MULTIPLICATION 1

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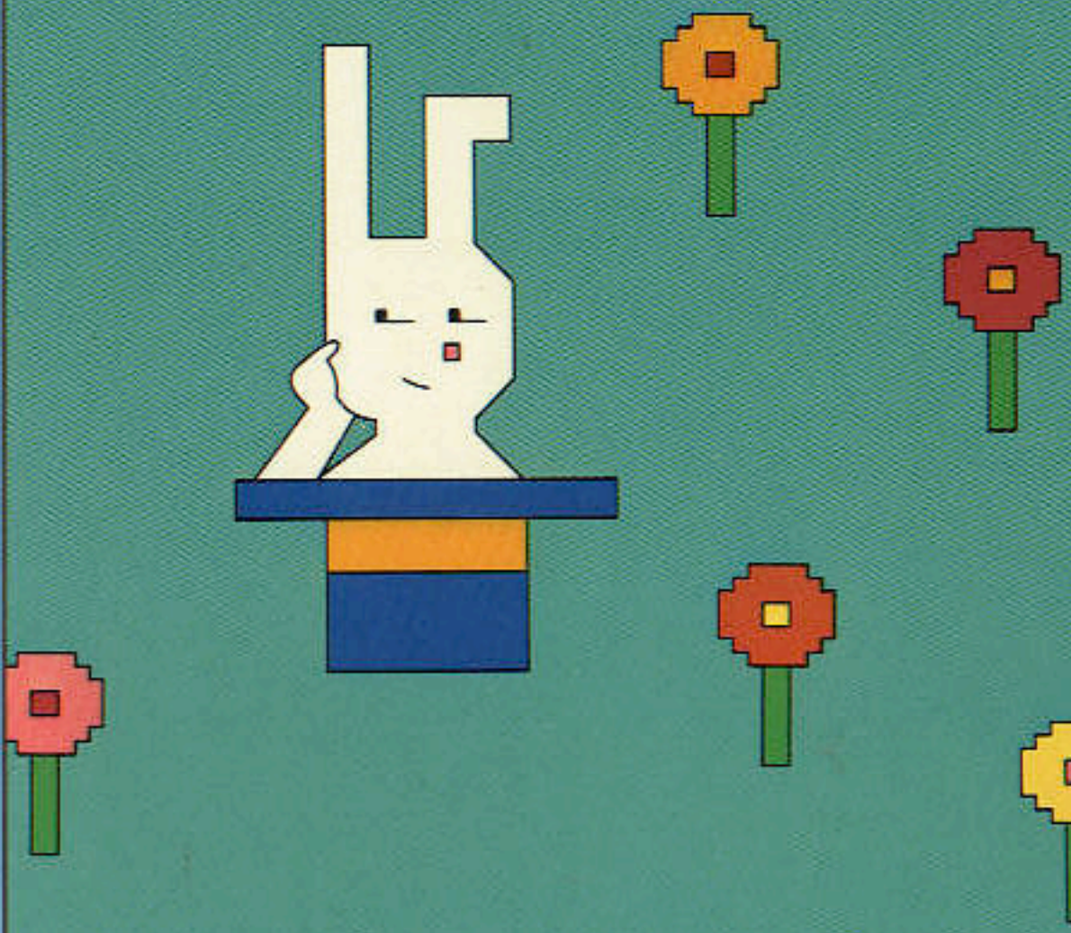

