MATH LEAP FROG

Gamco Industries, Inc.
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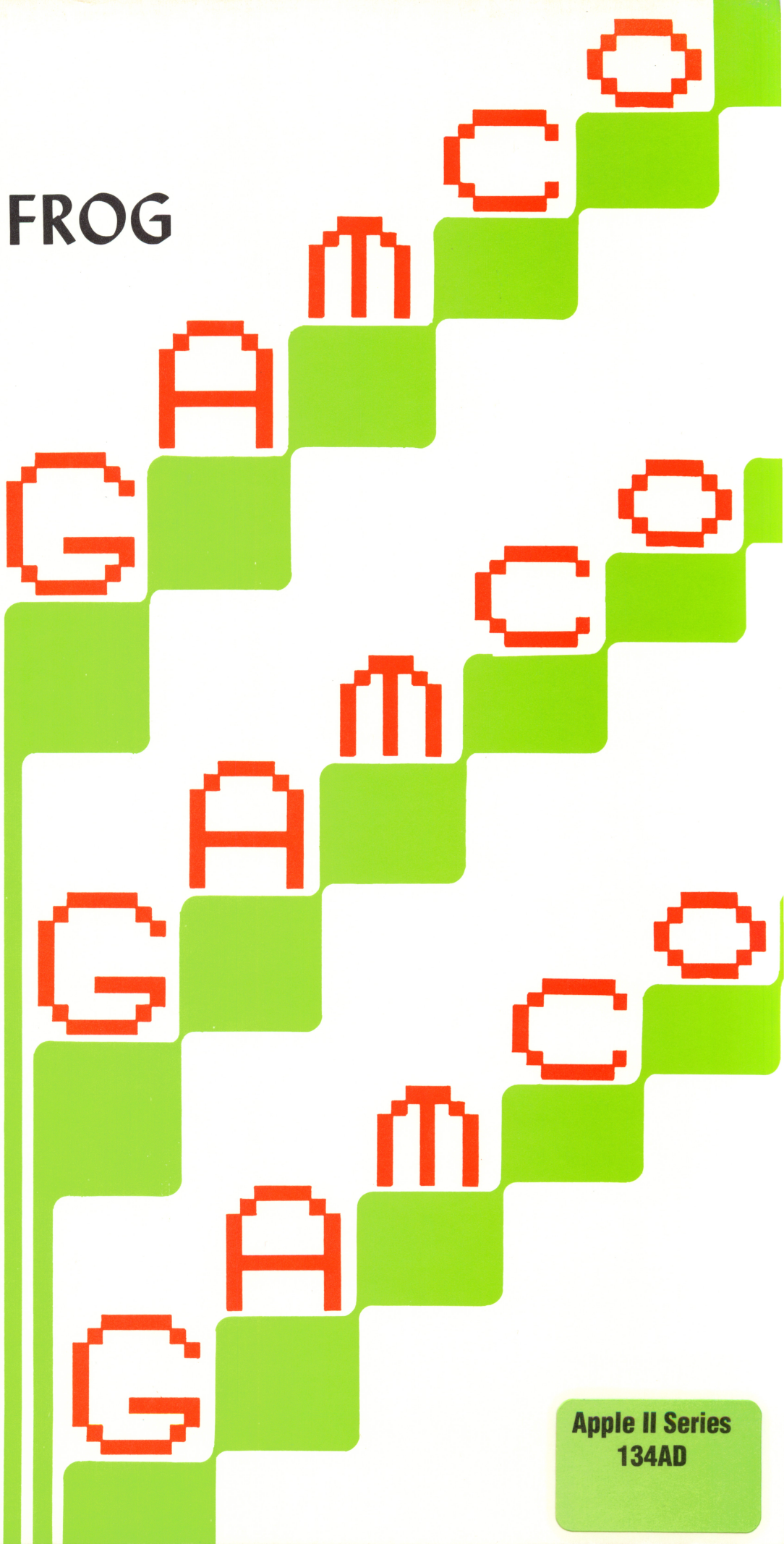

Apple II Series
134AD

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GETTING STARTED

This disk operates on any Apple II Series microcomputer and Apple compatible microcomputer with at least 64K memory.

