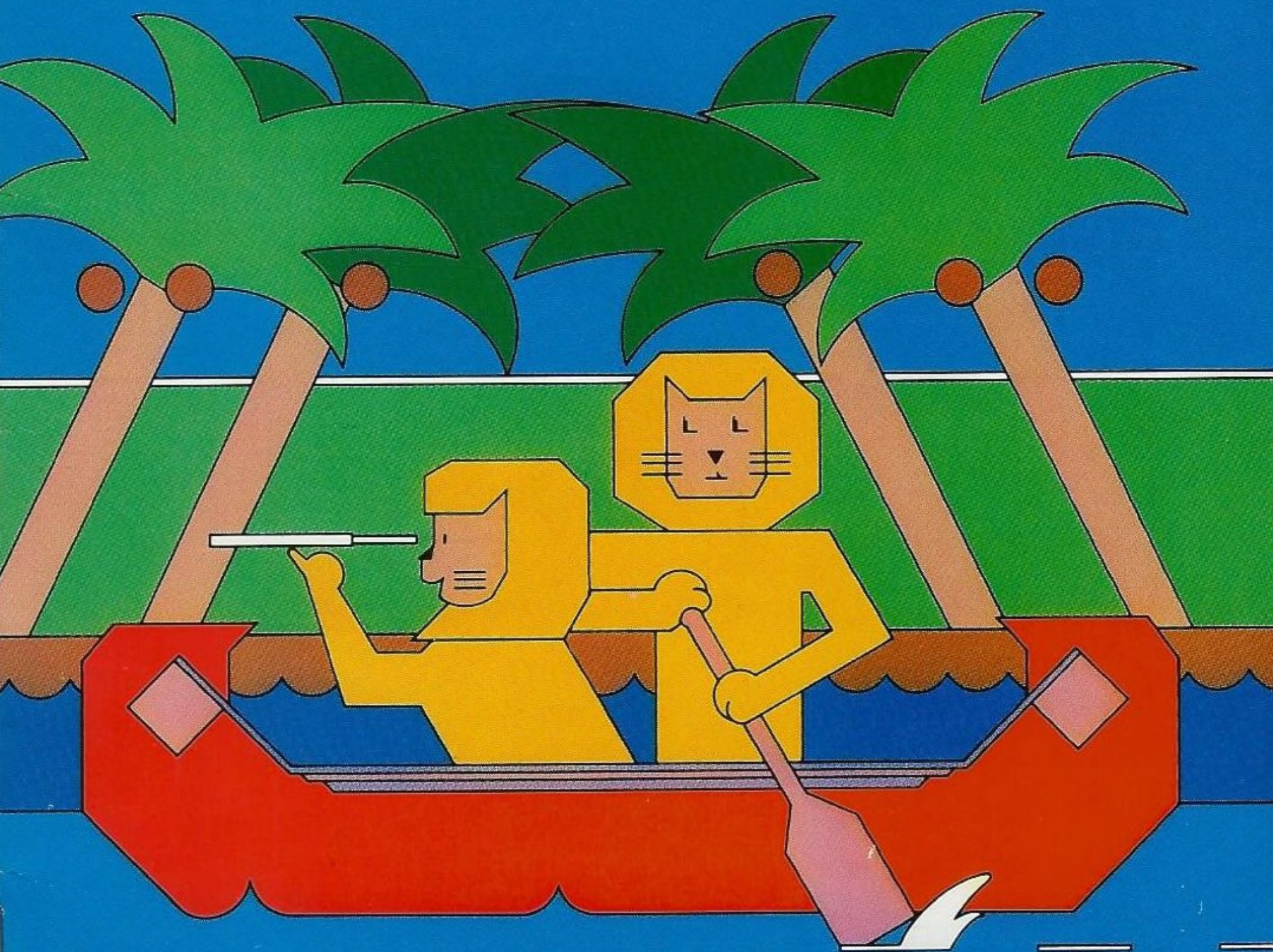

ADDITION AND SUBTRACTION 3

AGES 7-9

ADDITION AND SUBTRACTION WITH RENAMING

For use with the
TI 99/4A microcomputer.



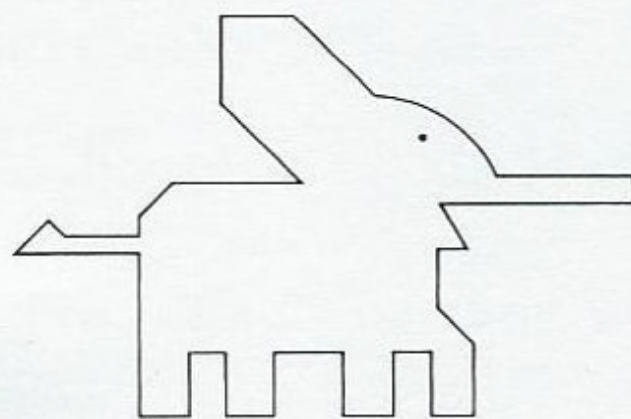
KEYBOARD GUIDE FOR ADDITION & SUBTRACTION 3

PRESS	TO
ENTER	<ul style="list-style-type: none">■ pass through title screens quickly.■ have the computer accept an answer.■ speed the appearance of the next problem.
Space Bar	<ul style="list-style-type: none">■ group objects in Activity 3.
Period Key (.)	<ul style="list-style-type: none">■ 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)	<ul style="list-style-type: none">■ erase the first number of a two-digit answer before the complete answer is typed.
FCTN 4 (CLEAR)	<ul style="list-style-type: none">■ erase the first number of a two-digit answer before the complete answer is typed.
FCTN 5 (BEGIN)	<ul style="list-style-type: none">■ return to the main list of activities at the beginning of the module.
FCTN 6 (PROC'D)	<ul style="list-style-type: none">■ leave the teaching example and begin the practice exercises.
FCTN 7 (AID)	<ul style="list-style-type: none">■ view the teaching example appropriate to the practice exercises being done.
FCTN 8 (REDO)	<ul style="list-style-type: none">■ begin an activity again.
FCTN 9 (BACK)	<ul style="list-style-type: none">■ return to the teaching example/practice exercise choice screen, or, if there is no teaching example, return to the main selection list of activities.
FCTN = (QUIT)	<ul style="list-style-type: none">■ end work on the module.

