

Excel for Beginners

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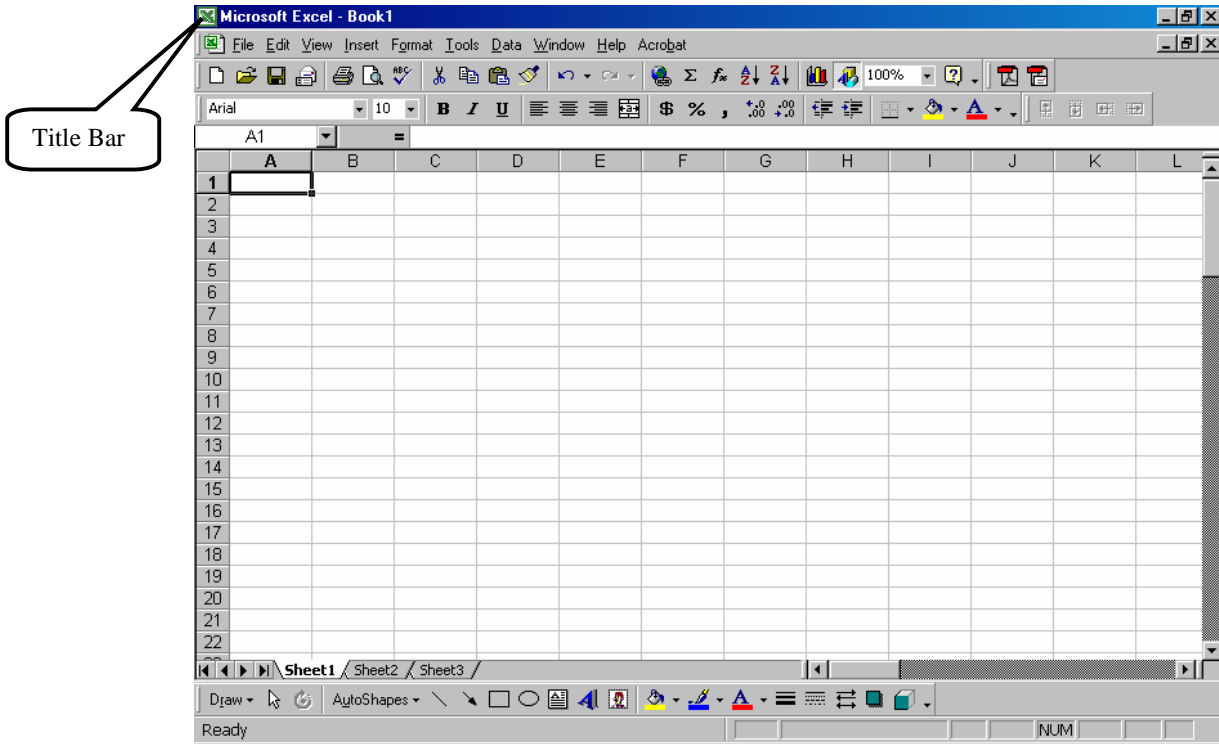
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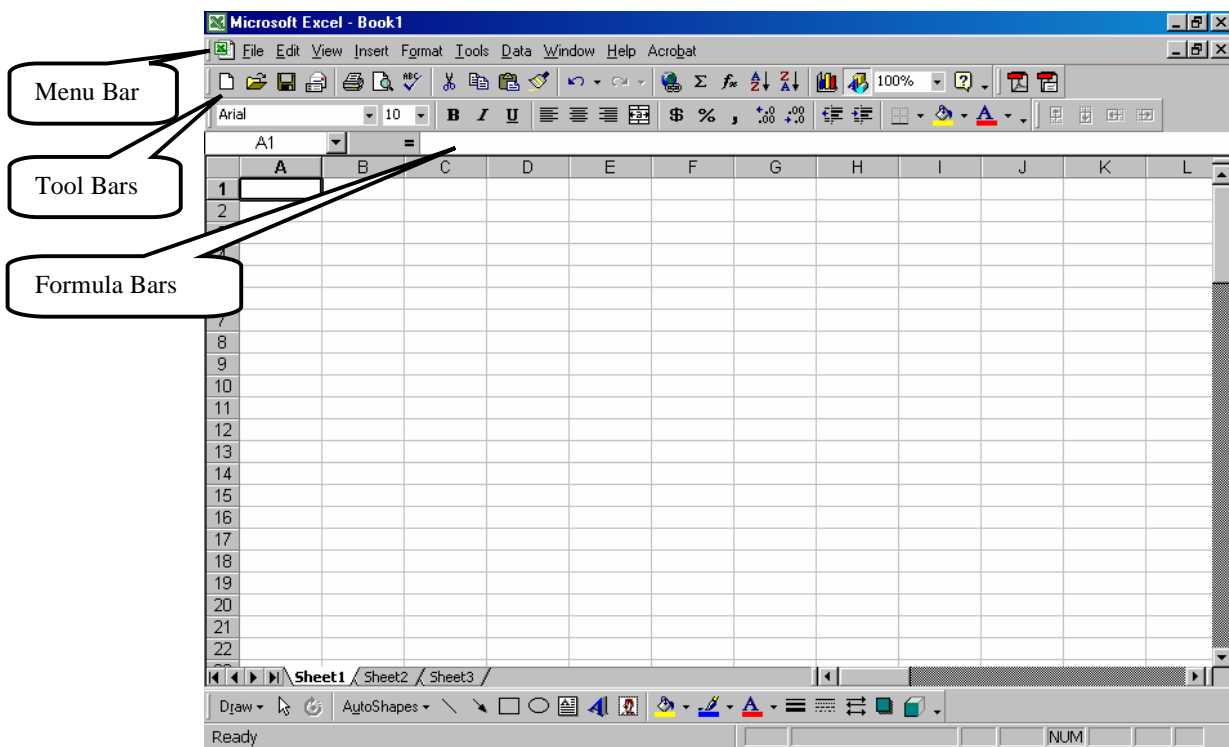
Understanding the Excel Screen

There are several areas of the Excel screen that you need to know about before working with the program. The names of these screen areas are often referred to in the Help files provided by Microsoft and in Excel tutorials or workbooks from other writers. So, understanding them will make researching questions easier.

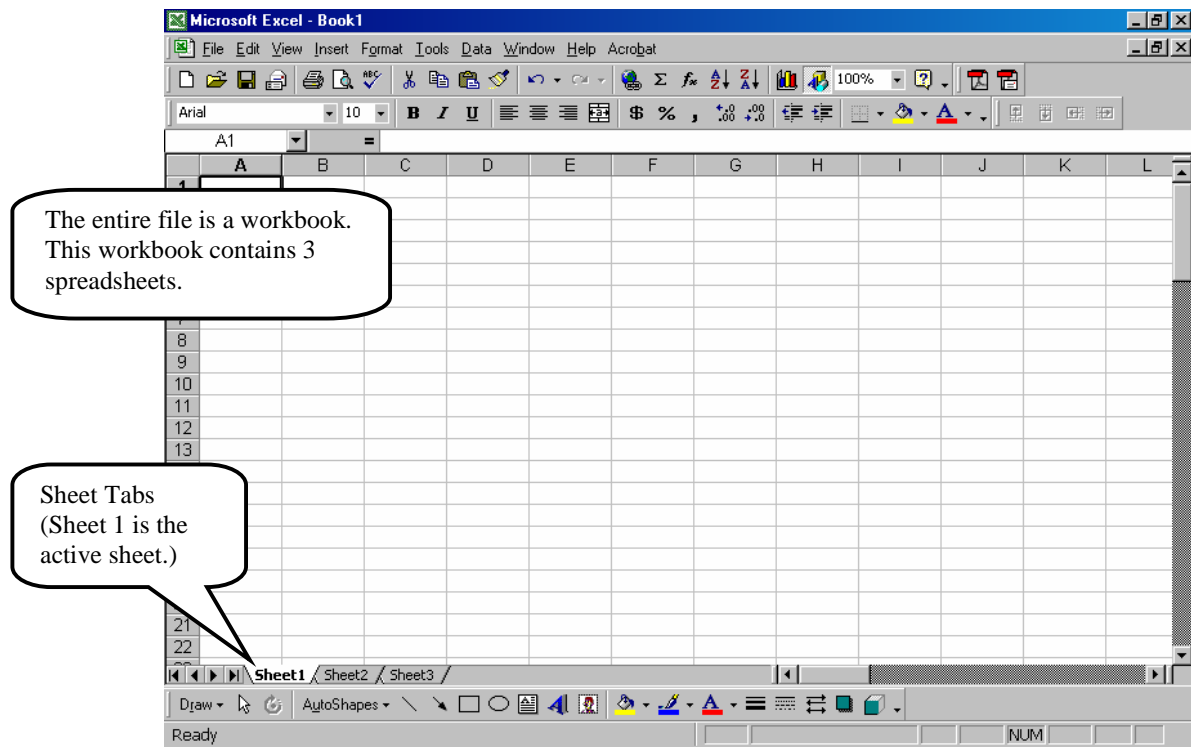


Title Bar

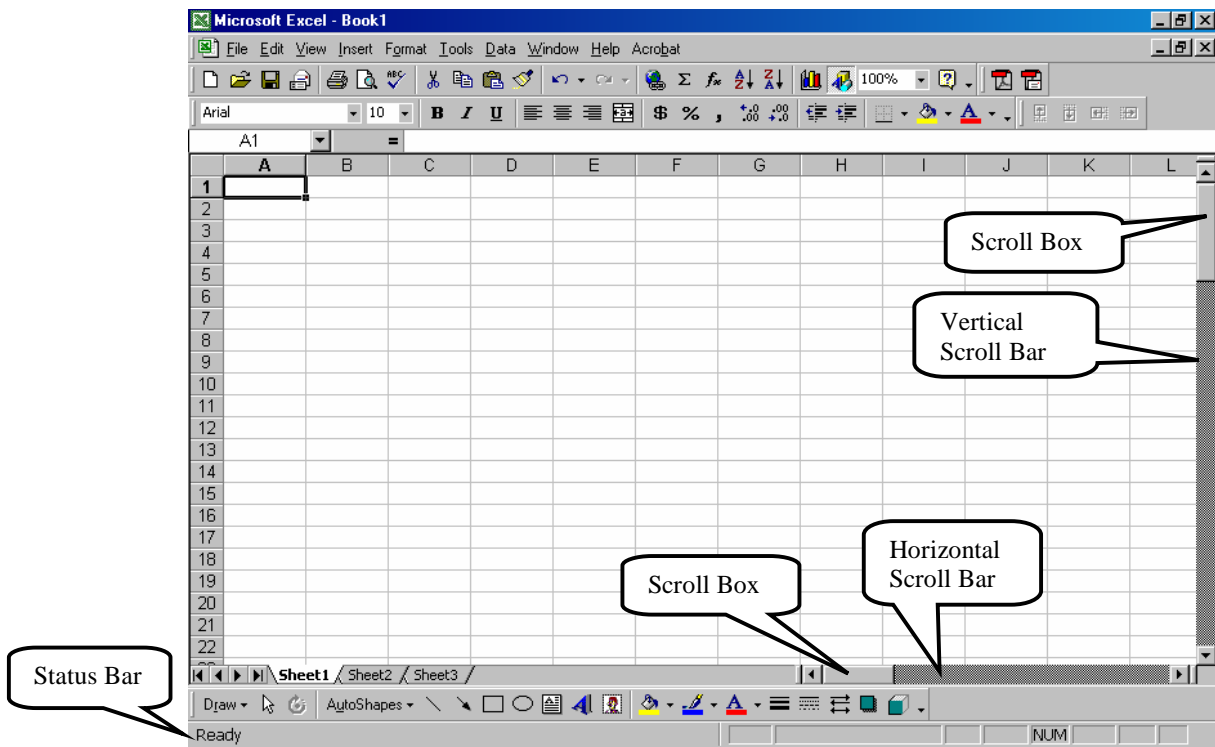
- Located at the top of the screen.
- Shows the name of the program and the name of the workbook that is currently open. For Example, Microsoft Excel-Book1.
- If you have never saved the workbook, the name “Book1” is used as a temporary name.
- Excel numbers workbooks sequentially. For example, Book 1, Book 2, Book 3, etc.
- When you close the program, the numbers are reset. The next time you start Excel you will start again with Book 1.
- When you save the workbook, the name you type will be used instead of the temporary name. For example, Microsoft Excel-Susan’ Budget.
- You can have more than one workbook open at a time.