Scott, Foresman
Electronic Publishing

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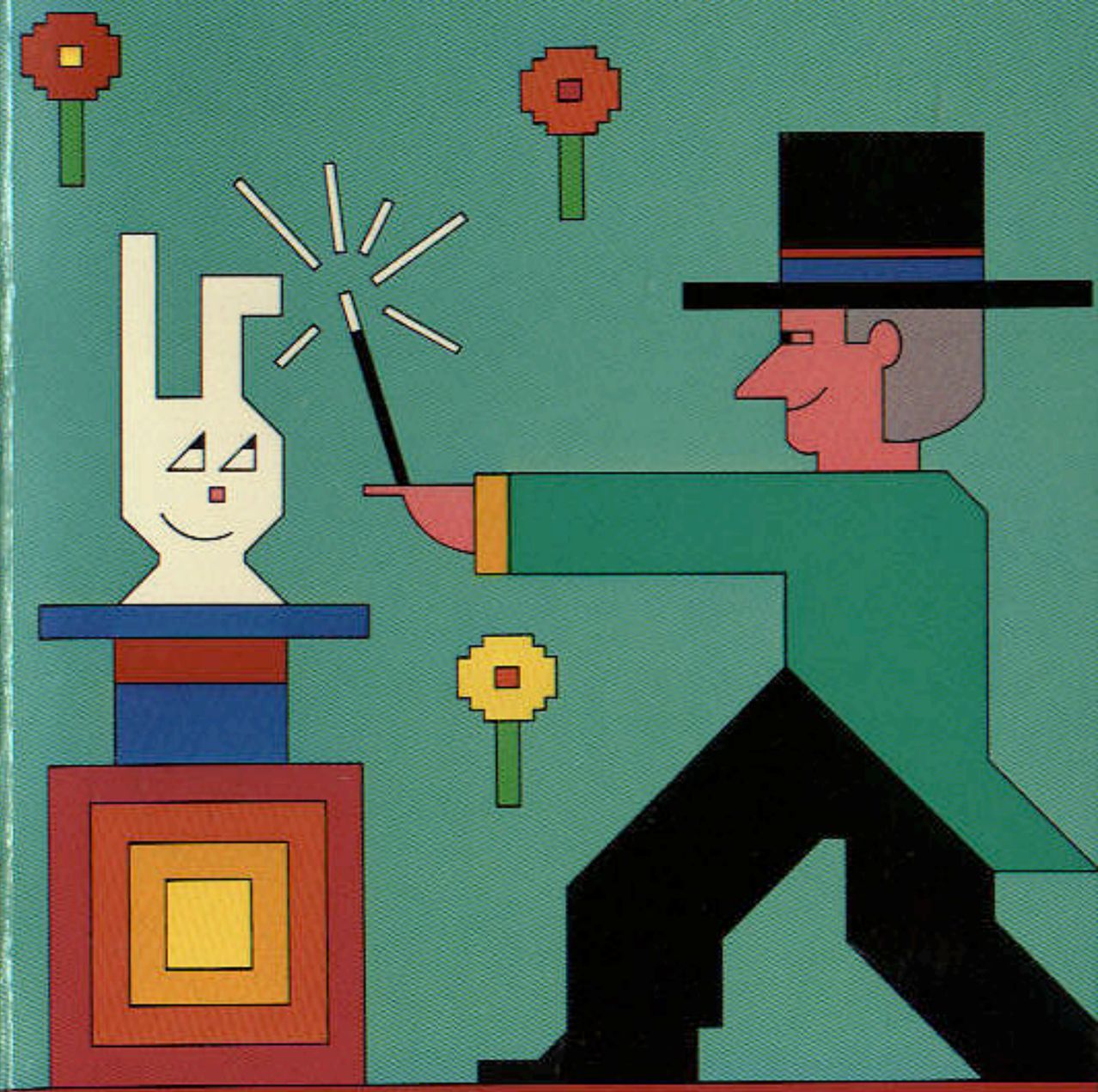
MULTIPLICATION 1

AGES 7-9

BASIC MULTIPLICATION SKILLS

For use with the
TI 99/4A microcomputer



SCOTT, FORESMAN

MATHEMATICS COURSEWARE SERIES

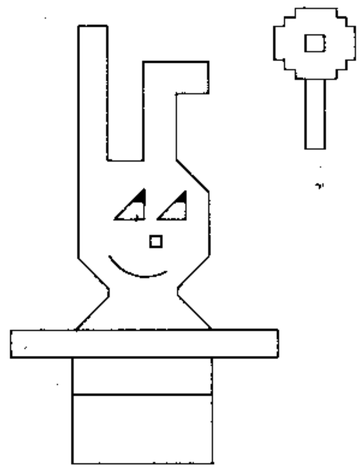
KEYBOARD GUIDE FOR MULTIPLICATION 1

PRESS	TO
ENTER	■ pass through title screens quickly. ■ speed the appearance of the next problem.
Space Bar	■ temporarily freeze a screen in the practice exercises. The program continues when the space bar is released.
Period Key (.)	■ see the beginning of each activity in the module in consecutive order. Start at the main list of activities. Hold the (.) key down until you reach the activity you want.
FCTN 3 (ERASE)	■ erase the first number of a two-digit answer before the complete answer is typed.
FCTN 4 (CLEAR)	■ erase the first number of a two-digit answer before the complete answer is typed.
FCTN 5 (BEGIN)	■ return to the main list of activities at the beginning of the module.
FCTN 7 (AID)	■ view the teaching example appropriate to the practice exercises being done.
FCTN 8 (REDO)	■ return to the teaching example.
FCTN 9 (BACK)	■ return to the teaching example.
FCTN = (QUIT)	■ end work on the module.

