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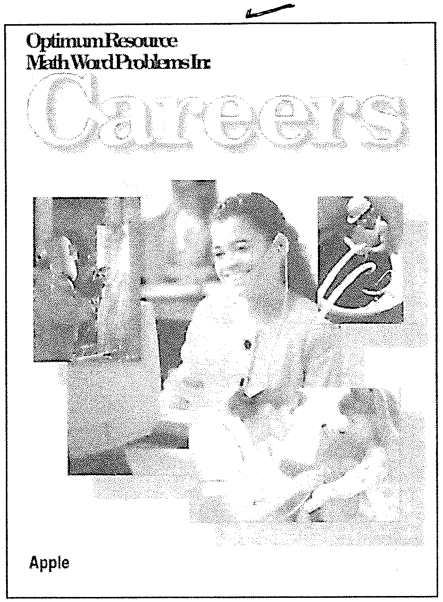
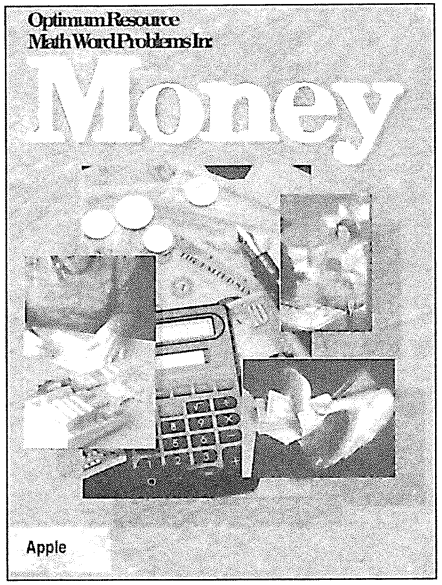
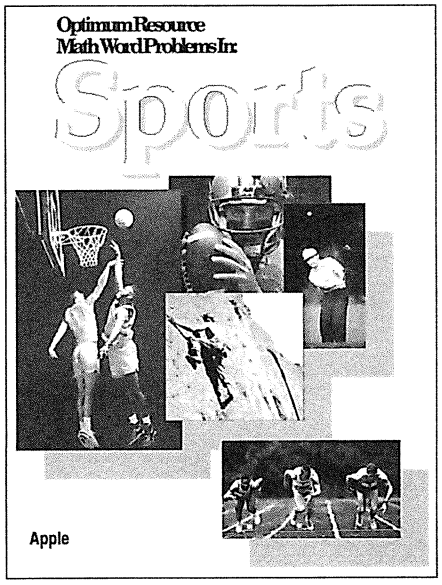
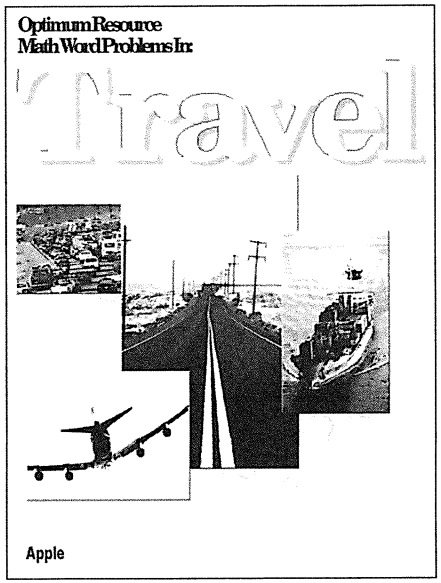
Optimum Resource Math Word Problems Series









User Guide

Contents

About the Program 3
Getting Started 4
To Begin 6
Customize Student Options 8
Report Card 10
Table of Levels 11
Add Your Own Problems 13
List of Commands 15

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the Esc key to cancel the print option, or enter the number of the problem you wish to print. The program will ask you if you are sure you want that problem printed. Press **N** and then the Return (Enter) key if you want to cancel the printing, or press **Y** and then the Return (Enter) key to print it.