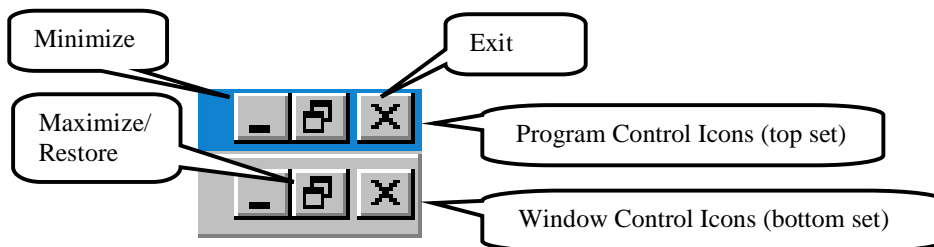
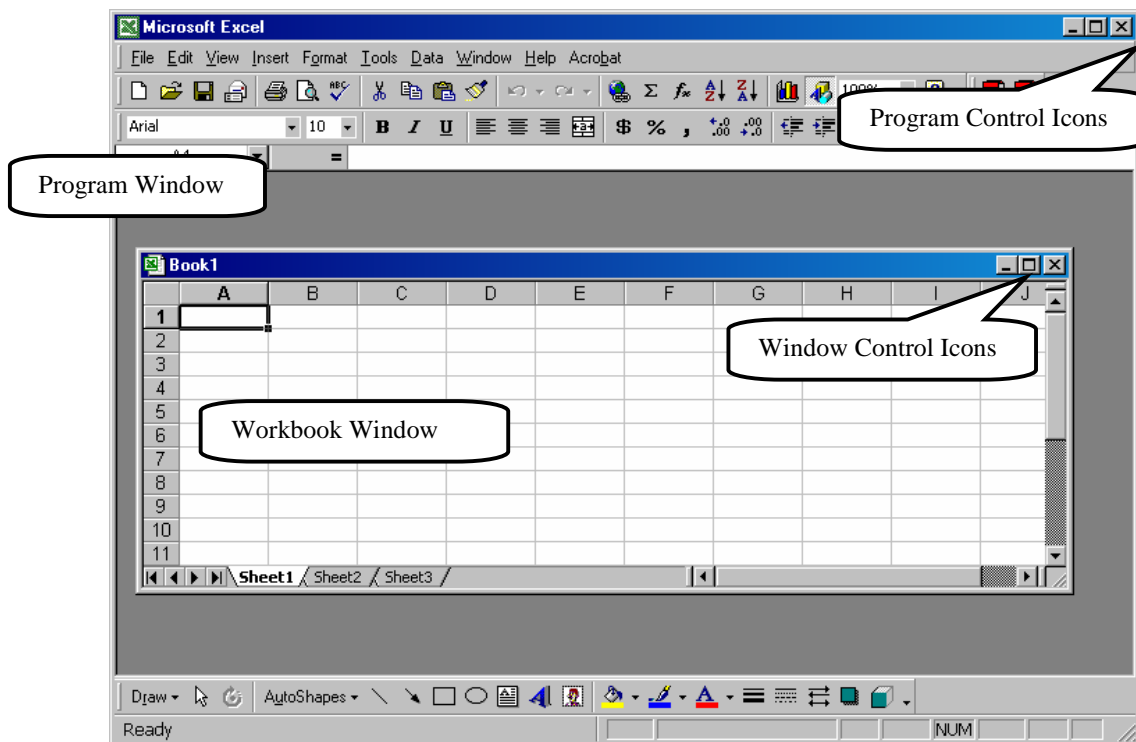
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| <p>Menu Bar</p> | <ul style="list-style-type: none"> • A menu is a list of options that you can use in a program. • The options are categorized and the names of the categories are shown on the menu bar. For example, File, Edit, etc. • To select a menu option, use the mouse to click the name of the menu and then click the name of the option. • Options that are followed by an ellipsis (three periods) will bring up a dialog box. • A lot of the menu options in Excel work the same way that they do in Word, or PowerPoint. For example, the Save option works the same way in almost all programs. |
| <p>Tool Bars</p> | <ul style="list-style-type: none"> • A tool bar is a series of small pictures called icons. • When you click on an icon, the program does something. For example, when you click on the picture of the diskette, the program saves the file. • Tool bars are used to make the work go faster. • You can have multiple toolbars open at the same time. |
| <p>Formula Bar</p> | <ul style="list-style-type: none"> • The formula bar is an area where you type information; either text, numbers, or a calculation. • The formula bar is identified by an equal sign. • When you type in the formula bar, you will see two icons. • A checkmark is used to accept (or enter) the information you typed. When you click the checkmark, the data is placed on the spreadsheet wherever the active cell is located. • An X icon is used to cancel the information you typed. The data is not saved anywhere. |



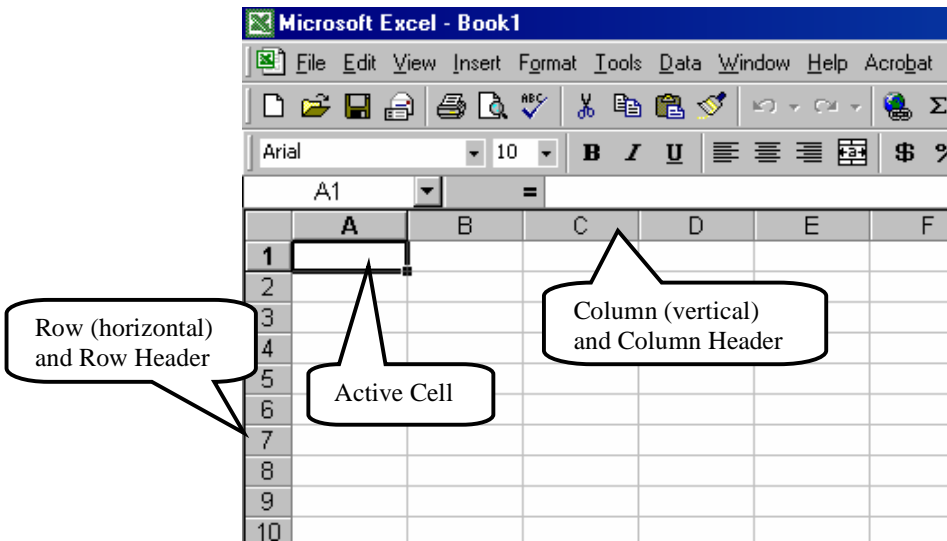
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| <p>Workbooks and Sheet Tabs</p> | <ul style="list-style-type: none"> • A workbook is a collection of spreadsheets. • You might use multiple spreadsheets to organize your data. For example, if you are creating a budget for next year, you might use one spreadsheet for each month. • Tabs at the bottom of the screen identify each spreadsheet in the workbook. The word tab is used because the area looks like the tab of a file folder. • Excel names the tab automatically, using the names Sheet1, Sheet2, Sheet3, etc. Rename a tab using the following steps: <ol style="list-style-type: none"> 1. Double-click on the tab name. 2. Type a new name. 3. Press Enter. • How you organize your data is up to you. |
| <p>Spreadsheet and Active Sheet</p> | <ul style="list-style-type: none"> • The term spreadsheet comes from the accounting profession. Before computers, accounts were kept on large sheets of paper or in ledger books that were spread out on a table or desk. • A spreadsheet is a series of rows and columns. When a row and column intersect a rectangular area is created. The intersection is called a cell. • You can have multiple spreadsheets in a workbook. However, you can only work on one spreadsheet at a time. The spreadsheet you are currently working on is called the active sheet. • You can tell which sheet is active by looking at the sheet tabs at the bottom of the screen. The tab for the active sheet is white. The tabs for the other (inactive) sheets are gray. |



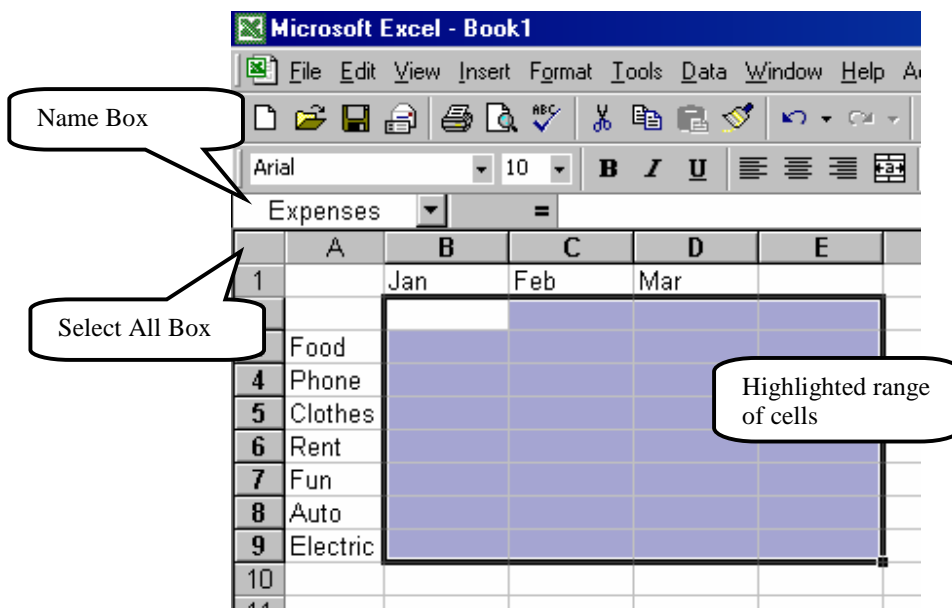
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| <p>Status Bar</p> | <ul style="list-style-type: none"> • The status bar is located at the bottom of the screen. It shows you what is going on in Excel. • Some words possible statuses are the following: <ul style="list-style-type: none"> • Ready, indicating that Excel is ready for you to enter data. • Num, indicating that you have the num lock on. If you type on the numeric keypad on the right side of the keyboard, you get numbers. • Caps, indicating that the caps lock is on. If you type letters, you will get capital letters. • End, indicating that you pressed the end key. |
| <p>Horizontal Scroll Bar Vertical Scroll Bar and Scroll Box</p> | <ul style="list-style-type: none"> • In Excel, you might have more data than you can see on one page at a time. • Scroll bars are used to move around on the spreadsheet. • There are two scroll bars: horizontal, which is used to move left and right, and vertical, which is used to move up and down. • There are multiple ways to move using a scroll bar. The easiest is to use the arrows. On either end of the scroll bar are arrows. Click the arrow to move in that direction. • Another way to move is to use the scroll box. Inside the scroll bar is a gray bar or box. You can move around the spreadsheet by dragging the scroll box to the other end of the scroll bar. |