Scott, Foresman

ADDITION AND SUBTRACTION 3

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.

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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

Addition and Subtraction 3 is an exciting way to practice mathematics. The module uses color, sound, music, and animation to bring math alive. The practice exercises challenge your child, and at the same time make learning fun. You can be confident that this module was carefully designed to provide a solid foundation in essential mathematics skills.

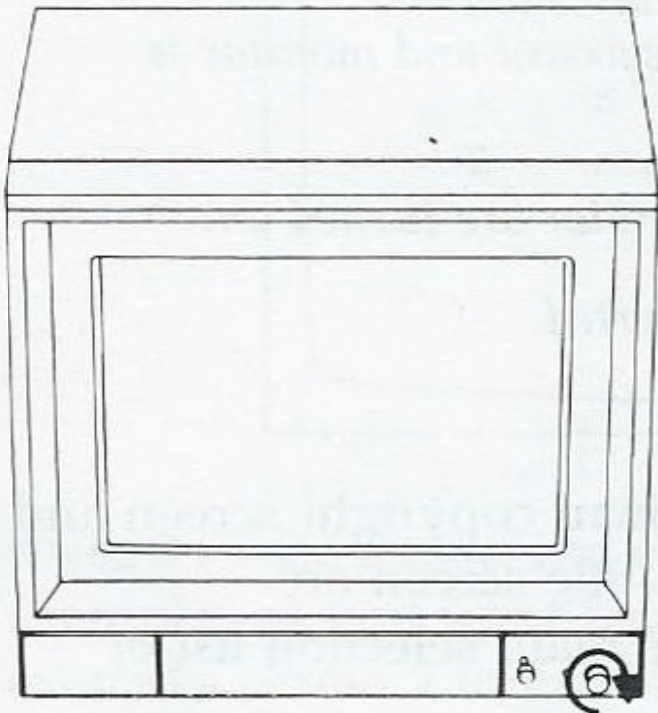
Addition and Subtraction 3 teaches and provides practice in the second and third grade skills of addition and subtraction with 2- and 3-digit numbers. The module introduces the concept of renaming (carrying and borrowing) in addition and subtraction. The eight activities in **Addition and Subtraction 3** 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*

