

InfoWorld Software Review

Addition & Subtraction, an educational package

By Lawrence R. De Rusha, Jr.

Many educational institutions and companies are exploring ways in which the personal computer can aid in educating grade-school children. The Scott, Foresman Company, an educational-textbook publisher, is developing an educational series of programs in conjunction with the Texas Instruments Learning Center. Addition and Subtraction 1, authored

by Thomas Hartsig, is part of this series and is produced as one of the snap-in Solid State Modules from TI.

Features

You require only the console for operating this program module. You can, in addition, use speech with an optional speech synthesizer attached to the console.

The program begins with an ani-

mated rocket ship blasting off. It is followed by a main-index listing. The colorful rocket introduces each selected activity with a banner and sound effects. You can select nine activities:

- Counting Bars;
- Getting Ready;
- Addition Action;
- Add Another Way;
- Subtraction Action;
- Subtraction Another Way;

- Across and Down;
- Addition Table; and
- Subtraction Table.

The level of difficulty to which you will advance depends on how many correct responses you make. Each individually correct answer is rewarded with a musical tune and a happy face, or a gold star. Incorrect answers are indicated by a red X across the answer, and you are asked to try again. If you



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InfoWorld Software Report Card

Addition and Subtraction 1

	Poor	Fair	Good	Excellent
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ease of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Error Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

System Requirements

- TI-99/4 or TI-99/4A
- 16K RAM
- Speech synthesizer optional

Price: \$39.95

Texas Instruments, Inc.
P.O. Box 53
Lubbock, TX 79408

miss more than 60% of the answers in an activity, the program will return you to the previous activity.

Each activity begins with a tutorial. In the first tutorial for Counting Bars, you are taken through the illustration of counting individual colored bars. The drill that follows asks you to identify the number of bars in various pictures, randomly selected by the computer. If you make more than two wrong guesses, the computer shows you the right answer by counting step-by-step.

In the second activity, Getting Ready, the demonstration displays two boxes of objects. Each object is counted with an animated display followed by the written number for the number of objects in the box. After several examples, the drill begins. The exercise asks you to answer questions that reinforce the counting skills of the first activity.

The third activity illustrates the "bringing-together" concept of adding. The screen displays two boxes with objects in them. The objects, perhaps rabbits, on the right move into the box on the left. The problem, given in a word sentence, follows.

The concept of vertical addition is the topic of the fourth activity, which is titled Add Another Way. Vertical problems are made from horizontal ones. In the drill, you are asked to an-

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SYSTEM

REQUIREMENTS: 48K Apple II or II+, ROM or RAM Card, DOS 3.3 (or DOS 3.2.1 for UBI) and one or more disk drives.

COST: \$49.95 (+\$3.00 Postage and Handling) for each Utility Disk (with Training Disk and Manual).

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swer the vertical problems.

The fifth selection on the index, Subtraction Action, utilizes a box for the activity area also. Objects are used to illustrate the "moving away" principle of subtraction by their movement out of the box. This is followed by a word sentence indicating the problem.

Section six shows you vertical subtraction.

Activity seven applies the principle of vertical and horizontal addition and subtraction by using a box divided into nine sections.

The last two activities use a game for practicing addition and subtraction. In the first game a table appears with numbers to be manipulated horizontally across the top and vertically down the left side. In the last section a table shows numbers down the left side and the program randomly picks a number to be added or subtracted from that number.

Performance

Each activity was well designed and effectively accomplished its goals with appealing interest.

The computer asks you to respond by saying or displaying the words *your turn*. If you do not reply within ten seconds, the computer will beep and ask again. If you still do not answer after the third time, the computer will ask, "What is the number?" A tutorial is provided if you do not reply after the third try.

If your answer is incorrect twice during the first seven activities, the computer will work the problem out

step-by-step. At the end of the last two activities the computer provides you with a list of problems to study.

I found it annoying that I could not return to the main menu at any time. To depress the shift and back keys will take you to the start of the activity you are in. No access is provided to go back to the main menu, however.

This Texas Instrument Solid State Module is enhanced by animation, music and sound effects.

Ease of use

The Addition and Subtraction 1 module is easy to use. Just plug the module into the slot on the console and begin. If you are utilizing the

speech unit, it should be plugged into the outlet on the side of the computer before you begin.