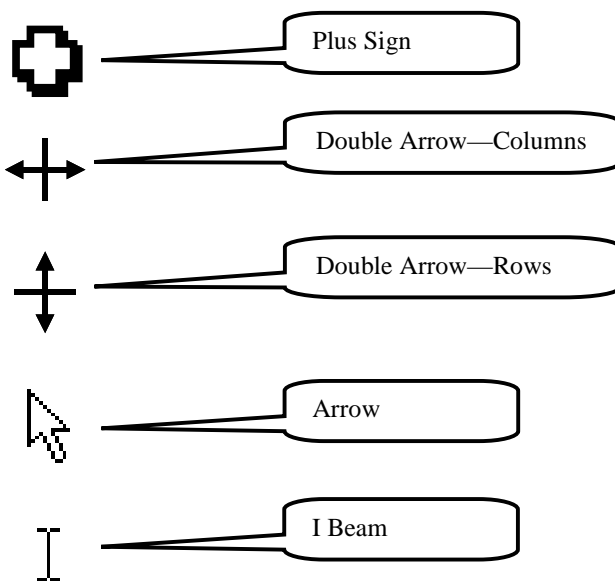
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| <p>Window Control Icons</p> | <ul style="list-style-type: none"> • When you start the Excel software, the program opens two windows automatically: the program window and the workbook window. • The window control icons allow you to control both windows. • Window control icons are always shown in the upper-right corner of the window. • There are two sets of icons. The top set controls the program window. The bottom set controls the workbook window. • Each set of icons, has three icons: <ul style="list-style-type: none"> • The first, which looks like a minus sign, minimizes the program or workbook, making it an icon at the bottom of the screen. • The second is a toggle control. It lets you switch back and forth between two settings. If the icon is a single square, it can be used to maximize the window; the window will fill up the screen. If the icon is two squares, it can be used to restore the window to the previous size. • The third icon in the set is the exit icon. It closes the workbook or program and is symbolized by the letter X. |
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| <p>Rows and Columns Row Headers Column Headers</p> | <ul style="list-style-type: none"> • A spreadsheet is made up of a series of rows and columns. • Rows are horizontal. A row header, on the left side of the row, identifies the row. Row headers are always numbers. • Columns are vertical. A column header, on the top of the column, identifies the column. Column headers are always letters. • The intersection of a row and column is called a cell. • There are 256 columns in a spreadsheet and 65,536 rows in a spreadsheet. That means there are 16,777,216 cells in a spreadsheet. You will never use up all of the cells in a spreadsheet. If you tried, you would run out of computer memory. |
| <p>Cell and Active Cell</p> | <ul style="list-style-type: none"> • A cell is a rectangular area in which you can type data. • Cells are created when rows and columns intersect. • Cells have addresses, which are a combination of the column letter and the row number. For example, A1, B7 or C12. • You can select multiple cells on the spreadsheet at the same time. • You can only type in one cell at a time. The cell where you can type is called the active cell. The active cell is white with a thick, black outline. • If you select multiple cells on the spreadsheet, they are highlighted in color. The active cell is not colored; it stays white. |



| | |
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| Range | <ul style="list-style-type: none"> • A range is a group of cells. • When you want to work with multiple cells at the same time, you select a range. • Ranges are addressed using the name of the beginning cell and the name of the ending cell, separated by a colon. For example, B2:E9. • See Selecting Ranges on page 11 for more information about ranges. |
| Name Box and Named Ranges | <ul style="list-style-type: none"> • The name box shows you several different things while you are working on a spreadsheet. <ol style="list-style-type: none"> 1. It shows the address of the active cell. 2. When you select cells, it shows the size of the range you have selected. The size of the selected area is shown as a number of rows and columns. For example, 6R X 3C indicates that a range is six rows by three columns. 3. It helps you work with named ranges. Named ranges allow you to assign a name to an area of the spreadsheet. For example, if you are working on a budget, you might name one area of the spreadsheet income and another area expenses. The name box is called a pull-down list. If you click on the down arrow in the name box, you will see a list of names for different ranges in the spreadsheet. |
| Select All Box | <ul style="list-style-type: none"> • The select all box is very simple; it allows you to select the entire spreadsheet. • It is used when you want to perform an action on the entire spreadsheet. For example, you might want to change the size of the text on the spreadsheet. The easiest way, is the click the select all box and then change the font. • The select all box is located above the row header for row 1 and to the left of the column header for column A. • It is a small, blank, gray square. |

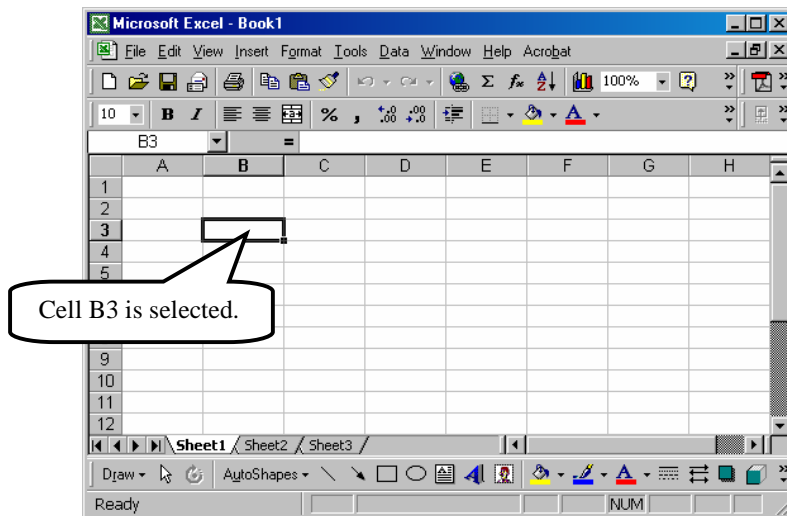


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| Mouse Pointer | <ul style="list-style-type: none"> • The mouse pointer is the symbol that you see on the screen to show you where the mouse is located. • When you move the mouse, the pointer moves across the screen. • Excel uses several different mouse pointers. Each pointer means something different. |
| Plus Sign | <ul style="list-style-type: none"> • Used to select cells or ranges |
| Double Arrow | <ul style="list-style-type: none"> • Used to change the size of columns and rows. • To change the size of columns, place the mouse pointer on the line between the columns and then drag left or right. • To change the size of rows, place the mouse pointer on the line between the rows and then drag up or down. |
| Arrow | <ul style="list-style-type: none"> • Used for selecting things, such as tools from the toolbars or options from the menus. • Also used for scrolling with the scroll bars. |
| I Beam | <ul style="list-style-type: none"> • Called an I beam because it looks like the letter I. • Used to position the insertion point in text. You can use it either in a cell or in the formula bar at the top of the screen. • Place the I beam where you want to type and then click the mouse button. • The system places an insertion point (flashing, vertical line) wherever you clicked. • <i>See</i> Editing Data—F2 on page 32 for more information about editing. |

Selecting Ranges

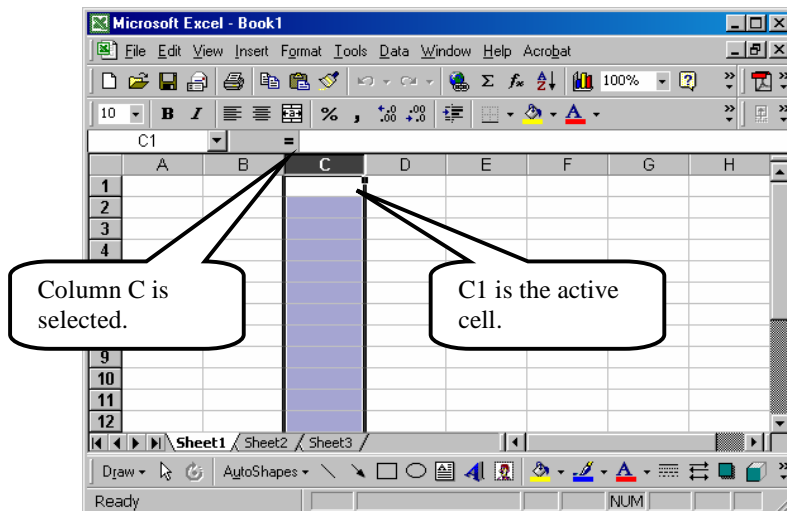
Before working with cells, you must select them. (Selecting is also called highlighting, because it changes the color of the cells.) For example, you might want to format the text in several cells, making it bold. You could select each cell, one at a time, and format the text. But an easier option is to select a range of cells and then change them all at the same time.

This section describes some of the methods for selecting cells. There are additional methods for selecting, but we will only cover the methods that are used most often.



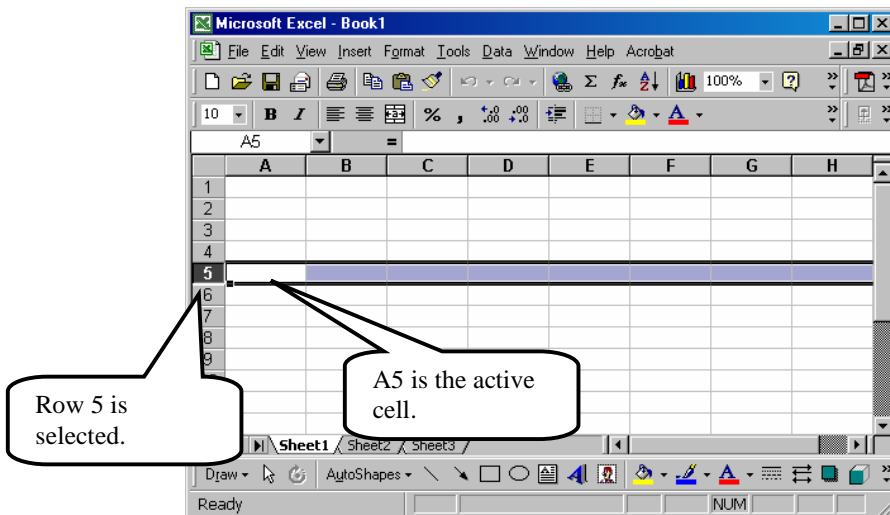
A Single Cell

- Click in a cell.
- Each time you click a different cell, the previous cell is de-selected and the new cell is selected.

