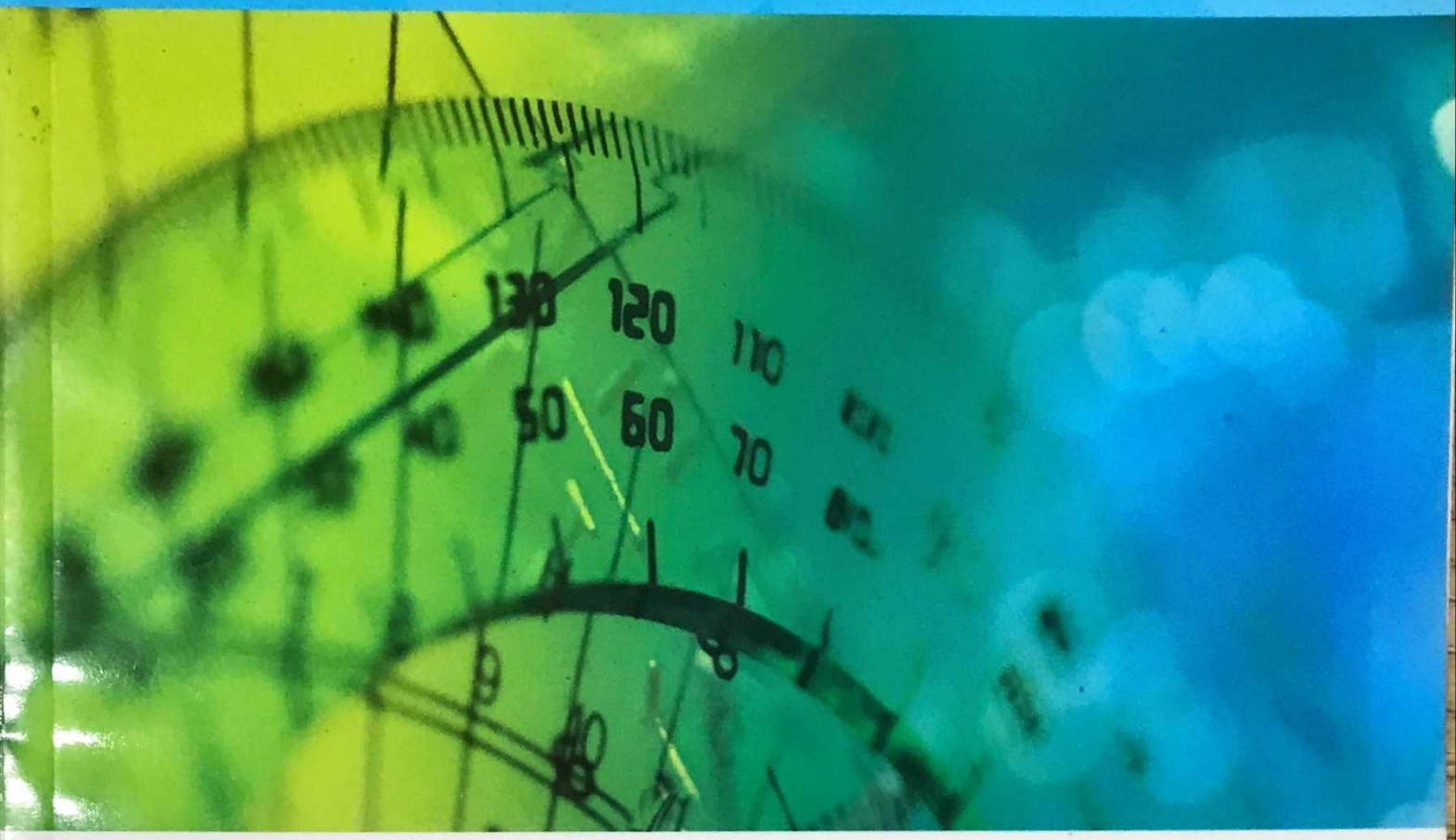
CENGAGE Learning

Cengage Learning

Asia Sectional Catalog
2008 - 2009



Mathematics

NỘI
75
NV

Contents

Higher Education

Mathematics

Precalculus 3
Finite Mathematics 34
Calculus 49
Discrete Mathematics 65
Differential Equations 68
Linear Algebra 73
Post Calculus Courses 79
Combined Author/Title Index ..... i-iii