If you are working on an Apple IIGS, you must make some system adjustments before you boot a Gamco disk in order to ensure proper running of the program. Use the Control Panel Program (refer to your Owner's Guide) to set the system speed to NORMAL and the keyboard buffering to NO.

Be sure that the microcomputer, disk drive, and monitor are properly connected and plugged in. To load a Gamco disk, follow these instructions:

1. With the microcomputer off, gently insert the disk, with the label up, into the disk drive and close the door.
2. Turn on the monitor and the microcomputer. The disk loads automatically.
3. A message on the screen tells you to turn over the disk and press RETURN. Remove the disk from the disk drive, turn it over so the label side is down, put it back into the disk drive, close the door, and press RETURN.

Any time you wish to start the disk again, remove it from the disk drive, turn it over so the label side is up, put it back in the disk drive, close the door, and press the reset key or keys for your machine. The disk automatically loads again. If you wish to switch disks at any point, remove the current disk, put the new disk in the disk drive, and press the reset key or keys for your machine.

CAUTIONS

- Do not place a write-protect tab on the disk.
- Do not remove a disk, press the reset key or keys, or turn off the microcomputer when the disk drive busy light is on.
- If the microcomputer is instructed to print and the printer is not connected, the program continues as if the printer were connected.
- If the microcomputer is instructed to print and the printer is not on-line, the program freezes. When the printer is put on-line, the program resumes where it left off.

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Math Leap Frog

Grade Levels

- Core curriculum Grades 1-5
- Remedial Grade 6-9
- Enrichment Grade K

Learning Objectives

After using *Math Leap Frog,* students will be able to:

- Complete addition fact problems which involve subtracting from 6 or less, 10 or less, 12 or less, or 18 or less.
- Complete subtraction fact problems which involve subtracting from 6 or less, 10 or less, 12 or less, or 18 or less.
- Complete multiplication fact problems which have multipliers from zero to nine.
- Complete division fact problems which have divisors from one to nine.
- Distinguish between the four operations (addition, subtraction, multiplication, and division).
- Solve basic fact problems within a specified time limit.

Uses

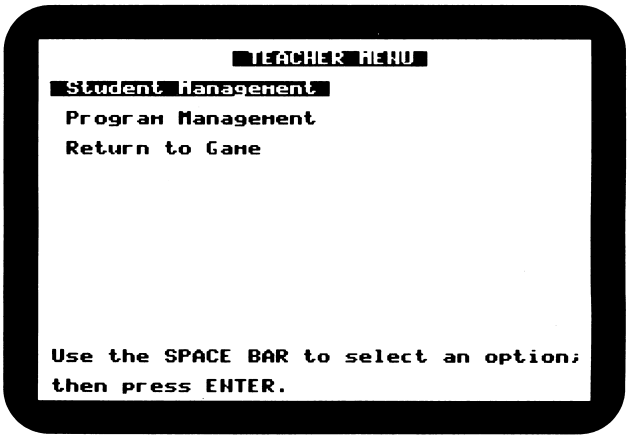
Math Leap Frog may be used to:

- Supplement the standard mathematics curriculum with additional drill and practice.
- Diagnose students' computational strengths and weaknesses.
- Motivate slow learners to practice basic math facts to a mastery level specified by the teacher.
- Provide individualized tutoring to students with special needs.
- Encourage students to increase their speed in completing basic fact problems.

Teacher Management

TEACHER MANAGEMENT has two sections: STUDENT MANAGEMENT and PROGRAM MANAGEMENT. STUDENT MANAGEMENT lets you display, print, or delete student files on disk. PROGRAM MANAGEMENT lets you adjust the playing time. turn the sound on or off, adjust the difficulty and speed levels for the game, and reset the reward game score to zero.