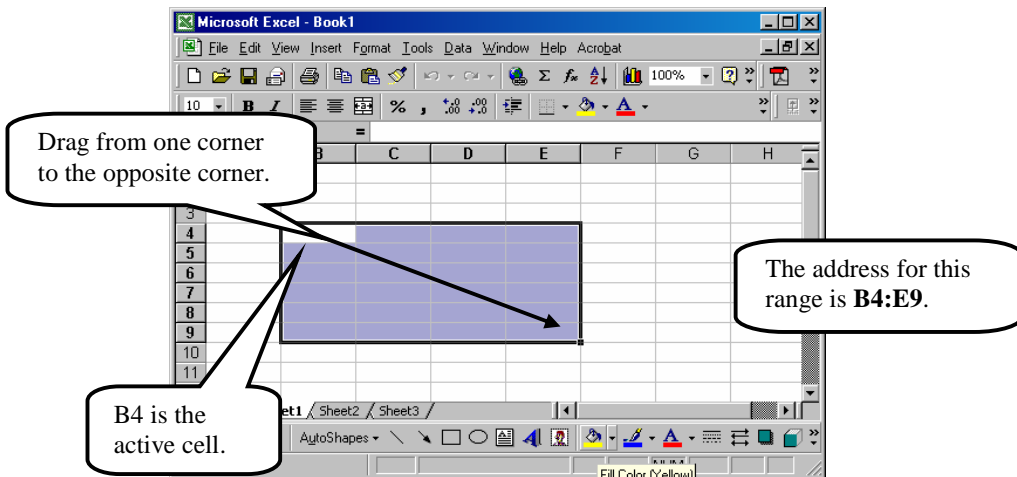


A Single Column

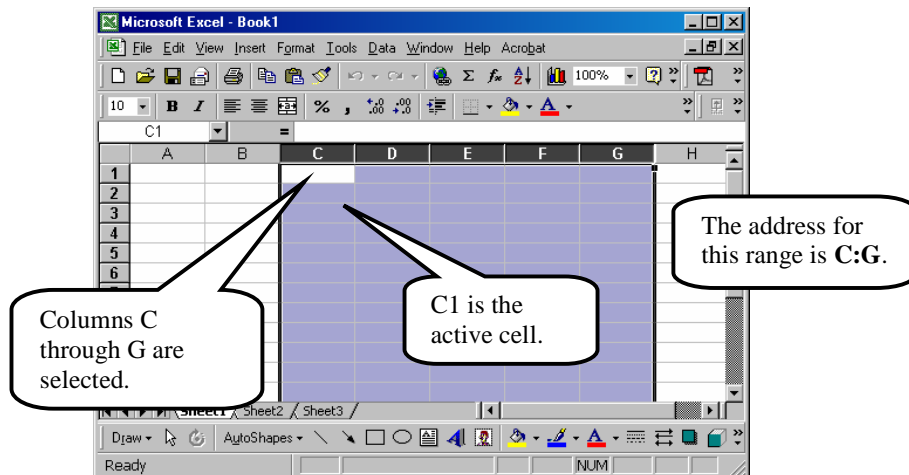
- Click any column header.
- The entire column is selected, from row 1 to row 65,536.



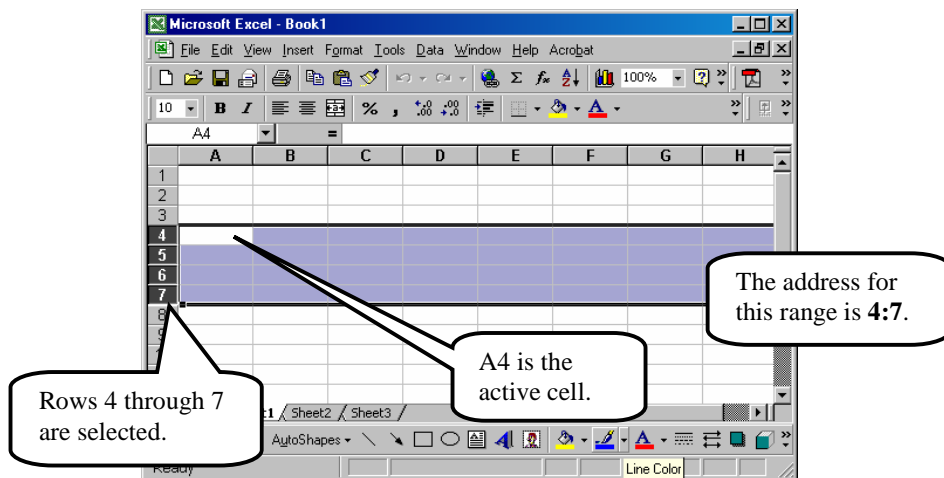
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| <p>A Single Row</p> | <ul style="list-style-type: none"> • Click any row header. • The entire row is selected, from column A to column IV. |
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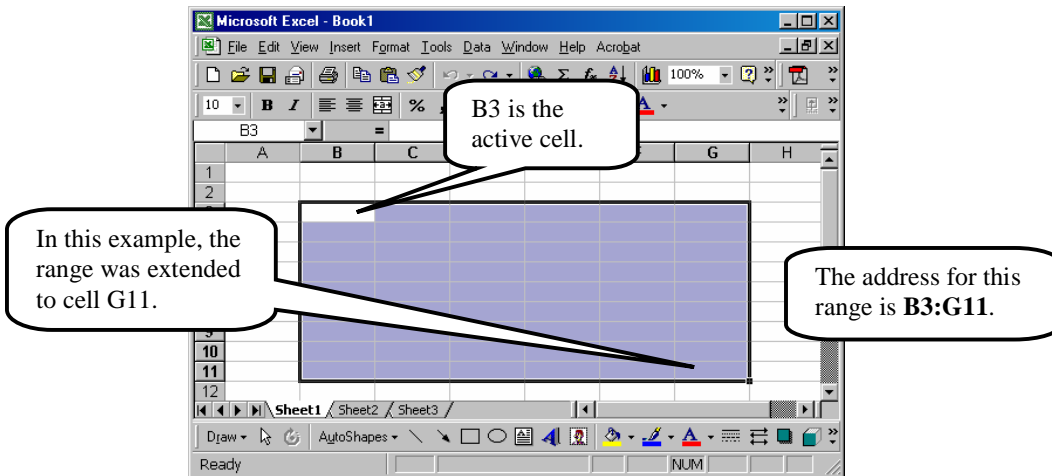
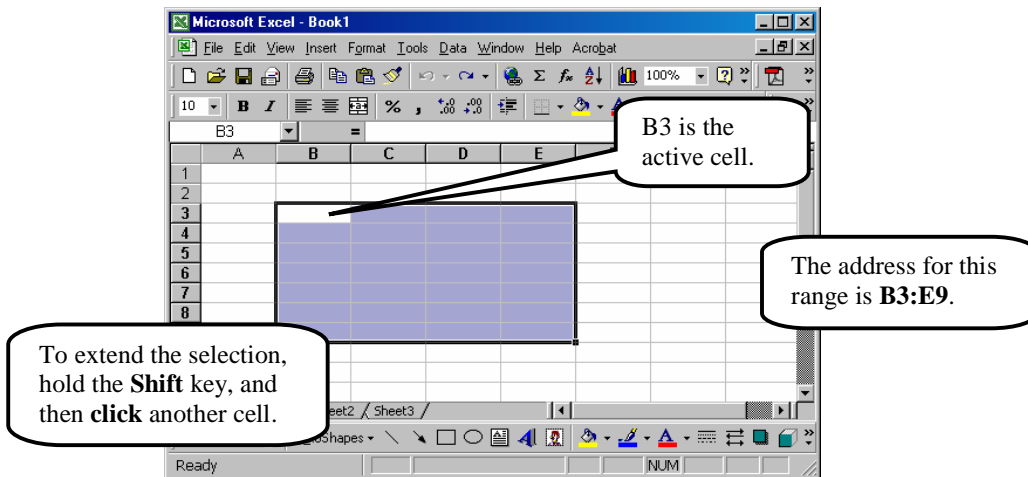
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| <p>A Contiguous Range of Cells</p> | <ul style="list-style-type: none"> • Dragging allows you to select a rectangular area,. • The cells in the rectangular area are called contiguous, because they are all right next to each other. <ol style="list-style-type: none"> 1. Start by clicking in a cell—one corner of the rectangle. 2. Hold the mouse button down. 3. Drag to another cell—the opposite corner of the rectangle. 4. Release the mouse button. |
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| <p>Contiguous Columns</p> | <ul style="list-style-type: none"> When you need to work with multiple columns, that are right next to each other, use these steps: <ol style="list-style-type: none"> 1. Start by clicking a column. 2. Hold the mouse button down. 3. Drag to another column (either left or right). 4. Release the mouse button. |
|---------------------------|---|



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| <p>Contiguous Rows</p> | <ul style="list-style-type: none"> When you need to work with multiple rows, that are right next to each other, use these steps: <ol style="list-style-type: none"> 1. Start by clicking a row. 2. Hold the mouse button down. 3. Drag to another row (either up or down). 4. Release the mouse button. |
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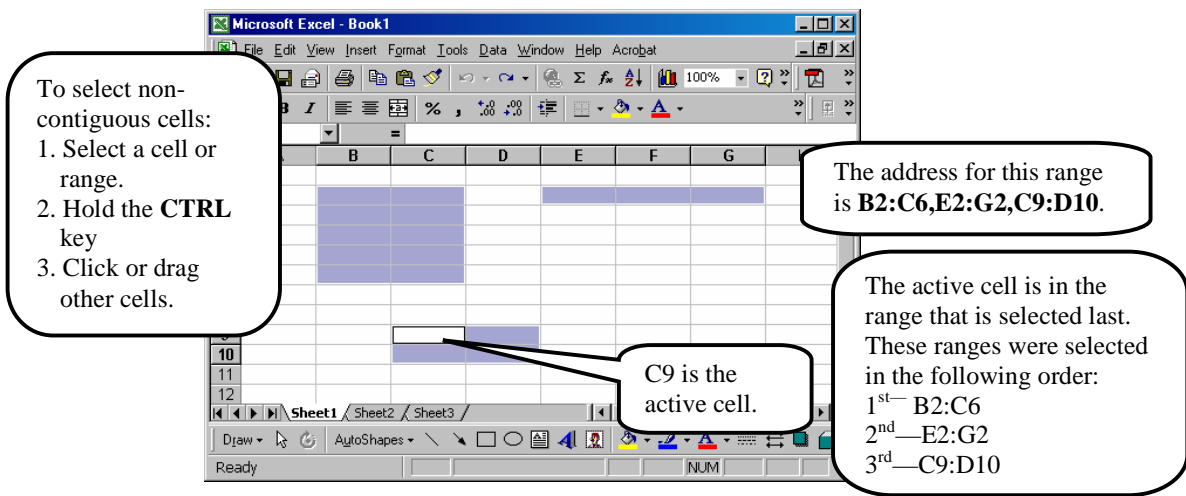



Extending a Selection or Shrinking a Selection

- When you select ranges, you can extend a range making it bigger. You can also shrink a selection, making it smaller.
- This saves time because you can change the selection without having to start over.
- When you extend or shrink a selection, the location of the original selection makes a big difference.
- If you click outside of the original selection, Excel extends the selection to the cell you clicked.
- If you click inside the original selection, Excel shrinks the selection to the cell you clicked.
 1. Select a range and then release the mouse button.
 2. Hold down the Shift key on the keyboard.
 3. Click a cell.



These steps also work with rows and columns.