Library Reference R1-R8

Catalog Info

It includes titles in Mathematics from the following publishers:

- **Cengage Learning Asia**
- **Brooks/Cole Cengage Learning**

For lecturers, please contact your Cengage Learning Representative or our Singapore Office for ancillaries to adopted texts.

Prices

Order form/pricelist is available upon request through Cengage Learning Representative.

Special prices are available for class adoption. Please contact your Cengage Learning Representative, listed in the inside backcover of this catalog for information on class adoption.

Orders

Please send your orders directly to:

Cengage Learning Asia Pte Ltd
5 Shenton Way
#01-01 UIC Building
Singapore 068808
Tel: (65) 6410 1200 Fax: (65) 6410 1208
email: asia.info@cengage.com
Attn: **Customer Service**

e-Learning Helpdesk

For user support, please email to:

asia.usersupport@cengage.com

or contact us through helpdesk line:

(65) 6410 1216
(Mondays to Fridays, 8.30am - 5.30pm, Singapore time)

Websites

Our internet kiosk gives you immediate access to all our Cengage Learning publishers and over 20,000 information resources.

Cengage Learning Asia - **cengageasia.com**
Brooks/Cole - **international.cengage.com**
academic.cengage.com

Cengage Learning

Asia Sectional Catalog
2008-2009

TRƯỜNG ĐẠI HỌC CÔNG NGHIỆP HÀ NỘI
TRUNG TÂM THÔNG TIN THƯ VIỆN
08 07
01075

Mathematics

TABLE OF CONTENTS

Precalculus **3**

- College Algebra 3
- Trigonometry 10
- College Algebra & Trigonometry 14
- Geometry 19
- Precalculus 20
- Additional Resources 29
- Technical Mathematics 31

Finite Mathematics **34**

- Finite Mathematics 34
- Applied Calculus 38
- Finite Mathematics with Applied Calculus (College Mathematics) 42
- Additional Resources 47

Calculus **49**

- Calculus 49
- Calculus for the Life Sciences 60
- Additional Resources 62

Discrete Mathematics **65**

Differential Equations **68**

Linear Algebra **73**

- Linear Algebra 73
- Linear Algebra with Differential Equations 77

Post Calculus Courses **79**

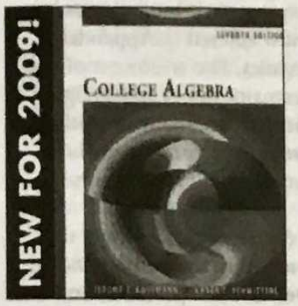
- The Brooks/Cole Series in Advanced Mathematics 79
- Abstract Algebra/Modern Algebra 80
- Advanced Calculus/Analysis 84
- Advanced Engineering Mathematics 85
- Approximation Theory 90
- Combinatorics 91
- Foundations of Mathematics/Introduction to Proofs 91
- Fourier Analysis 93
- Geometry 94
- History of Mathematics 96
- Linear Programming 96
- Mathematical Modeling 98
- Mathematics for Teachers 100
- Mathematics of Finance 101
- Mathematics of Physics 102
- Numerical Analysis/Numerical Methods 102
- Probability 109
- Real Analysis 111
- Topology 111
- Additional Resources 112

Combined Author/Title Index i-iii

PRECALCULUS

COLLEGE ALGEBRA

NEW FOR 2009!



COLLEGE ALGEBRA

Seventh Edition

JEROME E. KAUFMANN, Western Illinois University (Retired)

816 pages. Casebound. ©2009.
ISBN-10: 0495554030. ISBN-13: 9780495554035.

