Davidson POWER TOOLS

THE CRUNCHER™

CD-ROM VERSION
Includes 10 additional project templates

Look what the critics are saying!!!

"5 out of 5 Mouse Rating....**The Cruncher** will surprise people who think of spreadsheet programs as dull work applications. Its jazzy music and appealing characters provide a fun introduction to spreadsheets for everyone from ten-year-olds to spreadsheet-leery adults."
— MacUser

"Parents, heed this warning: Some educational computer software programs are extremely addictive."
— Los Angeles Times

"With sound and animation, the program is intended for children at least 10 years old, but many adults will find it to be all the spreadsheet they will ever need if only they can admit it."
— The New York Times

"Whoever said math can't be fun hasn't experienced **The Cruncher**."
— KidSoft

Ages 10 to Adult

The Spreadsheet That's Fun And Easy To Use.

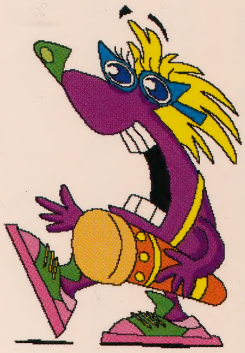
Davidson.
Teaching Tools From Teachers

NEW!

THE CRUNCHER™

The Spreadsheet That's Fun and Easy to Use

It computes, it graphs, it talks, it teaches math and–it's fun! **The Cruncher** puts you in command of a powerful information-age tool ready to help you solve problems and apply math concepts. This easy-to-use program combines a full-featured spreadsheet with simple step-by-step tutorials to get you started quickly. Plus, real-world projects are included to illustrate exactly how you can use math and spreadsheets in your everyday life. So stop merely calculating numbers and start crunching them!



Features:

- Full-featured, easy-to-use spreadsheet, powerful enough for any application from homework to family budgets
- Step-by-step animated tutorials help you get up and running quickly
- 10 real-world projects and templates
- Creates colorful charts and graphs
- On-line notebook
- Printable graphs, spreadsheets, and project templates
- Reads any words or numbers aloud

Developed by Berkeley Learning Technologies, Inc.
Davidson & Associates, Inc.
P.O. Box 2961 • Torrance, CA 90509
(800) 556-6141 • Customer Support
(800) 545-7677 • Sales

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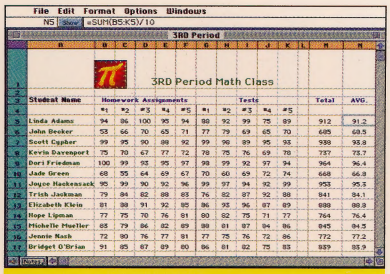
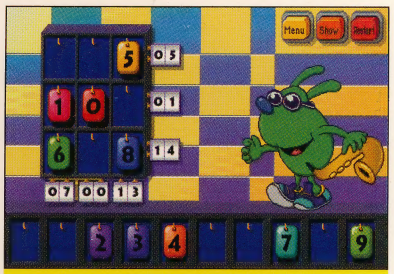
THE CRUNCHER
WIN/MAC CD-ROM
ISBN 0-7849-0410-3
DAV 499092

Easy Enough For Kids—Powerful Enough For Adults!



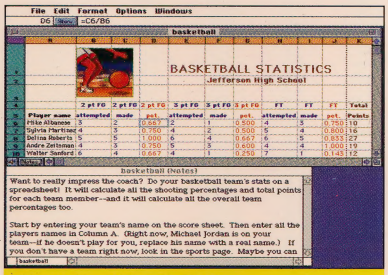
Turn On The Power

The Cruncher includes a fully functional spreadsheet with all the features you would expect and more! The most frequently used mathematical functions are already included. You've got the power to easily analyze everything from homework assignments to investment options.



What's A Spreadsheet?

Step-by-step graphic tutorials teach you everything you need to know to make the spreadsheet work. From basic spreadsheet logic to writing equations and formulas, these lively tutorials help you master spreadsheet fundamentals the fun and easy way!

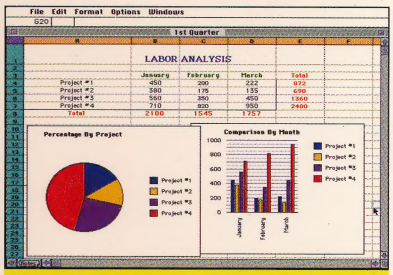


What Do I Use It For?

Have you ever wondered how long it would take to save for a Walkman or how to figure out basketball statistics? It's easy with **The Cruncher**. Ten ready-to-use project templates are included to let you jump right into spreadsheet fun. Projects include:

- Magic Squares
- Can We Get a Pet?
- Travel Planner
- Put Your Money to Work
- Recipe Converter
- Party Planner
- I Want a Walkman™
- Baseball Statistics
- Survey
- Basketball Statistics

Or create your own templates!

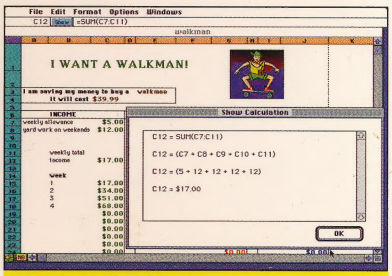


Picture This!

The Cruncher allows you to quickly visualize and analyze your results with pie charts, bar graphs, line graphs, and scatter charts.

The Sticker Picker

A whole library of animated illustrations and sound effects are included to liven up your spreadsheets, charts, and graphs.



How'd It Do That?

If you don't understand how **The Cruncher** calculated a number, a built-in math tutor is at your command. Just select any cell and then click SHOW. A window will appear that shows a breakdown of each step in the equation.

It Even Talks!

Highlight any words or numbers in your spreadsheet, and **The Cruncher** will read them back to you. This text-to-speech technology provides a great way to double-check your data.

Ages 10 to Adult Satisfaction Guaranteed!

See details on top panel.

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To register this product and be eligible for **FREE CUSTOMER SUPPORT and important product update information,** please fill out the following:

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Enter Program's Bar Code Number from back of box in space below.

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Product Platform:
☐ DOS ☐ Windows ☐ Macintosh ☐ Apple ☐ Other

Media Platform:
☐ Floppy Disk ☐ CD-ROM

What MOST influenced your purchase?
☐ Package ☐ Product Review ☐ Salesperson ☐ Friend ☐ Advertisement
☐ Promotional Offer ☐ Davidson Brand Name ☐ Teacher/School ☐ Newspaper ☐ Other

Computer Type:

IBM/Compatible:	☐ 286	☐ 386	☐ 486	☐ Pentium	☐ Power PC	☐ Other
Macintosh:	☐ Classic	☐ LC	☐ Quadra	☐ Performa	☐ Powerbook	☐ Other

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INSTALLING *THE CRUNCHER* FOR MACINTOSH CD-ROM

To use *The Cruncher* for Macintosh, you will need:

Mac Classic or above (black and white, 16-color or 256-color)

System 7.0 or higher	4 MB of RAM with at least 2 MB free
CD-ROM drive	Printer (highly recommended)

To run from your CD-ROM drive:

- Place *The Cruncher* CD-ROM into your CD-ROM drive.
- Double-click the CD-ROM icon.
- Double-click *The Cruncher* icon.

To install to your hard disk:

To install and run *The Cruncher* from your hard drive, you need 7.6 MB of space free on your hard disk. You may install either the entire program or only certain modules (using the Custom install option). Leaving out the Tutorials and Projects will reduce the hard drive space required to less than 2 MB. (You may also choose to run the program entirely from the CD-ROM. See above.)

- Place *The Cruncher* CD-ROM into your CD-ROM drive.
- Double-click the CD-ROM icon.
- Double-click the **Install to Hard Drive** icon.
- Click Continue.
- Read the instructions explaining the various options for installation and click either Continue or Custom.
- If you select a Custom installation, click the files you wish to install, then click Install.
- At the dialog box, select the Desktop button, then select the drive where you want *The Cruncher* files to be installed. Do *not* select your CD-ROM drive.
- Click Install. Files will be installed into a folder called *The Cruncher*.
- At the "Installation was successful" screen, select Quit.

To run from your hard disk:

- Locate the drive where *The Cruncher* files were installed.
- Double-click *The Cruncher* icon (if you did a full installation) or the folder icons (if you did a partial installation).

INSTALLING *THE CRUNCHER* FOR WINDOWS CD-ROM

To use *The Cruncher* for Windows, you will need:

16 MHz 386 processor or faster — Windows 3.1 or higher
256-color or 16-color VGA graphics — 4 MB of RAM
Double-speed CD-ROM drive — A mouse
Windows-compatible sound card recommended
Printer (highly recommended)

To run from your CD-ROM drive:

If you choose to run the program from your CD-ROM drive, we must install one small file to your hard disk (much less than 1 MB of space).

- Start Windows.
- Place *The Cruncher* CD-ROM into the CD-ROM drive.
- Select **Run...** from the Program Manager File menu.
- Type d:\setup and press ENTER or click OK. (If your CD-ROM drive is something other than D, type that drive letter instead of D.) A dialog box will appear.
- Select **Running The Cruncher from your CD-ROM drive**.
- Press ENTER or click OK to accept the default destination, or type in a new destination. (Do *not* select your CD-ROM drive; you cannot write to the CD-ROM disc.)
- Press ENTER or click OK when the "Installation Complete" dialog box appears, and follow the remaining prompts.
- Double-click the **Read Me** icon to see up-to-the-minute tips on running the program; double-click *The Cruncher* icon to begin.

To install to your hard disk:

Installing *The Cruncher* to your hard disk requires at least 14 MB of free hard disk space for the entire program. If you do not have this much available, you can run the program from the CD-ROM (see above) or select Custom Installation to install only certain files to your hard drive.

- Start Windows.
- Insert *The Cruncher* CD-ROM into your CD-ROM drive.
- Select **Run...** from the Program Manager File menu.
- Type d:\setup and press ENTER or click OK. (If your CD-ROM drive is something other than D, type that drive letter instead of D.) A dialog box will appear.

- Select **Install The Cruncher to your hard drive.**
- Select either **Quick** or **Custom** installation. (Quick installation installs the entire program; Custom allows you to choose to install only certain modules of the program to your hard drive.)
- If you selected Custom, choose the modules you want to install by clicking the box (or boxes), and click OK. The setup program will install *The Cruncher* files to your hard drive.
- When installation is complete, click OK.
- Double-click the **Read Me** icon to see up-to-the-minute tips on running the program; double-click *The Cruncher* icon to begin.

A NOTE TO ALL MACINTOSH AND WINDOWS USERS

Described below are 10 additional projects we've added to the CD-ROM version of *The Cruncher*. The original 10 projects are described on page 40 of the manual.

How Did They Ever Figure Out Pi? – Discover the origins and use of the mysterious pi (not peach or apple, but the mathematicians' pi!)

How Much Do We Eat and Drink in a Year? – Find trends in consumption for certain foods and beverages in the U.S. since 1970. Use the information to examine your own eating habits.

Make a Calendar – Learn how to create your own calendar using a spreadsheet!

Money, Money – Investigate the distribution of pennies by date in your community. Calculate the cost of actually making currency.

Mystery Population – Search for the clues to find out where and when a population of people existed in the U.S. by analyzing census data.

Number Patterns – Play two number games and discover the formulas that make them happen.

Pulse Rate After Exercise – Learn how your pulse rate changes depending on the activity you are doing.

Taking Cans and Bottles to the Recycling Center – You know the ecological benefits of recycling. Discover the financial rewards.

Test Scores – Track your test scores over a semester and calculate your averages.

Which Popcorn Should I Buy? – Determine the best brand of popcorn to purchase by comparing price and volume.

TWO NEW POWER TOOL DEMOS (MACINTOSH ONLY) *THE MULTIMEDIA WORKSHOP* AND *FLYING COLORS*

Davidson Power Tools are designed to empower students to think, analyze and communicate. *The Multimedia Workshop*, a multimedia tool for papers, projects, and presentations, will provide your students with the edge they'll need for the Information Age. *Flying Colors* lets anyone, from beginner to professional, create astonishing masterpieces.

