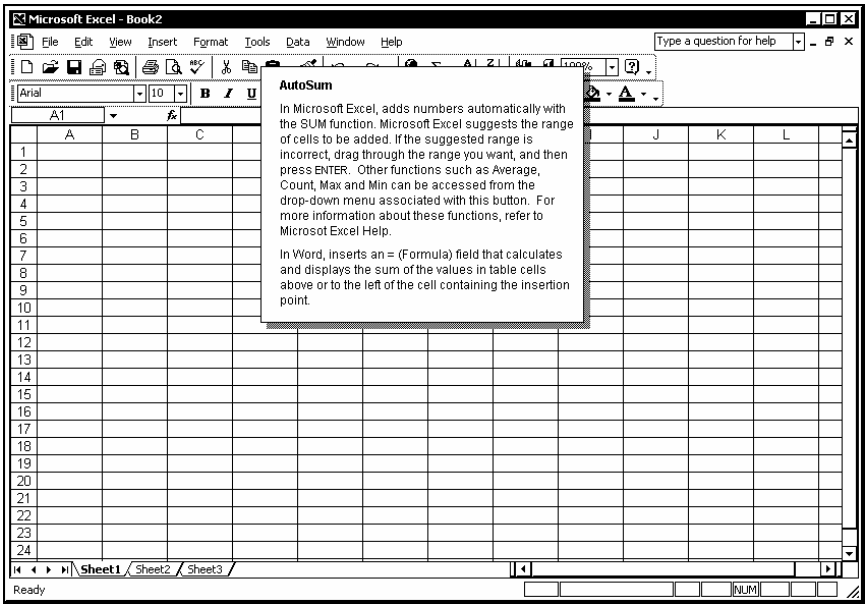
> You can also open the Microsoft Excel Help window by selecting the **Microsoft Excel Help** link at the bottom of the **New Workbook** task pane or by clicking the **Microsoft Excel Help** button on the **Standard** toolbar.

VIEWING SCREENTIPS

Discussion

If you are unsure of the name or function of a menu command or of any other object in a window, you can use a ScreenTip to view either the object name or a description of the object. Although the default ScreenTip only displays the name of an object, you can select the **What's This?** command from the **Help** menu to access more information.

When the **What's This?** feature is activated, the mouse pointer appears with a question mark and the ScreenTip appears when you click an object.



The AutoSum button ScreenTip

> You can also access the **What's This?** feature by pressing the **[Shift+F1]** key combination and clicking the object for which you want help.

Procedures

1. Select the **Help** menu.
2. Select the **What's This?** command.
3. Click the button or object with which you want help.
4. Click anywhere in the worksheet to hide the **What's This?** ScreenTip.

USING HELP CONTENTS

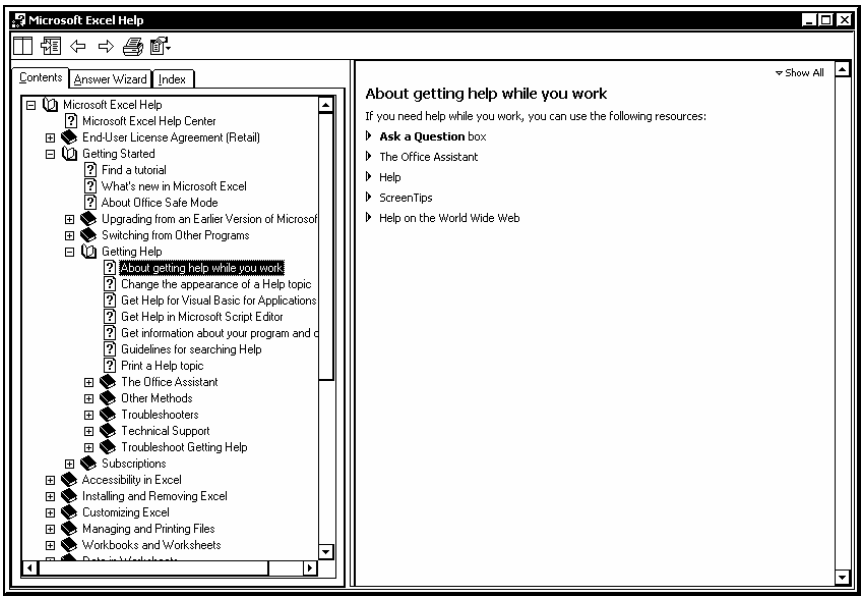
Discussion

The Microsoft Excel Help window is composed of two panes. The pane on the left contains the three help tabs: **Contents**, **Answer Wizard**, and **Index**. The pane on the right contains the information pertaining to the selected help topic.

