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COLLEGE ALGEBRA

Enhanced with Graphing Utilities

Seventh Edition

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BREAK THROUGH
To improving results

Available in MyMathLab® for Your College Algebra Course

Achieve Your Potential

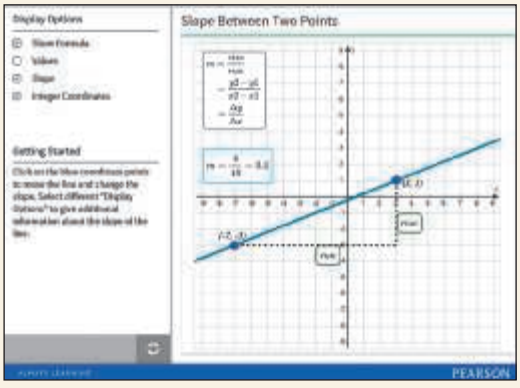
Success in math can make a difference in your life. MyMathLab is a learning experience with resources to help you achieve your potential in this course and beyond. MyMathLab will help you learn the new skills required, and also help you learn the concepts and make connections for future courses and careers.

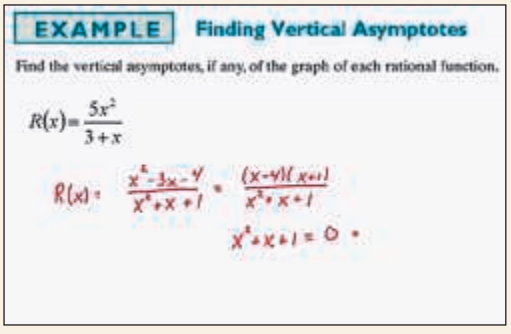
Visualization and Conceptual Understanding

These MyMathLab resources will help you think visually and connect the concepts.

NEW! Guided Visualizations

These engaging interactive figures bring mathematical concepts to life, helping students visualize the concepts through directed explorations and purposeful manipulation. *Guided Visualizations* are assignable in MyMathLab and encourage active learning, critical thinking, and conceptual learning.





Video Assessment Exercises

Video assessment is tied to key Author in Action videos to check students' conceptual understanding of important math concepts. Students watch a video and work corresponding assessment questions.

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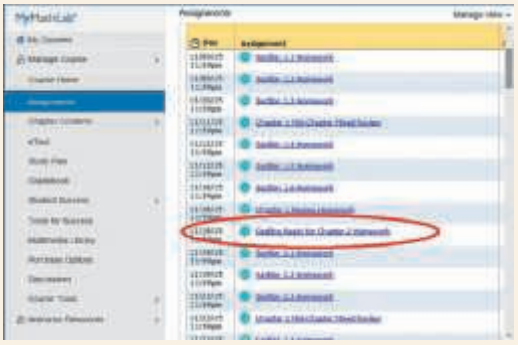
Preparedness and Study Skills

MyMathLab® gives access to many learning resources that refresh knowledge of topics previously learned. *Getting Ready material*, *Retain Your Knowledge Exercises*, and *Note-Taking Guides* are some of the tools available.

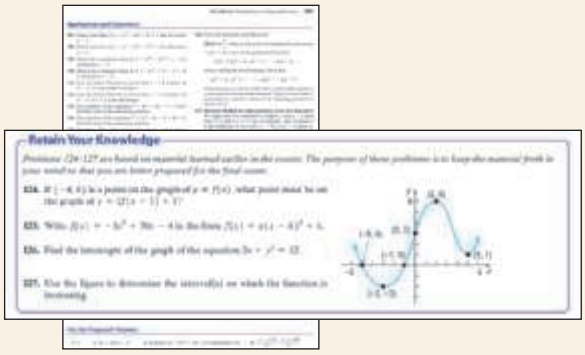


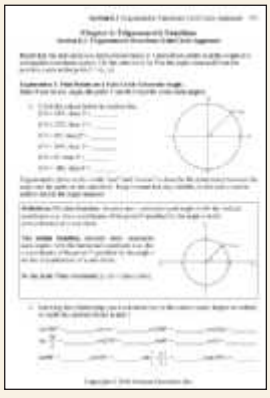
Getting Ready

Students refresh prerequisite topics through skill review quizzes and personalized homework integrated in MyMathLab. With *Getting Ready* content in MyMathLab students get just the help they need to be prepared to learn the new material.