The program will ask you to enter the slot number of the printer, then press the Return (Enter) key. If the printer is in slot 1, you can just press the Return (Enter) key.

*(**For Apple computers: The** program will ask you to enter the slot number of the printer, then press Return; or, if it is in slot 1, you can just press Return.)*

Only the text of the problem will be printed, not the solution or the answer. After the print is complete, the program will Return (Enter) you to the Level 4 List of Options.

You may use the print option to create paper tests of the word problems.

List of Commands

CTRL A	To add problems from the Welcome Screen
CTRL C	To get to the Customize Student Options section from the Welcome Screen
CTRL P	To print the problem
CTRL Q	To turn the sound on or off
CTRL R	To get to the Report Card from the Welcome Screen
CTRL Z	To end the session
Esc	To cancel the session you are currently in
Return (Enter)	To start playing from the Welcome Screen

solution to the student.

For example, if the solution is:

3 + 4 = 7

7 + 3 = 10

You enter:

3+4=7 (Return (Enter))

7+3=10 (Return (Enter))

You may use up to three lines for a solution, with no limit on the size of numbers, but the final answer can be only up to four digits.

If you try to put in more than three lines, the computer will flash the warning: EXCEEDING THE LIMIT.

When you have completed entering the solution, press the Esc key.

The problem (title, text, answer, and solution) is now saved to the disk and you are returned to the List of Options for Level 4 problems. You may store up to 25 problems in Level 4 at any one time. You may, of course, delete problems to make room for new ones.

Option 2 Deleting a Problem

The second option for Level 4 problems allows you to delete a problem you have already entered. Select number 2 from the menu, the program will show you a list of the titles of the Level 4 problems on the disk.

To the left of the titles will be the numbers 1 - 25. Press the Esc key to cancel the delete option, or enter the number of the problem to be deleted and press the Return (Enter) key.

The program will ask you if you are sure you want to delete the problem. Press **N** and then the Return (Enter) key if you want to cancel the delete, or press **Y** and then the Return (Enter) key to delete the problem.

The program will then Return (Enter) you to the Level 4 List of Options.

Option 3 Printing a Problem

When you select Option 3, you will see a list of the problems that have been entered for Level 4. To the left of the titles will be the numbers 1 - 25. Press

About the Programs

The ability to understand and solve math problems when they are presented in sentence form is crucial to a student's development. The programs in the *Optimum Resource Math Word Problems Series* provide practice in deductive as well as arithmetic skills, using mathematics adapted to specific subject categories that will be of interest to students— sports, travel, money, and careers. Hundreds of problems with thousands of possible number variables are stored on each program disk. In addition, teachers and parents may add their own word problems at any time.

The programs adjust automatically to meet the individual needs of the student. A level adjustment monitor, which the student never sees, constantly checks progress and adjusts accordingly. This allows each student to proceed at a comfortable pace, challenged but not frustrated.

Teachers and parents can further tailor the programs to meet each student's needs. The Options section of this guide gives step by step directions on how to choose the level and type of problem.

The program keeps track of the names, levels reached, scores, and types of problems assigned for up to 40 students. Names may be added or dropped at any time. All instructions and answers are entered via the keyboard.

Getting Started

Apple

The programs in the *Optimum Resource Math Word Problems Series* will run on any Apple, Apple II, Apple II Plus, Apple IIe, Apple IIc, Apple IIc+, Apple IIGS, or a Macintosh LC with an Apple IIe card installed. The 3.5" disks require 64K; 5.25" disks require 48K. Please see your warranty/ registration card for information on obtaining a backup copy of the program.

To start, put your program disk into the drive and turn on your Apple. If you have Autostart, you will see the title panel displayed.

If your Apple does not have Autostart ROM, you will see the monitor cursor (*). Type 6, then type P while holding down the Control key (6 CTRL P), then press Return. The title panel will be displayed.