You may gain access to the teacher management system when students are asked to enter their names. To do so. hold down CONTROL; then press T and M. You will see this menu:



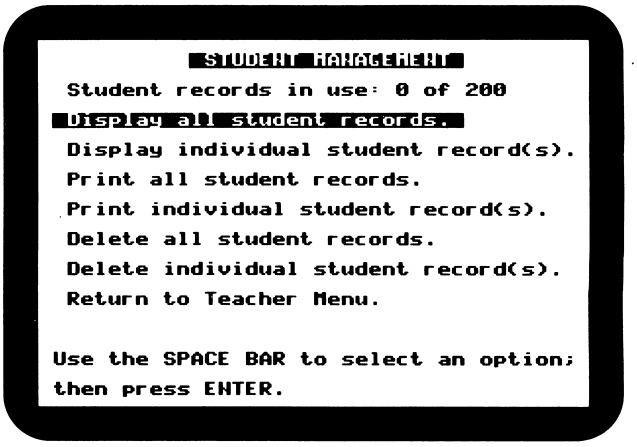
Pressing ESCAPE while you are in the teacher management system takes you back to the Teacher Menu.

Student Management

This section provides record-keeping functions. Each time a student enters a lesson, a record is created and stored in the student file on disk. A total of 200 records may be stored in the student file at one time.

```
STUDENT MANAGEMENT
Student records in use: 0 of 200
Display all student records.
Display individual student record(s).
Print all student records.
Print individual student record(s).
Delete all student records.
Delete individual student record(s).
Return to Teacher Menu.

Use the SPACE BAR to select an option;
then press ENTER.
```



When the student file is full, students are told to tell the teacher before they begin a lesson. If you tell them to continue anyway, no record is stored for that lesson. If you want students' scores recorded, you must make room by deleting some or all existing records from the student file.

Display All Student Records

Each record contains the student's name (maximum of 13 characters), the level completed, the speed used, the number of correct answers, the total number of problems attempted, and the percent correct (rounded to the nearest whole percent). Records are displayed on screen alphabetically and in the order that lessons were completed.

```
                                Number    Percent
Name            Lev  Spd        Correct   Correct

ERIC.........16    3    81 of 90     90%
JUAN.........  7    5    86 of 93     96%
MATTHEW......12    1    54 of 60     90%
REBEKAH......  4    4    94 of 94    100%

------------ End of List -------------

Press ENTER to continue.  _
```

Display Individual Student Records

When you enter the name of the student whose records you want to display, you must enter it exactly as the student did. For example, if a student enters her name as JO ANN, you must include the space when you type the name. If you omit the space and type JOANN, you are told there are no records for that name. To see how a student's name is recorded, choose DISPLAY ALL STUDENT RECORDS.

Print All Student Records

You must have a printer set up and ready to print. Align your paper so that the top edge is at the top of the printer head. Records are printed alphabetically by students' names and in the order that lessons were done.

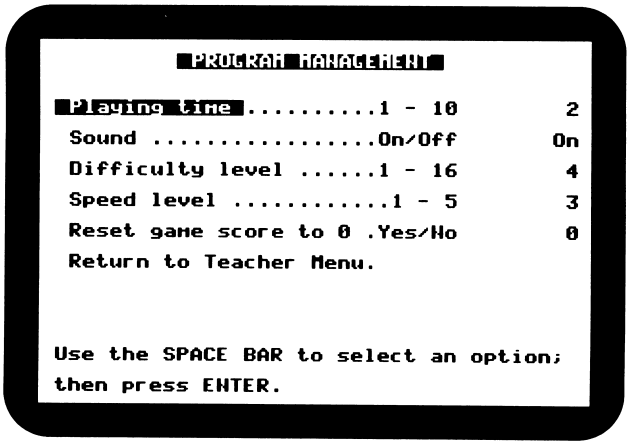
Print Individual Student Records
When you enter the name of the student whose records you want to print, you must enter it exactly as the student did. Please see the section **Display Individual Student Records**.

Delete All Student Records
You are told how many records are stored in the student file; then you are asked if you want to delete them all. If you say yes, you are given an opportunity to change your mind. Once the records are deleted, you cannot get them back. You may want to print a copy of the records before you delete them.