The **Contents** page displays a list of general help categories and topics. From this list, you can select the category for a particular group of features or functions or a specific help topic. This page is structured similar to a standard table of contents. The table is expandable; when you double-click a category, related categories and help topics appear.

When you select the help topic you want to view, it appears in the right pane of the help window. You can click underlined, colored text in the right pane to display additional help information. Many help topics include a **Show All** link at the top of the pane that you can use to display all the hidden information in the pane.

If you want a paper copy of the help topic, you can use the **Print** button in the help window to print the current topic.



Using Help Contents

	You can also expand and collapse help categories on the **Contents** page by clicking the plus or minus sign next to the desired category.

	The **Microsoft Excel Help** command on the **Help** menu directly opens the help window only if the Office Assistant is disabled. Selecting a topic in the Office Assistant, however, always opens the corresponding help window.

	You can resize the Microsoft Excel Help window by dragging an edge or corner or resize the individual panes within the window by dragging the vertical splitter bar between panes.

Procedures

1. Disable the Office Assistant on the **Options** page in the Office Assistant dialog box, if necessary.
2. Select the **Help** menu.
3. Select the **Microsoft Excel Help** command.
4. Select the **Contents** tab.
5. Expand the **Microsoft Excel Help** category, if necessary.
6. Expand categories as needed to find the desired help topic.
7. Select the desired help topic.

USING HELP WINDOW FEATURES

Discussion

The Microsoft Excel Help window displays two panes: the categorized help contents appear in the left pane and the selected help topic appears in the right pane.

You can use the **Show** and **Hide** buttons at the top of the window to hide the tabs in the left pane or to show both panes. Hiding the left pane decreases the size of the window. This option allows you to continue working in the worksheet while you reference the selected help topic in the right pane of the Help window.

You may want to be able to view the help window and your worksheet simultaneously, so that you can follow the help directions. When the Help window opens, it overlays the worksheet window. The **Auto Tile** button arranges the two windows side-by-side, so that both are visible. You can now type in the worksheet window without hiding the help window, and you can use the horizontal and vertical scroll bars to view more text. When the windows are tiled, the help window displays the **Untile** button, which allows you to untile the windows.

	You can also show or hide the tabs by selecting the **Show Tabs** or **Hide Tabs** commands from the **Options** button in the Microsoft Excel Help window.

	Other buttons in the Microsoft Excel Help window can be used to print help topics and to navigate forward and backward to previous topics.

Procedures

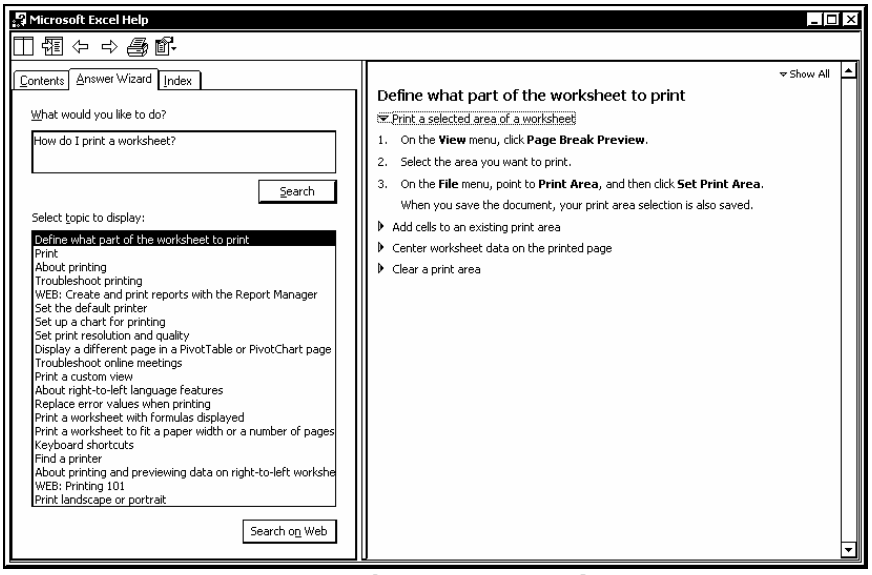
1. Open the Microsoft Excel Help window.
2. Click the **Hide** button  or the **Show** button  at the top of the Microsoft Excel Help window to hide or show the tabs, respectively.
3. Click the **Auto Tile** button  to tile the worksheet and help windows or the **Untile** button  to return to the previous view.