Take a look at the demos on *The Cruncher* CD-ROM. The demos are only the beginning. *The Multimedia Workshop* (CD version) contains fully-functioning writing, painting, and video workshops; a library of over 300 photographs, 600 pieces of clip art, 100 QuickTime ™ movie clips, 220 sound effects and 40 music clips; built-in templates, a spell checker and thesaurus; and full print and save capabilities. *Flying Colors* contains over 1000 images, over 100 gradients, and 148 wild patterns.

To install and run *The Multimedia Workshop* demo, you need System 7, 256 colors, a CD-ROM drive, 2 MB of RAM free, and 7.5 MB of free hard disk space.

Double-click the MMW Demo Installer icon. During installation, you will be asked to save the MMW Overview folder. At the dialog box, select the Desktop button. Open your hard drive (do not select the CD-ROM drive). Click the Save button. After completing the installation, restart your computer.

To run the demo, double-click *The Multimedia Workshop* icon from the CD-ROM drive. If you have 8 MB of RAM or greater or are running in Thousands of Colors mode, double-click *The Multimedia Workshop* (16 bit) icon. To access the Paint Workshop, double-click the Paint Workshop icon from the CD-ROM drive (use the same memory guidelines).

The Multimedia Workshop demo includes an overview video presentation. Start by watching the overview, then explore each workshop. To run the overview, double-click *The Multimedia Workshop* icon and select the Video Workshop Sequencer (by clicking the video camera icon). Select **Open** from the File menu. Locate and open the MMW Overview folder on your hard drive. Open the file called Overview. Once the overview appears on-screen, select **Auto Play** from the Playback menu. You will be asked to locate the Overview QuickTime movie. Select and import the Overview QuickTime file from the MMW Overview folder. Now sit back and enjoy this multimedia presentation!

To run the *Flying Colors* demo, double-click the *Flying Colors* icon. Have fun!

Davidson POWER TOOLS

THE CRUNCHER™

Macintosh and Windows Versions

Ages 10 to Adult

The Spreadsheet That's Fun And Easy To Use.

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THE DAVIDSON COMPANY CHARTER

At Davidson, we are committed to excellence in education. We strive for excellence in the products we create; we strive for excellence in the service we provide to our customers; we strive for excellence in the way in which we conduct our business. We believe that education enhances the quality of life and that our contribution to the enhancement of education will enrich the customers we serve.

Our Guiding Principles:

- Quality is our first priority.
- Customers are the focus of all our efforts.
- Seeking a better way is essential to our success.
- Employee involvement is our way of life.
- Dealers and suppliers are our partners.
- Integrity cannot be compromised.

DSS 13319

INSTALLING THE CRUNCHER – WINDOWS

To run *The Cruncher,* you will need:

- ✓ 386/16 MHz or faster IBM or MS-DOS compatible computer
- ✓ Hard disk with at least 13 MB of free space (The program can be run using only 4 MB of hard disk space if you do not install the tutorials and the projects.)
- ✓ 4 MB of available RAM
- ✓ Windows 3.1 or higher
- ✓ VGA (16 or 256 colors)
- ✓ Mouse
- ✓ Sound card (Windows compatible)
- ✓ Printer (highly recommended)

You must install *The Cruncher* onto your hard disk in order to run it. To install *The Cruncher:*

- Start Windows as usual.
- Insert the disk labeled **Disk 1** into drive A (or drive B).
- Select **Run** from the Program Manager File menu.
- Type **a:\setup** (or b:\setup) and press ENTER.
- At the Setup Program dialog box, press ENTER.
- Choose Quick Install to install the whole program or choose Custom Install to select the items you want installed.
- Press ENTER when the Setup Succeeded dialog box appears.
- The Install program will create a new program group called *The Cruncher.* (If you are using a shell program other than the Windows Program Manager, consult that documentation for information on how to access new programs.)

To start *The Cruncher:*

- From the Program Manager, double-click  to begin.

The Cruncher

INSTALLING THE CRUNCHER – MAC

To run *The Cruncher,* you will need:

- ✓ Mac Classic or above
- ✓ System 7.0 or higher
- ✓ At least 2 MB of available RAM
- ✓ Hard disk with at least 8 MB of free space (The program can be run using only 2 MB of hard disk space if you do not install the tutorials and the projects.)
- ✓ Printer (highly recommended)

You must install *The Cruncher* onto your hard disk in order to run it.
To install *The Cruncher:*

- Insert the disk labeled **Install 1** into your disk drive and double-click the installer icon.
- Follow the on-screen directions to install the software onto your hard disk. The installer will create a folder called *Cruncher 1.x* and install all the necessary files.

To start *The Cruncher:*
Find *The Cruncher* icon on your desktop and double-click it.


The Cruncher

Another way to begin is to double-click the icon of an existing tutorial, project, or document created using *The Cruncher.*

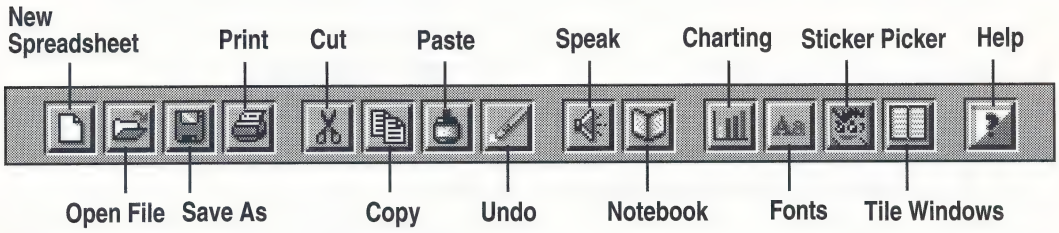

Tutorials


Projects

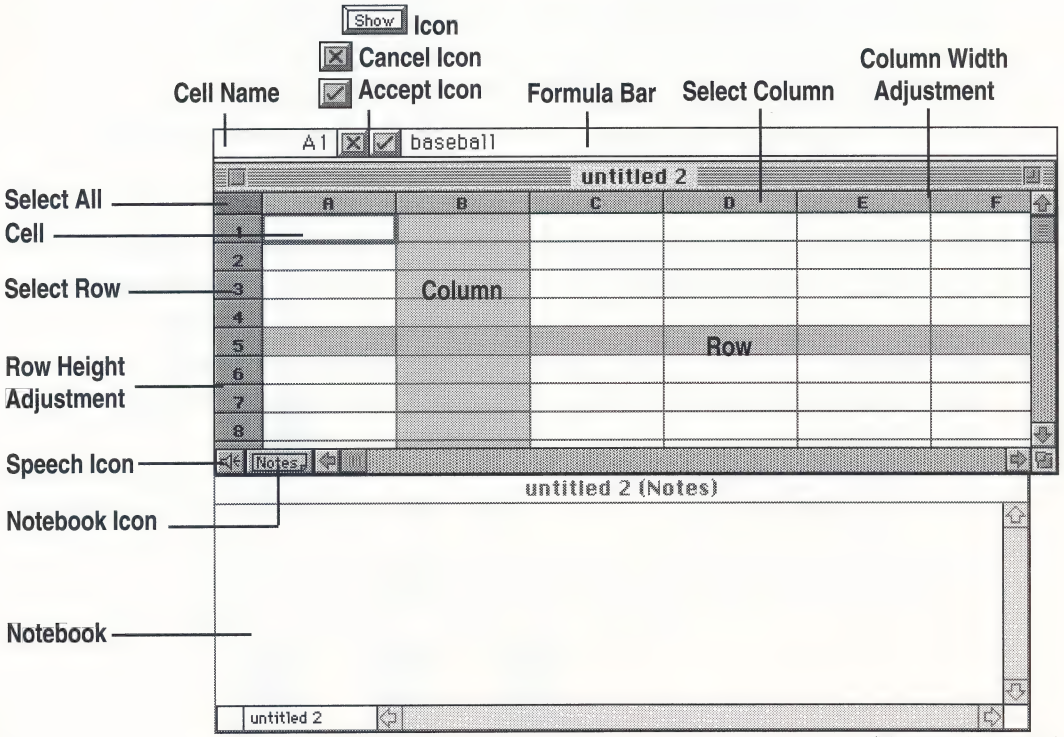

Documents

TABLE OF CONTENTS

DIAGRAM



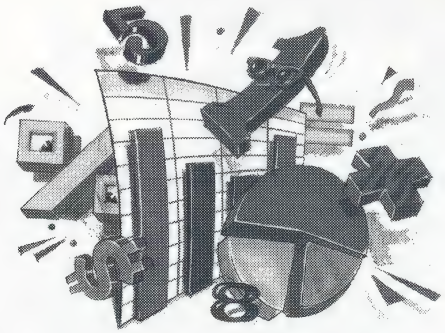
(Windows version only)



(Macintosh version)

See "*The Cruncher* Quick Reference" on pages 56–57 for more information.

WELCOME TO THE CRUNCHER!



The Cruncher is more than just a spreadsheet program that's fun and easy to use. With *The Cruncher,* a beginner can become familiar with one of the most useful types of computer software there is. Don't be fooled by how simple it is to use; underneath its inviting surface is plenty of power to meet the needs of almost any spreadsheet user.

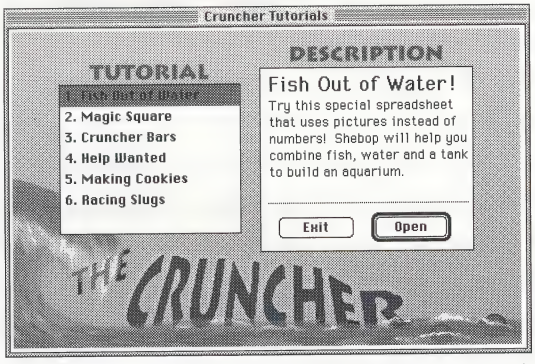
Some of the unique features of *The Cruncher* are:

- ✓ Step-by-step tutorials to introduce you to using a spreadsheet and the special features of *The Cruncher.*
- ✓ 10 projects: predesigned templates for commonly used spreadsheet activities to make you immediately productive.
- ✓ An on-screen notebook for your notes, reports, instructions, etc.
- ✓ Colorful stickers that can include sound and animations.
- ✓ A helpful Show feature that breaks down each step of the problem-solving process and illustrates what the computer is doing at every step.
- ✓ Easy-to-use charting that displays your data graphically.
- ✓ Powerful text-to-speech capabilities that will read back to you both text and numbers from your document.
- ✓ An easy-access toolbar to enhance efficiency (in the Windows version).

USING THE CRUNCHER

Tutorials

Unless you are already an experienced spreadsheet user, we recommend that you start with the tutorials, which will teach you everything from the basics to using some of the more powerful features of the spreadsheet. Appendix C lists the skills taught by each tutorial.



(Macintosh version)

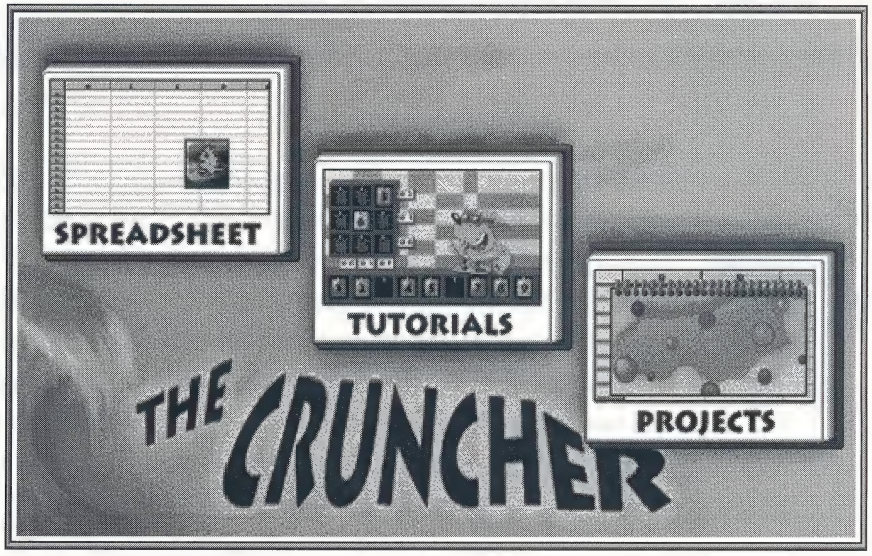
Projects

Once you are comfortable using *The Cruncher,* take a look at the projects. The projects are examples of useful things that can be done with *The Cruncher.* Appendix D lists the projects.