Delete Individual Student Records
When you enter the name of the student whose records you want to delete, you must enter it exactly as the student did. Please see the section **Display Individual Student Records**. After you enter the name, you are given an opportunity to change your mind. Once the records are deleted, you cannot get them back.

Return to Teacher Menu
This option lets you return to the Teacher Menu.

Program Management



Playing Time
This option lets you choose the amount of playing time for the game. The program is preset at two minutes. If you choose this option, the cursor moves to the preset time and lets you enter a time from one to 10 minutes.

Sound
You may turn the sound on or off. The program is preset with the sound on. Choose *On* or *Off*.

Difficulty Level
This option lets you choose from 16 difficulty levels. The program is preset at 4. If you choose this option, the cursor moves to the preset number and lets you enter a number from 1 to 16.

Level 1 generates problems with sums ranging from 0 to 6 and problems in which students subtract from 6 or less.

Level 2 generates problems with sums ranging from 0 to 10 and problems in which students subtract from 10 or less.
70% of the facts have sums or differences ranging from 7 to 10.
30% of the facts have sums or differences ranging from 0 to 6.

Level 3 generates problems with sums ranging from 0 to 12 and problems in which students subtract from 12 or less.
70% of the facts have sums or differences ranging from 11 to 12.
30% of the facts have sums or differences ranging from 0 to 10.

Level 4 generates problems with sums ranging from 0 to 18 and problems in which students subtract from 18 or less.
70% of the facts have sums or differences ranging from 13 to 18.
30% of the facts have sums or differences ranging from 0 to 12.

Level 5 generates problems with a multiplier of 0 or 1 and multiplicands ranging from 0 to 9, and division problems with a divisor of 1 and quotients ranging from 0 to 9.

Level 6 generates problems with a multiplier of 2 and multiplicands ranging from 0 to 9, and division problems with a divisor of 2 and quotients ranging from 0 to 9.

Level 7 generates problems with a multiplier of 3 and multiplicands ranging from 0 to 9, and division problems with a divisor of 3 and quotients ranging from 0 to 9.

Level 8 generates problems with a multiplier of 4 and multiplicands ranging from 0 to 9, and division problems with a divisor of 4 and quotients ranging from 0 to 9.

Level 9 generates problems with a multiplier of 5 and multiplicands ranging from 0 to 9, and division problems with a divisor of 5 and quotients ranging from 0 to 9.

Level 10 generates problems with a multiplier of 6 and multiplicands ranging from 0 to 9, and division problems with a divisor of 6 and quotients ranging from 0 to 9.

Level 11 generates problems with a multiplier of 7 and multiplicands ranging from 0 to 9, and division problems with a divisor of 7 and quotients ranging from 0 to 9.

Level 12 generates problems with a multiplier of 8 and multiplicands ranging from 0 to 9, and division problems with a divisor of 8 and quotients ranging from 0 to 9.

Level 13 generates problems with a multiplier of 9 and multiplicands ranging from 0 to 9, and division problems with a divisor of 9 and quotients ranging from 0 to 9.

Level 14 generates multiplication and division problems from levels 5 to 9 in equal proportions.

Level 15 generates multiplication and division problems from levels 10 to 13 in equal proportions.

Level 16 generates multiplication and division problems from levels 5 to 13 in equal proportions.

In Levels 6 through 13, 70% of the problems have the designated multiplier and divisor, and 30% of the problems are review from prior levels.

The facts in all levels are randomly generated to ensure that students encounter a variety of problems. All problems are presented in a horizontal format.

Speed Level

This option controls the rate at which the frogs move across the screen and at which problems are presented. You may choose from five speed levels. The program is preset at 3. Level 1 is the slowest, and level 5 is the fastest. If you choose this option, the cursor moves to the preset number and lets you enter a number from 1 to 5.