Retain Your Knowledge Exercises

New! *Retain Your Knowledge Exercises* support ongoing review at the course level and help students maintain essential skills.





Guided Lecture Notes

Get help focusing on important concepts with the use of this structured organized note-taking tool. The *Guided Lecture Notes* are available in MyMathLab for download or as a printed student supplement.

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Prepare for Class "Read the Book"

Feature	Description	Benefit	Page(s)
Every Chapter Opener begins with ...			
Chapter-Opening Topic & Project	Each chapter begins with a discussion of a topic of current interest and ends with a related project.	In the concluding project, you will apply what you have learned to solve a problem related to the topic.	407, 511
Internet-Based Projects	These projects allow for the integration of spreadsheet technology that you will need to be a productive member of the workforce.	The projects give you an opportunity to collaborate and use mathematics to deal with issues of current interest.	407, 511
Every Section begins with ...			
Learning Objectives 2	Each section begins with a list of objectives. Individual objectives also appear in the text where they are covered.	These objectives focus your studying by emphasizing what's most important and where to find it.	428
Sections contain ...			
PREPARING FOR THIS SECTION	Most sections begin with a list of key concepts to review, with page numbers.	Ever forget what you've learned? This feature highlights previously learned material to be used in this section. Review it, and you'll always be prepared to move forward.	428
Now Work the 'Are You Prepared?' Problems	These problems assess whether you have the prerequisite knowledge for the upcoming section.	Not sure you need the Preparing for This Section review? Work the 'Are You Prepared?' problems. If you get one wrong, you'll know exactly what you need to review and where to review it!	428, 439
Now Work PROBLEMS	These follow most examples and direct you to a related exercise.	We learn best by doing. You'll solidify your understanding of examples if you try a similar problem right away, to be sure you understand what you've just read.	437
WARNING	Warnings are provided in the text.	These point out common mistakes and help you avoid them.	462
Explorations and **Seeing the Concept**	These graphing utility activities foreshadow a concept or reinforce a concept just presented.	You will obtain a deeper and more intuitive understanding of theorems and definitions.	377, 434
In Words	This feature provides alternative descriptions of select definitions and theorems.	Does math ever look foreign to you? This feature translates math into plain English.	430
Calculus	This symbol appears next to information essential for the study of calculus.	Pay attention–if you spend extra time now, you'll do better later!	236, 238, 373
SHOWCASE EXAMPLES	These examples provide "how to" instruction by offering a guided, step-by-step approach to solving a problem.	With each step presented on the left and the mathematics displayed on the right, you can immediately see how each step is employed.	342–343
Model It! Examples and Problems	These examples and problems require you to build a mathematical model from either a verbal description or data. The homework Model It! problems are marked by purple problem numbers.	It is rare for a problem to come in the form "*Solve the following equation.*" Rather, the equation must be developed based on an explanation of the problem. These problems require you to develop models that will enable you to describe the problem mathematically and suggest a solution to the problem.	453, 482

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Practice "Work the Problems"

