Chapter 3
On-line Resources

With Mathcad you can access mathematical and technical content located on your computer or on the World Wide Web. In addition to a full on-line Help system, Mathcad comes with the *Resource Center*, a Mathcad Electronic Book containing an extensive collection of tutorials, examples, and reference information, with links to further resources on the World Wide Web. Mathcad also gives you a direct link to the *Collaboratory*, a unique Web-based messaging system that connects you to the community of Mathcad users.

The following sections make up this chapter:

Resource Center and Electronic Books

How to use the Resource Center, a library of reference content on your desktop and a gateway to resources on the World Wide Web. How to locate and use information in Mathcad Electronic Books.

Help

On-line Help on product features.

Internet access in Mathcad

What you need to connect to Web-based resources from within Mathcad.

The Collaboratory

How to retrieve and post files to the Collaboratory, a Web service for communicating with other Mathcad users.

Resource Center and Electronic Books

If you learn best from examples, want information you can put to work immediately in your Mathcad worksheets, or wish to access any page on the World Wide Web from within Mathcad, choose **Resource Center** from the **Help** menu or click [icon] on the Standard toolbar. The Resource Center is a *Mathcad Electronic Book* that appears in a custom window with its own menus and toolbar, as shown in Figure 3-1.

Figure 3-1: Resource Center for Mathcad Professional. Topics available in Mathcad Standard and other editions differ slightly.

Note Each edition of Mathcad comes with one or more additional Electronic Books on the installation media. In addition, a variety of Mathcad Electronic Books are available from MathSoft or your local distributor or software reseller. To open an Electronic Book you have installed, choose **Open Book** from the **Help** menu and browse to find the location of the appropriate Electronic Book (HBK) file.

The Resource Center offers:

■ A comprehensive Mathcad Electronic Book containing a collection of tutorials, QuickSheet templates, examples, and reference information. Simply drag and drop information from the Resource Center into your own Mathcad worksheets.

■ Immediate access to Mathcad worksheets on MathSoft's World Wide Web site or other Internet sites.

■ Access to the full Web-browsing functionality of Microsoft Internet Explorer from within the Mathcad environment.

Tip To open the Resource Center automatically every time you start Mathcad, choose **Preferences** from the **View** menu, click the General tab, and check "Open Resource Center at startup."

Content in the Resource Center

Here are brief descriptions of the topics available in the Resource Center. Exact topics vary in Mathcad Professional, Mathcad Professional Academic, and Mathcad Standard Edition.

■ **Mathcad Overview**. A tour of Mathcad's features.

■ **Getting Started**. A hands-on introduction to Mathcad's unique "live" worksheet interface.

■ **Advanced Topics**. Getting more out of Mathcad's mathematical, graphing, and document creation features.

■ **QuickSheets**. Over 300 "recipes" take you through a wide variety of common mathematical tasks.

■ **Mathcad in Action.** Dozens of discipline- and industry-specific examples show how you can apply Mathcad to your work.

■ **Reference Tables**. Look up physical constants, chemical and physical data, and mathematical formulas you can use in your Mathcad worksheets.

■ **Mathcad Web Library**. A built-in connection to regularly updated technical content and resources for Mathcad users only.

■ **Collaboratory**. A connection to MathSoft's free Internet forum lets you consult with the world-wide community of Mathcad users.

Finding information in an Electronic Book

The Resource Center is a *Mathcad Electronic Book*—a hyperlinked collection of Mathcad worksheets. As in other hypertext systems, you move around a Mathcad Electronic Book simply by clicking on icons or underlined text. The mouse pointer automatically changes into the shape of a hand when it hovers over a hypertext link, and a message in the status bar tells you what will happen when you click the link. Depending on how the book is organized, the activated link automatically opens the appropriate section or displays information in a pop-up window.