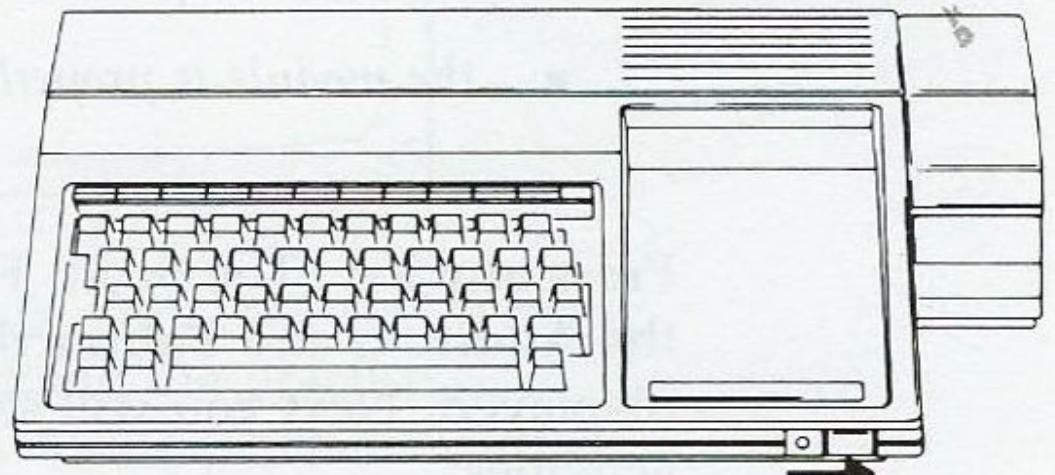
GETTING STARTED

1. Turn switches on.



MONITOR

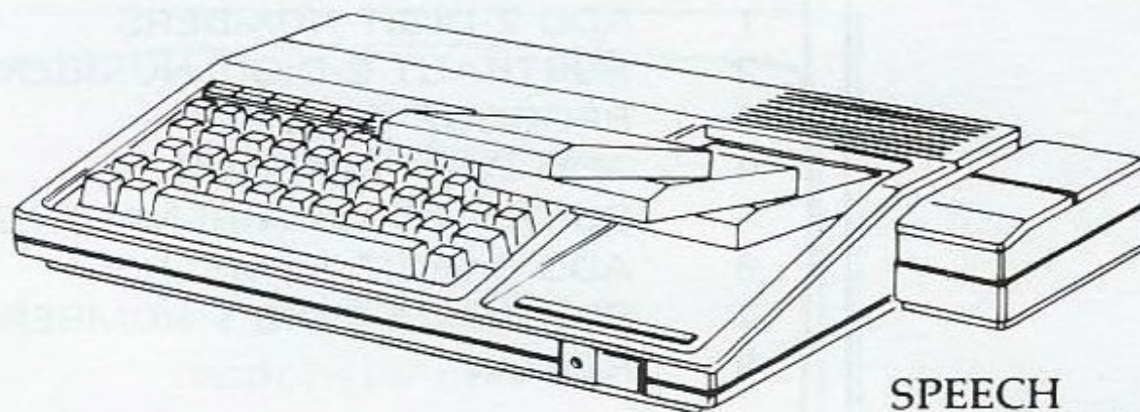
ON



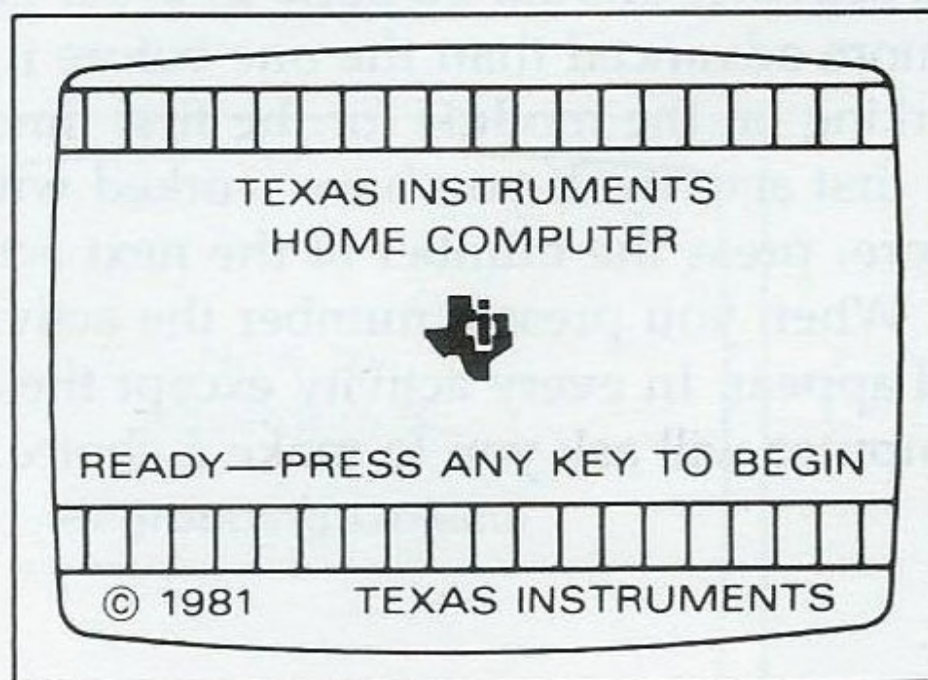
COMPUTER KEYBOARD

ON

2. Insert module.

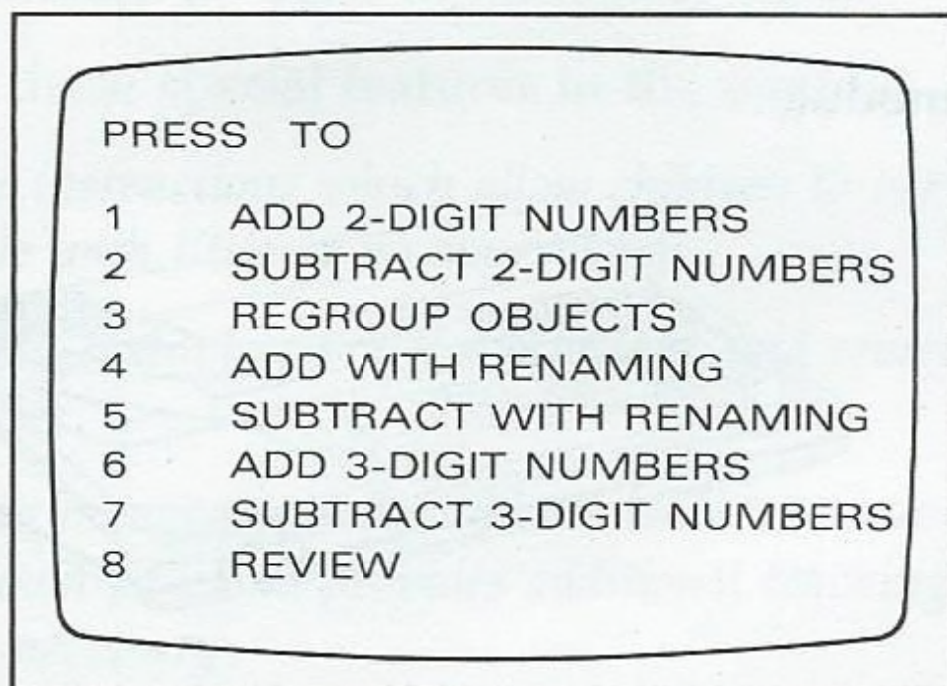
SPEECH
SYNTHESIZER

3. Wait for this screen to appear.

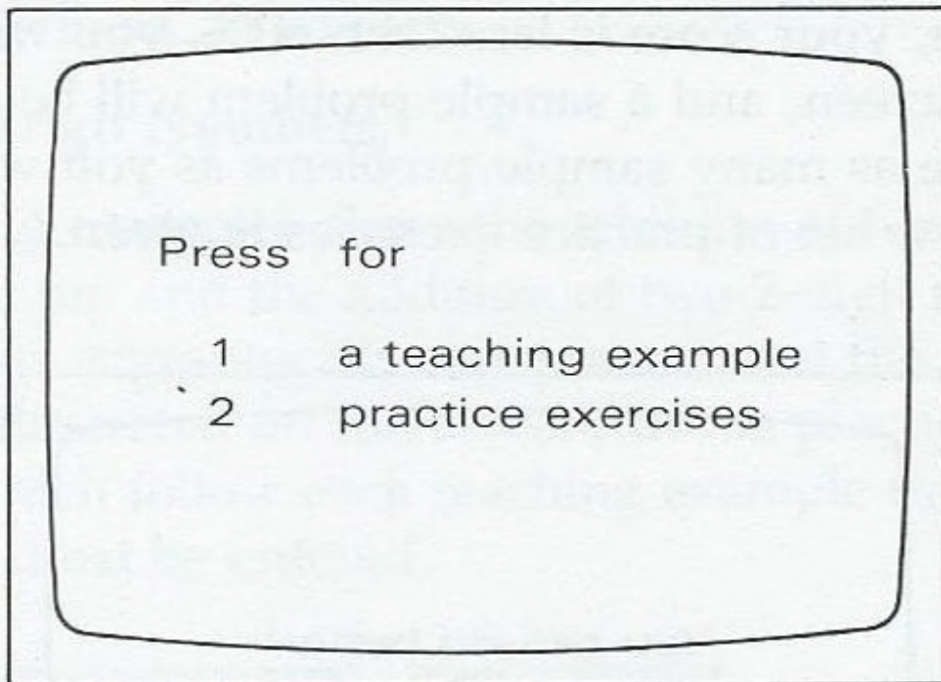


4. If you do not see the Texas Instruments title screen, check to see if:
- *the computer keyboard and monitor are plugged in.*
 - *the cable connecting the keyboard and monitor is properly connected.*
 - *both the computer and monitor are turned on.*
 - *the module is properly inserted.*

