

# Math Skills™

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**Here's the fun way for your child to learn basic math facts  
at the primary level.**

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A Product of  
**The Software Guild**

## **SYSTEM REQUIREMENTS**

Apple® II with Applesoft, Apple II +, or Franklin Ace™ 1000  
48K • One Disk Drive • DOS 3.3

## **PACKAGE CONTENTS**

Math Skills Disk  
Instruction Booklet  
Warranty Card

## **OVERVIEW**

Effective math skills are a must in today's world. Now Math Skills is here to help—by providing primary level instruction in basic arithmetic. Your child will want to learn with Math Skills because of its interactive format, animated pictures and captivating sounds.

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**Math Skills Manual v.2**  
**May 1983**  
**Edited by The Software Guild, Inc.**

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# I. Introduction

## THE MATH SKILLS PROGRAM

In today's world, effective mathematical skills are a must. Colleges and universities across the country are putting increased emphasis on science and technology. Basic math skills comprise the foundation upon which these are built.

Your purchase of Math Skills is the first step in leading your child to discover the world of numbers. The attractive displays make mathematical concepts such as addition and multiplication both interesting and exciting. The "positive feedback" your child gets takes the pain out of making mistakes and promotes learning for mastery.

Like Fractions and Decimals, two other products in Softsmith's educational line, Math Skills is easily modified so you can tailor the format of the lessons to meet your child's needs and learning pace.

This instruction booklet describes the Math Skills program in detail. Read it over carefully to make the most effective use of the program. Pay particular attention to the System Set-up functions in Chapter III, since they are the key to the program's versatility.

## HOW TO OBTAIN A BACKUP COPY

The Math Skills program disk is copy-protected. To obtain a backup copy, please send a check or money order in the amount of ten dollars (\$10.00) to The Software Guild, Inc., together with the Warranty Card. Our address is:

The Software Guild, Inc.  
Customer Service  
2935 Whipple Road  
Union City, CA 94587

## WARRANTY CARD

Please take a moment to complete and mail the enclosed Warranty Card. By having your name on file we will be able to provide better customer service, including information on program updates and replacement of damaged disks.

## IMPORTANT TIPS

Follow these tips to minimize problems in running this and many other programs on your microcomputer.

Handle your disks carefully and hold them with your fingers on the labeled edge. Always keep them in their special sleeves while not in use.

Make sure the shift lock light is on if running this program on the Franklin Ace. This program recognizes only capital letters.

Do not open the disk drive door while the "in-use" light is on. This may damage your disk and render it unusable.

Do not press <CTRL-C> while the "in-use" light is on. Results are unpredictable and damage to your program may result.

Do not press <BREAK> while the program is running.

Do not try to make a copy of this disk. If during normal use something goes wrong with your disk, please refer to the Troubleshooting section of this manual.

## GETTING STARTED

To get started with Math Skills, simply follow these steps (this is called "booting"):

1. Turn off the computer to clear the memory. Turn on the monitor.
2. Open the disk drive door by pulling out and up on its bottom edge. Slip the program disk into drive #1 with the labeled edge being the last to enter the drive.

3. When the disk is entirely in the drive, close the drive door.
4. Turn the power switch to the on position. You will hear a "beep" from the computer and the "in-use" light on the disk drive will come on. This means that the program is loading.

You will now see the Softsmith logo and the Math Skills title appear on the screen. If you don't, please try turning your computer off briefly, and then on again.



## II. Using the Math Skills Program

This chapter describes how a child will approach Math Skills lessons. It also presents a summary of the lesson units included within the program.

### HOW A CHILD USES MATH SKILLS

When the program is first "booted," the Menu on the screen gives you a choice of running Math Skills or exiting from the program.

By pressing <1>, you can run the lessons in the program. Try out one of the lessons to get a feel for how the program works, as this is the way a child will use the program. The program shows you one or more examples and then presents questions for you to answer. Eventually, one or more tests will be given which must be passed (according to criteria which you establish under System Set-up) before going on to the next lesson.

To exit in the middle of a Math Skills lesson, press <ESC> twice. Once again you have the choice of running Math Skills or exiting from the program.

