Word Problem Shape-Up Series
Math levels 4 - 9

Complete program: 9 units
Set 1:Addition and Subtraction (Unit 1), Multiplication and Division (Unit 2), Mixed Practice (Unit 3)
Set 2: Fractions (Unit 4), Decimals (Unit 5), Percents (Unit 6), Mixed Practice and Multi-Operations
Set 3: (Unit 7), Fractions and Decimals (Unit 8), Mixed Practice - Fractions, Decimals, Percents (Unit 9)

For teaching suggestions, see page 3.

Evaluation versions: Units 2 and 5
Tracks work for two students.

Windows 98/Me/NT/2000/2003/XP
8 MB RAM, 35 MB hard disk space
This program requires a minimum screen resolution of 800 by 600 pixels.

The program helps students interpret key words and solve word problems. Each problem is divided into individual steps: finding the correct numbers to use, finding the words that tell what to do with those numbers, and finding the solution. Each set contains 180 problems and 900 questions.

Designed for upper elementary, middle school and high school students, this program can be used as well by older students for remediation. Each lesson is self-directing and self-correcting. The computer gives step-by-step help in interpreting key words and solving problems. Students must read the questions carefully to avoid irrelevant numbers; to convert two quantities into one, such as hours to minutes; or to watch for important instruction words, such as "twice," "half," or "each."

We suggest that students have pencils and paper handy throughout the program.

A diagnostic test at the beginning of each unit determines the student's place of entrance. The questions are multiple choice; as the student answers correctly, the questions gradually get harder. The program is configured so that the student is placed where s/he gets a first answer wrong out of a possible five.

Students do a round of randomly chosen questions within a group. The student will be asked, in step-by-step fashion, to look for: The EVIDENCE (the numbers needed to solve the problem); the STRATEGY (the word clues that indicate the method to use to find the answer); and the OPERATION (the mathematical method to arrive at the answer to the problem), before trying to find the SOLUTION (the answer to the problem). Context-sensitive help is available throughout the main program.

Each lesson is self-directing and self-correcting. Students receive graphic rewards. Following each round on the summary screen is a Print option, which generates a progress-to-date report. Student scores are kept in a management system that allows teachers to view and print reports.

For logging on instructions, see the Logging on and Class Management section of this guide.
Versions are available for stand-alone, network, or home use.

PROGRAM DESCRIPTION
Each unit of the program contains three Main Menu parts: Tryout, Workout, and Finals. Summary screens follow each round of each part of the Main Menu. The Print option shows the student's progress-to-date, not just the results of an individual round.

TRYOUT: The Tryout helps the student find the right questions to work on. It is over as soon as he misses a question. The student then moves on to questions in the Workout, where help is available. Because the Tryout helps to assess the student's skills, he does not get any sounds or graphic rewards until he has completed it. The bar at the bottom of the screen will show how much of the Tryout has been completed. When the student has finished, a summary screen will show how he did. Stars show the number of questions passed. A check shows that the student has done an excellent job. 'Print' will show how he did in a progress-to-date report.

WORKOUT: The student will need to play at least 8 rounds to pass the Workout. There are 4 groups of questions. To complete a group he must pass 10 problems. There are steps to each problem: Evidence, Strategy, Operation, Solution. He will have 5 problems per round. He gets a star for each problem passed. When he accumulates enough stars, he gets a check. The bar at the bottom of the screen first shows how far along the student is in the Workout and then indicates how far along he is in the round he is doing.

At the end of each round the student will see a star for each problem passed. Red stars show the problems passed for the current round. In the next round these will change to gray, and there will be new red stars for the most recently passed problems. The bar at the bottom of the summary screen will be 1/4 filled when the student completes the first group. The scores shown on the screen are only for this round. 'Print' will show how the student did in this round as well as his progress to date.

FINALS: The student will be tested on all the word problem skills. To pass the Finals, he must pass 3 questions from each group. The bar at the bottom of the screen will show how much of the Finals have been completed. When the student has finished, a summary screen will show how he did. Stars show the number of questions passed in each group. A check shows that the student has done an excellent job. 'Print' will show how he did in all the parts of the program.
Targeted Workout (follows the Finals): If the student has NOT passed one or more skills in the Finals, he is prompted to do this optional exercise and then repeat the Finals.

Note: Workout will stop students who miss either step 1 or step 2 from continuing. If it's not the last problem in the round, they will be given a new problem instead.

LOGGING ON AND CLASS MANAGEMENT
There are two options for adding student names to the record database.

- Teacher controlled – appropriate for most schools. Names added with the Teacher Program Manager (TPM) Set Up Student Names functions. See the Teacher Program Manager section of the guide.

- Student controlled – for home users and mature students. Names added at the Logon Screen.

The program opens to a Logon screen with all previously entered class codes and student names. Students must select their class code in order to see the list of students in their class. They then click on their name to begin the program. If the program is in student controlled mode and students are logging on for the first time, they select their class code, click the New Student icon, and fill in their name on the form that appears on the screen.

The evaluation version of the program permits entry of only two student names. When a third name is entered, the first one will be deleted. The stand-alone version for one station contains record keeping for

42 students. Other school versions permit entry of as many names as disk space allows. When disk space is filled, the name that was entered first will be deleted.

SCORING
Students may print out their scores at the end of round progress-to-date screen. Teachers may view detailed scoring in the Teacher Program Manager.

TEACHER PROGRAM MANAGER
All Merit Software applications utilize a centralized student record keeping/management system utility program called Teacher Program Manager (TPM). For more information about class management, scoring, and other program features see the Teacher Program Manager manual. It can be printed out from a Merit Software CD or from this link on the Internet:
http://meritsoftware.com/Teacher_Program_Manager.pdf

Here are the program features the teacher may customize for students using the Program options menu in the TPM.

1. Hide/Show Sound
2. Hide/Show Graphics
3. Control which program parts are active

SUGGESTIONS FOR USING THIS PROGRAM
For best results we recommend that students use the program 20 to 30 minutes a session, two to three times a week, for six to eight weeks in conjunction with other methods of instruction. Program usage should be paced to allow students sufficient time between sessions to absorb the material.

Start out with Merit's *Tryouts* to see where students need math help most.

Discuss problem areas with students.

Supplement Merit software with workbooks so students have a chance to practice skills in a variety of contexts.

Return to the software; have students try Merit *Warm-up* and/or *Workout* sections.

Follow up each software session by asking students what new things they have learned. What new questions do they have?

Follow up each session by having students keep a list of important math words and phrases they have learned.   Ask students to work in small groups, explaining their math terms to other students.

Have students print scores received for completing software *Warm-up* and *Workout* sections. Later, discuss these scores with students. Are they pleased with their progress? What seems easier to them? What needs more practice?

Relate math skills being practiced with *Word Problem Shape Up* to material in the classroom.

Practice basic words or phrases by giving students a problem and a list of relevant terms, i.e., "equals," "minus," "multiplied by," "variable." Have students rewrite the problem using some of these words. Finally, ask them to solve it.

Practice percents, ratios and/or fractions by having students observe their surroundings, i.e., what percent of classmates are wearing sneakers or the color blue; how many days per week do they go to school.

Practice word problems by having students work in pairs. Give each pair a word problem from a text. Ask students to list phrases from the problem indicating the strategy needed to find the answer. Then have them list what operation(s) and steps are needed to solve the problem. Finally, have each pair solve the problem and share what they did with other students.

Return to the software and let students try Merit's *Finals*, to help prepare for and de-mystify standardized tests.

Follow up software units with written post-tests.

Compare students' software results with gains in standardized test scores.

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