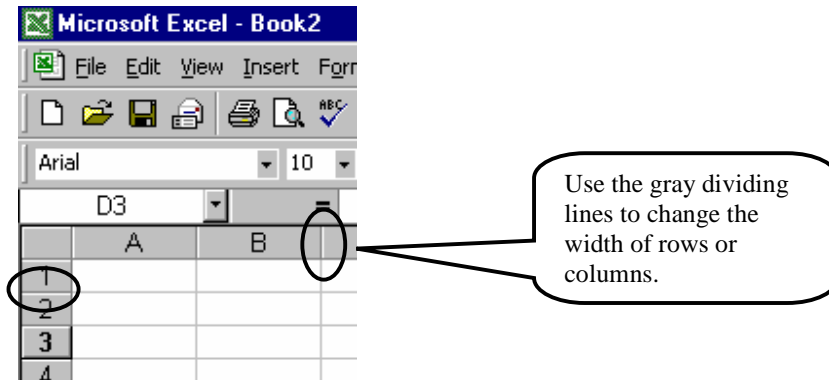





| | |
|--|---|
| <p>Selecting Non-Contiguous Cells</p> | <ul style="list-style-type: none"> • Sometimes, you might need to select cells that are not right next to each other. • The order in which the cells are selected is very important. The active cell is always located in the last range selected. So, if you select three areas on the screen, the active cell will be in the 3rd area. <ol style="list-style-type: none"> 1. Select a range and then release the mouse button. 2. Hold down the CTRL key on the keyboard. 3. Select another cell or range of cells. <p> These steps also work with rows and columns.</p> |
| <p>Moving the Active Cell Without Losing Your Selection.</p> | <ul style="list-style-type: none"> • One advantage of selecting cells is that, when you are typing data, it prevents you from typing in the wrong cells. • If you want to move the active cell horizontally, use the Tab key. • If you want to move the active cell vertically, use the Enter key. • Don't use the arrow keys. If you try to use the arrows to move the active cell, Excel will de-select the range. |

Sizing Rows and Columns

You might need to change the size of the rows or column in your spreadsheet. If the data that you typed is too big for the cell, you can change the size of the cell to make the data fit.

In this section, we will cover the different methods for changing the size of rows and columns.



| | |
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| <p>Dragging to change column widths and row heights.</p>   | <ul style="list-style-type: none"> • There is a gray dividing line between every row and column. It shows where one row or column ends and the next one begins. • If you point to the gray line your mouse pointer changes. The mouse pointer becomes a solid black bar with a double-headed arrow. • When the mouse pointer changes, you know that you are in the right place. • Hold the mouse button down and drag the line to a new location. • For columns, you drag left to shrink or right to widen • For rows, you drag up to shrink or down to widen.  <p>If you select several rows or columns and then drag to change the size, all of the selected rows or columns are changed.</p> |
| <p>Double clicking to Autosize a row or column</p> | <ul style="list-style-type: none"> • Use the same gray dividing line between the rows and columns. • Point at the line, and watch for the mouse pointer to change. • Double click the left mouse button. • The row or column changes to fit the text. • If you are working with a column, the width changes to match the widest piece of text. • If you are working with a row, the height changes to match the tallest piece of text. |
| <p>Using the shortcut menu to size a row or column</p> | <ul style="list-style-type: none"> • Point at the column header or the row header and then right-click. (Use the header, not the gray dividing line this time.) • Choose an option from the shortcut list. • For columns, the option is called Column Width. • For rows, the option is called Row Height. • Type a new number and then click OK. |

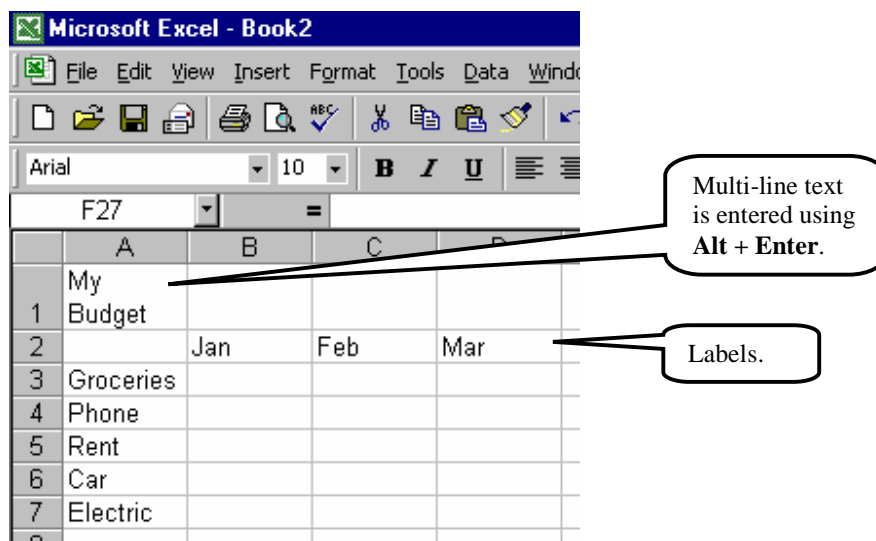
Entering Text and Values

There are two types of data that can be entered into Excel: text and values. The key difference is whether or not you would use the data in a calculation. Text cannot be used to calculate; values can be used to calculate.

Entering Text

Text includes any of the following:

- Any letters and symbols you type from the keyboard.
- Any numbers you type using the equal sign and quotation marks. This tells Excel to treat the number like text. For example entering a zip code in the following way: =**“46819”**.



Key points about text:

- An example of text might be a label on a column of numbers in your budget.
- Some numbers, such as Zip codes, are never used in calculations. Using the equal sign and the quotes around a number tells Excel to treat the number as text. This prevents you from accidentally using the number in a calculation.
- If you want to have multiple lines of text in the same cell, type the first line, press **ALT + Enter** and then type the next line. Don't use multiple cells for text that really belongs together. In other words, don't type the first line in one cell and the second line in another cell. Doing so will cause problems.

Entering Values

The term value is used to describe anything that is a number, a formula, or a function. Values can be used in calculations.

| | A | B | C | D |
|---|-----------|--------|--------|--------|
| 1 | My Budget | | | |
| 2 | | Jan | Feb | Mar |
| 3 | Groceries | 125.52 | 130.24 | 110.32 |
| 4 | Phone | 57.24 | 76.21 | 43.25 |
| 5 | Rent | 350 | 350 | 350 |
| 6 | Car | 275 | 275 | 275 |
| 7 | Electric | 140.65 | 125.33 | 100.84 |

Notice that there are no dollar signs and that the decimal points are inconsistent.

Numbers.

Key points about numbers:

- When you type numbers, do not type the comma, dollar sign, or percent sign. These symbols are added as formatting. If you type them, you are doing extra work that isn't necessary.
- If you need to type a negative number, use the minus sign before the number. Do not put a space between the minus sign and the number. For example, you could type **-75.52**.

Entering Formulas

A formula is a calculation that you type into a cell. The system displays the result of the calculation in the cell. Formulas start with an equal sign (=). The equal sign tells Excel that you are entering a formula. Formulas can be up to 256 characters long.

The screenshot shows the Microsoft Excel interface with a spreadsheet titled "excel examples". The spreadsheet has columns A through E and rows 1 through 8. The data is as follows:

| | A | B | C | D | E |
|---|-----------|-----|-----|-----|---|
| 1 | My Budget | | | | |
| 2 | | Jan | Feb | Mar | |
| 3 | Groceries | 125 | 130 | 110 | |
| 4 | Phone | 52 | 76 | 61 | |
| 5 | Rent | 350 | 350 | 350 | |
| 6 | Car | 300 | 300 | 300 | |
| 7 | Electric | 140 | 125 | | |
| 8 | | 967 | | | |

The formula bar shows the formula `=125+52+350+300+140`. A callout points to the formula bar with the text: "Formula used to calculate a sum." Another callout points to cell B8 with the text: "The result of the formula is shown in the cell. Select the cell and then look at the formula bar to see the formula."

Key points about formulas:

- When typing formulas, use any of the numbers, the parentheses and the arithmetic operators for add, subtract, multiply, and divide. (+ - * /)
- You can use cell addresses (cell references) in a formula. *See Using References in Formulas and Functions for more information.*
- Example formulas:
`=3+5`
`=(A5+B9)/2`
- When you type a formula in a cell, you see the result of the formula. To see the formula you look at the formula bar.
- The way you type a formula makes a difference in the result. This is because, when Excel does the calculation, it does things in a certain order. This is called the order of *precedence*.
- Calculations are done in the following order: calculations inside parentheses, multiplication and division, addition and subtraction.
- If two arithmetic operators have the same precedence, the calculations are done left to right.
- Example of the order of precedence: If you type the following formula, `=3+6/2` the result is 6.
- The result of the above formula is 6 because the division operation is done first ($6/2=3$) and the addition operation is done next ($3+3=6$).
- If you use parentheses, you get different results
- If you type `=(3+6)/2` the result 4.5. The addition operation is done first because it is in parentheses ($3+6=9$) and then the division operation is done ($9/2=4.5$).

Entering Functions

Function used to calculate a sum. This function uses cell references.

The result of the function is shown in the cell. Select the cell and then look at the formula bar to see the function.

| | A | B | C | D |
|---|-----------|-----|-----|-----|
| 1 | My Budget | | | |
| 2 | | Jan | Feb | Mar |
| 3 | Groceries | 125 | 130 | 110 |
| 4 | Phone | 52 | 76 | |
| 5 | Rent | 350 | 350 | |
| 6 | Car | 300 | 300 | |
| 7 | Electric | 140 | | |
| 8 | | 967 | | |

Key points about functions:

- A function is a special formula that is built into Excel. Some examples include the **Sum** function and the **Average** function.
- You could type a formula to do the same work as the Sum function or the Average function, but the function makes it easier.
- Functions are typed in a specific way: They start with an equal sign (=) like a formula. Next, comes the function name. Then, you type either numbers or cell references in parentheses.
- You can use cell addresses (cell references) in a formula. *See Using References in Formulas and Functions on page 22* for more information.

Using the Sum Function

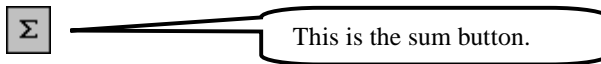
The sum function is used to add numbers together. The function uses the following format: **=Sum()**. Inside the parentheses, you can type a series of numbers separated by commas. You can also use cell references.

Example Sum functions:

=Sum(5,7,32,5,8,43,2,4,5,7,8,9,99,100)

=Sum(A1:A75)

Using the Sum Button



The Sum function is used so often, that a button was added to the toolbar. Use the following steps to use the Sum button:

1. Select the cell where you want the result of the function to be placed. (Select only one cell.)
2. Click the **Sum** button.
The system automatically selects the cells that it *thinks* you want to add up.
3. Check to make sure the correct cells are selected.



The system “guesses” which cells you want to add up based on the location of the active cell when you click the Sum button. If the active cell is below a column of numbers, Excel assumes you want to Sum the column. If the active cell is to the right of a row of numbers, Excel assumes you want to Sum the Row. Keep in mind, Excel might “guess” wrong. Always check to make sure that you are summing the correct numbers.

4. If you want to change the selection, use your mouse to select a range.
5. Press **Enter**.

Using the Average Function

The average function is used to calculate the average of several numbers. The function uses the following format: **=Average()**. Inside the parentheses, you can type a series of numbers separated by commas. You can also use cell references.

Example Average functions:

`=Average(5,8,43,2,4,5,7,8)`

`=Average(A1:D20)`

Using the Count and CountA Functions

The count and counta functions are used to count entries on a spreadsheet. The count function only counts values. The counta function counts all entries, whether they are text or values. The functions use the following format: **=Count()** or **=CountA()**. Inside the parentheses, you type cell references.

Example functions:

`=Count(A1:D20)`

`=Counta(A1:D20)`

Using References in Formulas and Functions

When entering formulas and functions, you can use actual numbers or you can use cell reference. Cell references, such as C1, identify the location on a spreadsheet that contains a number. Why would you want to use cell references? It makes updating the data in the spreadsheet a breeze.

Anytime the contents of a cell changes, Excel automatically updates any formula or function that refers to the cell. If you used the actual number instead of a reference, you must update the formula or function manually. Use cell references whenever possible to make the updates easier.