IBM

The programs in the *Optimum Resource Math Word Problems Series* will run on any IBM PC/XT/AT, PS/1 and PS/2 models, the Tandy 1000 family, and any other MS-DOS compatible computers with 256K bytes free and which support CGA or EGA graphics.

To start the program from floppy disk:
Insert the program disk in your A or B drive. Change to that drive by typing A: or B:, and press Enter. At your DOS prompt (A: or B:) type Careers, Travel, Money, or Sports, depending on which program in the *Optimum Resource Math Word Problems Series* you are running. The title screen will appear.

Hard Disk installation:
Insert the program disk in your A or B drive. Change to that drive by typing A: or B:, and press Enter. At your DOS prompt (A: or B:) type Install and press Enter. Follow the instructions on the screen to install the program. By pressing Enter at each flashing cursor, you have the option of allowing the installation program to automatically install the program to the hard drive and directory displayed (c:\Stickybr\). If you wish to install the program to a different drive and path, simply backspace over the displayed option and reenter the new drive or installation path . The install program will create your new directory if necessary and install the program to the drive and path you entered. The program can also be installed to your hard drive manually by copying all the files on the disk to the drive and directory of your choice.

Add Your Own Problems

Press Control A (**CTRL A**) from the welcome panel to enter the Level 4 option section. This section enables you to add, delete or print your own problems.

Option 1 Adding a New Problem

There are four steps to adding a new problem to Level 4. You will need to enter the title, problem text, answer and solution.

1. Enter the title for the problem. This is necessary to keep track of the number of problems and to be able to list, delete and print them. You may enter up to 10 characters for the title. Press the Return (Enter) key when you have finished.

2. Next, you may begin to enter the problem text. This section works like a simple word processor. Type in the problem, leaving spaces between words (the program will automatically wrap the words onto the next line when it reaches the end of a line). You may skip lines between sentences. To delete any text, use the left arrow key or the Delete key. As you move the cursor back over any words, they will be erased. Type in the new text.

The text for a problem may not exceed 11 lines. If you attempt to go beyond this, the computer will beep and flash a warning: EXCEEDING THE LIMIT.

For those users with later model Apple computers, it might be helpful to make sure that the CAPS LOCK key is up when you enter the problem text. A word problem is somewhat easier to read when it is typed in upper and lowercase letters. Apple II Plus owners can press the Control key while pressing the L key (**CTRL L**) to toggle between upper and lowercase letters.

When you have finished entering the problem, press the Esc key. The problem will be saved to the disk. If you decide that you don't want to use the problem, you will have to delete it. (See Option 2.)

3. Enter the answer. This must be a numerical answer that does not exceed four digits. The computer will not accept any more than four digits or any special characters such as commas, dollar signs, or decimal points. Enter the answer, then press Return (Enter).

4. Enter the solution steps for the problem. As you enter the solution, do not type in any spaces. The computer will accept only numbers, operation signs, and the equal sign in the solution. It will place the spaces when it displays the

You may, of course, select more than two problem modes. The problems will be a mixture of all the modes you have chosen.

Level 3

Level 3 consists of problems that require three operations to answer. These may be in any combination. You must select at least three problem modes from the options section to begin at this level. For example:

Problem: Jack wanted to earn 700 dollars in 4 weeks. He earned 118 dollars the first week. In the second week he earned 115 dollars. In the third week Jack earned 224 dollars. How many dollars must Jack earn in the fourth week to meet his goal?

Solution: 118 + 115 = 233 Answer: 243
233 + 224 = 457
700 - 457 =

In Level 3, each solution will require that three steps be taken, as in this problem, to get the answer.

Level 3 problems can be generated, as in the example above, using only two problem modes; but a minimum of three are required for students to begin at this level. More than three problem modes (i.e., addition, subtraction, multiplication, division) allow for the greatest variety of problem type.