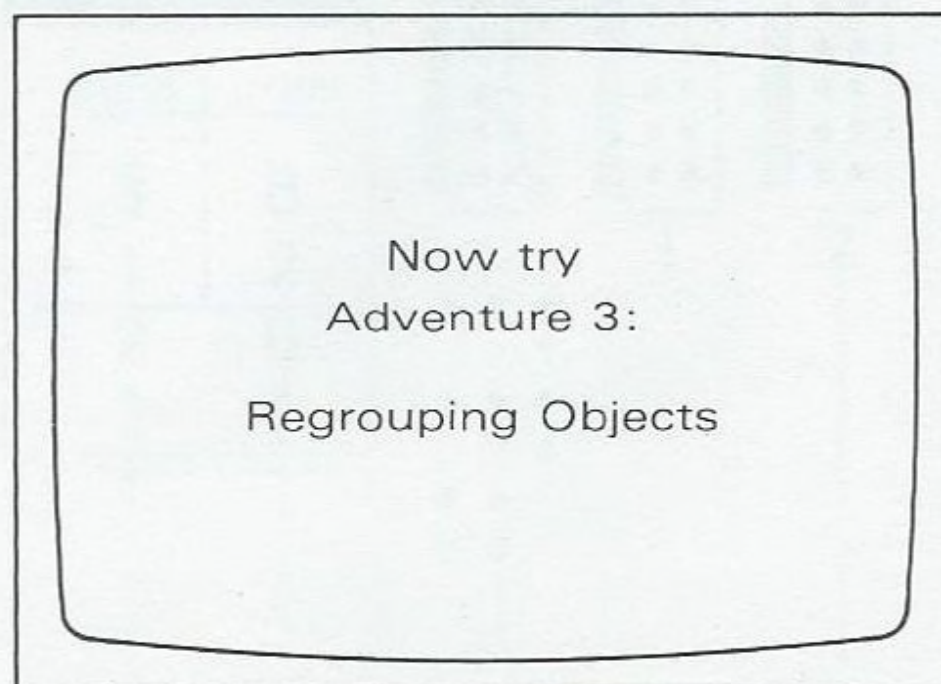
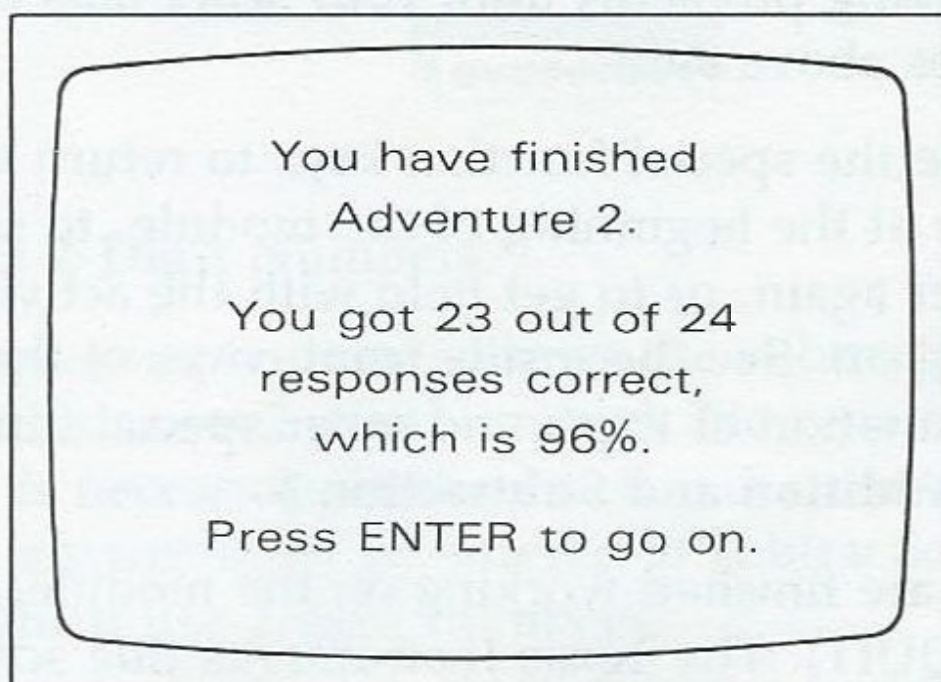
Press any key. The Scott, Foresman copyright screen and the **Addition and Subtraction 3** title screen are displayed. Next you will see the main selection list of activities:



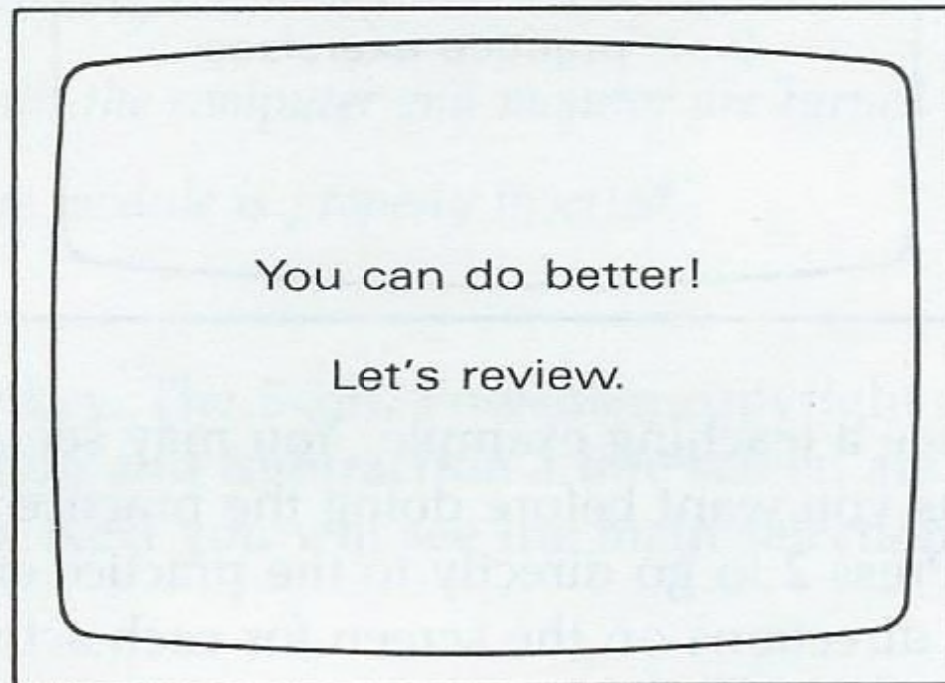
The activities should be done in order since each activity is more advanced than the one before it. If you are working on the module for the first time, press 1 to go to the first activity. If you have worked with the module before, press the number of the next activity you want to do. When you press a number the activity title screen will appear. In every activity except the Review the computer will ask you to make a choice.