Using Help

On-line help is available at any point in the program. In the Windows version, select **Help Index** from the Help menu or click on the toolbar or press F1 on your keyboard. In the Macintosh version, select **Cruncher Help** from the menu. For more information, see page 22.

When *The Cruncher* starts, you will see the program's main screen.

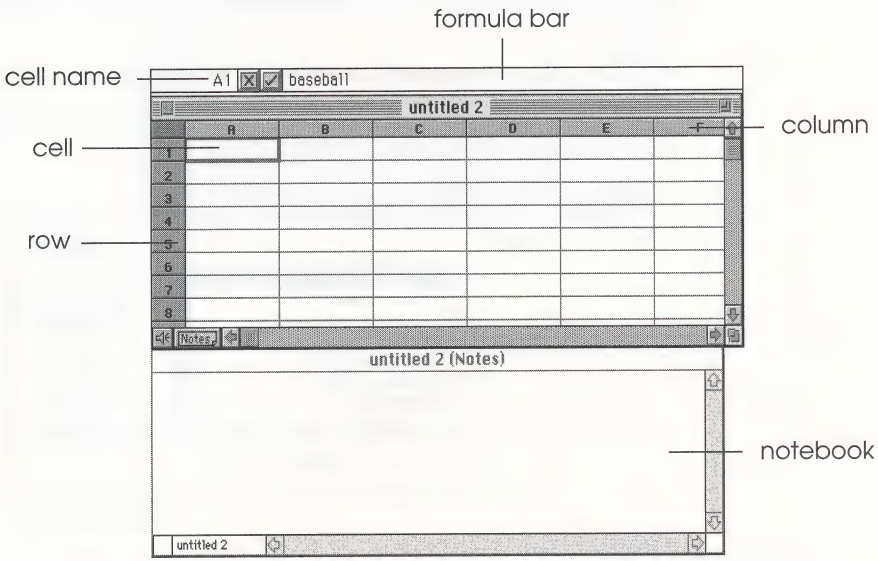


- Click **Spreadsheet**, **Tutorials**, or **Projects**. If you select Tutorials or Projects, you will be given a chance to choose the file you wish to open.

(Macintosh version)

THE SPREADSHEET

A spreadsheet is organized in a grid made up of many *rows* and *columns.* Rows are horizontal and are numbered along the left side. Columns are vertical and are labeled across the top of the screen with letters. Each small rectangle is called a *cell;* cells are where you place information in your spreadsheet. Cells are created by the intersection of rows and columns. Each cell has a unique name that begins with its column letter followed by its row number. Therefore, the cell in the upper left corner of the spreadsheet is A1, and the one to its right is B1. The cell below A1 is A2.



The *formula bar* at the top of the screen is where you type information that is to go into a particular cell. At the far left of the formula bar is the highlighted cell's name. Two buttons will appear

once you begin to type information into the formula bar. The button cancels what you have typed into the formula bar, and the button accepts it by putting it into the cell. You can edit any previous entry you have made by clicking the cell and then revising what appears in the formula bar.

The *toolbar* will allow you quick access to features without having to go to the menu bar (Windows version).

The *notebook* is a miniature word processor attached to your spreadsheet. It can hold anything you want: comments about your spreadsheet, stickers, or a write-up of a project or report.

Create, Save, Open, and Exit

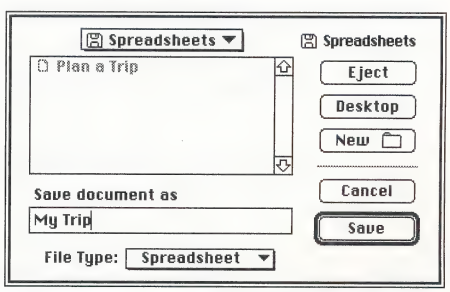
Creating a New Spreadsheet

- Select **New Spreadsheet** from the File menu. A new spreadsheet and notebook will open.

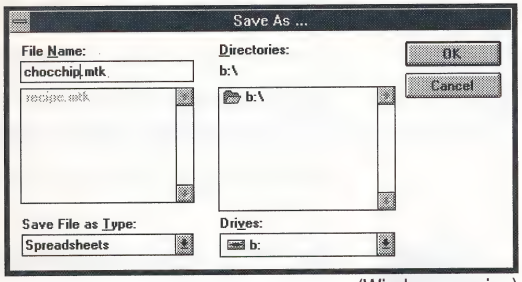
Saving a Spreadsheet

- Select **Save** from the File menu. Type in a name for your document if you haven't already named it. (Save will not be available until you have made changes to your spreadsheet.)

If you want to save your spreadsheet under a new name, select **Save As** from the File menu. A dialog box will appear, allowing you to rename your document and designate where to save it.



(Macintosh version)



(Windows version)

Opening a Spreadsheet

- Select **Open** from the File menu. A dialog box will appear where you can specify the location and document you wish to open.

Closing a Spreadsheet

- Select **Close Window** from the File menu. You can also click the close window box in the upper left corner of the Spreadsheet window.

Exiting the Program

- Select **Exit** or **Quit** from the File menu. If you haven't saved your spreadsheet, you will be given a chance to save it.

Entering Information Into the Spreadsheet

Enter information into the spreadsheet by clicking a cell and typing a number, a label, or a formula. Whatever you type will appear on the formula bar.

To enter information into the spreadsheet:

- Click a cell.
- Type what you want to appear in the cell. Valid entries are any text, numbers, or formulas. (See page 7 for more information.)
- To enter your data, click  , press TAB, or press RETURN. To cancel the entry and clear the formula bar, click .

Composing a Formula

Formulas always begin with an equal sign (=). Following the equal sign can be any combination of numbers, cell references, functions, and arithmetic operators. For example, the following are all valid formulas:

=2+3	adds 2 and 3
=A1+B1	adds the contents of cells A1 and B1
=10*C5	multiplies 10 times the contents of cell C5

To enter a formula in a cell:

- Select a cell.
- Type an equal sign (=) to begin the formula.
- Enter your formula.
- To finish your entry, click ☑ or press RETURN. To cancel the entry and clear the formula bar, click ☒.

(If what you entered is a valid formula, the result of the calculation will appear in the cell. If the cell displays the formula you entered instead of a value, that means *The Cruncher* cannot understand your formula and you should check it for errors.)

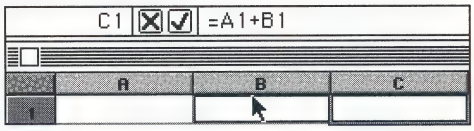
You can specify a *range,* to include a group of cells in a formula. A range can be any row or column of cells. Ranges are defined by the coordinates of two cells separated by a colon. For example, C1:C4 is a range that includes cells C1, C2, C3, and C4. Functions in *The Cruncher* only operate on ranges of cells that fall within a single row or column. Here are some examples of ranges used in formulas:

=MAX(A1:A8)	finds the largest value in cells A1 through A8
=SUM(C3:C10)	adds all the cells from C3 to C10

Shortcut for Entering Cell References in Formulas

There is a powerful point-and-click shortcut built into *The Cruncher.*

- Select a cell.
- Type an equal sign (=) to begin the formula.
- Click a cell, and its name will appear in the formula bar.



- To select a range of cells, click and drag horizontally or vertically, and the cell reference will appear in the formula bar. (For example, if you drag over A1, B1, and C1, you will see **A1:C1** appear in the formula bar. Remember to select or type a function first.)
- Continue typing to complete the formula.

Arithmetic Operators and Functions in Formulas

Not only does *The Cruncher* handle all of the common arithmetic operators, but it also has more advanced operators and built-in functions. The following are the arithmetic operators that *The Cruncher* understands:

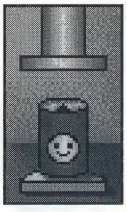
+	Addition	/	Division
-	Subtraction	^	Raise a number to a power (e.g., 3 squared would appear as 3^2)
*	Multiplication		

Functions are used in formulas just like arithmetic operators. See pages 27–34 for a description of functions and how to use them.

Editing Your Work

To change the contents of a cell:

- Click it to select it. (The contents of the selected cell will appear in the formula bar.)
- Type your changes into the formula bar and click ☑ or press RETURN.



Undo

To reverse the last action taken, select **Undo** from the Edit menu. If the action cannot be undone, the command will be unavailable (dimmed).

Cut

To remove anything and save it to the Clipboard:

- Click and drag to select the cells or any item that you want to cut.
- Select **Cut** from the Edit menu. The Clipboard holds only one cut at a time, so paste before you make another cut.

Copy

To make a copy of anything and save it to the Clipboard:

- Click and drag to select the items you want to copy.
- Select **Copy** from the Edit menu. The Clipboard holds only one copy at a time, so paste before you make another copy.

Paste

Paste lets you finish what you started with Cut and Copy by inserting the contents of the Clipboard wherever you indicate, such as another location in the spreadsheet, in the notebook, or in a different document.

- Click to select the place where you want to paste.

- Select **Paste** from the Edit menu, and your information will appear in this new location.

Clear

Clear removes the contents of a cell or group of cells, a sticker, or a chart. Use it to completely delete items you no longer want.

- Select the cell(s) or other item(s) that you wish to empty or remove.
- Select **Clear** from the Edit menu.

Select All

Select All selects the entire contents of the spreadsheet.

- Choose **Select All** from the Edit menu, or click  in the upper left corner of the spreadsheet (where the row headers meet the column headers). **Note:** Select All will not include charts and stickers.

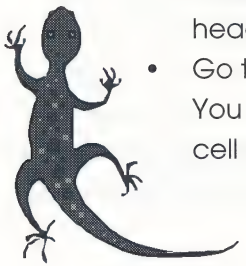
Erase

- Highlight what you want to erase in the formula bar; press DELETE, then click  or press RETURN.

Insert Row, Insert Column

The Insert Row and Insert Column commands let you add a row or column, or multiple rows and columns, of blank cells anywhere you want in your spreadsheet. To insert a new row or column:

- Select the row below or the column to the right of where you want to place your new row or column. To select a row or column, click the number or letter in the row or column header.
- Go to the Edit menu and choose **Insert Row** or **Insert Column**. You will get a new row or column in your spreadsheet, and all cell references will be updated.



Delete Row, Delete Column

Delete Row and Delete Column remove an entire row or column, or multiple rows and columns, from your spreadsheet.

To delete a row or column:

- Select the row or column you want to erase by clicking the number or letter in the row or column header.
- Go to the Edit menu and choose **Delete Row** or **Delete Column**. The row or column will be erased, and cell references will be adjusted to their new locations.

Fill Down, Fill Right

Fill Down and Fill Right are quick ways to copy the contents of a cell to a range of cells without pasting again and again. Any type of cell data can be copied. Formulas contained in cells are automatically adjusted.

For example, if you select cells B1 through B6 and the formula in cell B1 is "=A1+2", then, after you fill down, cell B2 will show the result of "=A2+2", cell B3 will show the result of "=A3+2", etc.

B1 Show =A1+2

	A	B
1	3	5
2	4	6
3	5	7
4	6	8
5	7	9
6	8	10

To Fill Down or Fill Right:

- Click the cell you want to copy, and drag over the cells you want to fill. The entire range of cells should appear highlighted.
- Go to the Edit menu and choose either **Fill Down** or **Fill Right**. The contents of the first cell will be copied into each of the other cells selected. If cell references are included in what is to be copied, they will change to reflect their new location.

