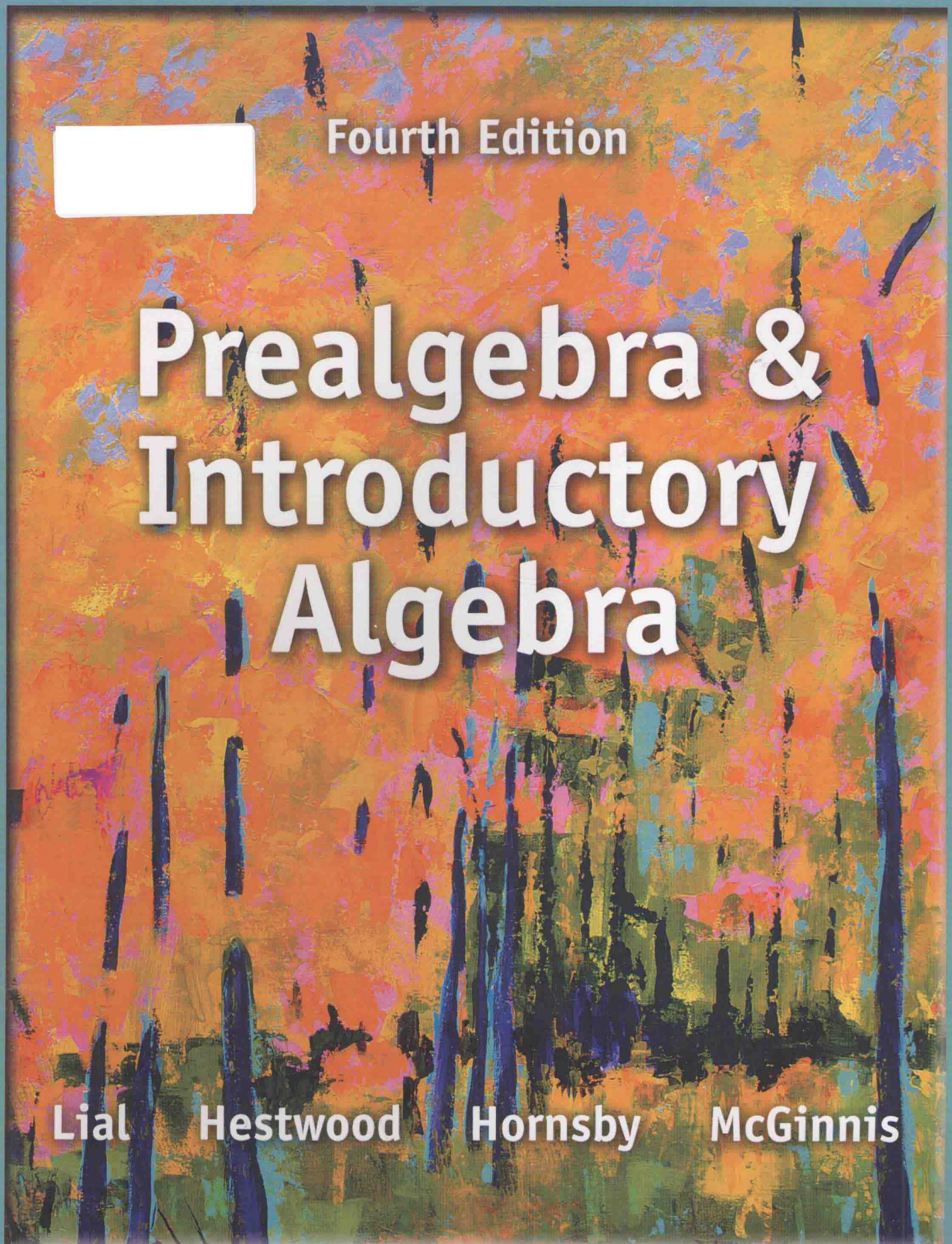
Fourth Edition
Prealgebra &
Introductory
Algebra
Lial
Hestwood
Hornsby
McGinnis