Feature	Description	Benefit	Page(s)
'Are You Prepared?' Problems	These problems assess your retention of the prerequisite material. Answers are given at the end of the section exercises. This feature is related to the Preparing for This Section feature.	Do you always remember what you've learned? Working these problems is the best way to find out. If you get one wrong, you'll know exactly what you need to review and where to review it!	428, 439
Concepts and Vocabulary	These short-answer questions, mainly fill-in-the-blank, multiple-choice, and true/false items, assess your understanding of key definitions and concepts in the current section.	It is difficult to learn math without knowing the language of mathematics. These problems test your understanding of the formulas and vocabulary.	440
Skill Building	Correlated with section examples, these problems provide straightforward practice.	It's important to dig in and develop your skills. These problems give you ample opportunity to do so.	440–442
Mixed Practice	These problems offer comprehensive assessment of the skills learned in the section by asking problems related to more than one concept or objective. These problems may also require you to utilize skills learned in previous sections.	Learning mathematics is a building process. Many concepts build on each other and are related. These problems help you see how mathematics builds on itself and how the concepts are linked together.	442
Applications and Extensions	These problems allow you to apply your skills to real-world problems. They also enable you to extend concepts learned in the section.	You will see that the material learned within the section has many uses in everyday life.	442–444
Explaining Concepts: Discussion and Writing	"Discussion and Writing" problems are colored red. They support class discussion, verbalization of mathematical ideas, and writing and research projects.	To verbalize an idea, or to describe it clearly in writing, shows real understanding. These problems nurture that understanding. Many are challenging, but you'll get out what you put in.	445
NEW! Retain Your Knowledge	These problems allow you to practice content learned earlier in the course.	Remembering how to solve all the different kinds of problems that you encounter throughout the course is difficult. This practice helps you remember previously learned skills.	445
Now Work PROBLEMS	Many examples refer you to a related homework problem. These related problems are marked by a pencil and orange numbers.	If you get stuck while working problems, look for the closest Now Work problem, and refer to the related example to see if it helps.	429, 437, 438, 441
Review Exercises	Every chapter concludes with a comprehensive list of exercises to practice. Use the list of objectives to determine what objective and examples correspond to each problem.	Work these problems to ensure that you understand all the skills and concepts employed in the chapter. Think of it as a comprehensive review of the chapter. All answers to Chapter Review problems appear in the back of the text.	506–509

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Review "Study for Quizzes and Tests"

Feature	Description	Benefit	Page(s)
The Chapter Review at the end of each chapter contains …			
Things to Know	A detailed list of important theorems, formulas, and definitions from the chapter.	Review these and you'll know the most important material in the chapter!	504–505
You Should Be Able to …	A complete list of objectives by section and, for each, examples that illustrate the objective, and practice exercises that test your understanding of the objective.	Do the recommended exercises and you'll have mastered the key material. If you get something wrong, go back and work through the example listed, and try again.	505–506
Review Exercises	These provide comprehensive review and practice of key skills, matched to the Learning Objectives for each section.	Practice makes perfect. These problems combine exercises from all sections, giving you a comprehensive review in one place.	506–509
Chapter Test	About 15–20 problems that can be taken as a Chapter Test. Be sure to take the Chapter Test under test conditions—no notes!	Be prepared. Take the sample practice test under test conditions. This will get you ready for your instructor's test. If you get a problem wrong, you can watch the Chapter Test Prep Video.	509
Cumulative Review	These problem sets appear at the end of each chapter, beginning with Chapter 2. They combine problems from previous chapters, providing an ongoing cumulative review. When you use them in conjunction with the Retain Your Knowledge problems, you will be ready for the final exam.	These problem sets are really important. Completing them will ensure that you are not forgetting anything as you go. This will go a long way toward keeping you primed for the final exam.	510
Chapter Projects	The Chapter Projects apply to what you've learned in the chapter. Additional projects are available on the Instructor's Resource Center (IRC).	The Chapter Projects give you an opportunity to apply what you've learned in the chapter to the opening topic. If your instructor allows, these make excellent opportunities to work in a group, which is often the best way of learning math.	511
Internet-Based Projects	In selected chapters, a Web-based project is given.	These projects give you an opportunity to collaborate and use mathematics to deal with issues of current interest by using the Internet to research and collect data.	511

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Contents

Three Distinct Series xvi

The Enhanced with Graphing Utilities Series xvii

Preface to the Instructor xviii

Resources for Success xxiv

To the Student xxvi

R Review 1

R.1 Real Numbers 2
Work with Sets • Classify Numbers • Evaluate Numerical Expressions • Work with Properties of Real Numbers