FORMATTING

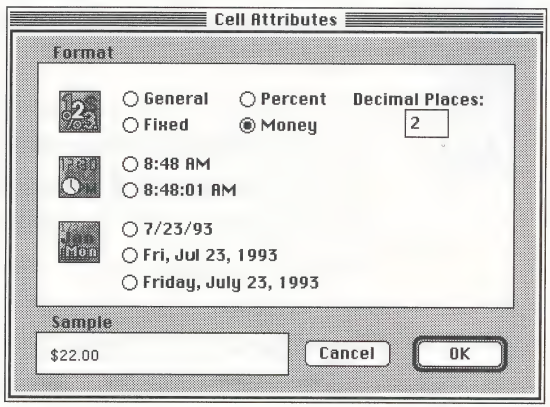
Use these formatting options to change the style and appearance of what is in a cell, a range of cells, or the entire spreadsheet.

Cell Attributes

Set Cell Attributes to indicate preferences for the layout of numerical information; these have no effect on text.

To set Cell Attributes:

- First, select the cell or range of cells you want to format. If you want to format the entire spreadsheet, go to the Edit menu and choose **Select All**.
- Next, go to the Format menu and choose **Cell Attributes**, or for a single cell, double-click it, and the Cell Attributes dialog box will appear.



(Macintosh version)

There are three categories to choose from: number, time, or date.

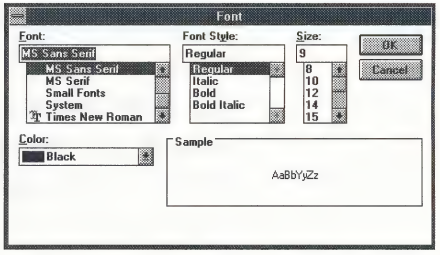
- Select a number format. A new spreadsheet always begins with the General number format selected.
  - General – 45.93
  - Fixed – 45.9 (the decimal place is set to 1)
  - Percent – 4600% (the decimal place is set to 0)
  - Money – $45.93 (the decimal place is set to 2)

- Select a time format. Time can be displayed in either hour:minute (11:31) or hour:minute:second (11:31:45) formats.

- Select a date format. Dates can be displayed three ways: with slashes (8/5/95), abbreviated (Thu, Aug 5, 1995), or written out (Thursday, August 5, 1995).
- Click OK to make the change. Click Cancel to close the dialog box without making a change.

Font, Size, Style, and Color

In order to change your font, font size, font style, or font color in the Windows version, access the Font & Color submenu under the Format menu. A dialog box will appear where you can make any of these changes.

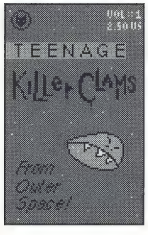


(Windows version)

In the Macintosh version, the Format menu contains Font, Font Size, Font Style, and Font Color submenus from which to make your choices without a dialog box appearing.

Align Text

The Align Text submenu lets you determine the position of the text (words, numbers, formulas, etc.) in a cell. Text can be aligned to the left margin, right margin, or center (i.e., left justified, right justified, or centered). The default alignment is left justified.



To change the alignment of text within a cell:

- Select the cell or range of cells you want to format.
- In the Format menu, go to the Align Text submenu and select a text alignment (for example, centered).

Cell Borders

The Add Border submenu lets you draw horizontal or vertical lines, or make borders for cells or blocks of cells in your spreadsheet. The choices are Outline, Top, Left, Bottom, Right, and None.

To add a border around a cell or range of cells:

- Select the cell or range of cells.
- Select a border type from the Add Border submenu of the Format menu.

Row and Column Dimensions

You can use drag bars in row and column headers to change the dimensions of individual columns and rows. If you want more precise control over your changes or want to change a number of rows or columns at one time, you can use the **Row Height** and **Column Width** menu choices on the Format menu.

To change row height or column width using the drag bars:

- Move the cursor to the bottom of the row heading or the right of the column heading you want to resize; it will change into ✢.
- Click and drag to make the row or column smaller or larger. Release the mouse button when you are done.

To change row height or column width over a larger area of the spreadsheet:

- Select the columns or rows to be changed by clicking and dragging on their headings. The selected cells will be highlighted.
- Choose **Row Height** or **Column Width** from the Format menu. A dialog box will appear.
- Enter the dimension you desire and click OK.

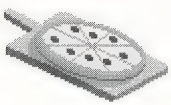
Viewing and Editing Options

Hide Grid

You can choose whether or not to have the grid lines show in your spreadsheet. To hide grid lines, simply select **Hide Grid** from the Options menu. A ✓ will appear next to the menu choice and the grid will no longer be visible. To show the grid again, reselect **Hide Grid** and the grid will become visible.

Show Formulas

If you wish, you can show the formulas instead of the calculated values in your spreadsheet.



- Select **Show Formulas** from the Options menu. A ✓ will appear next to Show Formulas on the menu until it is selected again and turned off.

Freeze Row and Column Headings

If you have a large spreadsheet with more than one full screen of information, you may want to keep rows at the top or columns at the left of your spreadsheet fixed for reference.

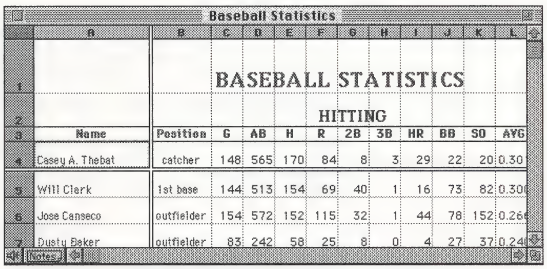
For example, you might have a spreadsheet with a list of names in the first column and information about each name across the spreadsheet. By freezing the first row, you can ensure that the name will always remain visible when you scroll across the spreadsheet. That way you never lose track of who the information is about.

In order to freeze rows or columns:

- Scroll within your spreadsheet so that the rows or columns you want to see all the time are visible at the top left of your screen.

- Click the cell that is to be at the intersection of the frozen rows and columns. If you wish to have only rows or only columns frozen, then click the row or column header.
- Select **Freeze** from the Options menu.

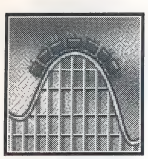
- Now scroll in your spreadsheet, and notice that the top row or left column stays fixed.



To unfreeze rows or columns that have been previously frozen, reselect **Freeze** from the Options menu. (Note: When freeze is in effect, you cannot create, resize, or move stickers or charts. Turn off Freeze in order to make changes to stickers or charts, then turn Freeze back on.)

Working With Multiple Documents

The Cruncher can open more than one document at a time. A document includes the contents of the spreadsheet and its associated notebook. Only one document can be active at any one time. The active document is always the one whose spreadsheet or notebook window is active and on top.



There are two ways to make a spreadsheet active: by clicking one of its windows or by selecting its name from the Windows menu. The Windows menu lists all open windows. To make a document active, select either its spreadsheet window or its notebook window from the menu.

Arranging Windows on the Screen

Windows can be arranged on the screen either by using standard window manipulation (dragging them by their drag bar or title bar) or by using the Tile Windows menu choice. Tile Windows will automatically align your documents either horizontally or vertically, spacing them evenly so that they fill the whole screen.

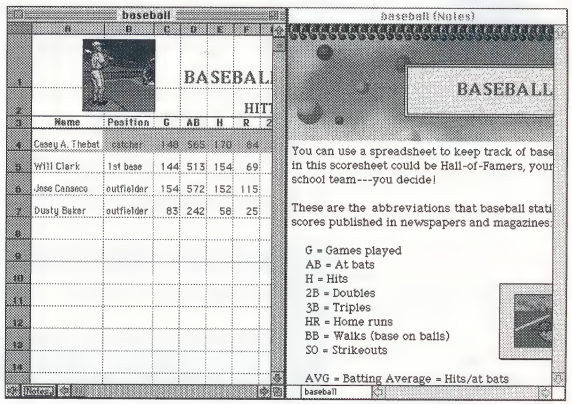
To use Tile Windows to arrange windows on the screen:

- Select **Tile Windows** from the Windows menu. The Tile Windows dialog box will appear.
- Select either Vertically or Horizontally to indicate which way you'd like the windows arranged. If you also want to have notebook windows tiled, click the Include Notebook check box.
- Once you have made all of your selections, click OK and your document windows will all be rearranged.

Hiding and Showing the Notebook Window

To save space on the screen, you can temporarily close the notebook window and then reopen it later.

- Click the close box in the upper left corner of the window, or select **Hide Notebook** from the Windows menu.

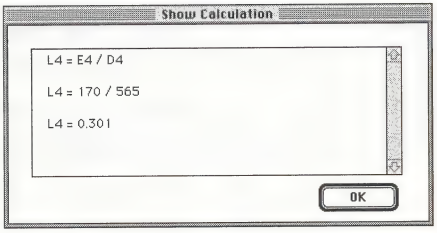


- To reopen the notebook window, click the Notes icon in the lower left corner of the spreadsheet window, or reselect ✓ **Hide Notebook** from the Windows menu.

SHOW

The Show feature explains, step-by-step, how the computer is solving your formula. You can only use Show on a cell that has a formula in it.

- Click the desired cell.
- Click Show on the formula bar. You will see the calculations used to solve your formula.
- When you finish, click OK to leave the window.



CHARTING

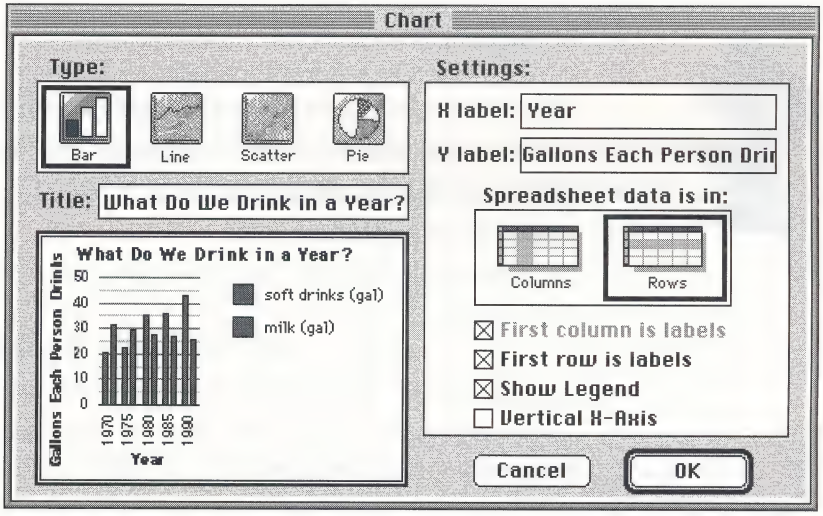
Charts can be a powerful way to present your data. You can create any number of charts that display right in your spreadsheet and update automatically as your data changes.

To create a chart:

- Select the cells to be included in the chart. Include the rows or columns that have labels for your data.

	A	B	C	D	E	F
3						
4		1970	1975	1980	1985	1990
5	soft drinks (gal)	20.8	22.2	35	35.7	42.7
6	milk (gal)	31.2	29.5	27.6	26.7	25.7

- Select **Chart** from the Options menu. The Chart dialog box will appear on your screen.



(Macintosh version)

Select these options:

- **Type:** Select Bar, Line, Scatter, or Pie.
- **Title:** Type a title for your chart.
- **X label:** Enter a label for the X-axis.
- **Y label:** Enter a label for the Y-axis.
- **Spreadsheet data is in:** Check whether the data is arranged in rows or columns. The default is for data to be in columns.
- **First column is labels:** Click the box to use the first column as labels instead of data.
- **First row is labels:** Click the box to use the first row as labels instead of data.
- **Show Legend:** Click the box to display a legend in your chart. If the chart is to be small, checking this box saves space in the display.
- **Vertical X-Axis:** Click the box to rotate the chart display 90 degrees.