To use the program, the child need only "boot" the Math Skills disk according to the "Getting Started" instructions presented earlier. The program automatically sends the child to the selected lesson unit. You, as a parent or teacher, will want to learn how to customize the program for your child by entering the System Set-up portion of the program. (Please refer to the "Math Skills System Set-up" section of this booklet.)

### THE LESSONS OF MATH SKILLS

The Math Skills program includes lessons covering the following basic concepts:

#### Counting

- one digit numbers
- two digit numbers

### **Addition**

- one and two digit numbers, no carrying
- one, two and three digit numbers with carrying

### **Subtraction**

- one and two digit numbers, no borrowing
- one, two and three digit numbers with borrowing

### **Multiplication**

- one and two digit multiplier and multiplicand
- two digit multiplier ending in zero
- two digit multiplier and three digit multiplicand

### **Division**

- one and two digit divisors, no remainder
- one and two digit divisors with remainder
- three place dividend

## **ABOUT CHILDREN AND DISKS**

Usually, children need some initial help with using the computer. We also strongly recommend that young children be taught the correct way to handle disks and not be allowed to use the program disk without supervision, especially the first couple of times.

For those unfamiliar with the strange behavior of disks, be forewarned that mishandling them is likely to be lethal. Fingerprints on the exposed magnetic material, bending, or using the disk in any way other than that originally intended is guaranteed to bring a fatal end to the programs stored on it. Please also review the "Important Tips" section of this booklet with your child.

### III. Math Skills' System Set-up

While children enjoy the pictures and sounds of the Math Skills program, adults especially appreciate the flexibility provided by the System Set-up. This section describes various features you can adjust with System Set-up. Please read it carefully to get the most effective use of the program.

**Note:** In the remainder of the booklet, "you" refers to the adult setting up the program, and "learner" refers to the child who will be using it to learn math.

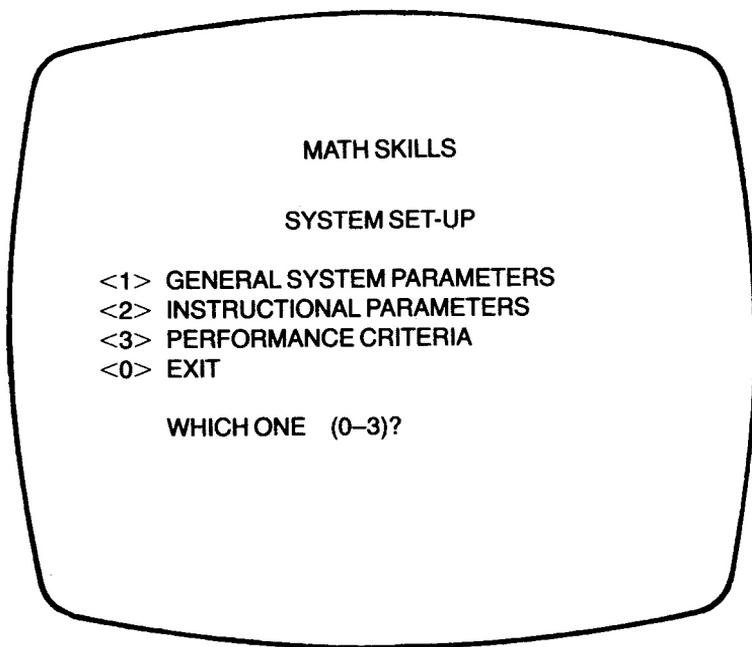
#### WHAT IS THE SYSTEM SET-UP?

The System Set-up is that portion of the program that allows you to change the format of the lessons. Normally, a child will proceed directly into the lessons by "booting" the disk without ever seeing the System Set-up portion of the program. A parent or teacher will, however, use the System Set-up to make adjustments and review the learner's progress.

To get to the System Set-up part of the Math Skills program, follow steps 1-4 in the "Getting Started" section of this booklet. As soon as the Math Skills title page appears, press the <-> key.

## THE SYSTEM SET-UP MENU

A minute or so after pressing <→> the following System Set-up Menu will appear on the screen.