Scott, Foresman

MULTIPLICATION 1

Thomas P. Hartsig
Director of Computer-Based Instruction
Macomb Intermediate School District
Macomb County, Michigan



This learning module is part of the Mathematics Courseware Series designed to be used with the Texas Instruments 99/4A microcomputer.

The module can be used with or without the Texas Instruments Solid State Speech™ Synthesizer.

Scott, Foresman and Company
Electronic Publishing Offices: Glenview, Illinois

Regional Offices: Palo Alto, California •
Tucker, Georgia • Glenview, Illinois •
Oakland, New Jersey • Dallas, Texas

ISBN 0-673-30944-4

1 2 3 4 5 6 -MAL- 86 85 84 83

CONTENTS

School Materials

A Teacher's Guide for this module is also available. The Guide includes teaching objectives, suggestions for classroom use, and reproducible record-keeping forms and worksheets. For ordering information contact:

Scott, Foresman and Company
Electronic Publishing Division
1900 East Lake Avenue
Glenview, IL 60025

ABOUT THE MODULE

Multiplication 1 offers an exciting way to practice basic multiplication skills. The module uses color, sound, music, and animation to bring multiplication alive. The practice exercises are challenging and fun. The module was designed by educational experts and provides a solid foundation in essential mathematics skills.

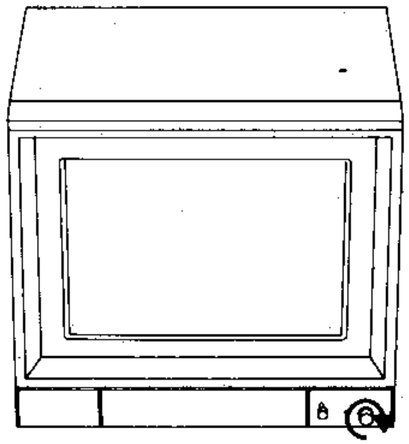
Multiplication 1 introduces the third- and fourth-grade skills of understanding the meaning of multiplication and learning basic multiplication facts. It also provides practice multiplying the numbers zero through nine. The eight activities in **Multiplication 1** follow the same sequence of skill-building that most classroom teachers use and should be done in numerical order.

Look for these special features in the module:

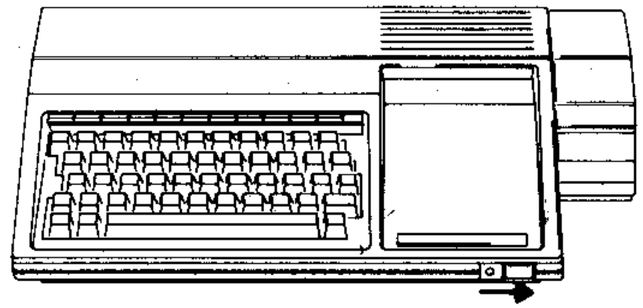
- *simple instructions which allow children to use the module with little or no supervision*
- *teaching examples, practice exercises, and review activities*
- *built-in management that allows children to advance at their own pace and provides additional teaching examples when necessary*
- *musical and graphic rewards for correct answers*
- *color, sound, and animation*
- *voiced reinforcement of directions and correct answers through optional use of a speech synthesizer*
- *numbers which are randomly generated so children receive new problems each time the exercises appear*
- *two chances to answer each exercise correctly before the computer supplies the correct answer*
- *durable hardware and software components with useful keyboard functions programmed into the module*