To edit an existing chart:

- Double-click the chart in your document. The chart dialog box will appear.
- Make any changes to your chart and click OK.

To move a chart:

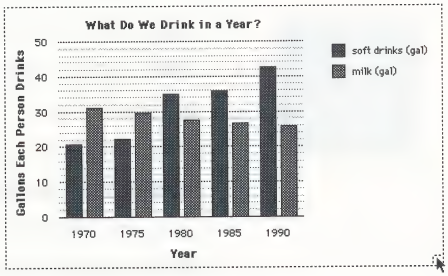
- Make a chart in the spreadsheet.
- Click the chart and hold down the mouse button for a moment. (A marquee or "marching ants" will appear.)
- Click near the middle of the chart; then you can drag it anywhere in your spreadsheet.
- To move your chart to the notebook, use Cut or Copy, and then Paste.

To delete a chart:

- Click and hold to select the chart, then press DELETE or select **Clear** from the Edit menu.

To change the size of a chart:

- Click the chart and hold down the mouse button for a moment. (A marquee will appear around the chart.)
- Click and drag the tiny square in the chart's lower right corner.



PRINTING

You may print the entire spreadsheet or just a portion of it.

To print your entire spreadsheet:

- Select **Print** from the File menu.
- In the dialog box that appears, make sure the Spreadsheet button is selected.
- Choose any other options you desire, and click Print.

To print only a portion of your spreadsheet:

- Click and drag to select the area to print.
- Select **Set Print Area** from the Options menu.
- In the dialog box, click the Selected Cells button and click OK.
- Choose any other options you desire and click Print.

Importing and Exporting

Notebook text and sticker graphics can be imported or exported using the Clipboard. Spreadsheet data can be imported to or exported from spreadsheet programs that import or export text files.

To import or export spreadsheet data, notebook text, or sticker graphics using the Clipboard:

- Select what you want to import or export and choose **Copy** from the Edit menu.
- Click to select where you want to place the data.
- Choose **Paste** from the Edit menu and your data will appear.

Importing

To import a text file into your Windows spreadsheet:

- Select **Open** from the File menu.
- Under File Name, type ***.*** and click OK.
- Select your file and click OK. Your data will appear.

To import a text file into your Macintosh spreadsheet:

- Select **Open** from the File menu.
- In the dialog box, under File Type, select **TEXT**.
- Select your file and click OK. Your data will appear.

Exporting

To export a file from *The Cruncher,* Windows version:

- With your file open, select **Save As** from the File menu.
- Under File Name, type **name.txt** and click OK.

To export a file from *The Cruncher,* Macintosh version:

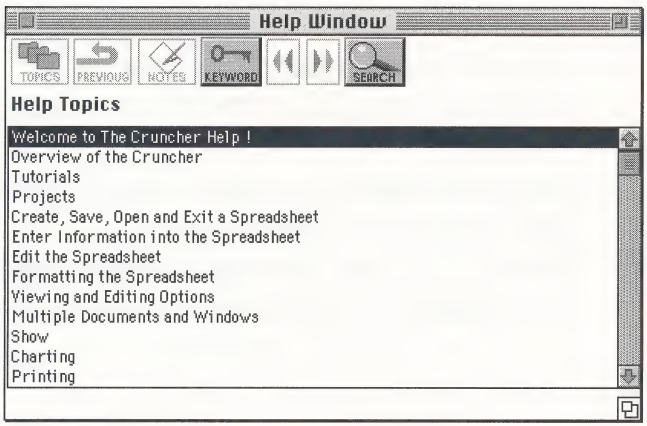
- With your file open, select **Save As** from the File menu.
- In the dialog box, select the destination, name your file, set the file type to **TEXT**, and click the Save button.

Note: To move formulas intact when moving data between *The Cruncher* and another spreadsheet, select **Show Formulas** from the Options menu.

Using On-line Help

The Cruncher has an extensive on-line help facility.

- For Macintosh help, select **Cruncher Help** from the [?] menu, or press **⌘?**.
- For Windows help, select **Help Index** from the Help menu, press **F1**, or select [?] on the toolbar.

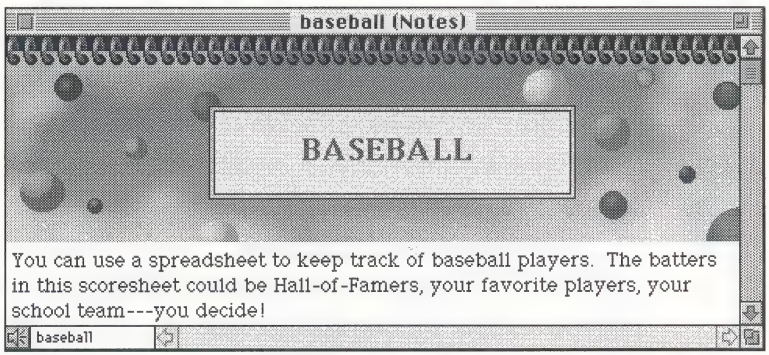


(Macintosh version)

NOTEBOOK, STICKERS, AND SPEECH

NOTEBOOK

The notebook is a separate area for holding text and stickers that pertain to your spreadsheet. It is a convenient place to write notes, reports, or any information related to the spreadsheet. Just like in a full-featured word processing program, you can type in text with any font syle; edit the text; move it around with Cut, Copy and Paste; and print it.



Using the Notebook

The notebook window is visible, but not active, on a new spreadsheet. It is titled with the same name as the spreadsheet, followed by *(Notes)*. Its name is always visible in the lower left corner of the notebook window, and in the title bar when the window is active. Since it is a part of the spreadsheet document, it is saved with the spreadsheet.

There are three ways to show and activate the notebook window:

- Click anywhere in the notebook window.
- Click Notes in the spreadsheet window.
- If the notebook is hidden, go to the Windows menu and select ✓ **Hide Notebook** to remove the ✓ and show the notebook.

There are two ways to temporarily hide the notebook:

- From the Windows menu, select **Hide Notebook**. A ✓ will appear to show that the Hide Notebook feature is on.
- With the notebook active, click the Close box on the title bar.

Editing Within the Notebook

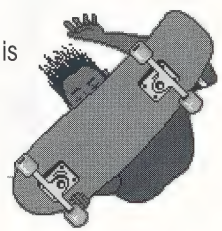
Undo, Cut, Copy, Paste, Clear, and Select All are commands on the Edit menu that can be used to change the contents of the notebook. These commands function the same way they do in the spreadsheet. (See pages 9–10.)

To erase text, click and drag the cursor over the text to highlight it; then press DELETE or type in new text to replace what was highlighted. To delete a sticker or chart, click and hold the mouse on the item for a moment and then press DELETE.

Formatting the Notebook

The font, font size, font style, and font color choices available from the Format menu can be used to change the appearance of the notebook. They work the same way as in the spreadsheet. (See page 13.) Emphasize and decorate the notebook by pasting in stickers and charts. See the Options menu and pages 18–20 and 25–26.

Locking or Unlocking Text



Text within the notebook can be locked so that it is impossible to change. This feature is particularly useful if you have written something you don't want others to accidentally change.

To lock or unlock text within the notebook:

- Select the text you want locked or unlocked.
- For Windows, press CTRL + L simultaneously.
  For Macintosh, simultaneously press ⌘, OPTION, and L.

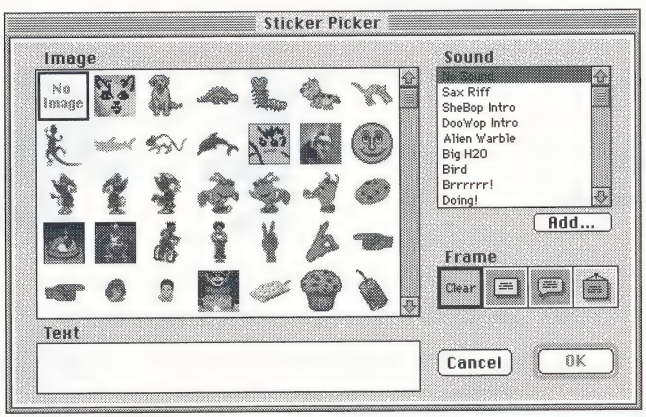
Printing the Notebook

- Select **Print** from the File menu and click the Notebook button in the Print dialog box.
- Click **Print**.

STICKERS

Stickers can be used to point out something important or just make your documents fun. You can put them anywhere in your spreadsheet or notebook and customize them in a variety of ways. To add a sticker:

- Select **Sticker Picker** from the Options menu.
- Choose an image, a sound, a frame. Type in text if you wish.



(Macintosh version)

- Click OK. Your sticker will appear selected on-screen.
- Drag the sticker to where you want it in your document.

Working With Stickers

- Click the sticker once to play its animation and sound.
- Click and drag the sticker to move it to another location in the spreadsheet or notebook.

You can use the stickers that come with *The Cruncher,* or you can import art from other programs using the Clipboard.

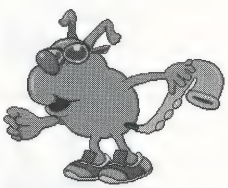
To add your own sticker art:

- Locate the art in your graphics application and select Copy to put it into the Clipboard.
- Within *The Cruncher,* paste the art into either the spreadsheet or the notebook window. Your graphic will appear as a sticker.

To create your own sticker sound (for Macs and PCs with a microphone):

- In the Sticker Picker dialog box, click the Add button *under* the Sound list box.
- Record your sound using the microphone attached to your computer. If you wish, click Play to hear your sound.
- When you are happy with your sound, click Save and give your sound a name.

SPEECH



Built into *The Cruncher* is a powerful text-to-speech tool. Using it, you can select text or numbers and have the computer read them to you. Text can be read from spreadsheet cells or the notebook.

To have text read using text-to-speech:

- Select the text that you want to have read by highlighting it.
- Click  at the lower left of the spreadsheet window, and the computer will read whatever you have selected.

FUNCTIONS

Functions perform calculations on numbers or formulas automatically. A function can do calculations on many cells at one time very quickly. There are many different kinds of functions. You'll find some of them in the Options menu under the Functions submenu.

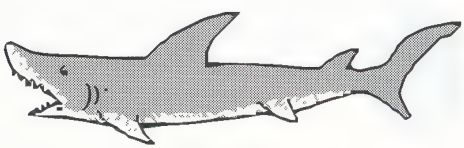
These simple functions are listed on the Functions submenu:

- ✓ Sum
- ✓ Average (Mean)
- ✓ Median
- ✓ Mode
- ✓ Maximum
- ✓ Minimum

If you're looking for functions that do trigonometry, square root, rounding, etc., and an explanation of how to nest functions, see "Advanced Functions" starting on page 30.

To put a function into a cell:

- Select the cell where you want the result of the function placed.
- Choose the function you want from the Functions submenu of the Options menu.
- Select the range of cells upon which you want to perform the function.
- Click ☑ and your entry will be complete.



Sum

Use the Sum function to add values in a range of cells you select.

For example, in the formula bar, the sum of the contents of cells A1 through A4 will look like this: **=SUM(A1:A4)**.

Average (Mean)

The average is the arithmetic mean of a set of values. The paper-and-pencil way to find the average of a set of values is to add them together and divide by the number of elements in the set. If you took the average of four cells containing 2, 4, 9, and 13, these are the steps you would take: First you would add them to get 28. Since you added four numbers, you would divide 28 by 4. This would give you the average, 7.

For example, in the formula bar, the average of the contents of cells B1 through B5 will look like this: **=AVERAGE(B1:B5)**.

Median

The median is the middle element in a set of values. The pencil-and-paper way to find the median of an odd number of values is to arrange them in increasing order, such as 3, 8, 12, 15, and 21. The median is 12, the middle value. When there are an even number of values, such as 2, 5, 7, and 9, take the average (mean) of the two middle numbers (5 + 7). Your answer is 6, the median.

For example, in the formula bar, the median of the contents of cells C3 through C7 will look like this: **=MEDIAN(C3:C7)**.