You can also use the buttons on the toolbar at the top of the Electronic Book window to navigate and use content within the Electronic Book:

Button	Function
🏠	Links to the Table of Contents, the page that appears when you first open the Electronic Book.
🌐	Opens a toolbar for entering a World Wide Web address.
⇐	Backtracks to whatever document was last viewed.
⇒	Reverses the last backtrack.
⬅	Goes backward one section in the Electronic Book.
➡	Goes forward one section in the Electronic Book.
📑	Displays a list of documents most recently viewed.
🔍	Searches the Electronic Book for a particular term.
📋	Copies selected regions to the clipboard.
💾	Saves current section of the Electronic Book.
🖨	Prints current section of the Electronic Book.

Mathcad keeps a record of where you've been in the Electronic Book. When you click
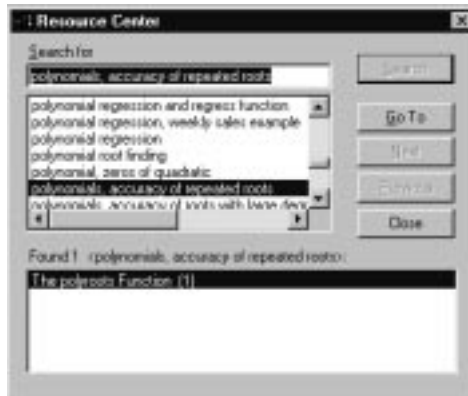
⇐, Mathcad goes back to the last section you opened and the page you were on when you left it. Backtracking is especially useful when you have clicked to look at a cross-reference and then want to return to the section you just came from.

If you don't want to go back one section at a time, click 📑. This opens a History window from which you can jump to any section you viewed since you first opened the Electronic Book.

Full-text search

In addition to using hypertext links to find topics in the Electronic Book, you can search for topics or phrases. To do so:

■ Click 🔍 to open the Search dialog box.

■ Type a word or phrase in the "Search for" text box. Select a word or phrase and click "Search" to see a list of topics containing that entry and the number of times it occurs in each topic.

■ Choose a topic and click "Go To." Mathcad opens the Electronic Book section containing the entry you want to search for. Click "Next" or "Previous" to bring the next or previous occurrence of the entry into the window.

Annotating an Electronic Book

A Mathcad Electronic Book is made up of fully interactive Mathcad worksheets. You can freely edit any math region in an Electronic Book to see the effects of changing a parameter, modifying an equation, etc. You can also enter text, math, or graphics as *annotations* in any section of your Electronic Book, using the menu commands on the Electronic Book window and the Mathcad toolbars.

Tip   By default any changes or annotations you make to the Electronic Book are displayed in an annotation highlight color. To change this color, choose **Color**⟹**Annotation** from the **Format** menu. To suppress the highlighting of Electronic Book annotations, remove the check from **Highlight Changes** on the Electronic Book's **Book** menu.

Changes you make to an Electronic Book are temporary by default: your edits disappear when you close the Electronic Book, and the Electronic Book is restored to its original appearance the next time you open it. You can choose to save annotations in an Electronic Book by checking **Annotate Book** on the **Book** menu or on the pop-up menu that appears when you click with the right mouse button. Once you do so, you have the following annotation options:

■ Choose **Save Section** from the **Book** menu to save annotations you made in the current section of the Electronic Book, or choose **Save All Changes** to save all changes made since you last opened the Electronic Book.

■ Choose **View Original Section** to see the Electronic Book section in its original form. Choose **View Edited Section** to see your annotations again.

■ Choose **Restore Section** to revert to the original section, or choose **Restore All** to delete all annotations and edits you have made to the Electronic Book.

Copying information from an Electronic Book

There are two ways to copy information from an Electronic Book into your Mathcad worksheet:

■ You can use the Clipboard. Select text or equations in the Electronic Book using

one of the methods described in "Selecting regions" on page 19, click 📋 on the Electronic Book toolbar or choose **Copy** from the **Edit** menu, click on the appropriate spot in your worksheet, and choose **Paste** from the **Edit** menu.

■ You can drag regions from the Book window and drop them into your worksheet. Select the regions as above, then click and hold down the mouse button over one of the regions while you drag the selected regions into your worksheet. The regions are copied into the worksheet when you release the mouse button.