Please note that pressing <0> is the only correct method of exiting from the System Set-up. Because the decisions you make are recorded on the disk, do not attempt to exit by any other method, or you will have to reset all the parameters.

The following sections describe the various controls available to you in System Set-up. They are presented in the order in which you would actually customize the Math Skills program for your learner.

### GENERAL SYSTEM PARAMETERS

You get to these settings by pressing <1> from the System Set-up Menu shown previously. The System Parameters Menu will appear, listing the following settings available to you.

#### Sound

The Math Skills program is designed to wait a specified period for the learner to give a response to a question or screen display. If a response

does not occur within the time period set, the computer will "beep." After five beeps, the computer will exit the program, returning to the Menu.

In addition, each time an example is given, an animated hand taps the keyboard and, as it does so, a sound is emitted. You may eliminate these sounds and/or set the amount of time that elapses before a sound occurs, as follows:

- If sound coming from the computer will be disturbing, press <1> and press <1> again for "no." Press <0> to return to General System Parameters.
- If you wish to change how much time will elapse before the "beep," press <1>, press <2> and enter the time in seconds. Then press <RETURN> and press <0> to return to General System Parameters.

## User

Throughout this booklet, we will refer to two types of learners: the child learner and the remedial learner.

The child learner is considered to be a young learner in early elementary school, grades one to four. This learner will be experiencing the Math Skills lessons as new material.

We assume that the child learner is unable to manage his or her own instruction, and that a parent or teacher will be the only person using the System Set-up. You will also need to assign a particular lesson to be worked on.

The remedial learner, on the other hand, is assumed to be an older student in need of basic instruction or review in arithmetic. This learner should be capable of managing his or her own instructional program and will be using the System Set-up to do so. No assignment need be made at this time, because each time the program is booted, the remedial learner can select any lesson desired.

To set the program for the type of learner, press <2> from the System Parameters Menu. The "User Menu" will appear. To set the User option:

- Press <1> for remedial learner, then press <0> to return to General System Parameters.
- Press <2> for child learner, then press the number corresponding to the desired lesson (counting, addition, subtraction, multiplication, or division). Press <0> to return to User Menu, and press <0> again to return to the General System Parameters.

**Note:** Option <2> for the child learner is the only opportunity you have to determine which lesson the child will study.

## Space Bar Press

You may set the program to move automatically from one example to the next, or have the learner initiate this change by pressing the <SPACE BAR>.

To set the Space Bar option:

- Press <3> from the System Parameters Menu.
- Press the number next to YES or NO as you prefer.

## Delay

You may adjust the speed at which the questions and examples change on the screen. A lower number makes them change more rapidly, and a higher number slows them down. To adjust the speed:

- Press <4> from the System Parameters Menu.
- Enter the number you wish (you will automatically be returned to General System Parameters).

## Okay!

When you have finished adjusting all settings available from the System Parameters Menu, press <0> to return to the System Set-up Menu.

## INSTRUCTIONAL PARAMETERS

These settings are available by pressing <2> from the System Set-up Menu. The Instructional Parameters Menu will appear.

### Number of Examples Before Testing

This option lets you determine how many examples will be presented to the learner before she or he tries to work a problem alone. Examples are usually presented each time a new lesson or concept is introduced. To set the number of examples:

- Press <1> from the Instructional Parameters Menu.
- Enter the number of examples desired.
- Press <RETURN> to return to the Instructional Parameters Menu.

### Number of Incorrect Answers Allowed

When the learner is given a question, a preset number of incorrect responses will be accepted before the computer presents the correct answer. To set the number of incorrect responses accepted:

- Press <2> from the Instructional Parameters Menu.
- Enter the number of errors you wish to allow.
- Press <RETURN> to return to the Instructional Parameters Menu.

## Number of Typing Errors Allowed

Young children may make typing mistakes unrelated to their understanding of the mathematical tasks with which they are dealing. Specifically, letter keys are not used to enter answers in Math Skills. To set the number of such typing mistakes allowed:

- Press <3> from the Instructional Parameters Menu.
- Enter the number of errors you wish to allow.
- Press <RETURN> to return to the Instructional Parameters Menu.

## Okay!

Again, when you have completed all the changes you wish to make, press <0> to return to the System Set-up Menu.