Mode

The mode is the most frequently occurring number in a set of numbers. The mode of the set {1, 2, 5, 5, 5} is 5. In the set {2, 4, 6, 9}, there is no one mode, because no number occurs more often than any other; therefore the result is multimodal.

For example, in the formula bar, the mode of the contents of cells E2 through E6 will look like this: **=MODE(E2:E6)**.

Maximum

The maximum value in a set of numbers is the value that is greater than the others in the set. In the set of numbers {8, 6, 9, 5}, the maximum value is 9.

For example, in the formula bar, the function for the maximum value in cells B2 through B6 will look like this: **=MAX(B2:B6)**.

Minimum

The minimum value in a set of numbers is the number that is less than all the other values in the set. In the set of numbers {7, 3, 9, 4}, the minimum value is 3.

For example, in the formula bar, the function for the minimum value in cells A1 through A10 will look like this: **=MIN(A1:A10)**.

Advanced Functions

Two more sets of functions are available besides those listed in the Options menu under the Functions submenu.

General Functions

- ✓ ABS
- ✓ CEILING
- ✓ EXP
- ✓ FLOOR
- ✓ LOG10
- ✓ LN
- ✓ POW10
- ✓ ROUND
- ✓ SQR
- ✓ SQRT
- ✓ TRUNC

Trigonometric Functions

- ✓ SIN
- ✓ COS
- ✓ TAN
- ✓ ASIN
- ✓ ACOS
- ✓ ATAN

Using Advanced Functions

To have a function operate on a number or formula:

- Click the cell where you want to put your function.
- Type an equal sign and your function name.
  Example: **=ROUND**
- Next, type a left parenthesis.
  Example: **(**
- Type the number or the formula you want the function to use, followed by a right parenthesis.
  Example: **4.75)**

So, to round off 4.75 to an integer, you'd type **=ROUND(4.75)** in the formula bar.

- Finish the entry by clicking ☑ or pressing ENTER.

To have the function operate on the values in a cell or cells:

- Select the cell where you want the function to appear.
- Type an equal sign, the function you want, and a left parenthesis in the formula bar:

  =SQRT(
- Select the cell(s) you want the function to operate on. (To find the square root of the value in cell B3, select that cell by clicking it. (The cell name, B3, can be typed in instead.)
- Type a right parenthesis: **)**. In the formula bar you will see

  =SQRT(B3)
- Finish the entry by clicking ☑.

Note: Described above is the method for setting up a function with a simple single argument. The syntax pattern is *=function name(argument)* with the argument being either a number, a cell reference, or a function. You can write more complex arguments by writing expressions with more than one term (nesting functions). For example, to round off the square root of the value in cell A6 and then add 10, the formula bar would read =ROUND(SQRT(A6))+10.

General Functions

ABS

The ABS function gives you the absolute value of a number. For example:

=ABS(5)	returns 5
=ABS(-5)	returns 5

CEILING

The CEILING function returns the next higher whole number from the argument. On a number line, it is the next whole number to the right. For example:

=CEILING(3.3)	returns 4
=CEILING(5.8)	returns 6
=CEILING(-5.8)	returns -5

EXP

The EXP function gives you *e* raised to the power of the number between the parentheses. e is 2.7182818..., the base of the natural logarithm. EXP is the inverse of the LN function (see below). For example:

=EXP(1)	returns 2.7182818 (the value of e)
=EXP(2)	returns 7.389056 (the value of e squared)

FLOOR

The FLOOR function returns the next lower whole number from the argument. On a number line, it is the next whole number to the left. For example:

=FLOOR(3.3)	returns 3
=FLOOR(5.8)	returns 5
=FLOOR(-5.8)	returns -6

LOG10

The LOG10 function gives you the base 10 logarithm of the number between the parentheses. The number must be positive. For example:

=LOG10(10)	returns 1
=LOG10(100)	returns 2

LN

The LN function gives you the natural logarithm of the number between the parentheses. The base of natural logarithms is e, 2.7182818.... The number must be positive. LN is the inverse of the EXP function (see above). For example:

=LN(2.7182818)	returns .9999993 or 1

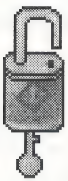
POW10

The POW10 function raises the number between the parentheses to the power of 10. For example:

=POW10(2)	returns 1024 (2 raised to the 10th power)

ROUND

The ROUND function rounds off the number between the parentheses to an integer. For example:



=ROUND(3.68)	returns 4
=ROUND(3.29)	returns 3

SQR

The SQR function gives you the square of the number between the parentheses. For example:

=SQR(4)	returns 16
=SQR(2.5)	returns 6.25

SQRT

The SQRT function calculates the square root of the number between the parentheses. The number must be greater than or equal to zero. For example:

=SQRT(25)	returns 5
=SQRT(7.25)	returns 2.6925824

TRUNC

The TRUNC function truncates the number between the parentheses. For example:

=TRUNC(12.993)	returns 12
=TRUNC(4.12)	returns 4
=TRUNC(-8.555)	returns -8

Trigonometric Functions

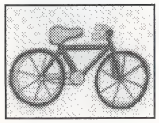
SIN

The SIN function gives the sine of the number between the parentheses. The number is an angle in radians. For example:

=SIN(30)	returns -0.9880316
=SIN(45)	returns 0.8509035

COS

The COS function gives the cosine of the number between the parentheses. The number is an angle in radians. For example:



=COS(60)	returns -0.9524130
=COS(30)	returns 0.1542514

TAN

The TAN function gives the tangent of the number between the parentheses. The number is an angle in radians. For example:

=TAN(45)	returns 1.6197752
=TAN(60)	returns 0.3200404

ASIN

The ASIN function gives the degree of the angle whose number is between the parentheses. The arcsine is the angle in radians whose sine is the number between the parentheses. The number must be in the range -1 to 1. For example:

=ASIN(0.5)	returns 0.5235988
=ASIN(0.7071068)	returns 0.7853982

ACOS

The ACOS function gives the degree of the angle whose number is between the parentheses. The arccosine is the angle in radians whose cosine is the number between the parentheses. The number must be in the range -1 to 1. For example:

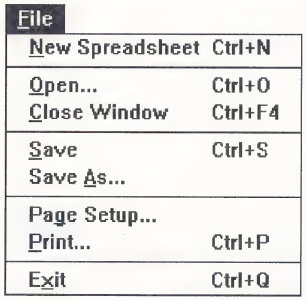
=ACOS(0.8660254)	returns 0.5235988
=ACOS(0.5)	returns 1.0471976

ATAN

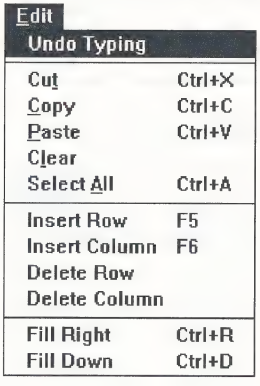
The ATAN function gives the degree of the angle whose number is between the parentheses. The arctangent is the angle in radians whose tangent is the number between the parentheses. For example:

=ATAN(1)	returns 0.7853982
=ATAN(0.5773503)	returns 0.5235988

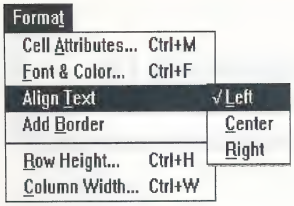
APPENDIX A – WINDOWS MENUS



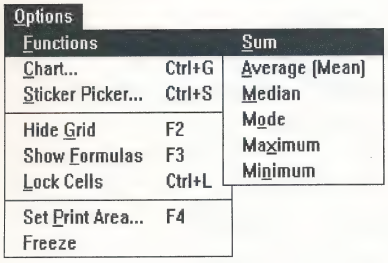
New Spreadsheet – Start a new spreadsheet
Open – Open an existing spreadsheet, project, or tutorial
Close Window – Close the current window
Save – Save a spreadsheet to a disk
Save As – Save a spreadsheet under a new name
Page Setup – Change page setup options for printing
Print – Print a spreadsheet or notebook
Exit – Quit *The Cruncher*



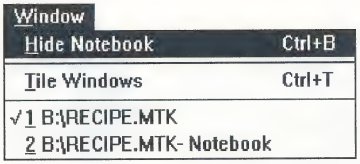
Undo – Undo the last action
Cut – Cut items to the Clipboard
Copy – Copy items to the Clipboard
Paste – Paste an item from the Clipboard
Clear – Delete a selected item
Select All – Select the whole spreadsheet
Insert Row – Insert a row in the spreadsheet
Insert Column – Insert a column in the spreadsheet
Delete Row – Delete row(s) in the spreadsheet
Delete Column – Delete column(s) in the spreadsheet
Fill Right – Copy contents of the selected cell to the highlighted cells to the right
Fill Down – Copy contents of the selected cell to the highlighted cells below



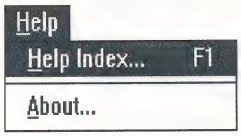
Cell Attributes – Define the format for data within a cell
Font & Color – Select font attributes
Align Text – Select the alignment of the text
Add Border – Select a border
Row Height – Change a row's height
Column Width – Change a column's width



Functions – Select from functions listed
Chart – Create a chart for the spreadsheet
Sticker Picker – Select a sticker
Hide Grid – Don't show grid on-screen
Show Formulas – Show the formulas in the cells
Lock Cells – Protect cell contents from editing
Set Print Area – Define the print area using the current selection
Freeze – Freeze spreadsheet rows or columns



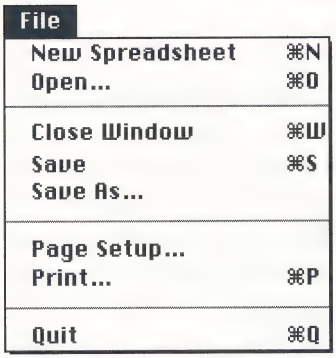
Hide Notebook – Don't show the notebook on-screen
Tile Windows – Arrange windows as tiles vertically or horizontally
Currently opened spreadsheets and their notebooks are listed here.



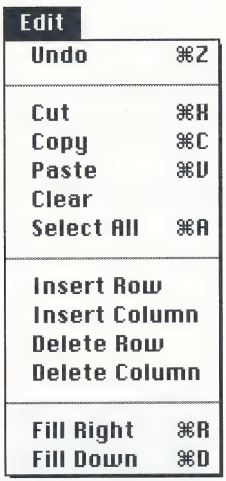
Help Index – Access on-screen program help
About... – Lists *The Cruncher*'s development team

APPENDIX B – MACINTOSH MENUS

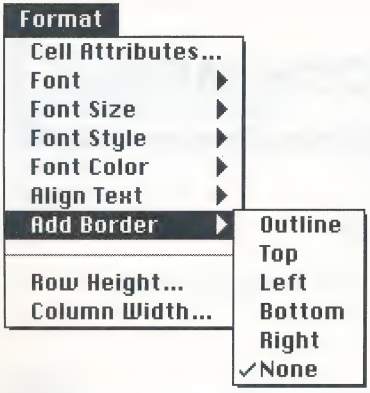
About The Cruncher – Lists development team



New Spreadsheet – Start a new spreadsheet
Open – Open an existing spreadsheet, project, or tutorial
Close Window – Close the current window
Save – Save a spreadsheet to a disk
Save As – Save a spreadsheet under a new name
Page Setup – Change page setup options for printing
Print – Print a spreadsheet or notebook
Quit – Quit *The Cruncher*



Undo – Undo the last action
Cut – Cut items to the Clipboard
Copy – Copy items to the Clipboard
Paste – Paste an item from the Clipboard
Clear – Delete a selected item
Select All – Select the whole spreadsheet
Insert Row – Insert a row in the spreadsheet
Insert Column – Insert a column in the spreadsheet
Delete Row – Delete row(s) in the spreadsheet
Delete Column – Delete column(s) in the spreadsheet
Fill Right – Copy contents of the selected cell to the highlighted cells to the right
Fill Down – Copy contents of the selected cell to the highlighted cells below



Cell Attributes – Define the format for data within a cell
Font – Select a font
Font Size – Select the size of the font
Font Style – Select the style of the font
Font Color – Select the color of the font
Align Text – Select the alignment of the text
Add Border – Select a border
Row Height – Change a row's height
Column Width – Change a column's width

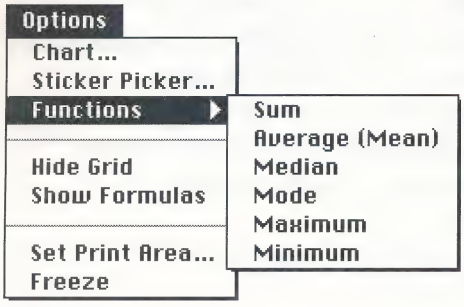
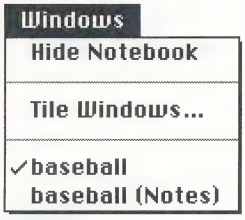
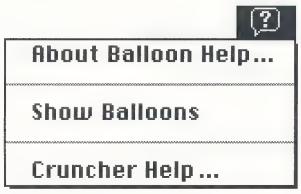


Chart – Create a chart for the spreadsheet
Sticker Picker – Select a sticker
Functions – Select from functions listed
Hide Grid – Don't show grid on-screen
Show Formulas – Show the formulas in the cells
Set Print Area – Define the print area using the current selection
Freeze – Freeze spreadsheet rows or columns



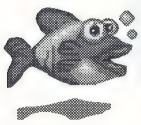
Hide Notebook – Don't show the notebook on-screen
Tile Windows – Arrange windows as tiles vertically or horizontally

Currently opened spreadsheets and their notebooks are listed here.



