The operation of each toolbar button is described in the following list in left to right order.

Shape - Pick the shape of the text, such as Plain Text, Slant Up, or Circle.

Font - Choose a font from a drop-down pick list.

Size - Choose a font size; Best Fit automatically adjusts text to fit the available area.

Bold-Bold the displayed type.

Italic-Italicize the displayed type.

Even Height-Make all letters the same height regardless of capitalization.

Flip - Turn WordArt text on its side.

Stretch-Spread the text horizontally and/or vertically to fit the available space.

Align - Align text centered, left, or right.

Spacing Between Characters-Spread and shrink the space between characters.

Special Effects - Rotate the text by entering the degrees of rotation or use the slider control to change the shape.
Shading - Pick a fill pattern for the WordArt text.

Shadow - Display a list of special effects with shadows for the WordArt text.


As you can see, WordArt offers many powerful features for emphasizing your written communications with special sizing, stretching, rotation, font selection, shading, and more. If you wish to insert a special symbol, such as a trademark or Wingding symbol, click the Insert Symbol button at the bottom of the Enter Your Text Here dialog. The displayed symbols use the current font. Use the Update Display button to change the displayed WordArt text in your document. Once the WordArt text suits you, click on the underlying document (away from the Enter Your Text Here dialog box and WordArt toolbar) to return to the normal document screen. Just like other inserted objects, WordArt objects are inserted at the cursor position. You can double-click on the WordArt text to restart WordArt for further modifications. The hands-on activity at the end of this section guides you through the use of WordArt.

## Microsoft Equation 3.0 (the Equation Editor)

Like Microsoft WordArt 3.2, the built-in Equation Editor is also accessed using the Insert / Object menu selection. Pick Microsoft Equation 3.0 from the displayed list of application objects. Either double-click Microsoft Equation 3.0 or click OK to start the Equation Editor. When the Equation Editor is active, you see a screen similar to the following illustration.

At this point you are ready to create an equation. Notice the Equation toolbar and the new menu items. The toolbar buttons are used to pick Greek and math symbols, equation fences (or boundaries), and a number of other items typically
used in equations．The name of each button is listed on the following page for your information．Following the button list is a brief description of each menu．

## Equation Editor Menus

The Equation Editor menus are used to select fonts，sizes，boldface，italics，and much more．Following is a brief overview of the purpose of each menu．

File－This menu performs the same basic file operations as the Word File

| Equation |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\leq 7 \approx$ | $4 \mathrm{ab} \cdot$. |  | $\pm \cdot \otimes$ | $\rightarrow \Leftrightarrow \downarrow$ | $\therefore$ 梀 | $\notin \cap \subset$ | a $\infty$ | $\lambda \omega \theta$ | $\Lambda \Omega \Theta$ |
| （\＃）［］ | \％$\sqrt{\text { m }}$ | 霛． | $\sum \sum$ | ¢ $¢$ | $\square$ | $\rightarrow \leftarrow$ | Пַ Ụ | 000 品踄 |  |

menu．

Edit－Choices are typical of Edit menus，including Undo，Cut，Copy，Paste， Clear，and Select All．

View－This menu provides different zoom selections．It also lets you Show All and Redraw the current equation．Redraw is helpful if you delete an element and a residual image remains．

Format－Here，you can align equation elements left，center，right，or on an equal or percent sign．You can also control the spacing between lines for superscripts and subscripts and between matrix elements．A matrix selection lets you control the format of a mathematical matrix consisting of rows and columns of values．

Style－This menu is used to apply a specific style to a selected group of elements or to elements typed following the style selection．Styles include：

Math－Choose function or variable font automatically based on selection．

Text－Use to apply standard text fonts and character styles．

Function－Use to apply function fonts and character styles to one or more characters or symbols．

Variable-Use to apply variable fonts and character styles to one or more characters or symbols.

Greek-Use to apply Greek fonts and character styles. Also accessed with <Ctrl+Shift+G>. You can use <Ctrl+Shift+G> to enter the next characters typed as Greek, or to convert a selection from normal text to Greek text.

Matrix-Vector - Also accessed with <Ctrl+Shift+B>, this selection is used to apply vector fonts and styles to selected characters.

Other - Use to apply another font and to designate it as bold or italic.

Define - Use the displayed dialog box to define the fonts to be used with each of the style selections. You can also use a Bold and Italic check box to designate the use of normal, bold, or italic.

Size-Apply an appropriate size to one or more selected elements including Full, Subscript, Sub-Subscript, Symbol, and Sub-Symbol. Other lets you choose a point size, while Define lets you modify the sizes of equation elements.

Window - This menu item is identical to Word's document Window menu in which you can move between documents, arrange (or tile) the open Word documents in separate windows, or split the active document into two working panes.
Help-This menu item is like other Help selections, as it provides helpful information about Equation Editor features and operation.

In the hands-on activity at the end of this section you use the Equation Editor to prepare an equation in a practice document. This experience should be sufficient to encourage your continued use of this powerful Word utility program.