Here is the great part—you can use cell reference to run “what-if” scenarios. A “what-if” scenario simply means that you change the numbers of the spreadsheet to see what happens. For example, you might want to know what would happen if you cut expenses by 10 percent.

The left screenshot shows a spreadsheet with the following data:

| | A | B | C |
|---|----|---|---|
| 1 | 12 | | |
| 2 | 50 | | |
| 3 | 32 | | |
| 4 | 94 | | |

The formula bar for cell A4 contains `=12+50+32`. A callout bubble points to the formula with the text: "This formula uses the actual numbers."

The right screenshot shows the same spreadsheet, but cell A1 has been changed to 22. The formula bar for cell A4 still contains `=12+50+32`, and the value in cell A4 is still 94. A callout bubble points to cell A4 with the text: "When cell A1 changed, the formula was not updated. The total is wrong."

The left screenshot shows a spreadsheet with the following data:

| | A | B | C |
|---|----|---|---|
| 1 | 12 | | |
| 2 | 50 | | |
| 3 | 32 | | |
| 4 | 94 | | |

The formula bar for cell A4 contains `=A1+A2+A3`. A callout bubble points to the formula with the text: "This formula uses the cell references."

The right screenshot shows the same spreadsheet, but cell A1 has been changed to 22. The formula bar for cell A4 still contains `=A1+A2+A3`, and the value in cell A4 has automatically updated to 104. A callout bubble points to cell A4 with the text: "When cell A1 changed, the total was automatically updated."

Understanding Relative and Absolute Cell References

Excel uses two types of cell references: relative and absolute. Relative cell references change when they are copied to another cell. In other words, the cell reference is *relative* to the cell location.

| | A | B | C | D |
|---|-----------|-----|-----|-----|
| 1 | My Budget | | | |
| 2 | | Jan | Feb | |
| 3 | Groceries | 125 | | |
| 4 | Phone | 52 | | |
| 5 | Rent | 350 | | |
| 6 | Car | 300 | 300 | 300 |
| 7 | Electric | 140 | 125 | 100 |
| 8 | | 967 | | |

| | A | B | C | D |
|---|-----------|-----|-----|-----|
| 1 | My Budget | | | |
| 2 | | Jan | Feb | Mar |
| 3 | Groceries | 125 | | |
| 4 | Phone | 52 | | |
| 5 | Rent | 350 | | |
| 6 | Car | 300 | 300 | 300 |
| 7 | Electric | 140 | 125 | 100 |
| 8 | | 967 | 981 | |

If you copy a formula or function, Excel automatically updates relative references. In the example above, the function was copied from column B to column C. The column letters were automatically updated.

Sometimes, you don't want the cell reference to change when you copy a formula or a function. To lock the cell references, you use the **F4** key to add dollar signs to the cell references. You can use **F4** to add the dollar signs when you type the formula or function into the spreadsheet or, you can edit the formula or function at a later time.

Press the **F4** key multiple times until the dollar signs show the way you want them to. There are four options when you are making an absolute cell reference:

- Make both the column letter and the row number absolute: **\$A\$1**.
- Make only the row number absolute: **A\$1**.
- Make only the column letter absolute: **\$A1**.
- Remove the dollar signs from both the column letter and the row number. This makes the cell reference a relative cell reference again: **A1**.

| | A | B | C | D |
|---|------------|------|-------|-------|
| 1 | Sales Tax: | 0.06 | | |
| 2 | Price | 25.5 | 32.14 | 61.45 |
| 3 | Tax | 1.53 | | |

| | A | B | C | D |
|---|------------|------|-------|-------|
| 1 | Sales Tax: | 0.06 | | |
| 2 | Price | 25.5 | 32.14 | 61.45 |
| 3 | Tax | 1.53 | 1.93 | 3.69 |

Formatting Information in Cells

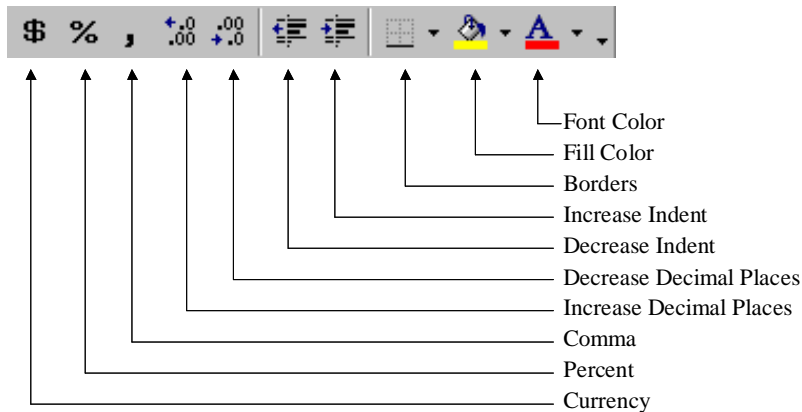
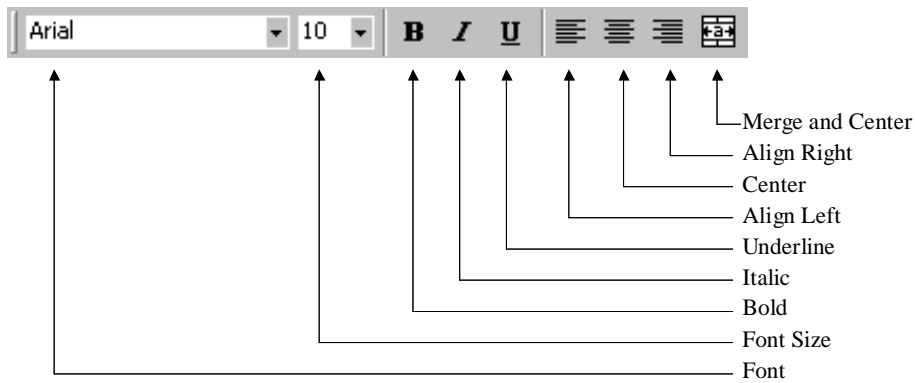
Using Formatting Tool Bar

When you type information into the cells in Excel, the information is displayed in the default font and font size. You can change the formatting of the information in several different ways. This section will cover different ways to format cells.



There are some options that apply to only text and other options that apply only to values. The type of data in the cells is important when applying formatting.

The formatting tool bar can be used for most formatting options. The formatting tool bar is shown below. It is shown in two sections to make it easier to read.



| <i>My Budget</i> | | | | |
|------------------|------------------|------------------|------------------|--------------------|
| | Jan | Feb | Mar | Average |
| Groceries | 125.52 | 130.24 | 110.32 | \$ 122.03 |
| Phone | 57.24 | 76.21 | 43.25 | \$ 58.90 |
| Rent | 350.00 | 350.00 | 350.00 | \$ 350.00 |
| Car | 275.00 | 275.00 | 275.00 | \$ 275.00 |
| Electric | 140.65 | 125.33 | 100.84 | \$ 122.27 |
| Total | \$ 948.41 | \$ 956.78 | \$ 879.41 | \$ 2,784.60 |

The way you type information affects the formatting of a cell. If you type a value and include certain characters, Excel will automatically apply the formatting to the cell. For example, if you type a dollar sign when you type a value, Excel will format the cell using the currency format. If you type a date, Excel will format the cell as a date.

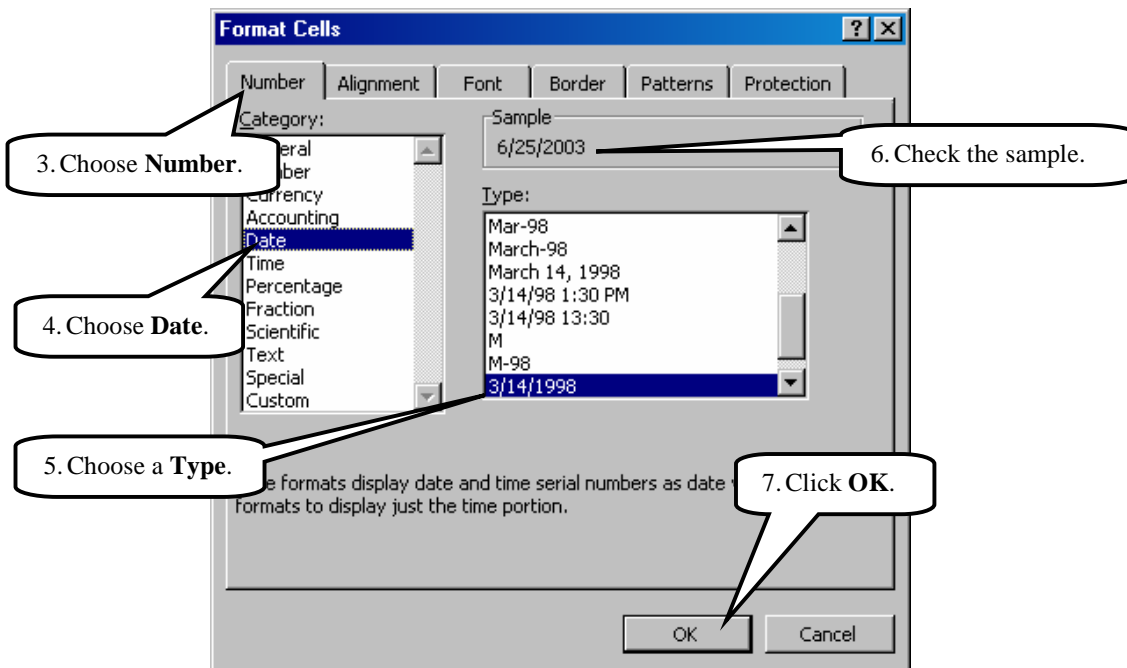
To use any of the formatting tools, you first select the cell or cells and then you click the tool. Listed below is a brief description of each option:

Understanding the Formatting Options

| Name | Used to... |
|--------------------------------------|---|
| Font | Change the appearance of the text or numbers. Different fonts are often used to make a heading stand out or to emphasize text. Different computers will have different lists of fonts. |
| Font Size | Change the size of text or numbers. You can use a larger font size to make text easier to read. A smaller size might be harder to read, but it will allow you to put more information on a page. |
| Bold/Italic/Underline | Emphasize text. Bold makes the text darker. <i>Italic</i> makes the text slant to the right. <u>Underline</u> places an underline under the text. Can be combined if needed. This <i><u>word</u></i> is bold, italic, and underlined. |
| Align Left Center Align Right | Change the location of text inside the cell. When aligned left, the left edge of the text lines up with the left edge of the cell. When centered, the text is centered in the cell. When aligned right, the right edge of the text lines up with the right edge of the cell. |
| Merge and Center | Combine multiple cells into one cell. This is called <i>merging</i> the cells. The merged information is then centered. It is usually used to create headings for spreadsheets. |
| Currency | Adds the dollar sign, commas, and decimal places to a value so that it is in a standard currency format. For example, the number 4536.09 would be changed to \$4,536.09 . |
| Percent | Changes a decimal value to a percentage. For example, .03 would be changed to 3% . |
| Comma | Adds commas to values to make them easier to read. Does not add the dollar sign. For example, 1032058 would be changed to 1,032,058 . |
| Increase Decimal Decrease Decimal | Quickly add or subtract decimal places. For example, you could change a number with 2 decimal places to a number with 3 decimal places. When the decimal places are decreased, the system rounds the number off. For example, the number 1.028 would be changed to 1.03 if you decrease the number of decimal places. |
| Increase Indent Decrease Indent | Indent text in a cell, to make it stand out. In Excel, you cannot use the Tab key to indent text. The Tab key is used to move from cell to cell. |
| Borders | Display a list of options for the borders around a selection. Whatever cells you have selected are treated as a <u>group</u> when applying borders. |
| Fill Color | Change the background color in a cell. The font color doesn't change. Color can be used to make information stand out. |
| Font Color | Change the color of the data in a cell. Color can be used to make information stand out. Red is often used to indicate negative numbers. |

Using the Format Cells Dialog Box

The formatting tool bar gives you the most commonly used options. If you need a formatting option that is not available on the tool bar, you can use the **Format Cells** dialog box.