Reset Game Score to 0

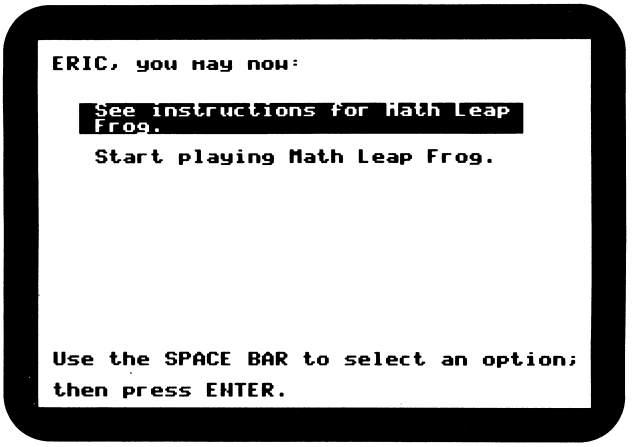
You may reset the game score to 0 (zero). Since only the highest score is recorded, this value changes each time a new high score is reached. You may wish to reset this value when a new group of students starts using the disk. Choose *Yes* or *No*.

Return to Teacher Menu

This option lets you return to the Teacher Menu.

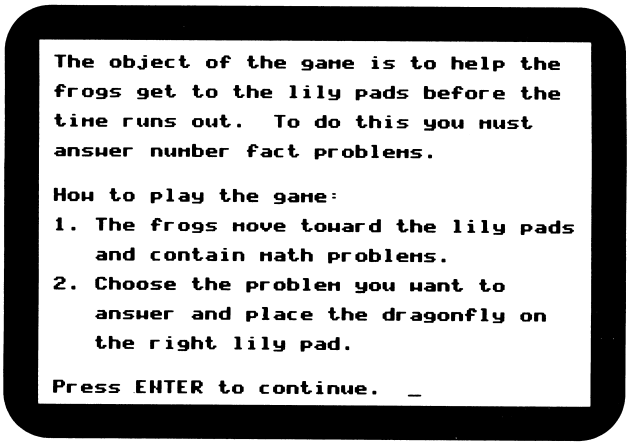
Playing the Game

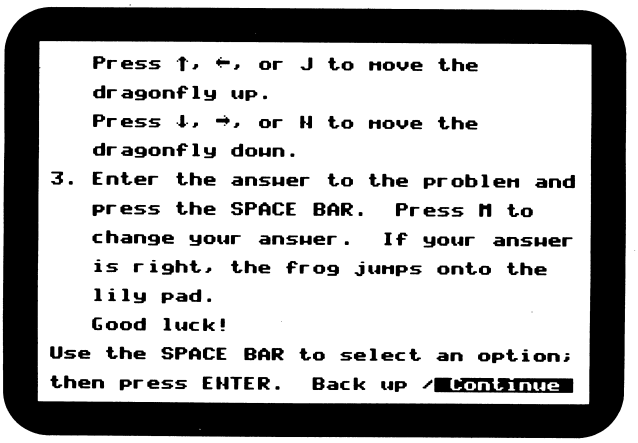
Students are first asked to enter their names. They may enter a maximum of 13 characters. Acceptable characters are letters, numbers, spaces, periods, and hyphens. (Note: If all 200 files for storing names and scores have been used, a warning message appears. See the **Student Management** section for further details.) Students then choose from the following:



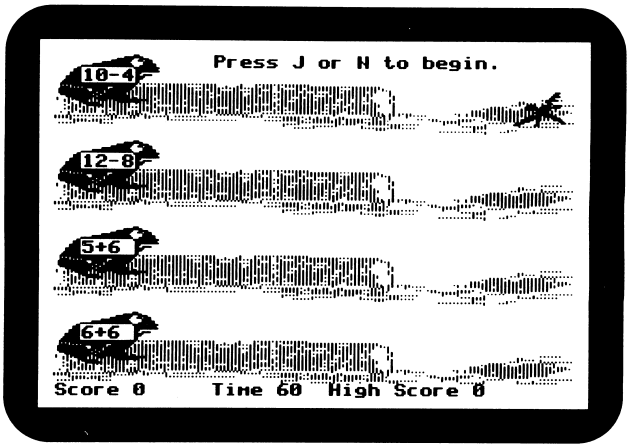
Students may exit from the game at any time by pressing the escape key. If students press this key before they begin playing the game, they return to the welcome screen. They may then enter their names and begin again. If they press the escape key after they begin playing the game, they are taken to the ending score screen. Scores are based on the number of problems solved.