A flashing cursor indicates a response is required. If you are using speech, it also asks for a response.

The master menu allows you to select any of the activities in the program. You can only choose at the beginning of the program, however.

Error handling

The Addition and Subtraction 1 module appears to be immune to users' punishment and users' errors.

The manual for this module is good. There is a Quick Reference Guide that summarizes keyboard functions on

the console. Adults working with children on the module are addressed in a separate segment about using the module.

There is a section titled "Your Child and The Computer" that indicates precautions to take around the computer.

The Special Features section and the summaries of the various activities are short but effective.

Summary

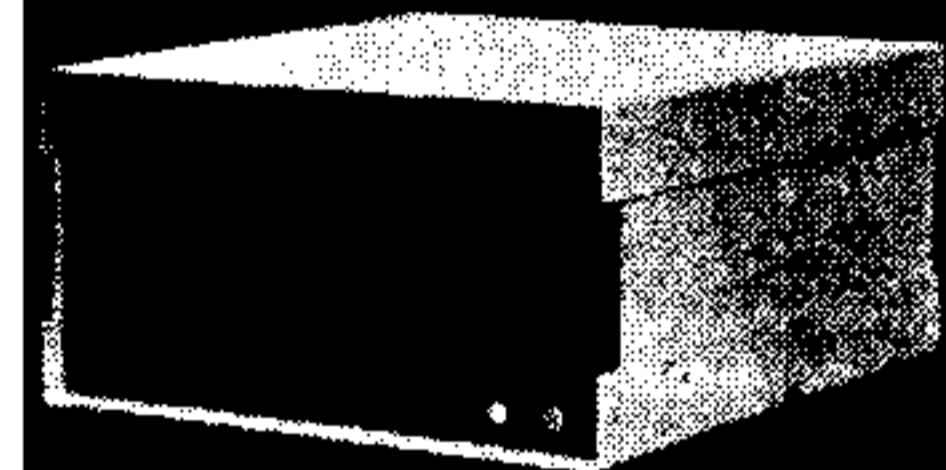
This program is well done. It provides serious lessons yet has entertainment value to prevent boredom. I think it should be included in any educational-software library. ■

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| Income Statement: | ● Summary — Shows current, YTD values and % |
| | ● Comparative — Above plus budget, last year, month and YTD |
| Trial Balance: | ● Dept. Income Statements, comparative and summary |
| | Complete transaction detail by account number |

ACCOUNTS RECEIVABLE

- | | |
|--------------------|--|
| Invoice: | Quick single billing or batch inv. entry; allows discounts |
| Statement: | Automatic billing; invoices automatically entered |
| Aged Receivables: | Detail or summary reports with 4 aging periods |
| Customer Activity: | Reports to video screen or printer |

ACCOUNTS PAYABLE

- | | |
|--------------------|--|
| Checks: | Uses commercially available forms; allows automatic payments |
| Cash Requirements: | By due or discount date; excellent cash management tool |
| Check Register: | Check Record for general use and audit |
| Query Vendor: | Account status by vendor to video screen or printer |
| Aged Payables: | 5 Aging periods |

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|-----------------|---|
| Payroll Checks: | Comprehensive check stub, uses commercially available forms |
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| W-2: | Prints end of year forms |

SYSTEM REQUIREMENTS

- | | |
|-----------------|--|
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Goodspell

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A general gripe that I have with the SDS manual style is that the printing is so small and light that you have to be well under the age of puberty to have good enough vision to be able to read it. This situation is in marked contrast to Apple Computer Company's finely produced manuals for its own products.

Support

Technical support is available by telephone at (408) 745-6731. This is not a toll-free number, and it is not correctly listed in the manual.

The Goodspell disk is copyable.

Summary

Goodspell is relatively fast and inexpensive.

Its small, fixed dictionary severely limits its usefulness for those requiring specialized or very broad vocabularies. If you merely need to use it for general correspondence, Goodspell will serve you well enough.

Please keep in mind that no currently available spelling checker can cope with correctly spelled but inappropriate words (such as too, two, to), misuse of uppercase or lowercase letters, improper date formats, incorrect punctuation, bad grammar or illogical phrasing. Even if you were able to have a perfect spelling-checker program with an infinitely large dictionary, you could still end up with a document that sounds like a literal translation of a Japanese technical manual. ■