GETTING STARTED

1. Turn switches on.

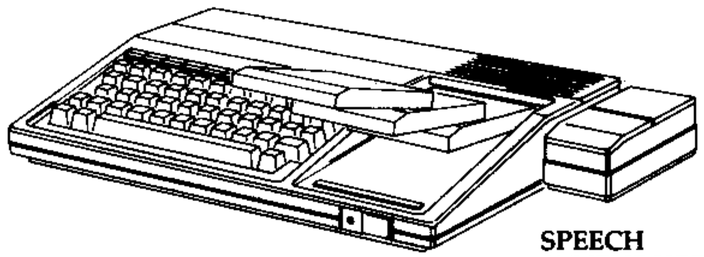


MONITOR ON



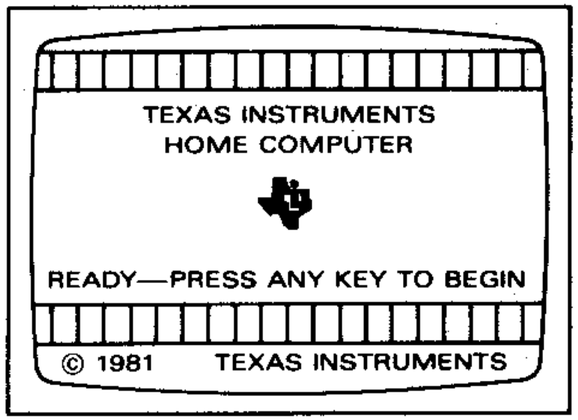
COMPUTER KEYBOARD ON

2. Insert module.



SPEECH SYNTHESIZER

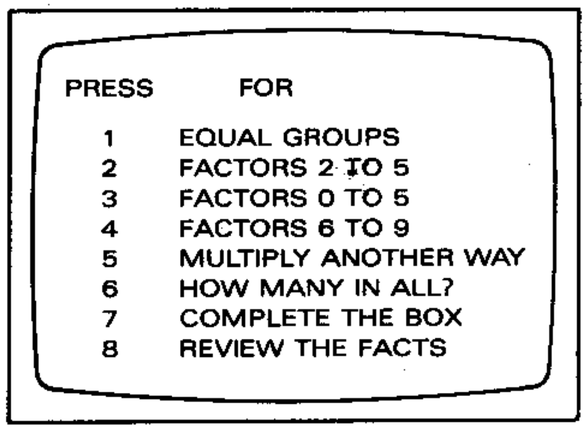
3. Wait for this screen to appear.



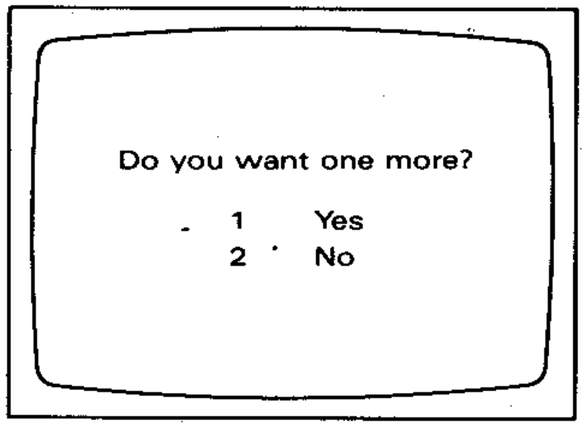
4. If you do not see the Texas Instruments title screen, check to see if:
   - *the computer keyboard and monitor are plugged in.*
   - *the cable connecting the keyboard and monitor is properly connected.*
   - *both the computer and monitor are turned on.*
   - *the module is properly inserted.*

Press any key. The Scott, Foresman copyright screen and **Multiplication 1** title screen are displayed.

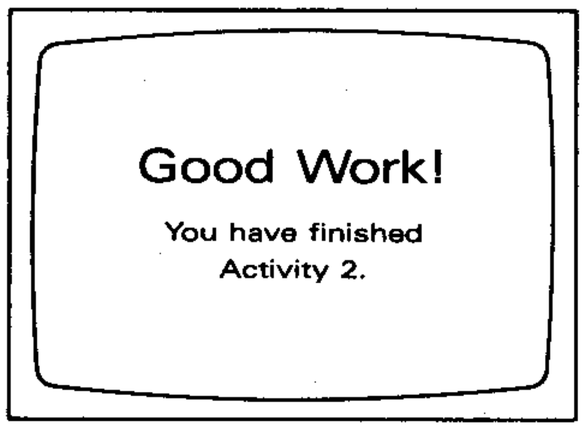
Next you will see the main selection list of activities:

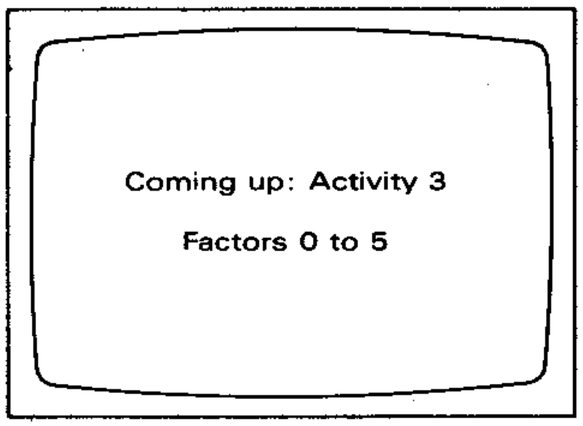


The activities should be done in order since each activity is more advanced than the one before it. If you are working on the module for the first time, press 1 to go to the first activity. If you have worked with the module before, press the number of the next activity you want to do. When you press a number the activity title screen will appear. You will be shown a teaching example for that activity. In most activities, after the teaching example is complete, the computer will ask if you want another example.

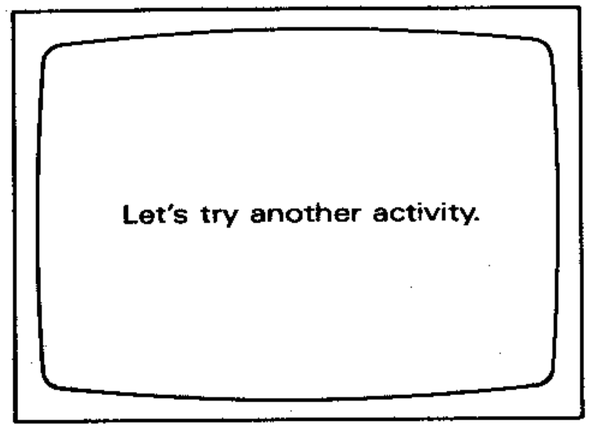


Press 1 to see another teaching example. You may see as many examples as you want before doing the practice exercises. Press 2 to go on to the practice exercises. Follow the directions on the screen for each activity. As you do the set of practice exercises, the computer keeps track of how you are doing. If your score is 80% or higher you will automatically go on to the next activity.





If, however, your score is less than 60%, the computer will take you to another activity that you should practice more before you continue.



If your score is between 60% and 80% the computer will continue giving problems until your score falls below 60% or goes above 80%.

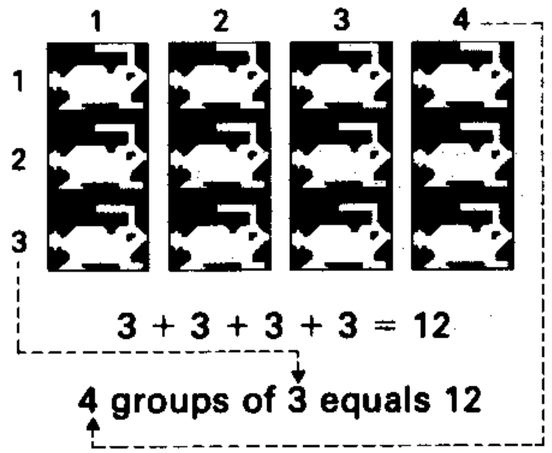
You can use the special function keys to return to the list of activities at the beginning of the module, to start an activity over again, or to get help with the activity you are working on. See the inside front cover of this book for an explanation of these and other special functions built into **Multiplication 1.**

When you are finished working on the module, press FCTN = (QUIT). The Texas Instruments title screen will reappear and you may safely remove the module.