## PERFORMANCE CRITERIA

You get to these settings by pressing <3> from the System Set-up Menu. The Performance Criteria Menu will appear.

### Intermediate Test—Passing

For some lessons, there are both Intermediate and Final Tests. The Intermediate Test provides prompts for correct solutions. The Final Test determines whether or not the learner has mastered a given skill and provides no such prompting.

The passing criterion on the Intermediate Test establishes the number of correct responses required before the learner may continue to the Final Test. To set the number of correct responses:

- Press <1> from the Performance Criteria Menu.
- Enter the desired number of correct responses.
- Press <RETURN> to return to the Performance Criteria Menu.

### Intermediate Test—Failing

Just as the passing criterion refers to the number of correct answers needed to pass, the failing criterion refers to the number of incorrect responses needed to fail. The tests will continue until one of these two limits is reached. When the Intermediate Test is failed, the learner is automatically returned to the example preceding the test.

Subsequent failures loop the learner back to more examples, until she or he can meet the Intermediate Test passing criterion. You may set this variable to establish the number of incorrect responses allowed before

the learner is returned to an earlier example. To set the number of incorrect responses allowed:

- Press <2> from the Performance Criteria Menu.
- Enter the desired number.
- Press <RETURN> to return to the Performance Criteria Menu.

### **Final Test—Passing**

Final Test—Passing refers to the number of correct responses required to "graduate" to the next lesson. To set the number of correct responses:

- Press <3> from the Performance Criteria Menu.
- Enter the desired number.
- Press <RETURN> to return to the Performance Criteria Menu.

### **Final Test—Failing**

As with the Intermediate Test, this refers to the number of incorrect responses needed to fail. The first time that the learner fails the Final Test, she or he is returned to the preceding Intermediate Test, if there was one for that particular lesson. If there was not, the learner is sent to the first set of examples preceding the Final Test. The next failure on the Final Test returns the learner to earlier examples. To set the number of incorrect responses allowed:

- Press <4> from the Performance Criteria Menu.
- Enter the desired number.
- Press <RETURN> to return to the Performance Criteria Menu.

### **Counting—Passing**

This variable applies only to the child learner using the Counting Unit. It sets the number of times the learner must correctly count a number between 10 and 29. To set the number of counting times:

- Press <5> from the Performance Criteria Menu.
- Enter the desired number.
- Press <RETURN> to return to the Performance Criteria Menu.