R.2 Algebra Essentials 18
Graph Inequalities • Find Distance on the Real Number Line • Evaluate Algebraic Expressions • Determine the Domain of a Variable • Use the Laws of Exponents • Evaluate Square Roots • Use a Calculator to Evaluate Exponents • Use Scientific Notation

R.3 Geometry Essentials 31
Use the Pythagorean Theorem and Its Converse • Know Geometry Formulas • Understand Congruent Triangles and Similar Triangles

R.4 Polynomials 40
Recognize Monomials • Recognize Polynomials • Add and Subtract Polynomials • Multiply Polynomials • Know Formulas for Special Products • Divide Polynomials Using Long Division • Work with Polynomials in Two Variables

R.5 Factoring Polynomials 50
Factor the Difference of Two Squares and the Sum and Difference of Two Cubes • Factor Perfect Squares • Factor a Second-Degree Polynomial: $x^2 + Bx + C$ • Factor by Grouping • Factor a Second-Degree Polynomial: $Ax^2 + Bx + C, A \neq 1$ • Complete the Square

R.6 Synthetic Division 59
Divide Polynomials Using Synthetic Division

R.7 Rational Expressions 63
Reduce a Rational Expression to Lowest Terms • Multiply and Divide Rational Expressions • Add and Subtract Rational Expressions • Use the Least Common Multiple Method • Simplify Complex Rational Expressions

R.8 *n*th Roots; Rational Exponents 74
Work with *n*th Roots • Simplify Radicals • Rationalize Denominators • Simplify Expressions with Rational Exponents

1 Graphs, Equations, and Inequalities 82

1.1 The Distance and Midpoint Formulas; Graphing Utilities; Introduction to Graphing Equations 83
Use the Distance Formula • Use the Midpoint Formula • Graphing Equations by Plotting Points • Graph Equations Using a Graphing Utility • Use a

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Graphing Utility to Create Tables • Find Intercepts from a Graph • Use a Graphing Utility to Approximate Intercepts

1.2 Solving Equations Using a Graphing Utility; Linear and Rational Equations 99
Solve Equations Using a Graphing Utility • Solve Linear Equations • Solve Rational Equations • Solve Problems That Can Be Modeled by Linear Equations

1.3 Quadratic Equations 110
Solve Quadratic Equations by Factoring • Solve Quadratic Equations Using the Square Root Method • Solve Quadratic Equations by Completing the Square • Solve Quadratic Equations Using the Quadratic Formula • Solve Problems That Can Be Modeled by Quadratic Equations

1.4 Complex Numbers; Quadratic Equations in the Complex Number System 121
Add, Subtract, Multiply, and Divide Complex Numbers • Solve Quadratic Equations in the Complex Number System

1.5 Radical Equations; Equations Quadratic in Form; Absolute Value Equations; Factorable Equations 129
Solve Radical Equations • Solve Equations Quadratic in Form • Solve Absolute Value Equations • Solve Equations by Factoring

1.6 Problem Solving: Interest, Mixture, Uniform Motion, Constant Rate Jobs 137
Translate Verbal Descriptions into Mathematical Expressions • Solve Interest Problems • Solve Mixture Problems • Solve Uniform Motion Problems • Solve Constant Rate Job Problems

1.7 Solving Inequalities 146
Use Interval Notation • Use Properties of Inequalities • Solve Linear Inequalities Algebraically and Graphically • Solve Combined Inequalities Algebraically and Graphically • Solve Absolute Value Inequalities Algebraically and Graphically

Chapter Review 158
Chapter Test 162
Chapter Projects 163

2 Graphs 164

2.1 Intercepts: Symmetry; Graphing Key Equations 165
Find Intercepts Algebraically from an Equation • Test an Equation for Symmetry • Know How to Graph Key Equations

2.2 Lines 173
Calculate and Interpret the Slope of a Line • Graph Lines Given a Point and the Slope • Find the Equation of a Vertical Line • Use the Point–Slope Form of a Line; Identify Horizontal Lines • Write the Equation of a Line in Slope–Intercept Form • Find the Equation of a Line Given Two Points • Graph Lines Written in General Form Using Intercepts • Find Equations of Parallel Lines • Find Equations of Perpendicular Lines