Fourth Edition

Prealgebra and Introductory Algebra

Margaret L. Lial
American River College

Diana L. Hestwood
Minneapolis Community and Technical College

John Hornsby
University of New Orleans

Terry McGinnis

常州大学山书馆
藏书章

PEARSON

Boston Columbus Indianapolis New York San Francisco Upper Saddle River
Amsterdam Cape Town Dubai London Madrid Milan Munich Paris Montréal Toronto
Delhi Mexico City São Paulo Sydney Hong Kong Seoul Singapore Taipei Tokyo

Editorial Director	Christine Hoag
Editor in Chief	Maureen O'Connor
Executive Content Editor	Kari Heen
Content Editor	Christine Whitlock
Senior Content Editor	Lauren Morse
Assistant Editor	Rachel Haskell
Senior Managing Editor	Karen Wernholm
Senior Production Project Manager	Kathleen A. Manley
Digital Assets Manager	Marianne Groth
Supplements Production Coordinator	Kerri Consalvo
Media Producer	Stephanie Green
Software Development	Eric Gregg, MathXL; Mary Durnwald, TestGen
Marketing Manager	Rachel Ross
Senior Author Support/Technology Specialist	Joe Vetere
Rights and Permissions Advisor	Cheryl Besenjak
Image Manager	Rachel Youdelman
Procurement Manager	Evelyn Beaton
Procurement Specialist	Debbie Rossi
Media Procurement Specialist	Ginny Michaud
Associate Director of Design	Andrea Nix
Senior Designer	Barbara Atkinson
Text Design, Production Coordination, Composition, and Illustrations	Cenveo® Publisher Services
Cover Image	*Autumn Hues* © Lorraine Cota Manley

For permission to use copyrighted material, grateful acknowledgment is made to the copyright holders on page P-1, which is hereby made part of this copyright page.

Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Pearson Education was aware of a trademark claim, the designations have been printed in initial caps or all caps.

Library of Congress Cataloging-in-Publication Data

Prealgebra and introductory algebra / Margaret L. Lial . . . [et al.]. — 4th ed.

p. cm.

Rev. ed. of: Prealgebra and introductory algebra / Margaret L. Lial, Diana L. Hestwood, John Hornsby. 2001.

Includes bibliographical references.

ISBN 978-0-321-85922-8

1. Algebra. I. Lial, Margaret L. II. Lial, Margaret L. Prealgebra and introductory algebra.

QA152.2.L56 2013

512.9—dc23 2012013987

Copyright © 2014, 2010, 2007 Pearson Education, Inc.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. Printed in the United States of America. For information on obtaining permission for use of material in this work, please submit a written request to Pearson Education, Inc., Rights and Contracts Department, 501 Boylston Street, Suite 900, Boston, MA 02116, fax your request to 617-671-3447, or e-mail at http://www.pearsoned.com/legal/permissions.htm.

2 3 4 5 6 7 8 9 10—V011—16 15 14 13

PEARSON

www.pearsonhighered.com

ISBN 13: 978-0-321-85922-8

ISBN 10: 0-321-85922-7

Fourth Edition

Prealgebra and Introductory Algebra

此为试读,需要完整PDF请访问: www.ertongbook.com

This book is dedicated to Margaret L. Lial

Always passionate about mathematics and teaching,

Always a valued colleague, a mentor, and a friend,

Always in our memory.

Diana Hestwood
John Hornsby
Terry McGinnis

Preface

The fourth edition of *Prealgebra and Introductory Algebra* continues our ongoing commitment to provide the best possible text and supplements package that will help instructors teach and students succeed. To that end, we have addressed the diverse needs of today's students by creating a tightly coordinated text and technology package that includes integrated activities to help students improve their study skills, an attractive design, updated applications and graphs, helpful features, and careful explanations of concepts. We've also expanded the supplements and study aids. We've revamped the video series into a complete Lial Video Library with expanded video coverage and new, easier navigation. And we've added the new Lial MyWorkBook. We have also responded to the suggestions of users and reviewers and have added many new examples and exercises based on their feedback.