USING THE HELP ANSWER WIZARD

Discussion

You can use the **Answer Wizard** page in the Microsoft Excel Help window to quickly locate help topics based on questions you ask. The **Answer Wizard** page functions in much the same way as the Office Assistant and the **Ask a Question** box on the menu bar. A list of the help topics pertaining to the typed question appears when you search using the Answer Wizard.

Questions entered into the Answer Wizard also appear in the **Ask a Question** list.



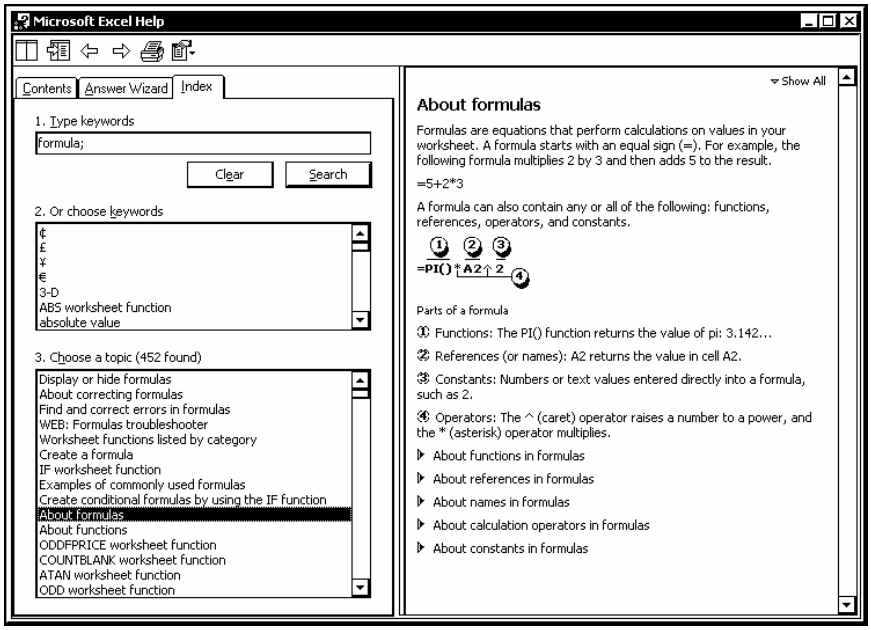
Using the Answer Wizard

USING THE HELP INDEX

Discussion

The **Index** page in the Microsoft Excel Help window provides an alphabetical index of available help topics.

The **Index** page enables you to search for a topic using a keyword. You can either type a keyword into the **Type keywords** box or pick a keyword from the alphabetical list under **Or choose keywords**. After typing or selecting a keyword and then selecting **Search**, an index of available help topics appears. You can then select the desired topic.



Using the Help Index

> To perform a subsequent search on a different subject, select the **Clear** button to clear the previous search criteria, and then enter the new search criteria.

Procedures

1. Open the Microsoft Excel Help window.
2. Select the **Index** tab.

3. Type the keyword for which you want to search in the **Type keywords** box or select it from the **Or choose keywords** list.
4. Select **Search** to search for the keyword, or double-click a keyword in the **Or choose keywords** list box.
5. Click the desired topic from the **Choose a topic** list box.

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