Known for a clear and concise exposition, numerous examples, and plentiful problem sets, Jerome E. Kaufmann and Karen L. Schwitters's COLLEGE ALGEBRA, Seventh Edition, is an easy-to-use book that focuses on building technique and helping students hone their problem-solving skills. The seventh edition focuses on solving equations, inequalities, and problems; and on developing graphing techniques and using the concept of a function. Updated with new application problems and examples throughout, the seventh edition is accompanied by a robust collection of teaching and learning resources, including Enhanced WebAssign, an easy-to-use online homework management system for both instructors and students.

NEW TO THIS EDITION

- New and updated concept quizzes, example tie-ups, and clear chapter objectives integrated into the text reinforce the problem-solving focus in the book.
- Co-author Karen Schwitters was instrumental in choosing exercises for Enhanced WebAssign, helping to ensure that text content is directly tied to the online exercises.
- Within Enhanced WebAssign, there are over 1,500 problem-specific videos available to lend extra tutorial help to students.
- New and updated concept quizzes, example tie-ups, and clear chapter objectives reinforce the problem-solving skills in the book and serve as a quick self-check to make sure your learning is on target.
- The book can be packaged with Enhanced WebAssign, an online homework system with practice problems tied directly to the ones in the book, and over 1,500 problem-specific videos available to lend you extra help.

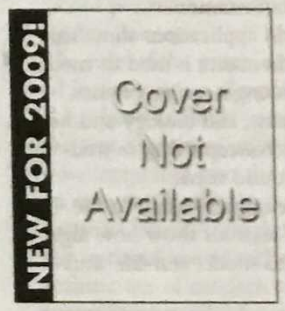
KEY FEATURES

- Problem-solving is emphasized early in the book using Polya's problem-solving method to help students hone their problem-solving skills.
- High-quality problem sets--from easy to more difficult--are well paired and concentrate on skill development. The book also provides pertinent review material in early chapters to ensure that students are fully grasping fundamental algebraic concepts.
- Alternative solutions for some problem-solving situations encourage flexibility in the development of problem-solving techniques, provide an opportunity to encourage students to think outside the box, and help accommodate different learning styles.
- Real-world application problems demonstrate how mathematical concepts can be applied to everyday activities, as well as in the workplace.
- The book's early emphasis on problem-solving helps you hone your problem-solving skills so you can grasp concepts quicker and do better on exams.
- Problem sets in COLLEGE ALGEBRA, Seventh Edition, are graduated from easy to more difficult to enhance your skill development--no matter what level you're starting at.
- Review material in early chapters helps ensure you are fully grasping fundamental algebraic concepts.
- Alternative solutions for some problems provide an opportunity for you to think outside the box and challenges conventional thinking.
- Real-world application problems in COLLEGE ALGEBRA, Seventh Edition, demonstrate how mathematical concepts being can be applied to everyday activities and in the workplace.

CONTENTS

Some Basic Concepts of Algebra: A Review.
1. Equations, Inequalities, and Problem Solving.
2. Coordinate Geometry and Graphing Techniques.
3. Functions.
4. Polynomial and Rational Functions.
5. Exponential and Logarithmic Functions.
6. Systems of Equations.
7. Algebra of Matrices.
8. Conic Sections.
9. Sequences and Mathematical Induction.
Appendix A: Binomial Theorem.

NEW FOR 2009!



COLLEGE ALGEBRA, INTERNATIONAL EDITION

Fifth Edition

JAMES STEWART, McMaster University; **LOTHAR REDLIN,** Pennsylvania State University, Abbington College; and **SALEEM WATSON,** California State University, Long Beach

800 pages. Paperbound. 9 x 9-1/4. ©2009.
ISBN-10: 0495565326. ISBN-13: 9780495565321.