The text is designed for mathematics students who are new to algebra, are relearning the algebra they studied in the past, or are anxious about their ability to learn algebra. The text interweaves just-in-time arithmetic review and geometry topics, as appropriate, into the algebraic themes of integers, variables and expressions, equations, solving application problems, positive and negative fractions and decimals, proportions, percents, measurement, graphing, and polynomials. The emphasis is on building a solid understanding of the foundations of algebra. This is accomplished by tying the content to students' experiences and previous knowledge, explaining important terminology in everyday English, showing *why* things work the way they do, and providing carefully sequenced exercises. This text is part of a series that also includes the following books:

- *Essential Mathematics,* Fourth Edition, by Lial and Salzman
- *Basic College Mathematics,* Ninth Edition, by Lial, Salzman, and Hestwood
- *Prealgebra,* Fifth Edition, by Lial and Hestwood
- *Introductory Algebra,* Tenth Edition, by Lial, Hornsby, and McGinnis
- *Intermediate Algebra,* Tenth Edition, by Lial, Hornsby, and McGinnis
- *Introductory and Intermediate Algebra,* Fifth Edition, by Lial, Hornsby, and McGinnis
- *Developmental Mathematics: Basic Mathematics and Algebra,* Third Edition, by Lial, Hornsby, McGinnis, Salzman, and Hestwood

WHAT'S NEW IN THIS EDITION

The scope and sequence of topics in *Prealgebra and Introductory Algebra* has stood the test of time and rates highly with our reviewers. Therefore, you will find the table of contents intact, making the transition to the new edition easier.

▶ ***Examples and Exercises*** Throughout the text, examples and exercises have been adjusted or replaced to reflect current data and practices. Applications have been updated and cover a wider variety of topics, such as the fields of technology, ecology, and health sciences.

▶ ***Guided Solutions*** Selected exercises in the margins and in the exercise sets, marked with a GS icon, now show the first few solution steps. This provides guidance to students as they start learning a new concept or procedure and gets them off to a successful start. (See p. 166 margin, and p. 245 Exercises 15–16.)

▶ ***Concept Checks*** The Concept Checks at the beginning of each exercise set assure students that they have necessary background skills or information to proceed. Concept Checks later in the exercise sets help students summarize and consolidate their learning by writing explanations, correcting common errors, and practicing mathematical processes. (See pp. 321 and 324.)

- ***Vocabulary Tips*** Many students at this level of mathematics do not have strong reading skills. The vocabulary tips included in the margins throughout Chapters 1-9 help them to learn the meaning of root words and prefixes commonly used in mathematics vocabulary (for example, *equ-, centi, tri-*), distinguish the mathematical meaning from the common usage of particular words (such as *volume, average*), and provide tips for remembering the difference between often-confused terms (such as the commutative and associative properties of addition on p. 25).

- ***Teaching Tips*** Although the mathematical content in this text is familiar to instructors, they may not have experience in teaching the material to adult students. The Teaching Tips, printed in the margins of the Annotated Instructor's Edition, provide helpful comments from colleagues with successful experience at this level. Common trouble spots are noted, with suggestions for improving student understanding. (See pp. 530 and 531.) Simple, but effective, hands-on activities are also included. (See p. 293.)

- ***Study Skills*** Thirteen carefully designed study skills activities provide opportunities for students to practice proven strategies for learning mathematics. Poor study skills and behaviors are major factors in low success rates in mathematics courses. Research shows that a few generic tips sprinkled here and there are not enough to help students change their study behaviors. Because students need specific instruction in study skills, we have contextualized them, integrating them into the text material. Topics include note taking, homework, study cards, math anxiety, test preparation, test taking, preparing for a final exam, and more. (See pp. 65–66, 105–106, and 152–153.) Most are located within the first few chapters so that students can use the skills throughout the course. (See the Contents for titles and locations.) The first activity, "Your Brain *Can* Learn Mathematics," explains how the brain actually learns and remembers so that students understand why the study skills will help them succeed in the course.