There are so many options that we can't cover them all in a beginning class. The best way to learn about the formatting options is to try them. One option that we will cover is the date format. When you type a date, Excel displays it in the default format. The default format might not be the format that you want to use. You can change it using the following steps:

1. Select the cell or cells that contain the dates.
2. Choose **Format > Cells**.
The system displays the **Format Cells** dialog box.
3. Click the **Number** tab.
4. From the **Category** list, choose **Date**.
5. From the **Type** list, choose a format.
6. Look at the sample to see if the format is correct.
7. Click the **OK** button.

Excel treats dates like numbers so that you can use them in calculations. The date is stored internally as a number but the formatting makes it appear like a date on the spreadsheet.

Removing Formatting From a Cell

Formatting is applied to a cell, not to the text or value in the cell. So, if you change the data in a cell the new data will use the same formatting as the old data.

Also, if you delete data from a cell using the **Delete** key only the data is removed; the formatting is not deleted. This can cause problems—if you delete data, the cell looks blank. But if you go back later and type data into the cell it will pick up the formatting from the previous entry. So, data can appear formatted when you don't want it to.

You can use the **Clear** option to remove the formatting. Use the following steps to clear the formatting:

1. Select the cell or cells that contain the formatting you want to clear.
2. Choose **Edit > Clear > Formats**.



If you want to delete the data but leave the cell formatted, you simply highlight the cell and then press the **Delete** key on the keyboard.

Using Copy and Paste

When you are working with an Excel file, there might be times when you want to duplicate information from one cell to another or from one range to another. Copy and Paste are the options that you use to make copies of information. They are often used to copy formulas or functions. Use the following steps to copy information:

1. Select the cell or range of cells that you want to copy.
2. Choose **Edit > Copy**.
The system copies the information and shows a dotted line around the area that was copied.
3. Select the cell or range of cells where you want to paste the information.
4. Choose **Edit > Paste**.
The system pastes the information in the new cell.

When you are copying and pasting information, the size and shape of the range of cells is important. If the size and shape of the area that you are copying doesn't match the size and shape of the area that you are pasting to, you will get an error message.

The image shows two screenshots of Microsoft Excel. The left screenshot shows a spreadsheet with a 'Copy Area' selected (cells D3:D7) and a 'Paste Area' selected (cells E3:E7). The right screenshot shows the same spreadsheet with the 'Copy Area' selected (cells D3:D7) and the 'Paste Area' selected (cells E3:E7). An error message dialog box is shown below the screenshots, stating: 'The information cannot be pasted because the Copy area and the paste area are not the same size and shape. Try one of the following: • Click a single cell, and then paste. • Select a rectangle that's the same size and shape, and then paste.' The dialog box has an 'OK' button.

| | A | B | C | D |
|---|-----------|-----|-----|-----|
| 1 | My Budget | | | |
| 2 | | Jan | Feb | Mar |
| 3 | Groceries | 125 | 130 | 110 |
| 4 | Phone | 52 | 76 | 61 |
| 5 | Rent | 350 | 350 | 350 |
| 6 | Car | 300 | 300 | 300 |
| 7 | Electric | 140 | 125 | 100 |

| | A | B | C | D | E |
|---|-----------|-----|-----|-----|---|
| 1 | My Budget | | | | |
| 2 | | Jan | Feb | Mar | |
| 3 | Groceries | 125 | 130 | 110 | |
| 4 | Phone | 52 | 76 | 61 | |
| 5 | Rent | 350 | 350 | 350 | |
| 6 | Car | 300 | 300 | 300 | |
| 7 | Electric | 140 | 125 | 100 | |

Microsoft Excel

The information cannot be pasted because the Copy area and the paste area are not the same size and shape. Try one of the following:

- Click a single cell, and then paste.
- Select a rectangle that's the same size and shape, and then paste.

OK

To avoid this problem, the area you are pasting to must be exactly the same size as the area you are copying from. Or, it must be a single cell. (This is the method that I recommend.) When using a single cell, Excel will paste the data into the cells, using as many cells as needed. Be careful not to paste over existing information. If you paste over information, use the Undo option.

Using Cut and Paste

When you want to move information to a different area of the spreadsheet, you use the Cut and Past options. They work in the same way that Copy and Paste work. The difference is that when you copy, the original information stays in the original cells and a duplicate is pasted into the new location. When you cut, the original information is removed and it is then pasted to the new location.

Use the following steps to copy information:

1. Select the cell or range of cells that you want to move.

2. Choose **Edit > Cut**.

The system copies the information and shows a dotted line around the area that was copied.



The information is still visible, it is not removed from the old location until you paste it somewhere else.

3. Select the cell or range of cells where you want to paste the information.

4. Choose **Edit > Paste**.

The system pastes the information in the new location and removes the information from the old location.



As with the copy and paste option, the destination location must be a single cell or a range of cells the same size and shape as the original range. Otherwise, you will get an error message.

Using Undo/Redo

You can use undo to correct mistakes or reverse actions that you did previously. For example, you might select some information and delete it. If you realize that you deleted the wrong information, you can choose undo. The system will “un-delete” the information or restore it. You can use either the **Undo** button or choose **Edit > Undo**.



The redo option allows you to undo the undo command. If you use the undo command, and then realize that the undo was a mistake you use the redo command. For example, you might select some information and delete it. You then realize that you deleted the wrong information so you use undo. You then realize that it really was the correct information after all, so you use redo. The information is deleted again. You can use either the **Redo** button or choose **Edit > Redo**.



Redo is not available for use until you undo something.

The undo and redo options can be used multiple times to undo or redo multiple steps. For example, you might do the following steps: entering values, making them bold, and then entering a formula to calculate the sum. If you click undo the system will undo the calculation. If you click undo again, the system will undo the bold formatting. If you click undo a third time, the system will undo the data entry.

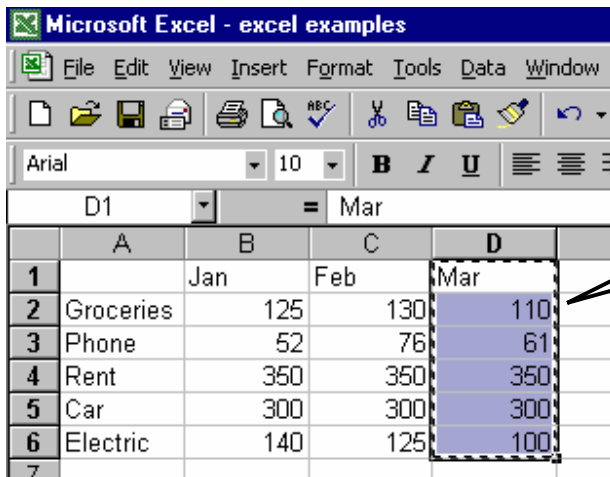


If you are typing data and catch a mistake before pressing **Enter**, you can tap Escape to cancel the data entry. In this case, you would not need to use the undo option.

Using Special Keys

Canceling Actions—Esc (Escape)

The Escape key is used when using the Cut and Paste option or the Copy and Paste option. Excel lets you paste the same data multiple times. After you choose Cut or Copy, a dashed outline is placed around the cells. As long as that outline is visible, you can paste as often as you want. When you are done pasting, tap Escape. The dashed outline disappears.



Microsoft Excel - excel examples

File Edit View Insert Format Tools Data Window

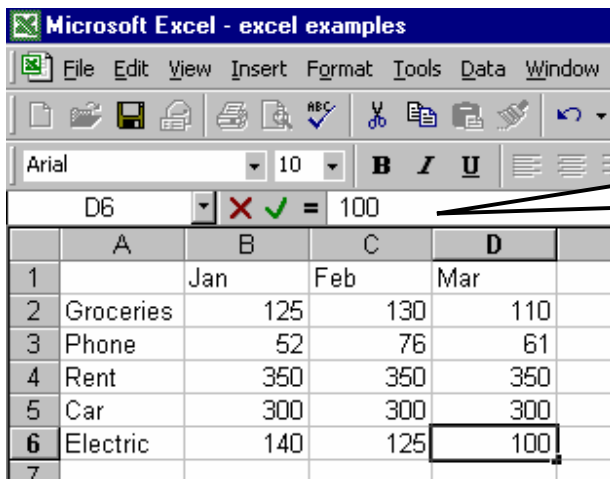
Arial 10 B I U

D1 = Mar

| | A | B | C | D |
|---|-----------|-----|-----|-----|
| 1 | | Jan | Feb | Mar |
| 2 | Groceries | 125 | 130 | 110 |
| 3 | Phone | 52 | 76 | 61 |
| 4 | Rent | 350 | 350 | 350 |
| 5 | Car | 300 | 300 | 300 |
| 6 | Electric | 140 | 125 | 100 |
| 7 | | | | |

Area that is being copied. Notice the dashed outline.

The Escape key is also used when editing data. If you change your mind, before you press enter, tap Escape to cancel.



Microsoft Excel - excel examples

File Edit View Insert Format Tools Data Window

Arial 10 B I U

D6 X ✓ = 100

| | A | B | C | D |
|---|-----------|-----|-----|-----|
| 1 | | Jan | Feb | Mar |
| 2 | Groceries | 125 | 130 | 110 |
| 3 | Phone | 52 | 76 | 61 |
| 4 | Rent | 350 | 350 | 350 |
| 5 | Car | 300 | 300 | 300 |
| 6 | Electric | 140 | 125 | 100 |
| 7 | | | | |

If you are in edit mode, you can cancel by pressing Escape.

Repeating Actions—F4

The F4 key can be used as a repeat key; it allows you to perform the same step multiple times in different locations. You can repeat almost any action, such as formatting, pasting information, deleting information, etc. However, the system only repeats the *last* thing that you did. So, if you did two formatting steps, making a cell bold and italic, you can use the F4 key to repeat applying the italic formatting. The system won't apply both at the same time.

Use the following steps:

1. Select a cell or range of cells.
2. Perform an action, such as formatting.
3. Select another cell or range of cells.
4. Press **F4**.

Editing Data—F2

You can edit any of the data, formulas, or functions that you enter in Excel. Excel lets you edit in two locations. You can edit in the cell or you can edit in the formula bar at the top of the screen. Use whichever location you prefer.



Depending on the changes you need to make, it might be easier to simply type the new entry over the old entry.

Use the following steps:

1. Click on the cell that you want to edit.
2. Press **F2**.

The system changes to *Edit* mode. You can tell you are in edit mode by looking at the status bar at the bottom of the screen.
3. Either in the cell or in the formula bar make the changes using the following steps:
 - a. Use your mouse to position the mouse pointer where you want to make changes and then click. This places the Insertion Point in the correct place. (The insertion point looks like a flashing vertical bar.)
 - b. Use **Backspace** to remove characters to the left
Or
Use **Delete** to remove characters to the right.
Or
Type to insert new characters.
 - c. When done making changes press **Enter**.