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



If, however, your score is less than 60%, you will see the following screen, and a sample problem will be shown. You can see as many sample problems as you want before a new set of practice exercises is given.



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

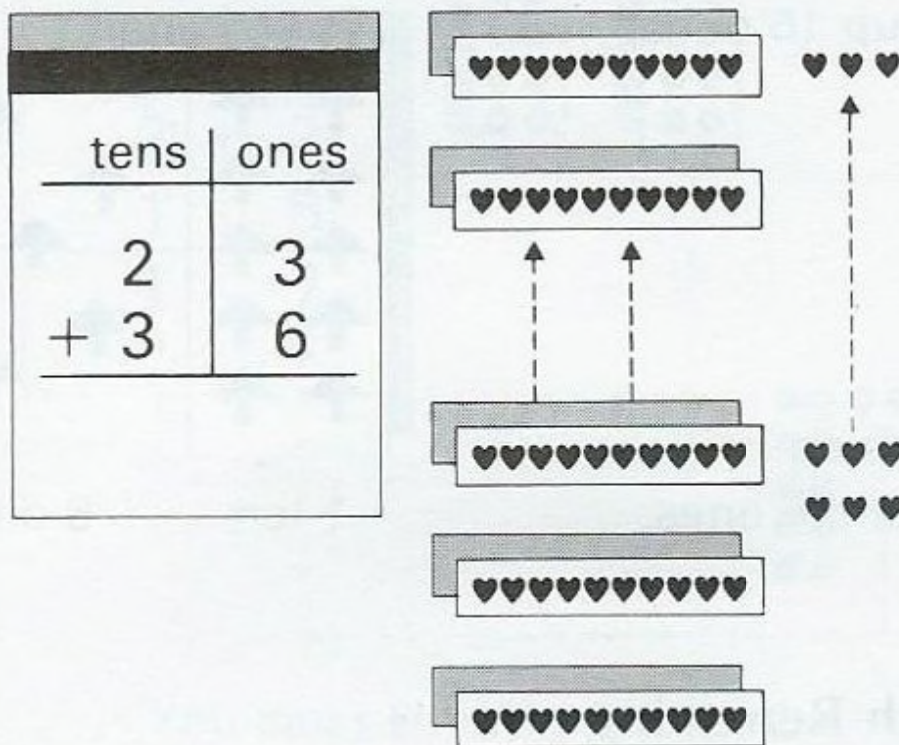
You can use the special function keys to return to the list of activities at the beginning of the module, to start an activity over again, or to get help with the activity you are working on. See the inside front cover of this book for an explanation of these and other special functions built into **Addition and Subtraction 3**.

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

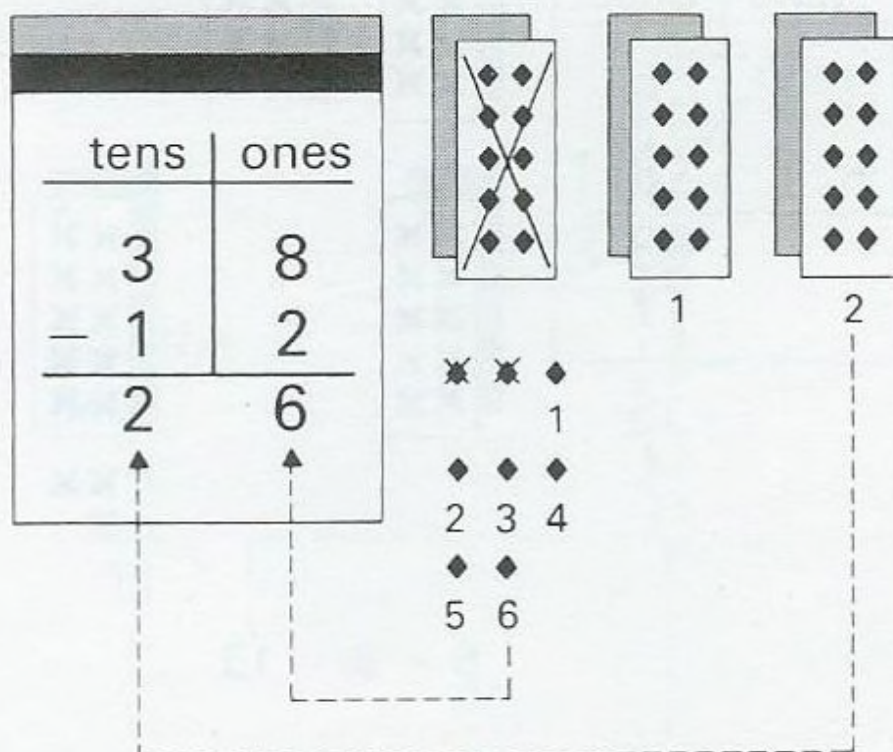
1. Add 2-Digit Numbers

Two teaching examples show the addition of two 2-digit multiples of ten and the addition of two 2-digit numbers. Each number is graphically represented and the addition process is illustrated on the screen. In the practice exercises which follow each teaching example the digits of the sum must be entered.