ABOUT THE ACTIVITIES

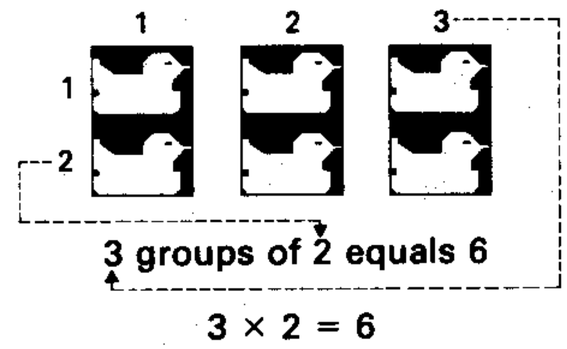
1. Equal Groups

The meaning of multiplication is illustrated when groups with an equal number of objects are used to find the total number of objects. Children must answer two questions before answering the multiplication problem: "How many groups?" and "How many objects in each group?"



2. Factors 2 to 5

Multiplication with the numbers 2, 3, 4, and 5 is emphasized. Equal groups of objects are displayed, followed by the corresponding word sentence and multiplication problem. Then the order of the numbers is reversed, the original objects are regrouped, and the new multiplication problem is shown. The practice exercises give problems which use the numbers 2 through 5.



3. Factors 0 to 5

Through the use of equal groups of objects the teaching example introduces multiplication by "one" and by "zero." In the practice section multiplication problems which use the numbers 0 through 5 are given.

4 groups of 1 equals 4

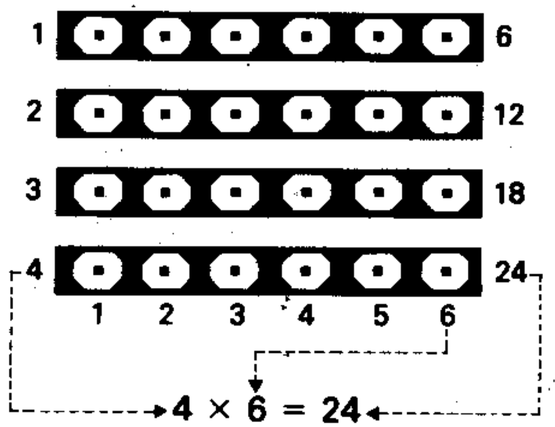
$4 \times 1 = 4$

4 groups of 0 equals 0

$4 \times 0 = 0$

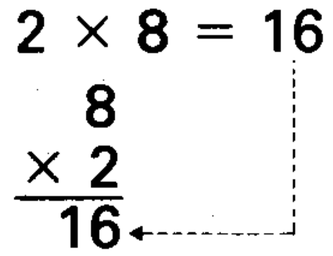
4. Factors 6 to 9

Equal groups of objects with six to nine objects in a group are used to illustrate multiplication using the numbers 6 to 9. The original array of objects is regrouped to show multiplication of the same two numbers in reverse order. Practice problems use the numbers 6 to 9.



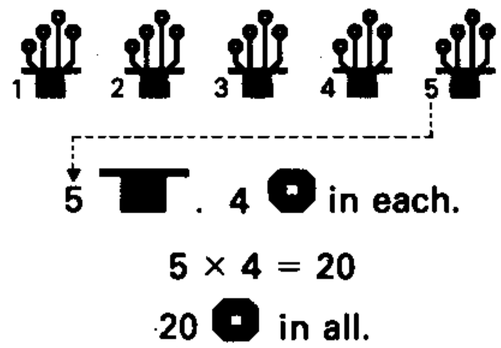
5. Multiply Another Way

A horizontal multiplication problem appears first. Then the same problem moves into a vertical format. The answer to the horizontal problem moves down to complete the vertical problem. Practice problems appear in vertical form.



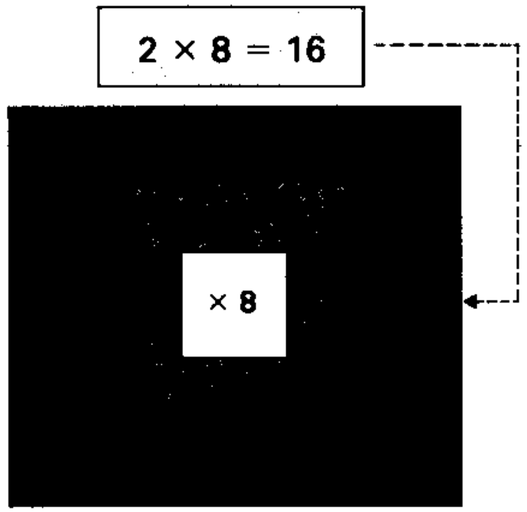
6. How Many in All?