IBM users: When all problems from a level have been shown, the program will repeat any problems that were answered incorrectly. After the student has had a chance to answer these problems once more, the program will proceed to the next level.

Apple users: The program repeats incorrectly answered problems after problems in all levels through Level 3 have been shown.

Level 4

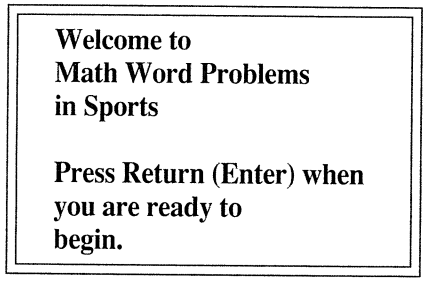
Level 4 contains any custom problems that have been entered by the teacher or parent. There is room on the disk for 25 custom problems in Level 4 at one time. There is a limit of three operations per problem, but no limit to the types of problems presented.

This level is not affected by the problem modes selected in the Options section. Students beginning at Level 4 will be presented with all the problems which have been created at that level. When all the problems have been presented, the program will repeat any problems that have been answered incorrectly.

To start the program from hard disk after installation:
Change to your installation drive (c: or d:) and press enter. Change to the directory by typing cd \Stickybr and press Enter. At your DOS prompt (c:\Stickybr) type Careers, Travel, Money, or Sports, depending on which program you are running. You will see the title screen appear. If you have installed the program to a different drive and directory, you must change to that drive and directory then type the appropriate command (Careers, Travel, Money, or Sports) to start the program.

To Exit the program and Return to DOS:
When the Welcome screen appears, press ESC to return to DOS.

After the title panel, you will see the Welcome panel:



The welcome panel is the only position from which teachers and parents can enter the optional sections. There are four choices: two allow teachers and parents to view and adjust the program, the third allows the teacher or parent to enter his or her own problems, and the fourth allows the child to play.

Control C (CTRL C) Customize Student Options
Press the Control key while pressing C (**CTRL C**) to enter the Customize Student Options section.

Control R (CTRL R) Report Card
Press the Control key while pressing R (**CTRL R**) to enter the Report Card section.

Control A (CTRL A) Add Your Own Problems
Press the Control key while pressing A (**CTRL A**) to enter your own word problems.

Return (Enter)
Press the Return (Enter) key while at the welcome panel to begin a program without making any new changes to the type and level of problems to be presented. Any previous changes will remain intact.

To Begin

If you press the Return (Enter) key when the welcome panel is on the screen, you will be asked to enter a name (no more than 11 letters, please) and press the Return (Enter) key.

NOTE: Students with the same first name should add a last initial so the program can tell them apart. A name should never begin with a space.

If a name is not on the program's previous list of students, the problems will start at Level 1 and progress upward as the student succeeds in solving them.

If a name was entered earlier, the program will start at the last level reached and with the various options (if any) set in the Customize Student Options section.

If you decide to skip the Options section, the programs will automatically present a mix of all available types of problems.

The programs will now present a series of problems that the student may solve by typing in the correct numbers and pressing the Return (Enter) key.

The programs present the cursor at the left most position so the problem may be answered naturally. For example, where the solution for a problem is **9 + 6 =** the student would enter the **1** first and then the **5** for the answer **15**.

The cursor may be moved from right to left to change an answer by using the left arrow key or the delete key. The cursor will erase any numbers it passes over, so you can enter a new answer, check it, the press Return (Enter).

If the answer is wrong, the student will hear a "bloop" sound, and the answer that was typed will be erased. The student may have from one to five attempts at answering the problem correctly, depending on the option chosen; the default is two attempts.

If the student has not correctly solved the problem within the designated number of attempts, the computer will highlight the numbers in the paragraph and display the steps and the solution at the bottom of the screen.

After studying the solution, the student can press **R** to repeat the highlighting sequence and see the solution displayed again, or press any other key to continue on to the next problem.

