

# Introduction

Many students have difficulty solving math word problems. Students of all ability levels are more likely to understand material when it relates to their everyday lives. This program was written to help make math word problems relevant and meaningful to students with special needs. *Meaningful Math* has two objectives: make math word problems relevant to students and build students' confidence in solving math word problems.

The author of this program taught pre-algebra to middle-school students with special needs. She discovered that her seventh-grade students learned material best when it was presented in a realistic manner. For example, a problem in a typical textbook might ask students to find the area of Farmer John's field. The author's students, though, lived in a city and had little interest in measuring fields. However, finding the area of a bulletin board in order to see how many pieces of student work could fit on the board piqued students' interest. In the same manner, the students were eager to learn about maintaining a checking account because that subject relates to real life.

*Meaningful Math* is a series of reproducible activities designed to help students master problem-solving skills through real-world applications. Students solve problems using addition, subtraction, multiplication, and division. Students also deal with decimals, percentages, and sales tax. Each page contains two problems.

Each activity page includes an image of a sign, web page, menu, receipt, newspaper article, or another item that can be seen in real life. Students are asked to solve math word problems based on the real-life image. Students are exposed to examples of how math is encountered in everyday life, such as calculating the amount of a tip given to a waiter in a restaurant or figuring out how much they can save on an item during a department store sale. At the same time, the students practice solving word problems correctly.

Many math word problems must be solved using two or more steps. In this book, students gradually move into solving two-step problems. For example, on one worksheet, a two-step problem is broken into two separate questions.

Students must use the answer to the first problem to solve the second problem. By breaking the two-step problems into single steps, students who struggle with math are more easily able to solve the problems. Also, the problems seem simpler to the students. After solving the two-step problems in this book, students can begin tackling more difficult problems with multiple steps.

The word problems in this program are written at a 3.0–3.9 reading level to make the program accessible to students with reading difficulties. Designed to be short and easy to read, the word problems focus on everyday situations that are age-appropriate for students in grades 6–12.

Four levels are included in this book. Level 1 begins with the most basic one-step problems, presented in both word and number formats. As the students progress through each level, new challenges appear. In Level 2, students must solve one-step word problems and select the correct answers from several choices. In Level 3, students must solve two-step word problems and choose the correct answer from a list of choices. In Level 4, students must figure out if the word problems include one step or two steps. Then, they must solve the problems and write the answers.

Since this program focuses on problem solving and not on students' knowledge of basic facts, the use of calculators is not only acceptable but encouraged as a modification for struggling students. Therefore, if students feel more comfortable using calculators, please allow them to do so.