Web browsing

If you have Internet access, the Web Library button in the Resource Center connects you to a collection of Mathcad worksheets and Electronic Books on the World Wide Web. You can also use the Resource Center window to browse to any location on the World Wide Web and open standard Hypertext Mark-up Language (HTML) and other Web pages, in addition to Mathcad worksheets. You have the convenience of accessing all of the Internet's rich information resources right in the Mathcad environment.
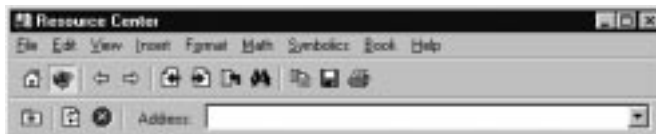
Note When the Resource Center window is in Web-browsing mode, Mathcad is using a Web-browsing OLE control provided by Microsoft Internet Explorer. Web browsing in Mathcad requires Microsoft Internet Explorer version 4.0 or later to be installed on your system. Although Microsoft Internet Explorer is available for installation when you install Mathcad, refer to Microsoft Corporation's Web site at **http://www.microsoft.com/** for licensing and support information about Microsoft Internet Explorer and to download the latest version.

To browse to any World Wide Web page from within the Resource Center window:

■ Click 🌐 on the Resource Center toolbar. As shown below, an additional toolbar with an "Address" box appears below the Resource Center toolbar to indicate that you are now in a Web-browsing mode:

■ In the "Address" box type a Uniform Resource Locator (URL) for a document on the World Wide Web. To visit the MathSoft home page, for example, type **http://www.mathsoft.com/** and press [**Enter**]. If you have Internet access and the server is available, you load the requested page in your Resource Center

window. Under Windows NT 3.51 or if you do not have a supported version of Microsoft Internet Explorer installed, you launch your default Web browser instead.

The remaining buttons on the Web Toolbar have the following functions:

Button	Function
⊛	Bookmarks current page for a later visit.
🔄	Reloads the current page.
⊗	Interrupts the current file transfer.

Note When you are in Web-browsing mode and click with the right mouse button on the Resource Center window, Mathcad displays a pop-up menu with commands appropriate for viewing Web pages. Many of the buttons on the Resource Center toolbar remain active when you are in Web-browsing mode, so that you can copy, save, or print material you locate on the Web, or backtrack to pages you previously viewed. When you click ⌂, you return to the Table of Contents for the Resource Center and disconnect from the Web.

Tip You can use the Resource Center in Web-browsing mode to open Mathcad worksheets anywhere on the World Wide Web. Simply type the URL of a Mathcad worksheet in the "Address" box in the Web toolbar.

Help

Mathcad provides several ways to get help on product features through an extensive on-line Help system. To see Mathcad's on-line Help at any time, choose **Mathcad Help** from the **Help** menu, click ? on the Standard toolbar, or press [**F1**]. Mathcad's Help system is delivered in Microsoft's HTML Help environment, as shown in Figure 3-2. You can browse the Explorer view in the Contents tab, look up terms or phrases on the Index tab, or search the entire Help system for a keyword or phrase on the Search tab.

Figure 3-2: Mathcad on-line Help is delivered in HTML Help.

You can get context-sensitive help while using Mathcad. For Mathcad menu commands, click on the command and read the status bar at the bottom of your window. For toolbar buttons, hold the pointer over the button momentarily to see a tool tip.

Note   The status bar in Mathcad is displayed by default. You can hide the status bar by removing the check from **Status Bar** on the **View** menu.

You can also get more detailed help on menu commands or on many operators and error messages. To do so:

■ Click an error message, a built-in function or variable, or an operator.

■ Press [**F1**] to bring up the relevant Help screen.

To get help on menu commands or on any of the toolbar buttons:

■ Press [**Shift**][**F1**]. Mathcad changes the pointer into a question mark.

■ Choose a command from the menu. Mathcad shows the relevant Help screen.

■ Click any toolbar button. Mathcad displays the operator's name and a keyboard shortcut in the status bar.