Deleting Data—Del (Delete)

Deleting data is easy. Use the following steps to delete data:

1. Highlight the cell or cells
2. Press the **DEL** (delete) key on the keyboard.

The system erases the data.



If you are in edit mode, Delete can be used to remove information one character at a time.



If you want to replace old data with new data, you don't have to delete the old data. You can simply type the new data in the cell. The second entry will overwrite the first entry.

Printing

There are quite a few options available when printing; we cannot cover them all in this class. The three basic options you will need are Setting the Print Area, checking the Print Preview, and then Printing the spreadsheet.

Setting the Print Area.

You might want to print a small portion of a large spreadsheet. Setting the print area identifies the area of the spreadsheet that you want to print. If you don't set the print area, Excel will "guess" that you want to print the entire document. You might end up with much more than you expected. Use the following steps:

1. Use your mouse to highlight the area you want to print.
2. Choose **File > Print Area > Set Print Area**.

The system places a dashed outline around the area.



If you ever want to check the print area, use the Name Box. Click the down arrow and then select Print Area. The system highlights the area for you.

Checking the Print Preview.

I recommend that you check the print preview before you print anything from Excel. It will prevent you from printing the wrong information, wasting time and paper. Use the following steps:

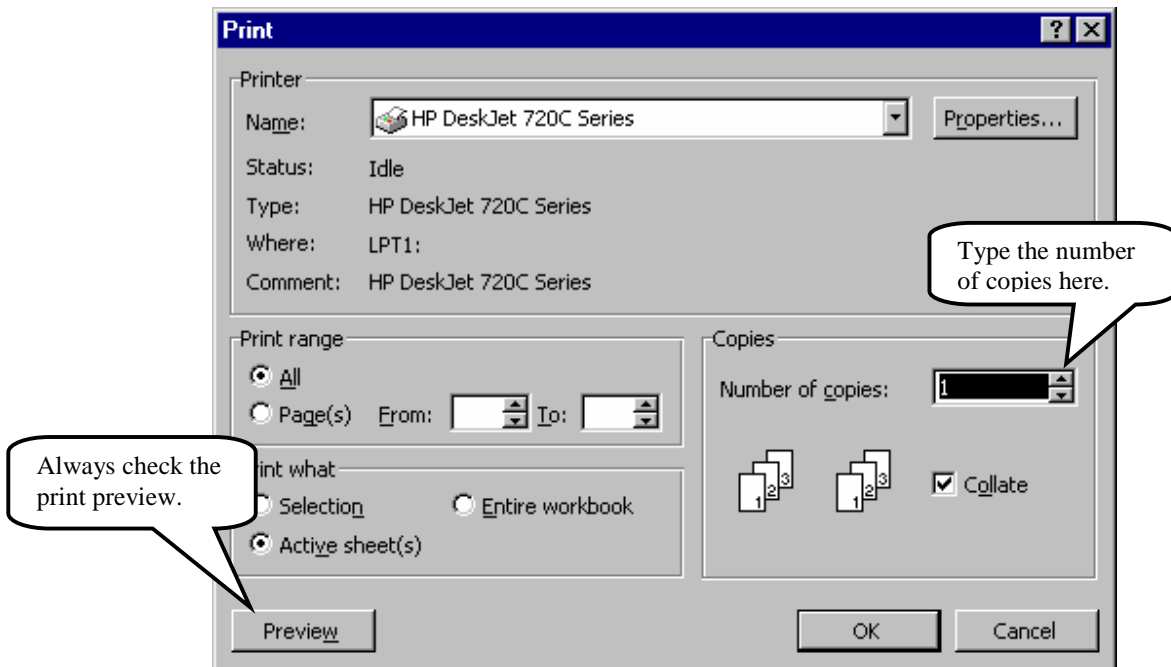
1. Choose **File > Preview**.
The system shows you a small version of the spreadsheet and shows the number of pages in the lower-left corner of the screen.
2. Use the **Next** button to see the next page.
Or
Use the **Previous** button to see the previous page.
3. If you want to make any changes, click **Close** to cancel the print preview.
Or
If you are ready to print, click the **Print** button.

The screenshot shows the Microsoft Excel interface with a menu bar at the top containing buttons for Next, Previous, Zoom, Print..., Setup..., Margins, Page Break Preview, Close, and Help. The main area displays a table titled "My Budget" with columns for Jan, Feb, Mar, and Average. The table lists expenses for Groceries, Phone, Rent, Car, and Electric, along with a Total row. Callouts provide instructions: one points to the Previous button stating "If there is only one page, next and previous are not available.", another points to the Print... button stating "To make changes, click Close. Or When ready to print, click **Print**.", and a third points to the status bar stating "Number of pages is shown here." The status bar at the bottom left shows "Preview: Page 1 of 1" and the bottom right shows "NUM".

| | Jan | Feb | Mar | Average |
|--------------|------------------|------------------|------------------|--------------------|
| Groceries | 125.32 | 100.24 | 110.02 | \$ 122.03 |
| Phone | 57.24 | 78.21 | 40.25 | \$ 58.90 |
| Rent | 350.00 | 350.00 | 350.00 | \$ 350.00 |
| Car | 275.00 | 275.00 | 275.00 | \$ 275.00 |
| Electric | 140.65 | 125.30 | 100.84 | \$ 122.27 |
| Total | \$ 948.41 | \$ 956.78 | \$ 879.41 | \$ 2,794.60 |

Printing the Spreadsheet

Printing is what allows you to make a paper copy of the spreadsheet. The print dialog box has quite a few options. We will only cover a few of them in this class. Use the following steps:



1. Choose **File > Print**.
The system displays the **Print** dialog box.
2. If you haven't checked the preview yet, click **Preview**.
3. Type the number of copies in the **Number of Copies** field.
4. Click **Print**.

Saving the Spreadsheet

When you create a spreadsheet, you might want to save it. Saving it allows you to work on the same spreadsheet multiple times. There are two commands used when saving: Save As and Save.



When you save a spreadsheet at the library, you must use a floppy diskette. The library does not provide diskettes, you must bring your own. The diskette allows you to take the information with you. If you are working at home or at your place of employment, you might be able to use other drives.

Using the Save As Command

The Save As command always brings up the Save As dialog box. This dialog box allows you to type a name for the file. Use this command if you want to save different versions of a file. For example, you might want to create a color version of a spreadsheet for use in a presentation and a black and white version for printing. To do this, you create the first version and then use Save As to save it. Then you can change the spreadsheet and use Save As to save it again, using a different name. The name that is given to a spreadsheet is called the file name.

Use the following steps:

1. Insert the diskette into the drive.
2. Choose **File > Save As**.
The system displays the **Save As** dialog box.
3. From the **Save In** drop-down list, select **A:**



A: represents the A drive, which is the drive that uses the floppy diskette.

4. In the **File Name** field, type a name.



Use a name that describes the file. A descriptive name will make it easier to know what the spreadsheet contains.

5. Click **Save**.
The system creates the file and saves the data.

Using the Save Command

The Save command works in two different ways, depending on whether or not the spreadsheet was ever saved before. If the spreadsheet was never saved before, then the Save command works just like the Save As command. The system displays the Save As dialog box, and asks you to type a name. After that, the Save command uses the same file over and over. Every time you choose save, the changes are saved. The system writes over the old version of the file.

Use the following steps:

1. Insert the diskette into the drive.
2. Choose **File > Save**.

If you never saved this file before, the system displays the **Save As** dialog box. Follow the instructions under Using the Save As Command on page 37.

Or

If you have saved this file before, the system saves the new version of the file over the old version.

Opening a Spreadsheet File

When you want to work on a spreadsheet that you saved previously, you use the Open command. This command tells Excel to read the data off of the diskette and display it on the screen.

Use the following steps:

1. Insert the diskette into the drive.
2. Choose **File > Open**.
The system displays the **Open** dialog box.
3. From the **Look In** drop-down list, select **A:**
4. Locate the file in the list and then click the file name.
5. Click **Open**.

Sample Spreadsheet—Teacher’s Gradebook

| | A | B | C | D | E | F | G |
|---|----------------------|-------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| 1 | Last Name | First Name | Assignment 1 | Assignment 2 | Assignment 3 | Assignment 4 | Average Grade |
| 2 | <i>Smith</i> | <i>Mary</i> | 98 | 52 | 48 | 75 | 68.25 |
| 3 | <i>Jones</i> | <i>Bob</i> | 52 | 65 | 87 | 91 | 73.75 |
| 4 | <i>Wilson</i> | <i>Larry</i> | 87 | 45 | 86 | 48 | 66.5 |
| 5 | <i>Peters</i> | <i>Tina</i> | 56 | 72 | 84 | 86 | 74.5 |
| 6 | <i>Harvey</i> | <i>Ken</i> | 65 | 62 | 87 | 51 | 66.25 |
| 7 | <i>Meyers</i> | <i>Betty</i> | 98 | 84 | 57 | 98 | 84.25 |
| 8 | Average Grade | | 76.00 | 63.33 | 74.83 | 74.83 | 72.25 |
| 9 | | | | | | | |

Sample Spreadsheet—Check Register

| | A | B | C | D | E |
|---|-------------|--------------------|----------------|-------------------|----------------|
| 1 | Date | Description | Deposit | Withdrawal | Balance |
| 2 | 10/28/03 | Balance Forward | 525.32 | | 525.32 |
| 3 | 11/1/03 | Rent | | 350.00 | 175.32 |
| 4 | 11/1/03 | Payday | 750.00 | | 925.32 |
| 5 | 11/1/03 | Electric | | 57.21 | 868.11 |
| 6 | 11/1/03 | Phone | | 38.94 | 829.17 |
| 7 | | | | | |
| 8 | | | | | |

Sample Spreadsheet—Calculating Sales Tax

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Arial 10 B I U

C4 = =B4*\$B\$1

| | A | B | C | D | E |
|----|------------------|-------------|------------|--------------|---|
| 1 | Sales Tax | 6% | | | |
| 2 | | | | | |
| 3 | Item | Cost | Tax | Total | |
| 4 | Coat | \$ 125.99 | \$ 7.56 | \$ 133.55 | |
| 5 | Shoes | \$ 75.99 | \$ 4.56 | \$ 80.55 | |
| 6 | Gloves | \$ 15.25 | \$ 0.92 | \$ 16.17 | |
| 7 | Scarf | \$ 17.50 | \$ 1.05 | \$ 18.55 | |
| 8 | Hat | \$ 12.95 | \$ 0.78 | \$ 13.73 | |
| 9 | | \$ 247.68 | \$ 14.86 | \$ 262.54 | |
| 10 | | | | | |

Sample Spreadsheet—Calculating Commissions

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Arial 10 B I U

E2 = = (B2/12)+(C2*D2)

| | A | B | C | D | E |
|---|---------------------|---------------------------|----------------------|-----------------------|-----------------------|
| 1 | Sales Person | Annual Base Salary | October Sales | Commision Rate | October Salary |
| 2 | Mark | \$ 20,000.00 | \$ 25,000.00 | 10% | \$ 4,166.67 |
| 3 | Terri | \$ 25,000.00 | \$ 41,000.00 | 10% | \$ 6,183.33 |
| 4 | Sarah | \$ 30,000.00 | \$ 18,000.00 | 10% | \$ 4,300.00 |
| 5 | Jim | \$ 25,000.00 | \$ 22,000.00 | 10% | \$ 4,283.33 |
| 6 | | | | | |