Learn to think mathematically and develop genuine problem-solving skills with Stewart, Redlin, and Watson's COLLEGE ALGEBRA, Fifth Edition. This straightforward and easy-to-use algebra book will help you learn the fundamentals of algebra in a variety of practical ways. The book features new tools to help you succeed, such as learning objectives before each section to prepare you for what you're about to learn, and a list of formulas and key concepts after each section that help reinforce what you've learned. In addition, the book includes many real-world examples that show you how mathematics is used to model in fields like engineering, business, physics, chemistry, and biology.

KEY FEATURES

- New and expanded study aids include learning objectives at the beginning of each section, and a list of formulas and key concepts at the end of each section.
- New Concept exercises, in addition to drill/skill exercises, vary from easy to difficult and help ensure that students are truly grasping the algebraic theories.

■ Precalculus

- New Practice What You've Learned features at the end of each example directs students to a similar problem in the exercises, allowing them to immediately reinforce the concept just covered.
- New Cumulative Reviews appear after select groups of chapters and help students gauge their progress and gain experience in taking tests that cover a broad range of concepts and skills.
- Enhanced WebAssign allows you to assign, collect, grade, and record homework assignments online, minimizing workload and streamlining the grading process. It also gives students the ability to stay organized with assignments and have up-to-date grade information.
- Many real-world applications show students how mathematics is used to model in fields such as engineering, physics, chemistry, business, and biology and help them relate the concepts they're studying to the world around them.
- Focus on Modeling and Math in the Modern World sections show how algebra can be applied to model real-life situations.
- Optional, yet complete, technology applications for graphing calculators and computers appear throughout the text, giving you the flexibility to teach the course the way you want.

CONTENTS

Prerequisites.
1. Equations and Inequalities.
2. Coordinates and Graphs.
3. Functions.
4. Polynomial and Rational Functions.
5. Exponential and Logarithmic Functions.
6. Systems of Equations and Inequalities.
7. Matrices and Determinants.
8. Conic Sections.
9. Sequences and Series.
10. Counting and Probability.

COLLEGE ALGEBRA

Ninth Edition

R. DAVID GUSTAFSON, Rock Valley College and **PETER D. FRISK,** Rock Valley College

720 Pages, 8" x 10". Casebound. ©2007.
ISBN-10: 0495012661. ISBN-13: 9780495012665.
International edition ISBN-10: 049511054X.
ISBN-13: 9780495110545.

Clearly written and comprehensive, the ninth edition of Gustafson and Frisk's popular book provides in-depth and precise coverage, incorporated into a framework of tested teaching strategy. The authors combine carefully selected pedagogical features and patient explanation to give students a book that preserves the integrity of mathematics, yet does not discourage them with material that is confusing or too rigorous. Long respected for its ability to help students quickly master difficult problems, this book also helps them develop the skills they'll need in future courses and in everyday life.