A set of hats with the same number of flowers in each hat appears. The number of hats and the number of flowers in each hat represent the two numbers of a multiplication problem. Children enter the total number of flowers to answer the multiplication problem.



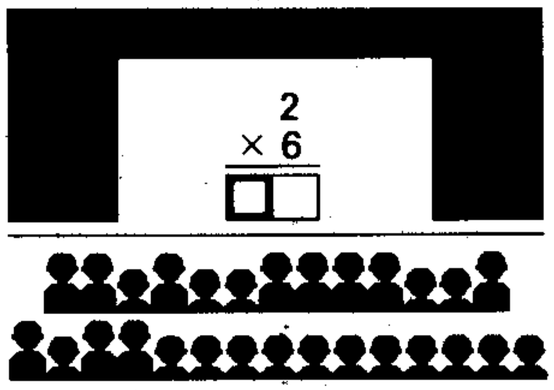
7. Complete the Box

A "multiplication box" is shown in which the number in the center square is multiplied by each of the digits from zero to nine. The computer shows how to complete the box before a similar set of practice exercises is given. The child then chooses a number from two to nine to put in the center square and completes the box.



8. Review the Facts

Multiplication problems are given in horizontal and vertical form. When a problem is answered correctly, the screen shows a person in the audience rising. At the end a score and a list of problems missed are given.



MODULES IN THE SERIES

Other mathematics modules in the Scott, Foresman Mathematics Courseware Series for the Texas Instruments Home Computer include:

TITLE	CONTENT	AGES
Addition & Subtraction 1	Introductory addition and subtraction skills	5-7
Addition & Subtraction 2	Basic addition and subtraction skills	6-8
Addition & Subtraction 3	Addition and subtraction with renaming (carrying and borrowing)	7-9
Numeration 1	Number concepts with 1-, 2-, and 3-digit numbers	5-8
Numeration 2	Number concepts with large numbers	7-11
Multiplication 1	Basic multiplication skills	7-9
Multiplication 2	Multiplication with renaming (carrying)	8-10
Division 1	Basic division skills	8-11
Fractions 1	Introductory fractions concepts	9-11
Fractions 2	Addition and subtraction of fractions	9-11
Decimals 1	Introductory decimals concepts; addition and subtraction of decimals	9-11
Decimals 2	Multiplication of decimals	10-11

Contact Scott, Foresman Electronic Publishing for information about these and other Scott, Foresman courseware packages. Special teacher materials are also available.

CARING FOR THE MODULE

1. Modules require the same care that you would give any piéce of electronic equipment. Keep them clean and dry.
2. Do not touch the recessed contacts in the module.
3. Avoid a build-up of static electricity by using an anti-static spray or a humidifier if the computer is in a particularly dry location.
4. If the module is accidentally removed from the slot while the module contents are being used and the computer behaves erratically, turn the computer off, wait a few seconds, reinsert the module, and then turn the computer on again.

SOFTWARE MEDIA LIMITED WARRANTY

Scott, Foresman and Company extends this consumer warranty only to the original consumer purchaser.

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This warranty covers the case components of the software package. The components include all cassette tapes, diskettes, plastics, containers, and all other hardware contained in this software package ("the Hardware"). This limited warranty does not extend to the programs contained in the software media and in the accompanying book materials ("the Programs").

The Hardware is warranted against malfunction due to defective materials or construction. **This warranty is void if the Hardware has been damaged by accident or unreasonable use, neglect, improper service, or other causes not arising out of defects in material or construction.**

Warranty Duration

The Hardware is warranted for a period of 90 days from the date of original purchase by the consumer.

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PROGRESS CHART

Color a box when you start an activity.
Color a star when the computer shows that you have finished the activity.

☆ 1 EQUAL GROUPS

☆ 2 FACTORS 2 TO 5

☆ 3 FACTORS 0 TO 5

☆ 4 FACTORS 6 TO 9

☆ 5 MULTIPLY ANOTHER WAY

☆ 6 HOW MANY IN ALL?

☆ 7 COMPLETE THE BOX

Cross out the factor for the box you have completed.
Record your score. Try all the factors at least once.

Factor	2	3	4	5	6	7	8	9
Score 1								
Score 2								

☆ 8 REVIEW

	First Try	Second Try	Third Try
Score			