To resume editing, press [**Esc**] or [**Shift**][**F1**]. The pointer turns back into an arrow.

Tip   Choose **Tip of the Day** from the **Help** menu for a series of helpful hints on using Mathcad.
Mathcad automatically displays one of these tips whenever you start it if "Show Tips at Startup"
is checked.

Internet access in Mathcad

Many of the on-line Mathcad resources described in this chapter are located not on your
own computer or on a local network but on the Internet, the global network that includes
the World Wide Web.

To access these resources on the Internet you need:

■ Networking software to support a 32-bit Internet (TCP/IP) application. Such soft-
ware is usually part of the networking services of your operating system; see your
operating system documentation for details.

■ A direct or dial-up connection to the Internet, with appropriate hardware and
communications software. Consult your system administrator or Internet access
provider for more information about your Internet connection.

Before accessing the Internet through Mathcad, you also need to know whether you
use a *proxy server* to access the Internet. If you use a proxy, ask your system
administrator for the proxy machine's name or Internet Protocol (IP) address, as well
as the port number (socket) you use to connect to it. You may specify separate proxy
servers for each of the three Internet protocols understood by Mathcad: HTTP, for the
World Wide Web; FTP, a file transfer protocol; and GOPHER, an older protocol for access
to information archives.

Once you have this information,
choose **Preferences** from the **View**
menu, and click the Internet tab.
Then enter the information in the
dialog box.

The remaining information in the In-
ternet tab of the Preferences dialog
was entered at the time you installed
Mathcad, but you may modify it here
at any time:

■ Your name, which appears on
any messages you send to the
Collaboratory (see page 39).

■ Your Internet electronic mail address, which is sent with any Collaboratory messages.

■ The URL for the Collaboratory server you contact when you click the Collaboratory button on the Resource Center home page:

http://webserve.mathsoft.com/mathcad/

The Collaboratory

If you have a dial-up or direct Internet connection, you can access the MathSoft Collaboratory server from the Resource Center home page. The Collaboratory is an interactive World Wide Web service that puts you in contact with a community of Mathcad users. The Collaboratory consists of a group of forums that allow you to contribute Mathcad or other files, post messages, and download files and read messages contributed by other Mathcad users. You'll find that the Collaboratory combines some of the best features of a computer bulletin board or an on-line news group with the convenience of sharing worksheets and other files created using Mathcad.

When you open the Collaboratory, Mathcad displays a window as shown in Figure 3-3. A list of *forums* appears in an Explorer pane on the left, and available *subjects* in each forum are listed in the pane to the right. Scroll in the right-hand pane to see the date, size, and file name of each subject. If a subject is indented, it's a reply to the previous subject.
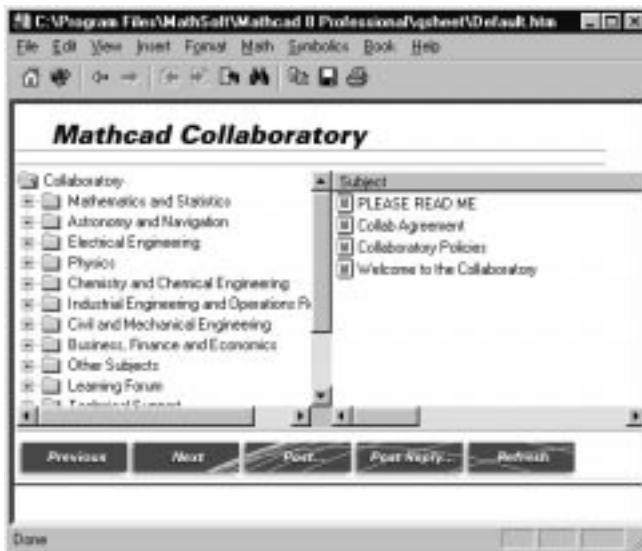

Figure 3-3: Opening the Collaboratory from the Resource Center. Available forums and subjects change over time.