About Balloon Help – Learn about Balloon Help
Show Balloons – Turn Balloon Help system on or off
Cruncher Help – Access on-screen program help

APPENDIX C – THE TUTORIALS



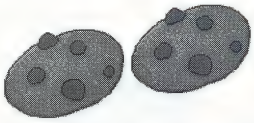
1. **Fish Out of Water**
   - ✓ entering data (pictures) in cells
   - ✓ observing how spreadsheets add the contents of cells
   - ✓ using Show to see the contents of cells

2. **Magic Square**
   - ✓ using Spreadsheet Math
   - ✓ entering numbers in cells
   - ✓ observing how spreadsheets add the contents of cells in rows and in columns

3. **Cruncher Bars**
   - ✓ entering numbers in cells
   - ✓ entering text in cells
   - ✓ entering formulas in cells

4. **Help Wanted**
   - ✓ changing cell width
   - ✓ formatting cells (currency, date)
   - ✓ point-and-click cell selection creating formulas

5. **Making Cookies**
   - ✓ inserting columns
   - ✓ fill down
   - ✓ show grid/hide grid



6. **Racing Slugs**
   - ✓ pasting functions (average, sum, maximum)
   - ✓ show formulas
   - ✓ inserting rows and deleting rows

APPENDIX D – THE PROJECTS

Baseball Statistics

Track your favorite team's batting and pitching statistics.

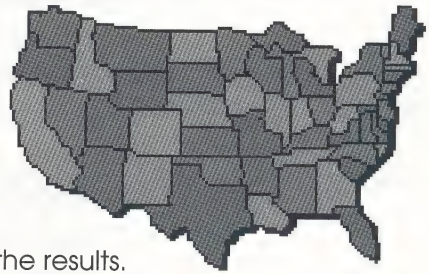
Basketball Statistics

Put your team's numbers into the computer, and have it calculate shooting percentages and total points for each team member and for the team as a whole.

Can We Get a Pet?

Do you know how much it costs to have a cat or dog? It all adds up. This project can help you plan realistically in order to meet the financial obligations of pet ownership.

Go for Fun Survey



What do your friends like to do on the weekend? Use *The Cruncher* to help you conduct a survey of your friends' favorite places to go. Find out how to make your own surveys and graph the results.

I Want a Walkman™!

Have you ever had your heart set on buying something, but just weren't able to save the money to afford it? This project guides you through setting up a budget so that you can plan in order to meet your goal.

Magic Squares

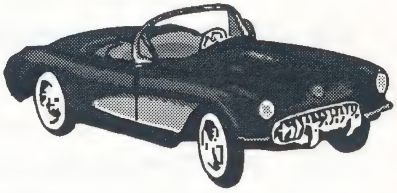
Try to solve a 4X4 magic square. It's like the magic square in the tutorial, but much more difficult to solve. It also gives instructions on how to expand to a 5X5-sized square.

Party Planner

You are throwing a party with a group of your friends; do you know how much of everything you need? How much will it cost each of you if you split the cost?

Plan a Trip

Want to convince your parents to take you on a fun family trip? Calculate how much it would cost to get there, buy food, and pay for the hotel.



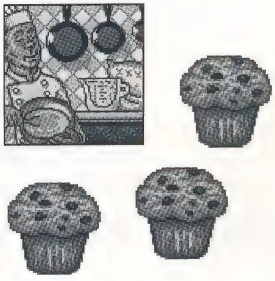
If you organize the trip, that might be just what's needed to get you all there!

Put Your Money to Work

Where is the best place to put the money you earn? The answer depends on a lot of things which this project and *The Cruncher* will help you sort out.

Recipe Converter

What do you do if you want to make a greater or lesser number of muffins than in the original recipe?



APPENDIX E – TROUBLESHOOTING

GENERAL

The Projects button or the Tutorials button on the opening screen is dim.

This means there are no projects in the Project Folder, or no Tutorials in the Tutorial Folder. Find them on your hard drive and move them to the correct folder, or reinstall them from the installation disks.

Macintosh Only

I keep getting an out-of-memory message. What can I do?

To increase the amount of memory allocated to the program, go to the Finder, select the *Cruncher* icon, choose **Get Info** from the File menu, and increase the preferred memory size. For more information, see Specifications on page 51. (If you are running from your CD-ROM, you must first install the program to the hard drive.)

When I click the Text-to-Speech button, I get a message that Text-to-Speech can't be run.

There may not be enough memory available. If you do not have enough memory available, try setting the partition size for *The Cruncher* to 1700K. To do this, close *The Cruncher* and open the Get Info. dialog box in the Finder. The Preferred Size is the item to change. Also, please be sure you don't have other applications (INITs) running in the background. (If you are running from your CD-ROM, you must first install the program to the hard drive.)

Windows Only

I don't see *The Cruncher* icon on my desktop.

The WinMate system does not automatically create an icon. You will need to disable WinMate and run the program from Windows. For more information regarding WinMate, please contact Tandy Technical Support: (817) 878–6875.

The program is installed but it will not start.

Your virus-checking software may be interfering with the installation. Disable the virus checker. Then delete *The Cruncher* directory and reinstall.

The program is running slow.

Close all open applications before entering the program.

If you are running from the CD-ROM, install the program to your hard drive.

Make sure you are running Windows in enhanced mode. See your Windows manual for further instructions on enhanced mode.

To enhance program speed, we recommend the use of SMARTDrive, a disk-caching program provided with Windows and DOS 5.0 (and higher). SMARTDrive should be operating automatically in Windows unless you have disabled it. Refer to "SMARTDrive program" in your Windows manual index, or "SMARTDrive cache" and "SMARTDRV.SYS device driver" in your DOS 5.0 (or higher) manual index, for information.

I'm getting low-memory messages.

Free up all available memory by making sure no other Windows applications are running. Also make sure your computer meets the minimum memory requirements.

I'm getting some display irregularities.
Some Windows video drivers may cause erratic behavior in 256-color mode (or higher). If you experience any disruption of graphics, try switching to Windows VGA mode. (Consult your Windows User's Guide for specific directions.)

My font doesn't display correctly.
Some very large or very small fonts will not display consistently. Use an 8-point to 14-point font size for the best results.

The printed Spreadsheet or Notebook looks different than on my screen:
Some printers (for example, HP LaserJet printers) do not recognize certain Windows fonts and will substitute a printer font instead. Check to see that your printer supports the font choices in your resume.

SPREADSHEET

I pressed the PAGE UP or PAGE DOWN key and was taken to the top or bottom of the spreadsheet, but the current cell did not change.
Within the spreadsheet, the PAGE UP and PAGE DOWN keys (HOME and END keys in the Macintosh version) change the area of the spreadsheet currently in view, not the current cell. To change the current cell, just click the cell you wish to edit.

The wrong cell was frozen when I used the Freeze function.
If you choose Freeze when the selected cell is either off the screen or on the border, Freeze will affect the cell at the center of the area in view instead. Reselect the Freeze area after scrolling the screen so the desired cell is in view.

Show does not display any details about advanced functions.
Show only displays details for the simpler functions.

I have made a chart based on only one column or row of data, and when I select Line or Scatter, nothing is displayed.
You are asking for a chart type that requires two data points but is only being supplied with one. Add more data and your chart will appear correctly.

NOTEBOOK

When I pasted text from the notebook to the spreadsheet, some of my text formatting was gone.
Not all text formatting can be retained between the notebook and the spreadsheet. When you cut and paste text between the notebook and the spreadsheet, the text formatting (font, size, style, or color) of the first character of your selection will be applied to the entire cell.

I can't see my cursor in the notebook.
The cursor may be underneath a sticker and thus not visible.

I want to know where the end of a notebook page will be when I print.
The notebook has no end-of-page marker. The only way to tell where the end of the page will be is to print the notebook.

FORMULAS

There is a little "e" in my number.
The number is being shown in scientific notation. It may be too large or small to display completely.

My formula is not calculating. All I get is the formula as text in the cell.
This means the formula is not written correctly. See pages 7–8, 27, and 29–30 of the manual for formula syntax information.

I copied cells from one part of my spreadsheet to another, and now the formulas are not correct. What happened?
Whenever you copy cells that have functions with cell references in them, the cell references will change.

I made a change in my spreadsheet, and now the cell says "CIRCULAR."
In a circular reference, the formula in a cell uses its own result to complete its calculation. *The Cruncher* does not solve this kind of problem. Make sure you are not using a reference to the current cell in your formula, even indirectly.

Even though I am not trying to, I keep adding unwanted cells in my formula.
Without meaning to, you are using the shortcut way to enter cells into a formula. Just click  on the formula bar to delete the information in a selected cell. Make sure that you finish editing a cell (by clicking  , or pressing ENTER or TAB) before selecting another cell.

Macintosh Only

The text I put in a cell extends beyond the edge of the formula bar, so that now I can't see everything I put into the cell. How do I edit it?

To edit long entries in the formula bar, use the four arrow keys to move right, left, up, or down.

My formula doesn't seem to be rounding correctly.

Rounding errors may occur in calculations involving very large or very small floating point numbers.

Windows Only

Refer to Online Help.

Rows and Columns

I have cleared a row or a column in my spreadsheet, and my chart now has one less data element.

If you clear numbers from your spreadsheet in a region that is being charted, the chart will have a gap where that data once was. If you later put numbers back into the chart, they will be displayed as they are entered.

I have changed the row heights and/or column widths in a part of my spreadsheet. When I try to copy this part elsewhere, the row heights and column widths are not preserved.

Since row height and column width changes affect the entire spreadsheet, you will need to change the settings of any specific row and/or column yourself to fit the format of your data.

Macintosh Only

I can't resize the last row or column using the cursor.

The last row and last column cannot be resized using the cursor. You must select **Row Height** or **Column Width** from the Format menu and change them in the dialog box.

Windows Only

Refer to Online Help.

STICKERS

In the Sticker Picker, bullets appear in front of some sound names, and some are duplicated. What does this mean?

Whenever you attach a sound to a sticker, a copy of the sound is stored in the document, and the name of the sound is added to the list in the Sticker Picker dialog box. The bullet symbol lets you know which sounds you are using.

When I select a sticker with no image (text only), the OK button is dim.

You must choose a frame in order to create a sticker with no image.