2.3 Circles 189
Write the Standard Form of the Equation of a Circle • Graph a Circle by Hand and by Using a Graphing Utility • Work with the General Form of the Equation of a Circle

2.4 Variation 196
Construct a Model Using Direct Variation • Construct a Model Using Inverse Variation • Construct a Model Using Joint Variation or Combined Variation

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Chapter Review 202
Chapter Test 204
Cumulative Review 204
Chapter Project 205

3 Functions and Their Graphs 206

3.1 Functions 207
Determine Whether a Relation Represents a Function • Find the Value of a Function • Find the Difference Quotient of a Function • Find the Domain of a Function Defined by an Equation • Form the Sum, Difference, Product, and Quotient of Two Functions

3.2 The Graph of a Function 222
Identify the Graph of a Function • Obtain Information from or about the Graph of a Function

3.3 Properties of Functions 231
Determine Even and Odd Functions from a Graph • Identify Even and Odd Functions from an Equation • Use a Graph to Determine Where a Function Is Increasing, Decreasing, or Constant • Use a Graph to Locate Local Maxima and Local Minima • Use a Graph to Locate the Absolute Maximum and the Absolute Minimum • Use a Graphing Utility to Approximate Local Maxima and Local Minima and to Determine Where a Function Is Increasing or Decreasing • Find the Average Rate of Change of a Function

3.4 Library of Functions; Piecewise-defined Functions 245
Graph the Functions Listed in the Library of Functions • Graph Piecewise-defined Functions

3.5 Graphing Techniques: Transformations 256
Graph Functions Using Vertical and Horizontal Shifts • Graph Functions Using Compressions and Stretches • Graph Functions Using Reflections about the x-Axis and the y-Axis

3.6 Mathematical Models: Building Functions 268
Build and Analyze Functions

Chapter Review 273
Chapter Test 277
Cumulative Review 278
Chapter Projects 278

4 Linear and Quadratic Functions 280

4.1 Properties of Linear Functions and Linear Models 281
Graph Linear Functions • Use Average Rate of Change to Identify Linear Functions • Determine Whether a Linear Function Is Increasing, Decreasing, or Constant • Build Linear Models from Verbal Descriptions

4.2 Building Linear Models from Data 291
Draw and Interpret Scatter Diagrams • Distinguish between Linear and Nonlinear Relations • Use a Graphing Utility to Find the Line of Best Fit

4.3 Quadratic Functions and Their Properties 298
Graph a Quadratic Function Using Transformations • Identify the Vertex and Axis of Symmetry of a Quadratic Function • Graph a Quadratic Function Using Its Vertex, Axis, and Intercepts • Find a Quadratic Function Given Its Vertex and One Other Point • Find the Maximum or Minimum Value of a Quadratic Function

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4.4 Build Quadratic Models from Verbal Descriptions and from Data 310
Build Quadratic Models from Verbal Descriptions • Build Quadratic Models from Data

4.5 Inequalities Involving Quadratic Functions 320
Solve Inequalities Involving a Quadratic Function

Chapter Review 324
Chapter Test 327
Cumulative Review 328
Chapter Projects 329

5 Polynomial and Rational Functions 330

5.1 Polynomial Functions and Models 331
Identify Polynomial Functions and Their Degree • Graph Polynomial Functions Using Transformations • Identify the Real Zeros of a Polynomial Function and Their Multiplicity • Analyze the Graph of a Polynomial Function • Build Cubic Models from Data

5.2 The Real Zeros of a Polynomial Function 351
Use the Remainder and Factor Theorems • Use Descartes' Rule of Signs to Determine the Number of Positive and the Number of Negative Real Zeros of a Polynomial Function • Use the Rational Zeros Theorem to List the Potential Rational Zeros of a Polynomial Function • Find the Real Zeros of a Polynomial Function • Solve Polynomial Equations • Use the Theorem for Bounds on Zeros • Use the Intermediate Value Theorem