## The Equation Toolbar

Look at the Equation toolbar illustration. When you click one of the buttons on the Equation toolbar, an additional series of buttons is displayed. Select your templates, symbols, and special characters by holding down the left mouse button until your choice is highlighted; then release the button and the selection
is displayed in the outlined equation object area．You can control the placement of equation elements by highlighting them and then using＜Ctrl＋Arrow Key＞ to move them up，down，left，or right．Use the Size／Subscript menu selection to create a subscript／superscript－size character．Then nudge the character into position．Space between equation elements is added using the Spaces and Ellipses button．The Equation Editor does not accept normal Spacebar entries unless you select Text from the Format menu．Once an equation is set，click on the document to insert it in your document．To return to the Equation Editor， just double－click on the equation object．

The following math symbol templates are available in Word 2000．Explore the various buttons to see what symbols are available．

| Equation |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\leq 7 \approx$ | Sab ${ }^{\text {a }}$ |  | $\pm \cdot \otimes$ |  | $\therefore \vee \exists$ | 生へく | a $\infty$ l | $\lambda \omega \theta$ | $\Lambda \Omega \Theta$ |
| （1）［］］ | 冎 $\sqrt{\text { m }}$ | \％－5 | $\sum \sum$ | ¢ $\dagger$ | $\square$ | $\rightarrow \leftarrow$ | П̄ Uِ | 000 㗊踟 |  |

## Excel Worksheets

If Excel is installed on your system，either independently or as part of Microsoft Office 2000，Word gives you direct access to the power of Excel worksheets． This is done by first positioning the text cursor at the desired insertion point within your document．Then click the Insert Microsoft Excel Worksheet button on the Standard toolbar．Drag the number of rows and columns and release the mouse button．The example here shows a $4 \times 4$ cell worksheet．

After a brief period（depending on your processor speed and the amount of available memory），a blank Excel worksheet appears in your document．In addition，the Excel menu and toolbar are displayed．

At this point you can create or load a stored worksheet file．Although the use of Excel 2000 is not the focus of this part of the book，the following hands－on activity guides you through the use of Excel．For an in－depth Excel tutorial，see Part 3 of this book．

## Working with Other Objects

In addition to accessing WordArt, Equation, and Excel Worksheet objects, you can also use the Insert / Objects menu selection to create new files or use existing files produced by other Windows-based programs. When you import an existing file, it can be updated using the originating program. For example, if you use the Create from File section of the Object dialog box to insert a Paintbrush picture, you can later use Paintbrush to edit the picture and automatically update the picture in your Word document. This is an example of object linking.

When you use the Create New tab of the Object dialog box, you can create a new object within the current document. Once active, you can create a new worksheet, picture, graph, etc. This lets you run the application directly from Word without having to move out of Word to start the application.

You can also use the Create from File tab to import existing files. Once inserted in your document, the inserted material becomes an integral part of your document. Just double-click it to launch the application for editing.

The hands-on activity guides you through the insertion of a Paintbrush picture. This activity is typical of how files created by other programs can be used in your documents.


## Hands-on Activities

In the following activities you create and embed WordArt, equation, and Excel objects into a document. Then you create and insert a Paintbrush picture object. If you have not installed WordArt, the Equation Editor, or Excel, skip the activities relating to the missing program(s) and move to the next one. Be sure to end your activity by performing the Paintbrush Object activity.

1. Start Word and display the blank Document1 screen.
2. Type Object Document; press <Ctrl+E> <Enter> <Ctrl+L><Enter> <Enter><Enter>; then press <Up Arrow> once.
3. Perform the following activities that make use of the programs installed on your computer, i.e., WordArt, Equation 3.0, or Excel.

## Insert Microsoft WordArt 3.2 Object

1. Use Insert / Object, pick Microsoft WordArt 3.2, and click OK.
2. Backspace to delete the text in the Enter Your Text Here box. Type Microsoft <Enter> WordArt <Enter> Object. Then click the Shape down arrow and select the Button (Pour) shape (third row, fourth column).
3. Pick the Font down arrow and pick a script font such as Brush Script MT.
4. Pick the Border button (rightmost button on the toolbar), pick Normal, and click OK.
5. Click on the underlying document. Then drag the WordArt object to the center of the page.
6. Press <Ctrl+End> to move to the end of the document. Now press <Enter> four times and then press <Up Arrow> once in preparation for the next activity.


## Insert Microsoft Equation 3.0 Object

1. Use Insert / Object, pick Microsoft Equation 3.0, and click the OK button to start the Equation Editor.
2. Type the equation shown here using the indicated steps.
a. Type $\mathrm{XC}=$.
b. Pick the Fraction and Radical Templates button on the bottom row of the Equation toolbar, select the fraction template (the first template), and release the mouse button.
c. Type 1, press <Tab>, then type 2.
d. Pick the pi character (use the Greek lowercase button-rightmost character on the fourth row).
e. Pick the Fraction and Radical Templates button again, select the square root symbol (the one with the interior dashed box fourth row, first column), and release the mouse button.
f. Type FC to complete the equation entry.
g. Select (highlight) the C in XC. Then pick Size / Subscript from the menu bar.
h. "Nudge" the subscript C by pressing <Ctrl+Down Arrow> six times; then press <Ctrl+Left Arrow> twice.
i. Pick View / Redraw to clean up the displayed equation.
3. Click on the underlying document to leave the Equation Editor and return to the document; notice that the equation is inserted.
4. Drag the equation to center it. Your equation should resemble the one shown here.

5. Press <Ctrl+End> to move to the end of the document. Now press <Enter> four times and then press $<\mathbf{U p}$ Arrow> once in preparation for the next activity.

## Insert Microsoft Excel Object

1. Pick the Insert Microsoft Excel Worksheet button on the Standard toolbar. Drag a $4 \times 4$ cell area and release the mouse button.
2. Use your mouse or an arrow key to select each cell, type the information as shown below, and press <Enter> after each entry.

|  | A | B | C | D |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Item | 1st <br> Half | 2nd <br> Half | Year |
| 2 | Income | 448 | 534 | =SUM(B2: <br> C2) |
| 3 | Expense | 467 | 472 | =SUM(B3: <br> C3) |
| 4 | Profit/Lo <br> ss | =B2-B3 | =C2- <br> C3 | =SUM(B4: <br> C4) |