When I choose Select All and then perform another operation, my stickers are not affected.

Operations such as Cut, Copy, Paste, and Clear do not affect both stickers and spreadsheet or notebook data at the same time. In order to execute an operation on stickers, you must select them individually.

I can't drag stickers when Freeze is in effect.
Turn Freeze off in order to drag stickers or place them in your spreadsheet.

Undo doesn't work on my sticker.
You can't undo operations on stickers.

Date and Time

I entered a date or time, but when I use it in a calculation, the formula is illegal. (It displays as text.) What is wrong?
You must set the cell attributes of a cell to "date" or "time" in order for the spreadsheet to consider the text to be a date or time in its calculations.

I am using a date or time value in a calculation, but am not getting the result I expect.
When you use a date or time value, you need to know what you are expecting as a result (a number, a date, or a time value) and set the attributes of the cell accordingly.

Macintosh Only
I have put in a date before 1904 or after 2040, but I am not getting the date I expected.
The Cruncher can only perform calculations on dates between Jan. 1, 1904 and Feb. 6, 2040. If you wish to include dates outside of this range in your spreadsheet, you can enter them as text, but you will not be able to use them in your formulas.

Printing

I have lined up text into columns within the notebook, but when I print them they are no longer perfectly aligned.
Text will not retain its exact alignment within the notebook when printed. If you want to print aligned text, put it into the spreadsheet. If you print text when Hide Grid is in effect, you will get much the same result as if the text were in the notebook.

When I freeze a row or column and then print my spreadsheet, it prints as if I hadn't frozen anything.
When Freeze is turned on, printing still displays the spreadsheet normally (as it appears without the freeze).

Macintosh Only
My printouts are unclear or choppy.
For best results when printing, turn off "Faster Bitmap Printing" and "Graphics Smoothing" in the Page Setup dialog. You will also get much higher-quality output by selecting "Color/Greyscale" in the Print dialog if it is available. If you continue to get poor results, contact the manufacturer of your printer and make sure you have the most current printer driver.

Windows Only
Refer to Online Help.

Import and Export

I am trying to import a text file, but I can't get it into the notebook.
Text file importing allows you to import data into your spreadsheet only. To import text into the notebook, you must use the Copy and Paste functions.

When I import a text file into my spreadsheet, only some of the information appears.
A limited amount of text can fit into each cell. Use tabs in your document to separate information into adjacent cells. Insert a return to move information to the cell below.

When I open a text file to import data, the name of the file that appears is "Untitled 1."
Because your file is a text file and not a regular spreadsheet document, *The Cruncher* protects you from overwriting the file. Select **Save As** from the File menu and give your new spreadsheet document a name.

SPECIFICATIONS

Maximum number of documents open at a time
- Macintosh: Limited only by available RAM
- Windows: 5

Spreadsheet
Maximum rows: 100
Maximum columns: 100
Maximum characters in a cell
- Macintosh: 200
- Windows: 60

Notebook
Maximum number of characters
- Macintosh: 32,000
- Windows: 20,480 or 1,024 lines

APPENDIX F – GLOSSARY

ABS: Absolute value is the value of a number without regard for its sign.

ACOS: The ACOS function gives the degree of the angle whose number is between parentheses. The arccosine is the angle in radians whose cosine is the number (in the range –1 to 1) between the parentheses.

argument: The information used by a function to calculate its result. The argument to a function is always put inside parentheses after the name of the function.

ASIN: The ASIN function gives the degree of the angle whose number is between parentheses. The arcsine is the angle in radians whose sine is the number between the parentheses. The number must be in the range –1 to 1.

ATAN: The ATAN function gives the degree of the angle whose number is between parentheses. The arctangent is the angle in radians whose tangent is the number between the parentheses. The number must be in the range –1 to 1.

automatic recalc (Auto calc): The process of computing the results of formulas each time you confirm an entry in a cell.

axes: The straight lines used to measure and compare data. Values are usually arrayed along the Y (vertical) axis of the chart. Divisions, or categories, are usually arrayed along the X (horizontal) axis. Pie charts have no real axis.

bar chart: A chart that represents spreadsheet data as bars, side by side or stacked horizontally. Often used to illustrate relative quantities.

calculation: The process of computing the results of formulas.

CEILING: The CEILING function returns the next higher whole number from the argument. On a number line, it is the next whole number to the right.

cell: The box formed at the intersection of a column and a row.

cell address: The combined designation of column letter and row number that identifies a cell. The address of a cell in column B, row 10 is B10.

cell attribute
(fixed): A format that rounds numeric entries to a fixed number of decimal places.
(general): A format that causes a number to fill a cell with a floating number of decimal places to the right of the decimal point.
(money): A format that adds a dollar ($) symbol to a number.
(percent): A format that multiplies a number by 100 and displays the number in a fixed decimal format with a percent sign.
(scientific): A format that displays entries as exponential powers of 10.

cell range: A group of selected cells in a row or a column.

cell reference: A cell address used in a formula.

chart: A graphic representation of the data in a spreadsheet, used to illustrate relationships among sets of data. A chart is a graphic object that can be pasted into another type of document.

circular reference: A formula reference that directly or indirectly refers back to the formula cell.

column: The vertical arrangement of cells identified by a letter designation at the top. The **column header** runs across the top of a spreadsheet and contains letters that are column labels.

COS: The COS function gives the cosine of the number between parentheses. The number is an angle in radians.

current cell: The active cell. What you type into the formula bar goes into the active cell.

document: In *Cruncher,* a spreadsheet with its corresponding notebook.

EXP: The EXP function gives you *e* raised to the power of the number between parentheses. *e* is 2.7182818..., the base of the natural logarithm. EXP is the inverse of the LN function.

fill down: The process of pasting data from the top selected cell into a range of cells directly below.

fill right: The process of pasting data from the left-most selected cell into a range of cells to the right.

FLOOR: The FLOOR function returns the next lower whole number from the argument. On a number line, it is the next whole number to the left.

formula: A calculation you want *The Cruncher* to perform. It can include any combination of numbers, cell references, arithmetic operators, or functions. A formula always begins with the equal sign (=).

formula bar: The box below the menu used to view, enter or edit data or formulas.

function: A predefined formula that performs mathematical or logical calculations, acting on values you specify or supply.

gridlines: A matrix of dotted lines used to indicate columns and rows.

legends: The labels for the data series and divisions on the chart.

line chart: A chart that represents spreadsheet data as lines. Often used to show trends over time.

LN: The LN function gives you the natural logarithm of the number between parentheses. The base of the natural logarithm is *e,* which equals 2.7182818.... The number must be positive. LN is the inverse of the EXP function.

LOG10: The LOG10 function gives you the base 10 logarithm of the number between the parentheses. The number must be positive.

maximum: The maximum value in a set of numbers is the value that is greater than the others in the set.

mean: The arithmetic mean is the average of a set of values.

median: The median is the middle element in a set of values.

minimum: The minimum value in a set of numbers is the number that is less than all the other values in the set.

mode: The mode is the most frequently occurring number in a set of numbers.

notebook: A separate area of your *Cruncher* document that acts as a miniature word processor for writing notes or other information without your spreadsheet.

operators: Symbols used in a formula to define the action to be performed.

pie chart: A circular chart that represents spreadsheet data as "slices" of a pie. Often used to show the relative contribution of values to a total.

POW10: The POW10 function raises the number between parentheses to the power of ten.

ROUND: The ROUND function rounds off the number between parentheses to an integer.

row: The horizontal arrangement of cells identified by a number designation on the left. The **row header** runs down the left side of a spreadsheet and has the row numbers on it.

scatter chart: A chart that represents spreadsheet data as unconnected points. Often used to show how points group around a value.

show: A feature that illustrates the steps taken by *The Cruncher* to calculate a formula.

SIN: The SIN function gives the sine of the number between parentheses. The number is an angle in radians.

spreadsheet: A document arranged in columns and rows, usually used to work with numerical data. A spreadsheet can contain formulas that allow complex "what-if" analyses of data.

SQR: The SQR function gives you the square of the number between parentheses.

SQRT: The SQRT function calculates the square root of the number between parentheses. The number must be greater than or equal to zero.

Sticker: A graphic, which may have sound or text, that you can put into your spreadsheet or notebook.

TAN: The TAN function gives the tangent of the number between parentheses. The number is an angle in radians.

Tile Windows: The uniform rearranging and resizing of windows on the screen in order to better view open documents.

TRUNC: The TRUNC function truncates the number between parentheses to the nearest whole number.

THE CRUNCHER QUICK REFERENCE

Action	Spreadsheet		Notebook	
	(Win)	(Mac)	(Win)	(Mac)
Accept entry in formula bar	ENTER or click ☑	RETURN or click ☑		
Activate formula bar for cell	Click a cell	Click a cell		
Bold		⌘B		⌘B
Cancel entry in formula bar	Click ☒	Click ☒		
Close window	CTRL + F4	⌘W	CTRL + F4	⌘W
Copy	CTRL + C	⌘C	CTRL + C	⌘C
Cut	CTRL + X	⌘X	CTRL + X	⌘X
Delete previous character	BACKSPACE	DELETE	BACKSPACE	DELETE
Exit/Quit	CTRL + Q	⌘Q	CTRL + Q	⌘Q
Fill down	CTRL + D	⌘D		
Fill right	CTRL + R	⌘R		
Help	F1	⌘?	F1	⌘?
Italic		⌘I		⌘I
Lock text	CTRL + L	none	CTRL + I	⌘ + OPTION + L
Move down one cell	ENTER or ↓	RETURN or ↓		
Move left one cell	←	←		
Move right one cell	TAB or →	TAB or →		
Move to bottom of document	END	END	END	END
Move to next field in most dialog boxes	TAB	TAB	TAB	TAB
Move to top of active doc.	HOME	HOME	HOME	HOME
Move up one cell	↑	↑		
New spreadsheet	CTRL + N	⌘N	CTRL + N	⌘N

Action	Spreadsheet		Notebook	
	(Win)	(Mac)	(Win)	(Mac)
Open a spreadsheet, project, or tutorial	CTRL + O	⌘O	CTRL + O	⌘O
Paste	CTRL + V	⌘V	CTRL + V	⌘V
Print	CTRL + P	⌘P	CTRL + P	⌘P
Save	CTRL + S	⌘S	CTRL + S	⌘S
Scroll down one screen	PAGE DOWN	PAGE DOWN	PAGE DOWN	PAGE DOWN
Scroll up one screen	PAGE UP	PAGE UP	PAGE UP	PAGE UP
Select all	CTRL + A	⌘A	CTRL + A	⌘A
Select a line			Click line 3x	Click line 3x
Select a range of cells	Click and drag	Click and drag		
Select text	Click and drag	Click and drag	Click and drag	Click and drag
Select a word			Dbl-click a word	Dbl-click a word
Set cell attributes	Dbl-click a cell	Dbl-click a cell		
Underline		⌘U		⌘U
Undo	CTRL + Z	⌘Z	CTRL + Z	⌘Z
Cell attributes	CTRL + M			
Chart	CTRL + G			
Column width	CTRL + W			
Font and color	CTRL + F			
Hide grid	F2			
Hide notebook	CTRL + B			
Insert column	F6			
Insert row	F5			
Row height	CTRL + H			
Set print area	F4			
Show formulas	F3			
Sticker Picker	CTRL + K		CTRL + K	
Tile windows	CTRL + T			

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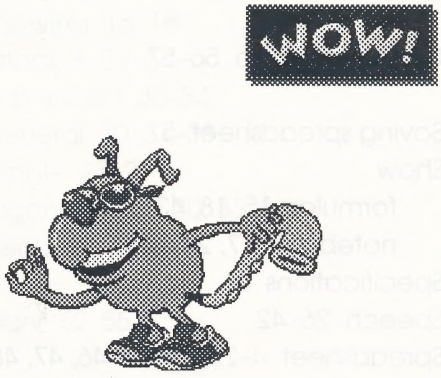

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