- ***Lial Video Library*** The Lial Video Library, available in MyMathLab and on the Video Resources DVD, provides students with a wealth of video resources to help them navigate the road to success. All video resources in the library include optional captions in English and Spanish. The Lial Video Library includes Section Lecture Videos, Solutions Clips, Quick Review Lectures, and Chapter Test Prep Videos. The Chapter Test Prep Videos are also available on YouTube (searchable using author name and book title), or by scanning the QR Code® on the inside back cover for easy access.

- ***MyWorkBook*** This new workbook provides Guided Examples and corresponding Now Try Exercises for each text objective. The extra practice exercises for every section of the text, with ample space for students to show their work, are correlated to Examples, Lecture Videos, and Exercise Solution Clips, to give students the help they need to successfully complete problems. Additionally, MyWorkBook lists the learning objectives and key vocabulary terms for every text section, along with vocabulary practice problems.

HALLMARK FEATURES

We believe students and instructors will welcome these familiar hallmark features.

- ***Chapter Openers*** The new and engaging Chapter Openers portray real life situations making math relevant for students. (See Chapter 2, p. 93.)

- ***Real-Life Applications*** We are always on the lookout for interesting data to use in real-life applications. As a result, we have included many new or updated examples and exercises throughout the text that focus on real-life applications of mathematics. Students are often asked to find data in a table, chart, graph, or advertisement. (See pp. 431 and 432.) These applied problems provide an up-to-date flavor that will appeal to and motivate students.

- ***Figures and Photos*** Today's students are more visually oriented than ever. Thus, we have made a concerted effort to include mathematical figures, diagrams, tables, and graphs whenever possible. (See pp. 628 and 641.) Many of the graphs use a style similar to that seen by students in today's print and electronic media. Photos have been incorporated to enhance applications in examples and exercises. (See pp. 181 and 182.)

- ***Emphasis on Problem Solving*** Chapter 3 introduces students to our six-step process for solving application problems algebraically: *Read, Assign a Variable, Write an Equation, Solve, State the Answer,* and *Check*. Devoting an entire chapter to this process allows students to build a strong foundation for problem solving, which is then reinforced through specific problem-solving examples in Chapters 4–8 and 12–15. (See p. 186.)
- ***Learning Objectives*** Each section begins with clearly stated, numbered objectives, and the material within sections is keyed to these objectives so that students know exactly what concepts are covered. (See p. 316.)
- ***Pointers*** More pointers have been added to examples to provide students with important on-the-spot reminders and warnings about common pitfalls. (See pp. 111 and 455.)
- ***Cautions and Notes*** These color-coded and boxed comments, one of the most popular features of previous editions, warn students about common errors and emphasize important ideas throughout the exposition. (See pp. 328–329.) Cautions are highlighted in yellow and Notes are highlighted with blue tabs.
- ***Calculator Tips*** These optional tips, marked with a red calculator icon, offer helpful information and instruction for students using calculators in the course. (See p. 343.)
- ***Margin Problems*** Margin problems, with answers immediately available on the bottom of the page, are found in every section of the text. (See pp. 14–15.) This key feature allows students to immediately practice the material covered in the examples in preparation for the exercise sets.
- ***Ample and Varied Exercise Sets*** The text contains a wealth of exercises to provide students with opportunities to practice, apply, connect, and extend the skills they are learning. Numerous illustrations, tables, graphs, and photos help students visualize the problems they are solving. Problem types include skill building, writing, estimation, and calculator exercises, as well as applications and correct-the-error problems. In the Annotated Instructor's Edition of the text, the writing exercises are marked with an icon so that instructors may assign these problems at their discretion. Exercises suitable for calculator work are marked in both the student and instructor editions with a calculator icon. (See pp. 574–575.) Students can watch an instructor work through the complete solution for all exercises marked with a Play Button icon on the Videos on DVD or in MyMathLab.
- ***Relating Concepts Exercises*** These help students tie concepts together and develop higher level problem-solving skills as they compare and contrast ideas, identify and describe patterns, and extend concepts to new situations. (See pp. 133, 259, and 348.) These exercises make great collaborative activities for pairs or small groups of students.
- ***Solutions*** Solutions to selected section exercises are included in the back of the book (following the Answers section). This provides students with easily accessible step-by-step help in solving the exercises that are most commonly missed. Solutions are provided for the exercises marked with a square of blue color around the exercise number, for example, **15.**
- ***Summary Exercises*** All but two chapters now include this helpful mid-chapter review. These exercises provide students with the all-important *mixed* practice they need at these critical points in their skill development. (See pp. 183–184.)
- ***Ample Opportunity for Review*** Each chapter ends with a Chapter Summary featuring: Key Terms with definitions and helpful graphics, New Formulas, New Symbols, Test Your Word Power, and a Quick Review of each section's content with additional examples. Also included is a comprehensive set of Chapter Review Exercises keyed to individual sections, a set of Mixed Review Exercises, and a Chapter Test. (See pp. 303–313.) Students can watch an instructor work out the full solutions to the Chapter Test problems in the Chapter Test Prep Videos.
- ***Test Your Word Power*** This feature, incorporated into each Chapter Summary, helps students understand and master mathematical vocabulary. Key terms from the chapter are presented along with three or four possible definitions in a multiple-choice format. Answers and examples illustrating each term are provided. (See p. 304.)