If students choose to see instructions, they are shown these screens:





If students choose to play the game, the starting screen appears. To begin playing and to move the dragonfly. students must press J or N. On some machines, they may use arrow keys instead.

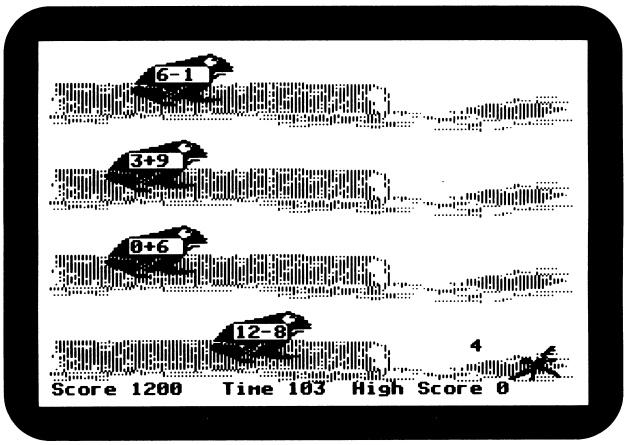


Frogs move across the screen in a random pattern. When students solve problems, the frog moves to the lily pad, and students are awarded from 200 to 500 points. Fewer points are awarded as the frog moves closer to the water.

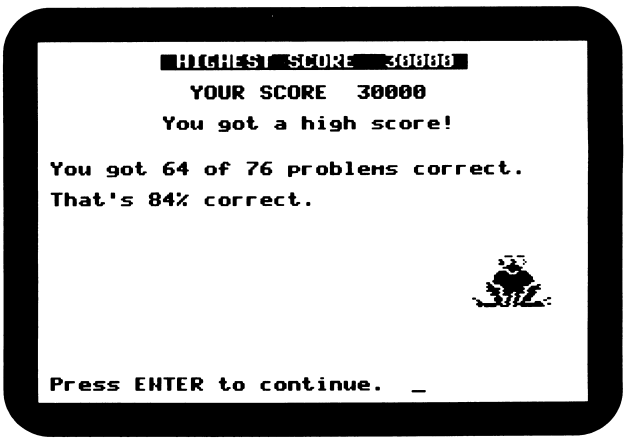
If a frog reaches the water and dives in before students can solve the problem, they lose 3000 points and a new problem is presented. For each incorrect response, students lose 1000 points. However, scores will not go below zero.

Students may press M to erase incorrect answers.

If no frog reaches the water or if there are no incorrect responses, students receive a 5000-point bonus.

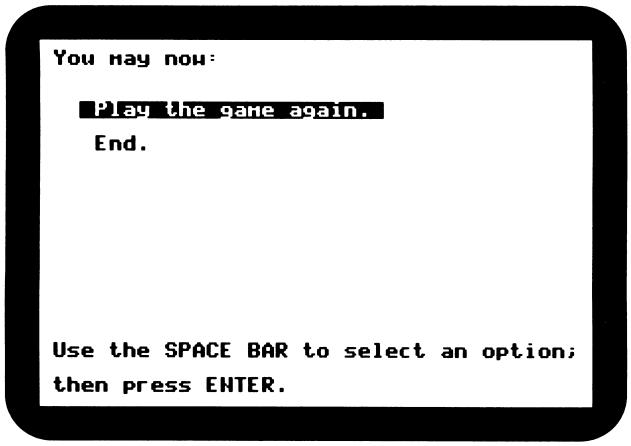


At the end of each game, students are shown the following information:



The message, "You got a high score," is shown if students' scores are greater than or equal to the previous high score.

Students are then given the following choices:



If students choose to play the game again, they are given another series of problems.

If students choose to end, they select from this menu:

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