2. Subtract 2-Digit Numbers

The teaching example demonstrates the subtraction process used for two 2-digit numbers. No renaming, or borrowing, is necessary. In the practice exercises, each digit of the answer must be entered in subtraction problems which use 2-digit numbers.

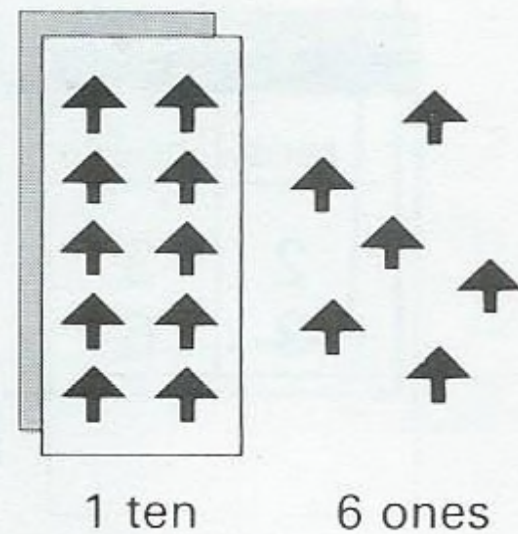


3. Regroup Objects

The first teaching example demonstrates regrouping when there are more than 9 ones, a skill necessary for addition with renaming (“carrying”). The second teaching example demonstrates regrouping one ten to have more ones, a skill which is necessary for subtraction with renaming (“borrowing”). Practice exercises follow each teaching example.

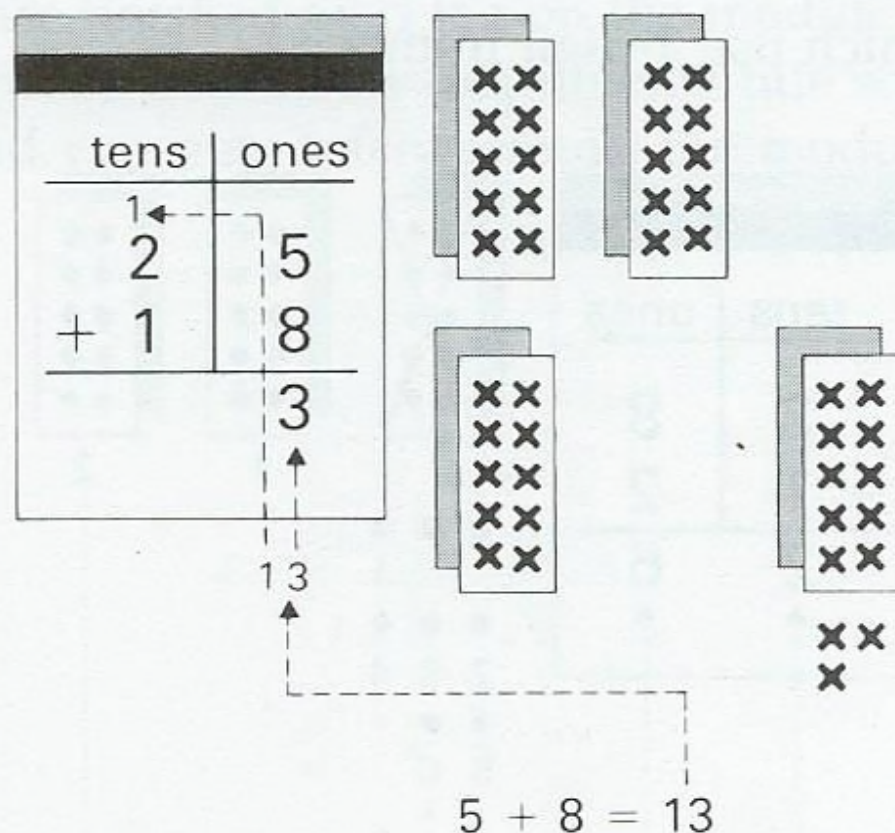
Regroup 16 ones.

16 ones equals
1 ten and 6 ones.



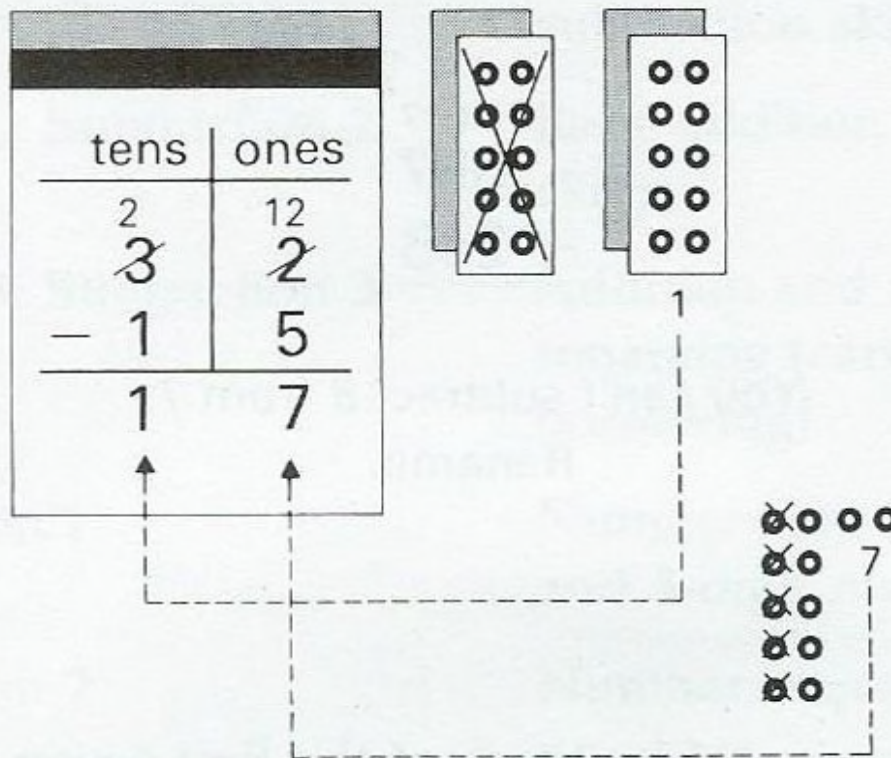
4. Add with Renaming

The teaching example graphically demonstrates the addition of two 2-digit numbers when renaming, or carrying, is necessary. The practice exercises give addition problems which use two 2-digit numbers and require renaming.