STUDENT SUPPLEMENTS

Student's Solutions Manual

- By Jeffery A. Cole, Anoka-Ramsey Community College
- Provides detailed solutions to the odd-numbered section-level exercises and to all margin, Relating Concepts, Summary, Chapter Review, Chapter Test, and Cumulative Review Exercises

ISBNs: 0-321-85484-5, 978-0-321-85484-1

NEW MyWorkBook

- Provides Guided Examples and corresponding Now Try Exercises for each text objective
- Refers students to correlated Examples, Lecture Videos, and Exercise Solution Clips
- Includes extra practice exercises for every section of the text with ample space for students to show their work
- Lists the learning objectives and key vocabulary terms for every text section, along with vocabulary practice problems

ISBNs: 0-321-85478-0, 978-0-321-85478-0

NEW Lial Video Library

The Lial Video Library, available in MyMathLab and on the Video Resources DVD, provides students with a wealth of video resources to help them navigate the road to success! All video resources in the library include optional captions in English and Spanish. The Lial Video Library includes the following resources:

- **Section Lecture Videos** offer a new navigation menu that allows students to easily focus on the key examples and exercises that they need to review in each section.
- **Solutions Clips** show an instructor working through the complete solutions to selected exercises from the text. Exercises with a solution clip are marked in the text and e-book with a Play Button icon ▶.
- **Quick Review Lectures** provide a short summary lecture of each key concept from the Quick Reviews at the end of every chapter in the text.
- **Chapter Test Prep Videos** let students watch instructors work through step-by-step solutions to all the Chapter Test exercises from the textbook. Chapter Test Prep videos are also available on YouTube™ (search using author name and book title) and in MyMathLab, or by scanning the QR Code® on the inside back cover for easy access.

INSTRUCTOR SUPPLEMENTS

Annotated Instructor's Edition

- Provides answers to all text exercises in color next to the corresponding problems
- Includes all **NEW** Teaching Tips located in the margins
- Icons identify writing and calculator exercises

ISBNs: 0-321-85474-8, 978-0-321-85474-2

Instructor's Solutions Manual (Download only)

- By Jeffery A. Cole, Anoka-Ramsey Community College
- Provides complete solutions to all exercises in the text
- Available for download at www.pearsonhighered.com

ISBNs: 0-321-85475-6, 978-0-321-85475-9

Instructor's Resource Manual with Tests and Mini-Lectures (Download only)

- Contains a test bank with two diagnostic pretests, six free-response and two multiple-choice test forms per chapter, and two final exams
- Contains a mini-lecture for each section of the text with objectives, key examples, and teaching tips
- Includes a correlation guide from the third to the fourth edition and phonetic spellings for all key terms in the text
- Includes resources to help both new and adjunct faculty with course preparation and classroom management, by offering helpful teaching tips correlated to the sections of the text
- Available for download at www.pearsonhighered.com

ISBNs: 0-321-85476-4, 978-0-321-85476-6

ADDITIONAL MEDIA SUPPLEMENTS

MyMathLab®

MyMathLab® Online Course (access code required)

MyMathLab from Pearson is the world's leading online resource in mathematics, integrating interactive homework, assessment, and media in a flexible, easy to use format. MyMathLab delivers **proven results** in helping individual students succeed. It provides **engaging experiences** that personalize, stimulate, and measure learning for each student. And, it comes from an **experienced partner** with educational expertise and an eye on the future.