5.3 Complex Zeros; Fundamental Theorem of Algebra 366
Use the Conjugate Pairs Theorem • Find a Polynomial Function with Specified Zeros • Find the Complex Zeros of a Polynomial Function

5.4 Properties of Rational Functions 372
Find the Domain of a Rational Function • Find the Vertical Asymptotes of a Rational Function • Find the Horizontal or Oblique Asymptote of a Rational Function

5.5 The Graph of a Rational Function 382
Analyze the Graph of a Rational Function • Solve Applied Problems Involving Rational Functions

5.6 Polynomial and Rational Inequalities 393
Solve Polynomial Inequalities Algebraically and Graphically • Solve Rational Inequalities Algebraically and Graphically

Chapter Review 400
Chapter Test 404
Cumulative Review 404
Chapter Projects 405

6 Exponential and Logarithmic Functions 407

6.1 Composite Functions 408
Form a Composite Function • Find the Domain of a Composite Function

6.2 One-to-One Functions; Inverse Functions 416
Determine Whether a Function Is One-to-One • Determine the Inverse of a Function Defined by a Map or a Set of Ordered Pairs • Obtain the Graph of the Inverse Function from the Graph of the Function • Find the Inverse of a Function Defined by an Equation

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6.3 Exponential Functions 428
Evaluate Exponential Functions • Graph Exponential Functions • Define the Number e • Solve Exponential Equations

6.4 Logarithmic Functions 445
Change Exponential Statements to Logarithmic Statements and Logarithmic Statements to Exponential Statements • Evaluate Logarithmic Expressions • Determine the Domain of a Logarithmic Function • Graph Logarithmic Functions • Solve Logarithmic Equations

6.5 Properties of Logarithms 458
Work with the Properties of Logarithms • Write a Logarithmic Expression as a Sum or Difference of Logarithms • Write a Logarithmic Expression as a Single Logarithm • Evaluate a Logarithm Whose Base Is Neither 10 Nor e • Graph a Logarithmic Function Whose Base Is Neither 10 Nor e

6.6 Logarithmic and Exponential Equations 467
Solve Logarithmic Equations • Solve Exponential Equations • Solve Logarithmic and Exponential Equations Using a Graphing Utility

6.7 Financial Models 475
Determine the Future Value of a Lump Sum of Money • Calculate Effective Rates of Return • Determine the Present Value of a Lump Sum of Money • Determine the Rate of Interest or the Time Required to Double a Lump Sum of Money

6.8 Exponential Growth and Decay Models; Newton's Law; Logistic Growth and Decay Models 484
Find Equations of Populations That Obey the Law of Uninhibited Growth • Find Equations of Populations That Obey the Law of Decay • Use Newton's Law of Cooling • Use Logistic Models

6.9 Building Exponential, Logarithmic, and Logistic Models from Data 495
Build an Exponential Model from Data • Build a Logarithmic Model from Data • Build a Logistic Model from Data

Chapter Review 504
Chapter Test 509
Cumulative Review 510
Chapter Projects 511

7 Analytic Geometry 513

7.1 Conics 514
Know the Names of the Conics

7.2 The Parabola 515
Analyze Parabolas with Vertex at the Origin • Analyze Parabolas with Vertex at (h, k) • Solve Applied Problems Involving Parabolas

7.3 The Ellipse 525
Analyze Ellipses with Center at the Origin • Analyze Ellipses with Center at (h, k) • Solve Applied Problems Involving Ellipses

7.4 The Hyperbola 536
Analyze Hyperbolas with Center at the Origin • Find the Asymptotes of a Hyperbola • Analyze Hyperbolas with Center at (h, k) • Solve Applied Problems Involving Hyperbolas

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Chapter Review 550
Chapter Test 551
Cumulative Review 551
Chapter Projects 552