5. Subtract with Renaming

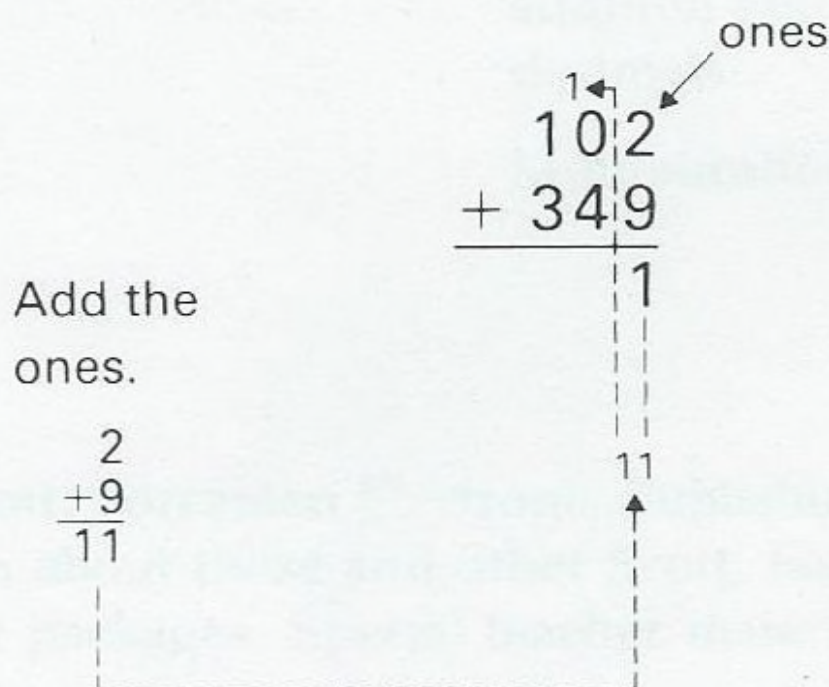
In the teaching example, a 2-digit number is represented graphically and the subtraction process, including renaming, is demonstrated visually. In the practice exercises subtraction problems which use 2-digit numbers and require renaming are given.



You can't subtract 5 from 2.
Rename 32.

6. Add 3-Digit Numbers

The teaching example illustrates two addition problems, each of which has two 3-digit numbers and requires renaming of either the ones or the tens. Each of the practice exercises which follow requires one renaming.



7. Subtract 3-Digit Numbers

The teaching example illustrates two subtraction problems, each of which has two 3-digit numbers and requires renaming of either the tens or the hundreds. Each of the practice exercises which follow requires one renaming.

$$\begin{array}{r}
 417 \\
 657 \\
 - 248 \\
 \hline
 \end{array}$$

ones
↙

You can't subtract 8 from 7.
Rename.

8. Review

Problems are given from each of the first seven activities. Only one chance is given to answer each problem. At the end of the activity a score is given, as well as a list of activities that need more practice.

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 piece 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.

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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.**

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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

Put an X in a box when you start an activity.

When the computer shows that you have finished an activity, write your score and percent in the boxes.

