Shell Education

PRACTICE - ASSESS - DIAGNOSE

Level 2

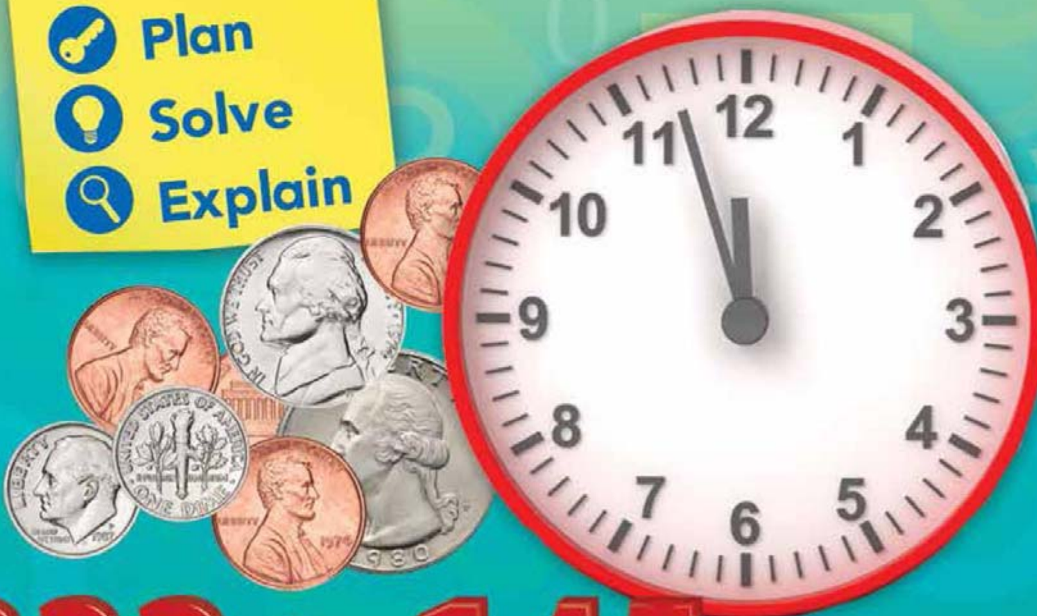
180 Days of PROBLEM SOLVING for Second Grade

Think

Plan

Solve

Explain



$232 > 145$

For information on how this resource meets national and other state standards, see page 4. You may also review this information by visiting our website at www.teachercreatedmaterials.com/administrators/correlations/ and following the on-screen directions.

Publishing Credits

Corinne Burton, M.A.Ed., *Publisher*; Conni Medina, M.A.Ed., *Managing Editor*; Emily R. Smith, M.A.Ed., *Series Developer*; Diana Kenney, M.A.Ed., NBCT, *Content Director*; Paula Makridis, M.A.Ed., *Editor*; Lee Aucoin, *Senior Multimedia Designer*; Kyleena Harper, *Assistant Editor*; Kevin Pham, *Graphic Designer*

Image Credits

All images from iStock and Shutterstock.

Standards

Shell Education
A division of Teacher Created Materials
5301 Oceanus Drive
Huntington Beach, CA 92649-1030
www.tcmpub.com/shell-education
ISBN 978-1-4258-1614-8

TABLE OF CONTENTS

INTRODUCTION

The Need for Practice

To be successful in today's mathematics classrooms, students must deeply understand both concepts and procedures so that they can discuss and demonstrate their understanding during the problem-solving process. Demonstrating understanding is a process that must be continually practiced for students to be successful. Practice is especially important to help students apply their concrete, conceptual understanding during each step of the problem-solving process.

Understanding Assessment

In addition to providing opportunities for frequent practice, teachers must be able to assess students' problem-solving skills. This is important so that teachers can adequately address students' misconceptions, build on their current understandings, and challenge them appropriately. Assessment is a long-term process that involves careful analysis of student responses from discussions, projects, practice pages, or tests. When analyzing the data, it is important for teachers to reflect on how their teaching practices may have influenced students' responses and to identify those areas where additional instruction may be required. In short, the data gathered from assessments should be used to inform instruction: slow down, speed up, or reteach. This type of assessment is called *formative assessment.*

HOW TO USE THIS BOOK

180 Days of Problem Solving offers teachers and parents problem-solving activities for each day of the school year. Students will build their problem-solving skills as they develop a deeper understanding of mathematical concepts and apply these concepts to real-life situations. This series will also help students improve their critical-thinking and reasoning skills, use visual models when solving problems, approach problems in multiple ways, and solve multi-step, non-routine word problems.

Easy-to-Use and Standards-Based

These daily activities reinforce grade-level skills across a variety of mathematical concepts. Each day provides a full practice page, making the activities easy to prepare and implement as part of a classroom routine, at the beginning of each mathematics lesson as a warm-up or Problem of the Day, or as homework. Students can work on the practice pages independently or in cooperative groups. The practice pages can also be utilized as diagnostic tools, formative assessments, or summative assessments, which can direct differentiated small-group instruction during Mathematics Workshop.

Domains and Practice Standards

The chart below indicates the mathematics domains addressed and practice standards applied throughout this book. The subsequent chart shows the breakdown of which mathematics standard is covered in each week.

Note: Students may not have deep understanding of some topics in this book. Remember to assess students based on their problem-solving skills and not exclusively on their content knowledge.

Grade-Level Domains	Practice Standards
1. Operations and Algebraic Thinking 2. Number and Operations in Base Ten 3. Measurement and Data 4. Geometry	1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

HOW TO USE THIS BOOK *(cont.)*

College-and-Career Readiness Standards

Below is a list of mathematical standards that are addressed throughout this book. Each week students solve problems related to the same mathematical topic.

Week(s)	Standard
1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. 100 can be thought of as a bundle of ten tens—called a "hundred." The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2	Count within 1,000; skip-count by 5s, 10s, and 100s.
3	Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.
4 and 5	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
6	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
7 and 8	Use addition within 100 to solve one-step word problems involving situations of adding to, putting together, and comparing, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
9 and 10	Use subtraction within 100 to solve one-step word problems involving situations of taking from, taking apart, and comparing, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
11	Use addition within 100 to solve two-step word problems involving situations of adding to, putting together, and comparing, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
12	Use subtraction within 100 to solve two-step word problems involving situations of taking from, taking apart, and comparing, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.