

Blue: Covered in Math 98 (Beginning Algebra)

Red: Covered in Math 99 (Intermediate Algebra)

Black: will not be covered

Chapter R - Reference

R.1 Study Tips

R.2 Fractions

R.3 Introduction to Geometry

Chapter 1 – The Set of Real Numbers

1.1 Sets of Numbers and the Real Number Line

1.2 Order of Operations

1.3 Addition of Real Numbers

1.4 Subtraction of Real Numbers

1.5 Multiplication and Division of Real Numbers

1.6 Properties of Real Numbers and Simplifying Expressions

Chapter 2 – Linear Equations and Inequalities

2.1 Addition, Subtraction, Multiplication, and Division Properties of Equality

2.2 Solving Linear Equations

2.3 Linear Equations: Clearing Fractions and Decimals

2.4 Applications of Linear Equations: Introduction to Problem Solving

2.5 Applications Involving Percents

2.6 Formulas and Applications of Geometry

2.7 Linear Inequalities

Chapter 3 – Graphing Linear Equations in Two Variables

3.1 Rectangular Coordinate System

3.2 Linear Equations in Two Variables

3.3 Slope of a Line

3.4 Slope-Intercept Form of a Line

3.5 Point-Slope Formula

3.6 Applications of Linear Equations

Chapter 4 – Systems of Linear Equations in Two Variables

4.1 Solving Systems of Equations by the Graphing Method

4.2 Solving Systems of Equations by the Substitution Method

4.3 Solving Systems of Equations by the Addition Method

4.4 Applications of Linear Equations in Two Variables

Chapter 5 – Polynomials and Properties of Exponents

5.1 Exponents: Multiplying and Dividing Common Bases

5.2 More Properties of Exponents

5.3 Definitions of b^0 and b^{-n}

5.4 Scientific Notation

5.5 Addition and Subtraction of Polynomials

5.6 Multiplication of Polynomials

5.7 Division of Polynomials

Chapter 6 – Factoring Polynomials

- 6.1 Greatest Common Factor and Factoring by Grouping
- 6.2 Factoring Trinomials of the Form x^2+bx+c - (Optional)
- 6.3 Factoring Trinomials: Trial-and-Error Method
- 6.4 Factoring Trinomials: AC-Method
- 6.5 Factoring Binomials
- 6.6 General Factoring Summary
- 6.7 Solving Equations Using the Zero Product Rule

Chapter 7 – Rational Expressions

- 7.1 Introduction to Rational Expressions
- 7.2 Multiplication and Division of Rational Expressions
- 7.3 Least Common Denominator
- 7.4 Addition and Subtraction of Rational Expressions
- 7.5 Complex Fractions
- 7.6 Rational Equations
- 7.7 Applications of Rational Equations and Proportions

Chapter 8 – Introduction to Relations and Functions

- 8.1 Introduction to Relations
- 8.2 Introduction to Functions
- 8.3 Graphs of Functions
- 8.4 Variation

Chapter 9 – Linear Systems of Linear Equations in Three Variables

- 9.1 Systems of Linear Equations in Three Variables
- 9.2 Applications of Systems of Linear Equations in Three Variables
- 9.3 Solving Systems of Linear Equations by Using Matrices
- 9.4 Determinants and Cramer's Rule

Chapter 10 – More Equations and Inequalities

- 10.1 Compound Inequalities
- 10.2 Polynomial and Rational Inequalities
- 10.3 Absolute Value Equations
- 10.4 Absolute Value Inequalities
- 10.5 Linear Inequalities in Two Variables

Chapter 11 – Radicals and Complex Numbers

- 11.1 Definition of an n th Root
- 11.2 Rational Exponents
- 11.3 Simplifying Radical Expressions
- 11.4 Addition and Subtraction of Radicals
- 11.5 Multiplication of Radicals
- 11.6 Rationalization
- 11.7 Radical Equations
- 11.8 Complex Numbers

Chapter 12 – Quadratic Equations and Functions

- 12.1 Square Root Property and Completing the Square
- 12.2 Quadratic Formula
- 12.3 Equations in Quadratic Form
- 12.4 Graphs of Quadratic Functions
- 12.5 Vertex of a Parabola and Applications

Chapter 13 – Exponential and Logarithmic Functions

- 13.1 Algebra and Composition of Functions
- 13.2 Inverse Functions
- 13.3 Exponential Functions
- 13.4 Logarithmic Functions
- 13.5 Properties of Logarithms
- 13.6 The Irrational Number e
- 13.7 Logarithmic and Exponential Equations

Chapter 14 – Conic Sections and Nonlinear Systems

- 14.1 Distance Formula and Circles
- 14.2 More on the Parabola
- 14.3 The Ellipse and Hyperbola
- 14.4 Nonlinear Systems of Equations in Two Variables
- 14.5 Nonlinear Inequalities and Systems of Inequalities