☆ KEY FEATURES

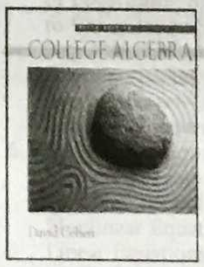
- Your students will love College AlgebraNow™, an online assessment-centered study tool that is integrated throughout the text, and included at no extra charge with every new copy of the text. This dynamic system allows students to focus their study time and improve their understanding of key content. For each chapter, College AlgebraNow includes diagnostic questions that create Personalized Learning Plan for students, and a Post-Test which will check their knowledge of the chapter material and help to prepare for exams. Icons in the text indicate where an active example exists in College AlgebraNow.
- The emphasis on solving problems through realistic applications has been increased by adding to the already wide variety of application problems. All application problems are titled for easy reference.
- New "Everyday Connections" boxes increase the relevance of the material to student's lives by relating the mathematics in the chapter to the student's experience in practical ways.
- The Careers in Mathematics feature has been updated throughout based on the latest information in the Occupational Outlook Handbook, published by the Bureau of Labor Statistics. Each chapter opens with a job description and job outlook for various careers requiring the study of mathematics.
- The presentation was revised in several sections to make it easier to read.
- More review and application problems are included throughout the text.
- An alternative approach to circles and parabolas is now offered in Appendix II.
- Solid Mathematics. The treatment of college algebra remains direct and straightforward. The authors' treatment of mathematics is thorough and precise, without being so rigorous that it will confuse students.
- Emphasis on Applications. To show that mathematics is useful, the authors include a large number of word problems and applications throughout the book. An index of applications is included and all applications are now labeled for easy reference.
- Accessibility to Students. The book is written for students to read and understand. The numerous problems within each exercise set are carefully keyed to over 400 worked examples, in which the authors' notes explain many of the steps used in the problem-solving process. Most examples are followed by a Self Check problem, whose answers appear at the end of each section. Answers to the odd-numbered exercises appear in an appendix in the Student Edition.
- ACCENT ON TECHNOLOGY boxes include an abundant amount of material on graphing calculators. This material can be omitted without interrupting the flow of ideas. Directions within each exercise set indicate where exercises require calculators.
- Chapter 9, The Mathematics of Finance, is especially helpful for students majoring in Business. It covers topics from business mathematics such as present value, sinking funds, simple and compound interest, and amortization.
- There are more than 4,000 exercises in the book. Exercise sets include Vocabulary and Concept problems, Practice problems, Application problems, Discovery and Writing problems, and Review problems. The exercises have been worked by the authors and a problem checker to ensure accuracy.
- Reviews are incorporated throughout the book to help students assess their strengths and weaknesses. Every chapter ends with Review Exercises, Chapter Summary, and a Chapter Test. Every odd-numbered chapter is followed by Cumulative Review Exercises.
- INTERACTIVE VIDEO SKILL-

BUILDER CD-ROM. Included with every new copy of this text, the Interactive Video Skillbuilder CD-ROM contains more than eight hours of video instruction and includes MathCue Tutorial Software, which presents and scores problems and tutors students by displaying annotated, step-by-step solutions.

- iLRN. Every new copy of this text is packaged with our suite of online tutorial services. With this mastery system, your students have dynamic, flexible online tutorial resources at their fingertips. By entering a PIN code packaged with their new textbook, students gain access to text-specific tutorials with step-by-step explanations, exercises and quizzes, and vMentor, live, one-on-one help from an experienced mathematics tutor. For instructors, we offer highly customizable testing, course management, and diagnostic online resources that provide a dynamic way to power your course.