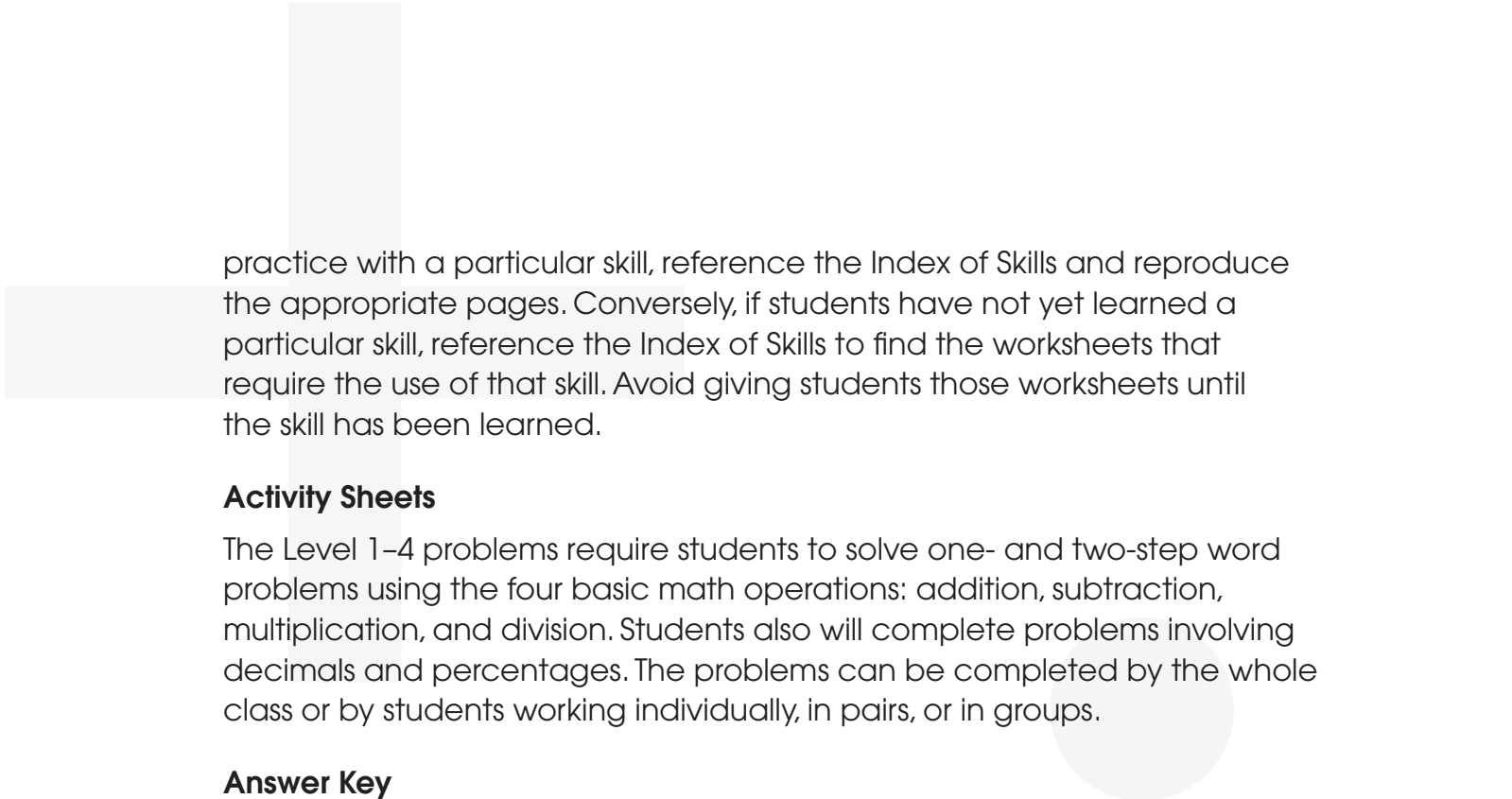
## **Program Components**

### **Research and Standards**

*Meaningful Math* uses methodology that is both research- and standards-based. Highlights from the applicable research and a list of standards addressed in this program can be found on pages VI-VII.

### **Index of Skills**

An Index of Skills is provided in this book on page VIII. If students need extra



practice with a particular skill, reference the Index of Skills and reproduce the appropriate pages. Conversely, if students have not yet learned a particular skill, reference the Index of Skills to find the worksheets that require the use of that skill. Avoid giving students those worksheets until the skill has been learned.

### **Activity Sheets**

The Level 1–4 problems require students to solve one- and two-step word problems using the four basic math operations: addition, subtraction, multiplication, and division. Students also will complete problems involving decimals and percentages. The problems can be completed by the whole class or by students working individually, in pairs, or in groups.

### **Answer Key**

For your convenience, an answer key is included on pages 161–167.



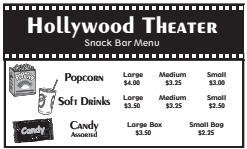
# Levels

Each level in this program contains 40 pages of worksheets. Each worksheet includes an image of a sign or some other real-life object. Students use the information in the image to solve the problems on the worksheet.

## Level 1

Name \_\_\_\_\_ Date \_\_\_\_\_

Directions Use the information in the picture to answer the questions.