1 ADD 2-DIGIT NUMBERS

--	--	--	--

SCORE

Out of

%

2 SUBTRACT 2-DIGIT NUMBERS

--	--	--	--

SCORE

Out of

%

3 REGROUP OBJECTS

--	--	--	--

SCORE

Out of

%

4 ADD WITH RENAMING

--	--	--	--

SCORE

Out of

%

5 SUBTRACT WITH RENAMING

--	--	--	--

SCORE

Out of

%

6 ADD 3-DIGIT NUMBERS

--	--	--	--

SCORE

Out of

%

7 SUBTRACT 3-DIGIT NUMBERS

--	--	--	--

SCORE

Out of

%

8 REVIEW

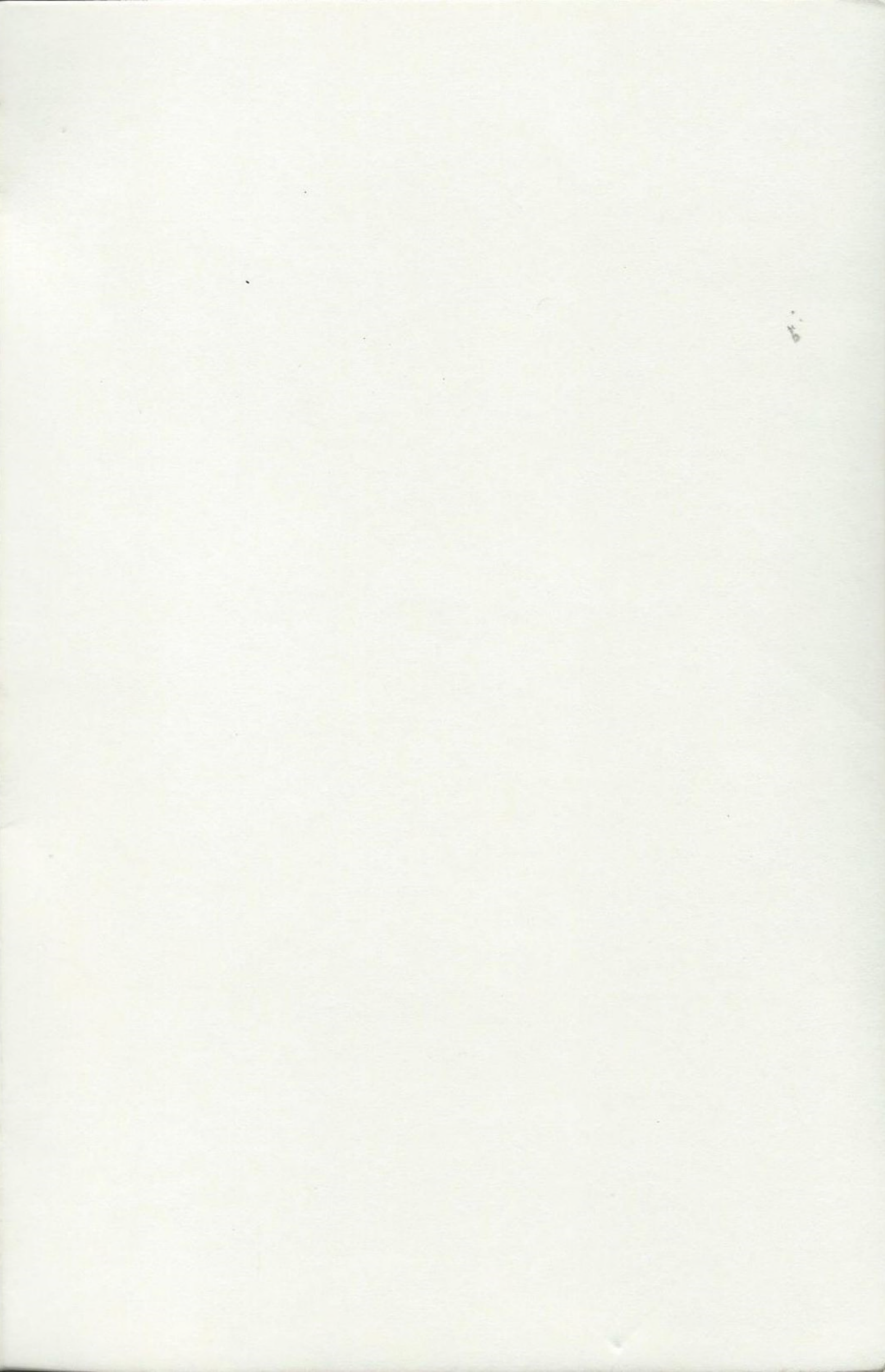
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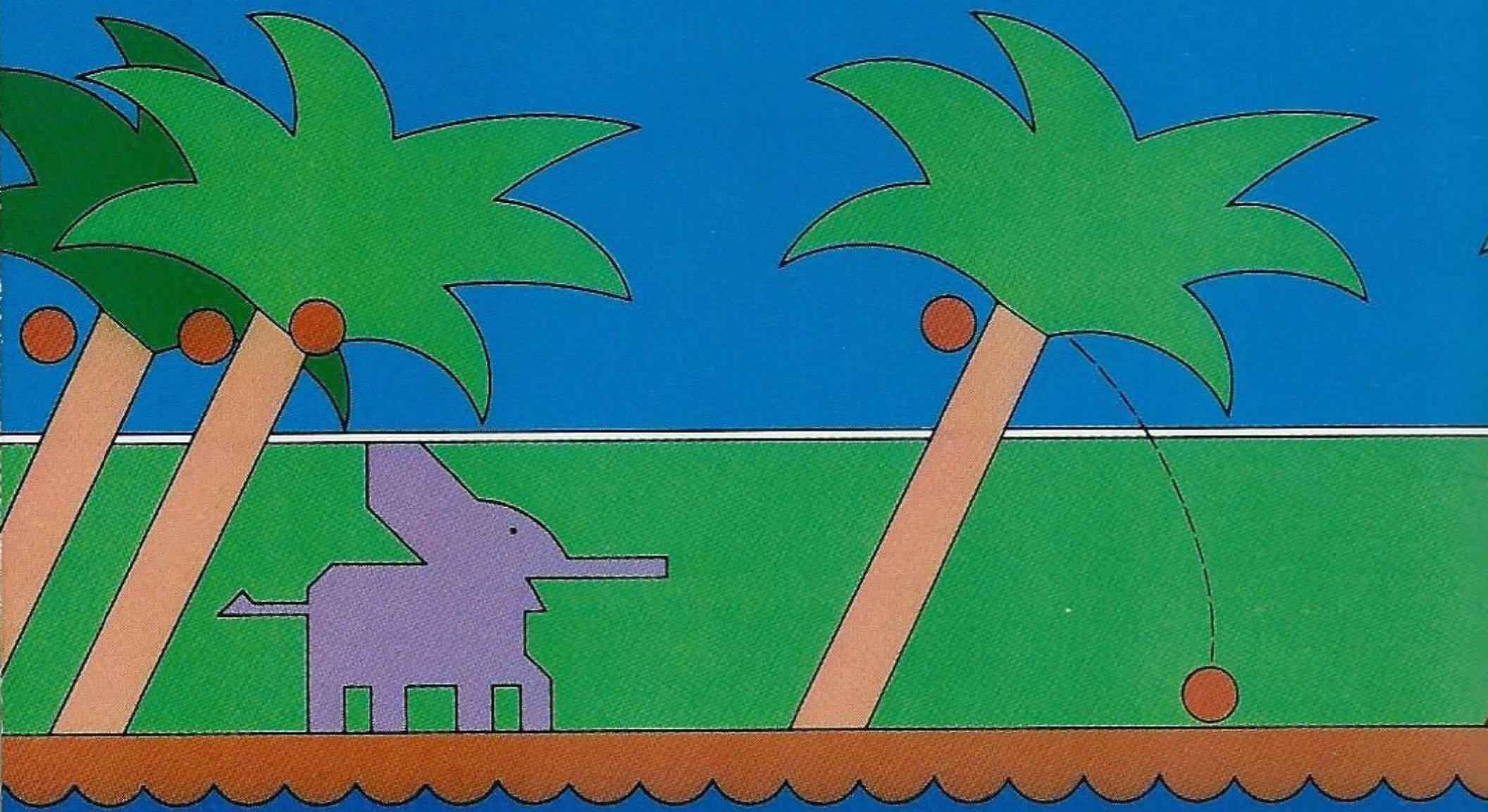
SCORE

Out of

%

List the activities you need to review:





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