Opening a worksheet or other file stored in the Collaboratory

To open a worksheet or other file stored in the Collaboratory:

- Click the Collaboratory button on the Resource Center home page.

- Select a forum from the list of forums in the Explorer tree in the left pane.

- Click a subject in the pane to the right.

Details about the author, title, and date of the subject appear in a pane below the strip of buttons in the Collaboratory. Depending on the subject, one of three things happens. If the file is text, the text appears directly in the pane below the Collaboratory buttons. Click "Post Reply" to reply to the message if you wish. If the file is a Mathcad worksheet, it opens in its own Mathcad window. If the file is of another type, you are prompted either to open or to save the file.

Click the "Next" button to view the next subject in the forum. Click "Previous" to view the subject before the current subject. Click "Refresh" to reload the current forum.

Sending a worksheet to the Collaboratory

If you want to send a worksheet you've created, or any other file, to the Collaboratory:

- Click the Collaboratory button on the Resource Center home page.

- Select a forum from the list of forums in the Explorer tree in the left pane. If you want to send the file as a response to an earlier subject, click the subject.

- Click "Post" or "Post Reply," as appropriate, to open the Send dialog box.

- Click "Send my Current File" if the worksheet you'd like to post is currently open in your Mathcad window. If it isn't, click "Send Another File."

- If you click "Send Another File," enter the path to the file in the File text box. Alternatively, click "Browse" to locate the file.

- Enter a title in the Title text box. This is the text that will appear in the list of subjects in the forum.

- Click "Send." Your file is then uploaded to the Collaboratory server, and the title appears in the Subjects pane.
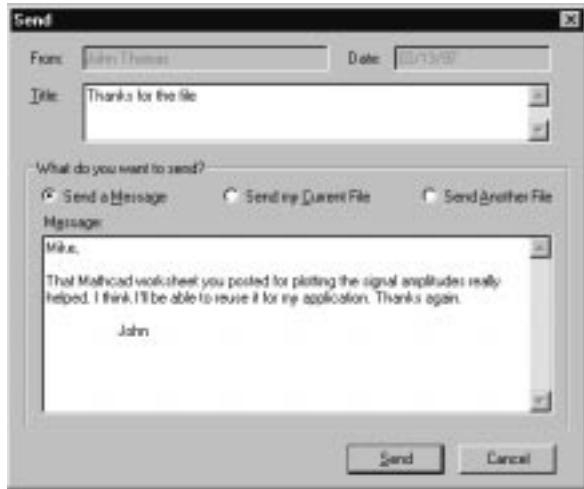
Tip   The Collaboratory is accessible to users of Mathcad 7 and higher. If you want Mathcad 7 users to be able to access a worksheet you post, you can first save it in a compatible format as described in "Saving your worksheet in Mathcad 7 or Mathcad 6 format" on page 102.

Sending a text message to the Collaboratory

To write a text message and send it to the Collaboratory:

■ Click the Collaboratory button on the Resource Center home page.

■ Select a forum from the list of forums in the Explorer tree in the left pane. If you want to send the message as a response to an earlier subject, click the subject.

■ Click "Post" or "Post Reply," as appropriate, to open the Send dialog box.

■ Click "Send a Message."

■ Enter a title in the Title text box. This is the text that will appear in the list of subjects in the forum.

■ Type your message into the Message text box.

■ Click "Send." Your message is then uploaded to the Collaboratory server, and the title appears in the Subjects pane.

Tip   Your name automatically appears in the details of any subject that you post to the Collaboratory. You can edit the user name as described in "Internet access in Mathcad" on page 39.

Deleting a subject from the Collaboratory

If you posted a file or a message to the Collaboratory but would like to remove it:

■ Click the Collaboratory button on the Resource Center home page.

■ Select a forum containing the subject you wish to delete from the list of forums in the Explorer tree in the left pane.

■ Click with the right mouse button on the topic you want to delete and choose **Delete** from the pop-up menu.

Note   You may only delete subjects that you previously posted. In addition, if your file or message has received any responses, you won't be able to delete it.