To learn more about how MyMathLab combines proven learning applications with powerful assessment, visit **www.mymathlab.com** or contact your Pearson representative.

此为试读，需要完整PDF请访问：www.ertongbook.com

MyMathLab® Ready to Go Course (access code required)
These new Ready to Go courses provide students with all the same great MyMathLab features, but make it easier for instructors to get started. Each course includes pre-assigned homework and quizzes to make creating a course even simpler. Ask your Pearson representative about the details for this particular course or to see a copy of this course.

MyMathLab® Plus/MyStatLab™ Plus
MyLabsPlus combines proven results and engaging experiences from MyMathLab® and MyStatLab™ with convenient management tools and a dedicated services team. Designed to support growing math and statistics programs, it includes additional features such as:

- **Batch Enrollment:** Schools can create the login name and password for every student and instructor, so everyone can be ready to start class on the first day. Automation of this process is also possible through integration with the school's Student Information System.
- **Login from the campus portal:** Instructors and students can link directly from their campus portal into MyLabsPlus courses. A Pearson service team works with each institution to create a single sign-on experience for instructors and students.
- **Advanced Reporting:** MyLabsPlus's advanced reporting allows instructors to review and analyze students' strengths and weaknesses by tracking their performance on tests, assignments, and tutorials. Administrators can review grades and assignments across all courses on the MyLabsPlus campus for a broad overview of program performance.
- **24/7 Support:** Students and instructors receive 24/7 support, 365 days a year, by email or online chat.

MyLabsPlus is available to qualified adopters. For more information, visit our website at *www.mylabsplus.com* or contact your Pearson representative.

MathXL®

MathXL® Online Course (access code required)
MathXL® is the homework and assessment engine that runs MyMathLab. (MyMathLab is MathXL plus a learning management system.)

With MathXL, instructors can:

- Create, edit, and assign online homework and tests using algorithmically generated exercises correlated at the objective level to the textbook.
- Create and assign their own online exercises and import TestGen tests for added flexibility.
- Maintain records of all student work tracked in MathXL's online gradebook.

With MathXL, students can:

- Take chapter tests in MathXL and receive personalized study plans and/or personalized homework assignments based on their test results.
- Use the study plan and/or the homework to link directly to tutorial exercises for the objectives they need to study.
- Access supplemental animations and video clips directly from selected exercises.

MathXL is available to qualified adopters. For more information, visit our website at *www.mathxl.com*, or contact your Pearson representative.

TestGen®
TestGen® (*www.pearsoned.com/testgen*) enables instructors to build, edit, print, and administer tests using a computerized bank of questions developed to cover all the objectives of the text. TestGen is algorithmically based, allowing instructors to create multiple but equivalent versions of the same question or test with the click of a button. Instructors can also modify test bank questions or add new questions. The software and testbank are available for download from Pearson Education's online catalog.

PowerPoint® Lecture Slides

- Present key concepts and definitions from the text
- Available for download at *www.pearsonhighered.com* or in MyMathLab

ACKNOWLEDGMENTS

The comments, criticisms, and suggestions of users, nonusers, instructors, and students have positively shaped this textbook over the years, and we are most grateful for the many responses we have received. The feedback gathered for this revision of the text was particularly helpful, and we especially wish to thank the following individuals who provided invaluable suggestions for this and the previous editions:

Carla Ainsworth, *Salt Lake Community College*
Randall Allbritton, *Daytona State College*
Jannette Avery, *Monroe Community College*
Pam Baenziger, *Kirkwood Community College*
Linda Beattie, *Western New Mexico University*
Jean Bolyard, *Fairmont State University*
Barbara Brown, *Anoka-Ramsey Community College*
Kim Brown, *Tarrant County College—Northeast Campus*
Hien Bui, *Hillsborough Community College*
Tim C. Caldwell, *Meridian Community College*
Russell Campbell, *Fairmont State University*
John Close, *Salt Lake Community College*
Jane Cuellar, *Taft College*
Ky Davis, *Zane State College*
Bill Dunn, *Las Positas College*
Lucy Edwards, *Las Positas College*
Randy Gallaher, *Lewis and Clark Community College*
Veronica Gold, *Assumption College*
Nancy Graham, *Rose State College*
Lynn Hargrove, *Sierra College*
J. Lloyd Harris, *Gulf Coast Community College*
Terry Haynes, *Eastern Oklahoma State College*
Edith Hays, *Texas Woman's University*
Karen Heavin, *Morehead State University*
Elizabeth Heston, *Monroe Community College*
Scott Higinbotham, *Middlesex Community College*
Lori Holdren, *State College of Florida, Manatee-Sarasota*
Sharon Jackson, *Brookhaven College*
Rosemary Karr, *Collin College*
Harriet Kiser, *Georgia Highlands College*
Valerie Lazzara, *Palm Beach State College*
Christine Heinecke Lehmann, *Purdue University—North Central*
Lou Ann Mahaney, *Tarrant County College—Northeast Campus*
Valerie H. Maley, *Cape Fear Community College*
Linda Marable, *Nashville State Community College*
Susan Martin, *Diablo Valley College*
Susan McClory, *San Jose State University*
Pam Miller, *Phoenix College*
Jeffrey Mills, *Ohio State University*
Michael Montano, *Riverside Community College*
Elizabeth Morrison, *Valencia Community College—West Campus*
Linda J. Murphy, *Northern Essex Community College*
Celia Nippert, *Western Oklahoma State College*
Elizabeth Olgilvie, *Horry-Georgetown Technical College*
Lisa Padgett, *Chaffey College*
Faith Peters, *Broward College*
Larry Pontaski, *Pueblo Community College*
Sara Pries, *Sierra College*
Brooke Quinlan, *Hillsborough Community College—Dale Mabry Campus*
Manoj Raghunandanan, *Temple University*
Janalyn Richards, *Idaho State University*
Diann Robinson, *Ivy Tech State College—Lafayette*
Heather Roth, *Nova Southeastern University*
Rachael Schettenhelm, *Southern Connecticut State University*
Julia Simms, *Southern Illinois University—Edwardsville*
Dr. Yojana Sharma, *Stark State College*
Sounny Slitine, *Palo Alto College*
Lee Ann Spahr, *Durham Technical Community College*
Carol Stewart, *Fairmont State University*
Sharon Testone, *Onondaga Community College*
Sam Tinsley, *Richland College*
Shae Thompson, *Montana State University*
Cora S. West, *Florida State College at Jacksonville*
Cheryl Wilcox, *Diablo Valley College*
Johanna Windmueller, *Seminole State College*
Gabriel Yimesghen, *Community College of Philadelphia*
Kevin Yokoyama, *College of the Redwoods*
Carol A. Zavarella, Ph.D., *Hillsborough Community College*
Karl Zilm, *Lewis and Clark Community College*

Our sincere thanks go to the dedicated individuals at Pearson who have worked hard to make this revision a success: Maureen O'Connor, Kathy Manley, Barbara Atkinson, Michelle Renda, Rachel Ross, Kari Heen, Christine Whitlock, Lauren Morse, Stephanie Green, and Rachel Haskell.

We are also grateful to Marilyn Dwyer, Carol Merrigan, and Kathy Diamond of Cenveo/Nesbitt Graphics for their excellent production work; Bonnie Boehme and David Abel, for supplying their copyediting expertise; Beth Anderson, for her fine photo research; Lucie Haskins, for producing a useful Index; Jeff Cole, for writing the Solutions Manuals; and Perian Herring, Sara Van Asten, Sarah Sponholz, Janis Cimperman, Paul Lorczak, and Chris Heeren, for their accuracy checking.

