Step • by • Step
Word Problems

Grade 2-3

REM 1129A

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ABOUT THIS BOOK

Step•by•Step Word Problems is designed to give students a strategy for understanding and solving word problems.

There are four levels of practice for the word problems in this book. As the levels progress, they challenge students to apply the skills they learned in previous levels while learning new ones. This process will help students master problem solving.

The first level – pages 2-10 – introduces students to the Step•by•Step Solution. Problems are presented in a template format that easily guides students through this six-step process. Pages 2 and 5 are examples of how to use the template. They can be reproduced as an overhead transparency for an in-class presentation of the steps. Pages 3, 4, 6, and 7 are practice pages that guide students through using the template. Page 8 presents students with the opportunity to write their own problem using the information given in the boxes. Pages 9 and 10 are blank templates that can be reproduced and filled in by the teacher to complement specific lesson plans.

The second level – pages 11-20 – shows the basic, practical application of the steps. Students will underline and highlight important information in the problem. Then, they will circle the operation and write the equation in the boxes provided. Finally, they will write the answer in a sentence on the lines provided and think about whether or not it makes sense. There is an example of how to do the problems in this level on page 11. This section features one-step addition and subtraction problems using one and two-digit numbers.

Skills include: computation with and without regrouping, column addition, money, distance, and measurement.

The third level – pages 21-29 – some of the problems include information not necessary to solving the problem. Students will cross out sentences with extra information, allowing them to focus on the facts. The operation will be written instead of circled. A blank space has been provided to write the equation instead of the boxes. There is an example of how to do the problems in this level on page 21. This section features one-step addition and subtraction problems with one, two, and three-digit numbers.

Skills include: computation with regrouping, column addition, money, time, distance, and measurement.

The fourth level – pages 30-44 – is the most challenging. All of the problems include extra information. Students will need to read the problems carefully to determine which information is needed to solve the problem. At this level, two-step problems are introduced. There is an example of how to do the problems in this level on page 30. This section features one-step and two-step addition and subtraction problems with one, two, and three-digit numbers.

Skills include: computation with regrouping, column addition, money, time, distance, and measurement.

SOLVING WORD PROBLEMS *Step by Step*

Many students have difficulty mastering word problems. This solution helps students break apart a word problem into six easy-to-follow steps. In following them, students will learn to focus on the information and sequence that is helpful to solving the problem.

STEP · BY · STEP SOLUTION

1. **Write or underline the facts.**
   This step asks students to carefully read the problem and then determine which facts give them the information they need to solve the problem.

   > Fact example: *11 flowers in the garden*   *13 more flowers*

   Students may write or underline the entire fact sentence or condense it down to a few words. Starting on page 21, the problems include extra information. The student is asked to cross out any sentences with information not needed to solve the problem.

2. **Write or highlight the question.**
   Focusing on the question will give clues as to what operation should be used to solve the problem. Some of the questions include key words that will help determine the operation. Key words that usually indicate "add" include: *altogether*, *in all*, and *total*. Key words that usually indicate "subtract" include: *still*, *left*, *how much more*, and *how much less*. Some questions don't use key words and will require students to use other clues to determine the operation.

3. **Write or circle the operation.**
   Focusing on this step allows students to use the information gathered in the first 2 steps to make their decision about the operation and then move on to the next step.

4. **Write the equation.**
   This important step is a result of determining the operation and then using the information from the facts. Writing the equation says: "I know how to do this problem."

5. **Solve the problem.**
   This is the computation part of the process. Students will solve for the answer.

6. **Write your answer in a sentence. Does it make sense?**
   Writing the answer in a sentence helps reinforce the problem-solving process. Asking students to think about whether or not the answer "makes sense" helps them check the answer and see it in the context of the problem.

Repeating these steps over and over throughout the book will give students the practice they need to develop an effective strategy for solving problems.

SOLVING WORD PROBLEMS   Step·by·Step

Read the word problem below. Follow the steps to see how to solve the problem.

PROBLEM: *There are 9 girls playing ball. 3 girls join them.*
How many girls are playing ball?

STEP · BY · STEP SOLUTION	
1. Write the facts.	9 girls playing ball 3 girls join them
2. Write the question.	How many girls are playing ball?
3. Write the operation.	Add
4. Write the equation.	$\begin{array}{r} 9 \\ +\ 3 \\ \hline \end{array}$
5. Solve the problem.	$\begin{array}{r} 9 \\ +\ 3 \\ \hline 12 \end{array}$
6. Write your answer in a sentence. Does it make sense?	There are 12 girls playing ball.

Name _____

Read the word problem below. Follow the steps to solve the problem.

PROBLEM: *There are 7 girls swimming in the pool. 4 boys come in.*
                How many kids are in the pool?

STEP · BY · STEP SOLUTION	
1. Write the facts.	
2. Write the question.	
3. Write the operation.	
4. Write the equation.	
5. Solve the problem.	
6. Write your answer in a sentence. Does it make sense?	

Read the word problem below. Follow the steps to solve the problem.

PROBLEM: *12 people are watching the otters at the zoo. 7 people are watching the giraffes. How many more people are watching the otters?*

STEP · BY · STEP SOLUTION	
1. Write the facts.	
2. Write the question.	
3. Write the operation.	
4. Write the equation.	
5. Solve the problem.	
6. Write your answer in a sentence. Does it make sense?	

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Read the word problem below. Cross out any sentences that are not needed to solve the problem. Follow the steps to solve the problem.

PROBLEM: _____

_____

_____

STEP · BY · STEP SOLUTION	
1. Write the facts.	
2. Write the question.	
3. Write the operation.	
4. Write the equation.	
5. Solve the problem.	
6. Write your answer in a sentence. Does it make sense?	

Read each word problem. Follow the steps to solve the problem.

1. Underline the facts. 2. Highlight the question. 3. Circle the operation. 4. Write the equation.
5. Solve the problem. 6. Write your answer in a sentence. Does it make sense?

1. There are <u>11 flowers in the garden</u>. Sally plants <u>13 more flowers</u>.
   How many flowers are in the garden?

   (Add) or Subtract

   $$\begin{array}{r} 11 \\ +\ 13 \\ \hline 24 \end{array}$$

   There are 24 flowers
   in the garden.

   (write your answer)

2. John has 17 toy cars. He gives 12 cars away.
   How many toy cars does John have left?

   Add or Subtract

   _____

   _____
   (write your answer)

3. There are 28 tigers jumping through hoops. The trainer sends 14 tigers
   to rest in their cages. How many tigers are still jumping through hoops?

   Add or Subtract

   _____

   _____
   (write your answer)

4. 35 people are waiting in 2 ticket lines. 23 people join 1 of the lines.
   How many people are waiting in line?

   Add or Subtract

   _____

   _____
   (write your answer)