**Pre-Algebra Table of Contents**

**Module 1 Solving Equations and Inequalities**

Section 1.1 Solving Equations with Variables on Both Sides

Section 1.2 Undoing Exponents

Section 1.3 Undoing Parenthesis

Section 1.4 Simplifying and Solving

Section 1.5 Reverse Thinking

Section 1.6 Writing Algebraic Inequalities

Section 1.7 Inequalities on the Number Line

Section 1.8 Solving Inequalities with Addition and Subtraction

Section 1.9 Solving Inequalities with Multiplication and Division

Section 1.10 Solving Two-Step Inequalities

Section 1.11 Multi-Step Inequalities

Section 1.12 Solving Inequalities

Section 1.13 Solving Equations and Inequality Word Problems

Section 1.14 Module Review

Section 1.15 Module Test

**Module 2 Introducing Linear Equations**

Section 2.1 Understanding Graphs

Section 2.2 Graphing Ordered Pairs

Section 2.3 Input-Output Tables

Section 2.4 Introducing Linear Equations

Section 2.5 Graphing an Equation Using a Table

Section 2.6 The *x*-intercept

Section 2.7 The *y*-intercept

Section 2.8 The Slope of a Line

Section 2.9 Finding Slope from a Graph

Section 2.10 Finding Slope from Two Points

Section 2.11 Slope-Intercept Form of an Equation

Section 2.12 Slope-Intercept Form to Graph Equations

Section 2.13 Writing Equations from a Graph

Section 2.14 Module Review

Section 2.15 Module Test

**Module 3 Linear Equations**

Section 3.1 The Math Triangle

Section 3.2 More than One Variable

Section 3.3 Interpreting Situations

Section 3.4 Generating Tables

Section 3.5 Graphing Linear Equations

Section 3.6 Finding the $x$ and *y*-intercepts

Section 3.7 Isolating the Variable

Section 3.8 Slope as a Ratio

Section 3.9 Direction and Steepness of Slope

Section 3.10 Comparing Slope and $y$-intercept

Section 3.11 Writing an Equation in Standard Form

Section 3.12 Using Slope and Intercept to Find an Equation

Section 3.13 Using Point-Slope Form to Find an Equation

Section 3.14 Module Review

Section 3.15 Module Test

**Module 4 Squares and Square Roots**

Section 4.1 Exponents Revisited

Section 4.2 Perfect Squares

Section 4.3 Perfect Squares and Their Square Roots

Section 4.4 Non-Perfect Squares and Square Roots

Section 4.5 Simplifying Non-Perfect Squares

Section 4.6 Ordering and Comparing Numbers with Square Roots

Section 4.7 Squares and the Coordinate Grid

Section 4.8 Finding Area Using the Chop Strategy

Section 4.9 Finding Area Using the Subtraction Method

Section 4.10 Irrational Square Roots

Section 4.11 Approximating Square Roots

Section 4.12 Finding Square Roots Using the Estimation Method

Section 4.13 Finding Square Roots Geometrically and Algebraically

Section 4.14 Module Review

Section 4.15 Module Test

**Module 5 The Pythagorean Theorem**

Section 5.1 Acute, Obtuse, and Right Triangles

Section 5.2 Right Triangles and the Pythagorean Theorem

Section 5.3 Pythagorean Theorem: Finding the Length of the Hypotenuse

Section 5.4 Pythagorean Theorem: Finding the Length of the Leg

Section 5.5 Finding the Length of Any Missing Side of a Right Triangle

Section 5.6 Pythagorean Triples

Section 5.7 The Pythagorean Theorem and the Distance Formula

Section 5.8 Pythagorean Theorem Word Problems

Section 5.9 The Wheel of Theodorus

Section 5.10 Deriving the Pythagorean Theorem using Algebra and Geometry

Section 5.11 The Pythagorean Theorem and the Golden Rectangle

Section 5.12 Pythagorean Theorem and the Fibonacci Numbers

Section 5.13 More Pythagorean Theorem Problems

Section 5.14 Module Review

Section 5.15 Module Test

**Module 6 Algebraic Reasoning**

Section 6.1 Simplifying and Evaluating Expressions

Section 6.2 Algebraic Properties

Section 6.3 Solving One Variable Equations

Section 6.4 Solving Equations with Variables on Both Sides

Section 6.5 Reasoning with Ratios

Section 6.6 Unit Rates and Conversions

Section 6.7 Properties of Proportions

Section 6.8 Reasoning Mathematically with Proportions

Section 6.9 Proportions and Similar Figures

Section 6.10 Thinking Proportionally to Problem-Solve

Section 6.11 Using Proportions to Solve Percent Problems

Section 6.12 Interest Rate Problems

Section 6.13 Solving for One Variable in Terms of Another

Section 6.14 Module Review

Section 6.15 Module Test

**Module 7 Functions**

Section 7.1 Function or Relation

Section 7.2 Types of Data

Section 7.3 Vertical Line Test

Section 7.4 Input and Output

Section 7.5 Function Machines

Section 7.6 Domain and Range

Section 7.7 Inequality Notation

Section 7.8 Interval Notation

Section 7.9 Lines of Best Fit

Section 7.10 Correlation Coefficient

Section 7.11 Solving Systems by Graphing

Section 7.12 Solving Systems by Substitution

Section 7.13 Solving Systems by Elimination

Section 7.14 Module Review

Section 7.15 Module Test

**Module 8 Plane and Solid Figures**

Section 8.1 Translation Symmetry

Section 8.2 Reflection Symmetry

Section 8.3 Rotation Symmetry

Section 8.4 The Distance Formula

Section 8.5 The Midpoint Formula

Section 8.6 Angle Relationships

Section 8.7 Classifying Triangles and Quadrilaterals

Section 8.8 Angle Sums of Polygons

Section 8.9 Regular Tessellations and More

Section 8.10 Surface Area of Polygons and Solids

Section 8.11 Area and Circumference of a Circle

Section 8.12 Finding the Volume of Solids

Section 8.13 Art Project: Hexaflexagons

Section 8.14 Art Project: Escher Tessellations

Section 8.15 Games: Pool Tables and Putt-Putt Golf