Abby Tanenbaum did an outstanding job helping us with manuscript preparation and researching applications. We are truly grateful for her contributions to so many of our books over the years. Special thanks go to Janis M. Cimperman, Associate Professor of Mathematics at St. Cloud State University, for her careful review of the new material in selected chapters.

Linda Russell developed and wrote all the Study Skills activities, made the text more readable for developmental-level students, wrote all of the vocabulary tips, and provided much-needed help during the production phase. Her many years of experience with students at this level was invaluable.

The ultimate measure of this textbook's success is whether it helps students master algebra skills, develop problem-solving techniques, and increase their confidence in learning and using mathematics. In order for us, as authors, to know what to keep and what to improve for the next edition, we need to hear from you, the instructor, and you, the student. Please tell us what you like and where you need additional help by sending an e-mail to *math@pearson.com*. We appreciate your feedback!

Diana L. Hestwood
John Hornsby
Terry McGinnis

Fourth Edition

Prealgebra and Introductory Algebra

Contents

Preface x

CHAPTER 1 Introduction to Algebra: Integers 1

Study Skills Your Brain *Can* Learn Mathematics 2

1.1 Place Value 4

Study Skills Using Your Textbook 11

1.2 Introduction to Integers 13

Study Skills Homework: How, Why, and When 19

1.3 Adding Integers 21

1.4 Subtracting Integers 30

1.5 Problem Solving: Rounding and Estimating 34

1.6 Multiplying Integers 44

1.7 Dividing Integers 54

Summary Exercises ***Operations with Integers*** 63

Study Skills Taking Lecture Notes 65

1.8 Exponents and Order of Operations 67

Study Skills Reviewing a Chapter 77

Summary 79 ▼ Review Exercises 85 ▼ Test 89

Study Skills Managing Your Time 91

CHAPTER 2 Understanding Variables and Solving Equations 93

2.1 Introduction to Variables 94

Study Skills Using Study Cards 105

2.2 Simplifying Expressions 107

Study Skills Using Study Cards Revisited 118

Summary Exercises ***Variables and Expressions*** 120

2.3 Solving Equations Using Addition 122

2.4 Solving Equations Using Division 134

2.5 Solving Equations with Several Steps 142

Study Skills Tips for Taking Math Tests 152

Summary 154 ▼ Review Exercises 159 ▼ Test 161

CHAPTER 3 Solving Application Problems 163

3.1 Problem Solving: Perimeter 164

3.2 Problem Solving: Area 173

Summary Exercises ***Perimeter and Area*** 183

3.3 Solving Application Problems with One Unknown Quantity 185

3.4 Solving Application Problems with Two Unknown Quantities 194

Study Skills Tips for Improving Test Scores 200

Summary 202 ▼ Review Exercises 208 ▼ Test 210

Math in the Media Formulas: Predicting a Young Child's Vocabulary 212

CHAPTER 4 Rational Numbers: Positive and Negative Fractions 213

4.1 Introduction to Signed Fractions 214

4.2 Writing Fractions in Lowest Terms 225

4.3 Multiplying and Dividing Signed Fractions 237

4.4 Adding and Subtracting Signed Fractions 249

Study Skills Making a Mind Map 260

4.5 Problem Solving: Mixed Numbers and Estimating 262

Summary Exercises ***Computation with Fractions*** 275

4.6 Exponents, Order of Operations, and Complex Fractions 277

4.7 Problem Solving: Equations Containing Fractions 284

4.8 Geometry Applications: Area and Volume 293

Study Skills Analyzing Your Test Results 301

Summary 303 ▼ Review Exercises 311 ▼ Test 313

CHAPTER 5 Rational Numbers: Positive and Negative Decimals 315

5.1 Reading and Writing Decimal Numbers 316

5.2 Rounding Decimal Numbers 325

5.3 Adding and Subtracting Signed Decimal Numbers 332

此为试读，需要完整PDF请访问：www.ertongbook.com