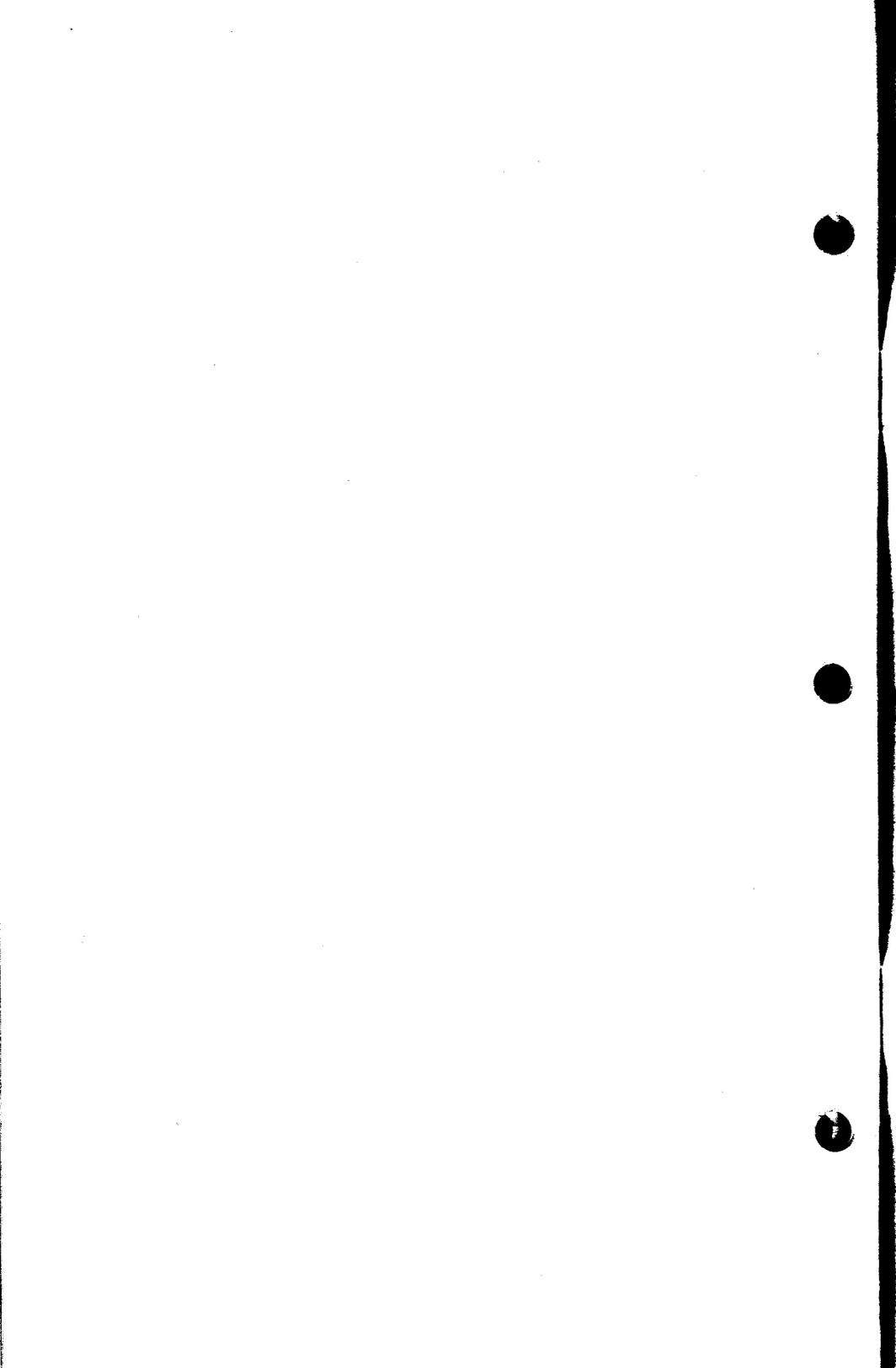
### **Okay!**

Again, press <0> to return to System Set-up when you have completed these settings.

## OTHER CONSIDERATIONS

The following are some additional considerations you should think about as you are customizing the System Set-up for a particular learner.

- The final tests in both multiplication and division require that final products or quotients be calculated without benefit of the computer's computational capabilities. Therefore, learners should have pencil and paper available to make these computations.
- For the rapid learner, you should decrease the number of examples given before the testing mode appears. This learner will rapidly become bored by concepts that have already been mastered.
- You may wish to increase the Final Test—Failing criterion so that minor, careless errors do not continuously return the learner to earlier sections.



## IV. Troubleshooting

A great deal of effort has gone into preparing this program to operate smoothly and without "bugs." Given normal use, it should provide you with many hours of consistent operation. However, should you have problems with the program, please follow these steps:

1. If the program never starts or dies soon after starting:
  - Check the instructions on how to start the program. Try them again, following all steps exactly.
  - Check to see that you have the disk in the correct disk drive.
  - Make sure that you have all the equipment necessary to run this program, and that it is properly connected. See the front page of this document for a list of necessary equipment.
  - Make sure your disk drive is working properly. Try another disk that you know to be good. If it does not start properly, stop the computer immediately and disconnect the drive. Do not use the drive again until it has been checked or it may damage other disks.
2. If your disk becomes damaged:
  - Given normal use, it should not be possible to damage your disk. However, if the disk or program on it does become damaged, please return it to us with a short description of the problem. The Software Guild, Inc., will replace your disk promptly, according to warranty provisions.
3. If you have other problems:
  - Please contact our Customer Service Department at the following toll free number. We have the experience and service network to assist you.

1 (800) 341-4000

We have the experience and service network to assist you.

The objective of The Software Guild, Inc. is to provide the highest quality software products available. In order to improve our products wherever possible, we are happy to receive comments, criticism or praise.

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