For every three correct answers, the programs will display an interesting fact or bit of trivia to provide a reward and a break in concentration. The student can then press any key to continue solving problems.

Option 2 allows you to delete any record you wish in order to make room on the disk. Type in the name you wish to delete and press the Return (Enter) key.

Option 3 allows you to review the option choices for any name on the list. Select the number of the student whose options you wish to review.

Table of Levels

This table illustrates the order in which the problem-difficulty levels are presented. Students do not see the levels; the program adjusts itself automatically.

You can use the table to select the starting place for a particular student or session. The highest level reached in each session is displayed in the progress report. Check the Table of Levels as well as the Customize Student Options section to see which skills have been mastered and which should be emphasized in future option assignments. If no options have been chosen, the program begins at Level 1 with all the operations selected and the calculator and printer available for use.

Level 1

Level 1 consists of problems that require only one operation to answer. The types of single operation problems presented depends on which problem modes have been selected. If, for example, multiplication is the only problem mode selected, word problems involving multiplication will be displayed.

***Problem**: Bonnie runs 4 miles an hour. How many miles can she run in 3 hours?*

***Solution**: 4 * 3 =* ***Answer**: 12*

If multiple problem modes have been selected, the problems presented will be a mixture of the modes chosen.

Level 2

Level 2 contains problems that require two operations to answer. Although the problem modes may be in any combination, you must select at least two modes in the Options section to begin at this level. For example:

***Problem:** Sam earns 9 dollars an hour. He works 5 hours per day and spends 13 dollars a day. How many dollars will he save in a day?*

***Solution**: 9 * 5 = 45* ***Answer**: 32*
45 - 13 =

Report Card

Press the Control key while pressing R (**CTRL R**) when the welcome panel is on the screen to access the Report Card section. The Report Card enables you to track and store individual assignments and progress reports for up to 39 students. (Position 40 is reserved for new and unlisted students.)

You will see:

> **Report Card Option**
> **Choose:**
> **1. Single child's report card**
> **2. Delete a child's record**
> **3. View Options**
>
> **Press Esc to go back to the start of the program.**

Press a number from 1 to 3 to select an option, or press Esc to return to the welcome panel.

Option 1 presents a list of the students whose names are stored on the disk and allows you to view the results of the last session for any student. Select the number of the student whose record you wish to review.

The Report Card contains the following information:

Report Card for:	Janie	*The student's name appears here.*
Starting Level:	1	*Level at which problems began.*
Current Level:	1	*Level reached last session. The current level will be the starting level for the next session.*
Problems attempted:	5	*The number of problems attempted.*
Answers correct:	5	*Correct answers within the number of tries allowed.*
Score:	100%	*Percentage of correct answers.*

NOTE: This information, which describes only the result of the preceding session, is updated each time the student works with the program.

Control Z (CTRL Z) End the Session

When the student is ready, the session can be ended and the results saved to the disk by pressing the Control key while pressing the Z key (**CTRL Z**). A report screen will appear with the current session's progress. *NOTE: Control Z can be used only when a new problem is on the screen, before it has been answered.*

Pressing the Esc key will also end the session. Because the Esc key is easy to hit by accident, the program will ask if you are sure you want to end the session. Press Y and Return (Enter) to end the session, or N and Return (Enter) to continue.

Control Q (CTRL Q) Quiet

Press the Control key while pressing the Q key (**CTRL Q**) to turn off the sound for quiet play. Pressing **CTRL Q** again will restore the sound. Apple IIc users can simply turn down the volume adjustment knob located on the left side of the computer.

Control P (CTRL P) Print

Press the Control key while pressing the P key (**CTRL P**) to print the problem you are working on. This must be done while the program is waiting for an answer.

(For Apple computers: After you press **CTRL P**, the computer will ask you to enter the slot number that the printer is in. Type the number and press the Return key. If the printer is in slot 1, you can just press the Return key.)