CONTENTS

Index of Applications.
0. A REVIEW OF BASIC ALGEBRA.
Sets of Real Numbers. Integer Exponents and Scientific Notation. Rational Exponents and Radicals. Polynomials. Factoring Polynomials. Algebraic Fractions.
1. EQUATIONS AND INEQUALITIES.
Equations. Applications of Linear Equations. Quadratic Equations. Applications of Quadratic Equations. Complex Numbers. Polynomial and Radical Equations. Inequalities. Absolute Value.
2. THE RECTANGULAR COORDINATE SYSTEM AND GRAPHS OF EQUATIONS.
The Rectangular Coordinate System. The Slope of a Nonvertical Line. Writing Equations of Lines. Graphs of Equations. Proportion and Variation.
3. FUNCTIONS.
Functions and Function Notation. Quadratic Functions. Polynomial and Other Functions. Translating and Stretching Graphs. Rational Functions. Operations on Functions. Inverse Functions.
4. EXPONENTIAL AND LOGARITHMIC FUNCTIONS.
Exponential Functions and Their Graphs. Applications of Exponential Functions. Logarithmic Functions and Their Graphs. Applications of Logarithmic Functions. Properties of Logarithms. Exponential and Logarithmic Equations.
5. SOLVING POLYNOMIAL EQUATIONS.
The Remainder and Factor Theorems; Synthetic Division. Descartes' Rule of Signs and Bounds on Roots. Rational Roots of Polynomial Equations. Irrational Roots of Polynomial Equations.
6. LINEAR SYSTEMS.
Systems of Linear Equations. Gaussian Eliminations and Matrix Methods. Matrix Algebra. Matrix Inversion. Determinants. Partial Fractions. Graphs of Linear Inequalities. Linear Programming.
7. CONIC SECTIONS AND QUADRATIC SYSTEMS.
The Circle and the Parabola. The Ellipse. The Hyperbola. Solving Simultaneous Second-Degree Equations.
8. NATURAL NUMBER FUNCTIONS AND PROBABILITY.
The Binomial Theorem. Sequences, Series, and Summation Notation. Arithmetic Sequences. Geometric Sequences. Mathematical Induction. Permutations and Combinations. Probability. Computation of Compound Probabilities. Odds and Mathematical Expectation.
9. THE MATHEMATICS OF FINANCE.
Interest. Annuities and Future Value. Present Value of an Annuity; Amortization.
APPENDIX I: A PROOF OF THE BINOMIAL THEOREM.
APPENDIX II: AN ALTERNATE APPROACH TO CIRCLES AND PARABOLAS.
APPENDIX III: TABLES.
TABLE A. POWERS AND ROOTS.
TABLE B. BASE-10 LOGARITHMS.
TABLE C. BASE-E LOGARITHMS.
APPENDIX IV: ANSWERS TO SELECTED EXERCISES.
Index.



COLLEGE ALGEBRA

Fifth Edition

DAVID COHEN, University of California, Los Angeles

880 pages. Casebound. 8 x 10. 4-Color. ©2003.
ISBN-10: 0534357717. ISBN-13: 9780534357719.

David Cohen's *College Algebra*, Fifth Edition, focuses on teaching mathematics, using a graphical perspective throughout to provide a visual understanding of college algebra. The author is known for his clear writing style and the numerous quality exercises and applications he includes in his respected texts. In this new edition, graphs, visualization of data, and functions are now introduced much earlier and receive greater emphasis. Many sections now contain more examples and exercises involving applications and real-life data. While this edition takes the existence of the graphing calculator for granted, the material is arranged so that one can teach the course with as much or as little graphing utility work as he/she wishes.

KEY FEATURES

- Functions are now introduced in Chapter 3. This earlier treatment of functions ensures that students have greater exposure to and practice with this crucial college algebra concept.
- The role of the graphing utility is expanded in this edition. Graphing utility material has been carefully integrated throughout the text. Graphing utility exercises are now integrated into the exercise sets with an icon to identify them. Reviewers praised Cohen's thoughtful approach to the optional use of technology, lauding his realistic use of modern technologies while maintaining a solid foundation in algebraic concepts.
- Exercises have been rewritten, updating real data and applications throughout.
- In addition to the *Writing Mathematics* sections, there are now *Projects* and *Mini Projects* at the ends of many sections. These give the students additional opportunities to discuss, explore, learn, and write mathematics.
- The book is now nine chapters rather than ten. Chapters 1 and 2 have been combined, moving some of the review material to appendices. There are *Notes* to students at appropriate places reminding them to consult one of the appendices if the use of one of the topics seems unclear. The material on long division of polynomials has been moved to Chapter 7, preceding synthetic division.
- Chapter 3 includes an expanded introduction to the function concept. Functions are introduced at length using algebraic, verbal, tabular, and graphical forms. Functions as models are introduced and used in examples and exercises. Implicit functions are introduced in the section *Project*. Material on the average rate of change of a function (previously in section 4.2) has been expanded and there is an increased emphasis on applications.
- New material in Chapters 4 through 8 includes: a discussion on the use of spreadsheets in generating scatter plots and regression lines, modeling real-life data with quadratic functions (Chapter 4); discussion on the use of graphing calculators and spreadsheets in computing matrix products and matrix inverses, including new examples and exercises using matrices