**Hollywood Theater**  
Snack Bar Menu

|                     |                  |                  |              |
|---------------------|------------------|------------------|--------------|
| <b>Popcorn</b>      | Large \$4.00     | Medium \$3.25    | Small \$3.00 |
| <b>Soft Drinks</b>  | Large \$3.50     | Medium \$3.25    | Small \$2.50 |
| <b>Candy Assort</b> | Large Box \$3.50 | Small Box \$2.25 |              |

1 If you buy a large popcorn and a medium soft drink, how much will you spend altogether?

2 If it is your friend's birthday, so you decide to treat her at the snack bar. She wants a large soft drink. You decide to get a large soft drink, too. How much do you spend on soft drinks?

\$4.00  
+ 3.25

\$3.50  
x 2

Write the answer. \_\_\_\_\_ Write the answer. \_\_\_\_\_

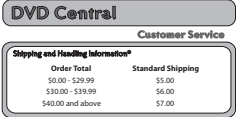
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Students solve two one-step word problems. In Level 1, the math problems corresponding to the word problems are provided. Students work the problems and write the answers.

## Level 2

Name \_\_\_\_\_ Date \_\_\_\_\_

Directions Use the information in the picture to answer the questions.



**DVD Central**  
Customer Service

**Shipping and Handling Information\***

|                   |                   |
|-------------------|-------------------|
| Order Total       | Standard Shipping |
| \$0.00 - \$29.99  | \$3.00            |
| \$30.00 - \$39.99 | \$6.00            |
| \$40.00 and above | \$7.00            |

\*For express delivery please add \$8.00 to the standard shipping fee.

1 If you buy a DVD player for \$14.95, how much will it cost when you add the standard shipping fee?

2 If your order is over \$40.00 and you want the package sent by express delivery, how much will you pay for shipping?

Choose the answer. Choose the answer.

A  \$29.95 A  \$47.00  
B  \$19.95 B  \$40.00  
C  \$27.95 C  \$15.00

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Students again solve two one-step word problems. In Level 2, they decide which math operations should be used to solve the problems. Students also set up the math problems and work them out. Then, they choose the correct answers from banks of possible answers.

## Level 3

Name \_\_\_\_\_ Date \_\_\_\_\_

**Directions** Use the information in the picture to answer the questions. Use the answer to the first question to solve the second question.

**Music Magazine**  
**Try it FREE!**  
✓ Yes! Send me my free issue today. If I like it, I'll receive 11 more issues (12 in all) for just \$20. Or sign me up for 2 years (24 issues) for just \$28.

12 issues \_\_\_\_\_  
 24 issues \_\_\_\_\_

1 If you buy a magazine subscription for 1 year (12 issues), how much does each magazine cost?

2 Now you know how much each magazine costs when you get a 1-year subscription. The regular newsstand price of 1 magazine is \$3.99. How much will you save per magazine if you buy a 1-year subscription?

Choose the answer.

A  \$2.16  
B  \$1.67  
C  \$0.60

Choose the answer.

A  \$2.32  
B  \$8.01  
C  \$1.83

Meaningful Math

Each Level 3 worksheet contains a two-step word problem that has been broken into two separate parts. Students use the answer to the first problem to solve the second problem. They also decide which math operations should be used to solve the problems. Then, they choose from banks of possible answers.

## Level 4

Name \_\_\_\_\_ Date \_\_\_\_\_

**Directions** Use the information in the picture to answer the questions. You might need to use the answer to the first question to solve the second question.

CAR WASH  
WOULD YOU LIKE TO RIDE  
A CAR WASH TODAY?  
SUPER WASH \$1.00  
QUICK WASH \$0.50  
TAKE \$2.00 OFF THE PRICE OF THE  
CAR WASH IF YOU BUY 8 OR MORE  
GALLONS OF GASOLINE.

1 How much more does it cost for a super wash than for a quick wash?

2 If you buy 12 gallons of gasoline and get a super wash, what is the cost of your car wash?

Write the answer. \_\_\_\_\_ Write the answer. \_\_\_\_\_

Meaningful Math

Each Level 4 worksheet contains two word problems. Students solve the first problem and determine whether that answer is needed to solve the second problem. As an added challenge, they no longer have a bank of possible answers from which to choose. After progressing through Levels 1–3, students should feel confident in their problem-solving skills and comfortable with writing the answer in the blank.