8 Systems of Equations and Inequalities 553

8.1 Systems of Linear Equations: Substitution and Elimination 554
Solve Systems of Equations by Substitution • Solve Systems of Equations by Elimination • Identify Inconsistent Systems of Equations Containing Two Variables • Express the Solution of a System of Dependent Equations Containing Two Variables • Solve Systems of Three Equations Containing Three Variables • Identify Inconsistent Systems of Equations Containing Three Variables • Express the Solution of a System of Dependent Equations Containing Three Variables

8.2 Systems of Linear Equations: Matrices 569
Write the Augmented Matrix of a System of Linear Equations • Write the System of Equations from the Augmented Matrix • Perform Row Operations on a Matrix • Solve a System of Linear Equations Using Matrices

8.3 Systems of Linear Equations: Determinants 585
Evaluate 2 by 2 Determinants • Use Cramer's Rule to Solve a System of Two Equations Containing Two Variables • Evaluate 3 by 3 Determinants • Use Cramer's Rule to Solve a System of Three Equations Containing Three Variables • Know Properties of Determinants

8.4 Matrix Algebra 595
Find the Sum and Difference of Two Matrices • Find Scalar Multiples of a Matrix • Find the Product of Two Matrices • Find the Inverse of a Matrix • Solve a System of Linear Equations Using an Inverse Matrix

8.5 Partial Fraction Decomposition 612
Decompose $\frac{P}{Q}$, Where Q Has Only Nonrepeated Linear Factors • Decompose $\frac{P}{Q}$, Where Q Has Repeated Linear Factors • Decompose $\frac{P}{Q}$, Where Q Has a Nonrepeated Irreducible Quadratic Factor • Decompose $\frac{P}{Q}$, Where Q Has a Repeated Irreducible Quadratic Factor

8.6 Systems of Nonlinear Equations 620
Solve a System of Nonlinear Equations Using Substitution • Solve a System of Nonlinear Equations Using Elimination

8.7 Systems of Inequalities 630
Graph an Inequality by Hand • Graph an Inequality Using a Graphing Utility • Graph a System of Inequalities

8.8 Linear Programming 639
Set Up a Linear Programming Problem • Solve a Linear Programming Problem

Chapter Review 646
Chapter Test 650
Cumulative Review 651
Chapter Projects 652

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9 Sequences; Induction; the Binomial Theorem 653

9.1 Sequences 654
Write the First Several Terms of a Sequence • Write the Terms of a Sequence Defined by a Recursive Formula • Use Summation Notation • Find the Sum of a Sequence Algebraically and Using a Graphing Utility • Solve Annuity and Amortization Problems

9.2 Arithmetic Sequences 667
Determine Whether a Sequence Is Arithmetic • Find a Formula for an Arithmetic Sequence • Find the Sum of an Arithmetic Sequence

9.3 Geometric Sequences; Geometric Series 674
Determine Whether a Sequence Is Geometric • Find a Formula for a Geometric Sequence • Find the Sum of a Geometric Sequence • Determine Whether a Geometric Series Converges or Diverges

9.4 Mathematical Induction 684
Prove Statements Using Mathematical Induction

9.5 The Binomial Theorem 688
Evaluate $\binom{n}{j}$ • Use the Binomial Theorem

Chapter Review 694
Chapter Test 697
Cumulative Review 697
Chapter Projects 698

10 Counting and Probability 699

10.1 Counting 700
Find All the Subsets of a Set • Count the Number of Elements in a Set • Solve Counting Problems Using the Multiplication Principle

10.2 Permutations and Combinations 705
Solve Counting Problems Using Permutations Involving n Distinct Objects • Solve Counting Problems Using Combinations • Solve Counting Problems Using Permutations Involving n Nondistinct Objects

10.3 Probability 714
Construct Probability Models • Compute Probabilities of Equally Likely Outcomes • Find Probabilities of the Union of Two Events • Use the Complement Rule to Find Probabilities

Chapter Review 724
Chapter Test 726
Cumulative Review 727
Chapter Projects 727

Answers AN1

Credits C1

Index I1

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