Control P also allows you to print any new problems you might enter. See the section "Adding Your Own Problems."

Space Bar - Calculator

Press the Space Bar to access the calculator. This must be done while a problem is on the screen, but before it has been answered. When you press the Space Bar, a calculator will appear at the bottom right corner of the screen.

When you are in the calculator mode, the program acts just like a regular calculator. Simply input the numbers and functions you want the calculator to process. Press the equal sign (=) key to get the answer. Use the slash (/) key for the division function. Use the asterisk (*) key for the multiplication function.

When you have finished using the calculator for a problem, press the Space bar again, or the Esc key to make the calculator disappear.

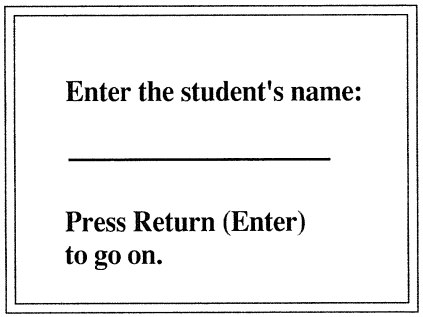
Customize Student Options

Press Control C (**CTRL C**) while the welcome panel is on the screen to enter the Customize Student Options section. This section allows teachers and parents to determine the type and level of word problems to be presented to each student.

Teachers and parents can make individual assignments for up to 39 students, then store them on the disk (the 40th name is always reserved for any new student not on the list).

The screen will display a message telling you that you can customize the programs for each student. The program will instruct you to press Esc to go back to the start of the program, or press the Return (Enter) key to continue.

If you press the Return (Enter) key to continue, you will see:



Type the student's name (11 letters or less), then press the Return (Enter) key. The Customize Student Options section will present you with eight choices. Press the appropriate number or answer, yes (**Y**) or no (**N**), to identify your response, then press the Return (Enter) key. You will be able to review and revise your selections after the eighth choice.

1. Number of tries. Enter a number from 1 to 5 to specify how many incorrect answers the program will accept before the computer displays the correct answer and the steps used to determine the correct answer. The program default is two tries. Younger students will feel comfortable with more tries. Set the number to 1 for more accomplished math wizards or for a quiz form that will record an accurate per-problem score.

2. Starting level of difficulty. Enter a number from 1 to 4 to select the level of difficulty at which the program will begin for this student. Remember, the programs will adjust upwards as the student solves the problems. See the "Table of Levels" for a description of the problems presented at each level and the skills involved.

3. Addition. Type **YES** to include addition problems or **NO** to exclude them.

4. Subtraction. Type **YES** to include subtraction problems or **NO** to exclude them.

5. Multiplication. Type **YES** to include multiplication problems or **NO** to exclude them.

6. Division. Type **YES** to include division problems or **NO** to exclude them.

NOTE: You must include at least one problem mode. Higher levels require that more than one mode be selected; see the "Table of Levels."

7. Calculator. Type Y to allow the student to use the calculator when figuring out problems; type N top turn off the calculator option.

8. Printer. Type **Y** to allow the student to print the problem. Type **N** to turn off the printer option.

When you have completed the eighth choice, you will be shown a review screen. Type the number of any option you wish to revise, or press the Return (Enter) key to accept the choices as made and Return (Enter) to the welcome panel.

Press Control C (**CTRL C**) to customize the program for another student.

The options may be changed as often as desired to increase variety and maintain interest.

Note: If you change any one of the problems modes by selecting the appropriate number, the program will cycle through each of the problem modes, allowing you to change the selection if desired.

You must select at least two problem modes to begin at Level 2, and three problem modes at Level 3.

If, for example, you select only addition problems and begin at Level 1, the program will give you problems that require that the student use only addition to solve them. The widest choice of problems occurs when more than one mode is selected. A greater variety of problems will be presented at the higher levels if, for example, addition, subtraction, and multiplication are selected rather than addition only.