# Arithmetic/Pre-Algebra Review Refresher Course Content

A symbol indicates that an animation is available for one or more exercises in this section.
A symbol indicates that a video is available for one or more exercises in this section.

| | Learning Aids |
|---|---|
| 1. Whole Numbers | |
| Section 1.1: Reading and Writing Whole Numbers | |
| Section 1.2: Adding Whole Numbers | |
| Section 1.3: Subtracting Whole Numbers | |
| Section 1.4: Multiplying Whole Numbers | |
| Section 1.5: Dividing Whole Numbers | |
| Section 1.6: Long Division | |
| Section 1.7: Rounding Whole Numbers | |
| Section 1.8: Exponents, Roots, and Order of Operations | |
| Section 1.9: Reading Pictographs, Bar Graphs, and Line Graphs | |
| Section 1.10: Solving Application Problems | |
| 2. Multiplying and Dividing Fractions | |
| Section 2.1: Basics of Fractions | |
| Section 2.2: Mixed Numbers | |
| Section 2.3: Factors | |
| Section 2.4: Writing a Fraction in Lowest Terms | |
| Section 2.5: Multiplying Fractions | |
| Section 2.6: Applications of Multiplication | |
| Section 2.7: Dividing Fractions | |
| Section 2.8: Multiplying and Dividing Mixed Numbers | |
| 3. Adding and Subtracting Fractions | |
| Section 3.1: Adding and Subtracting Like Fractions | |
| Section 3.2: Least Common Multiples | |
| Section 3.3: Adding and Subtracting Unlike Fractions | |
| Section 3.4: Adding and Subtracting Mixed Numbers | |
| Section 3.5: Order Relations and the Order of Operations | |
| 4. Decimals | |
| Section 4.1: Reading and Writing Decimals | |
| Section 4.2: Rounding Decimals | |
| Section 4.3: Adding and Subtracting Decimals | |
| Section 4.4: Multiplying Decimals | |

- Section 4.5: Dividing Decimals
- Section 4.6: Writing Fractions and Decimals
- 5. Ratio and Proportion
  - Section 5.1: Ratios
  - Section 5.2: Rates
  - Section 5.3: Proportions
  - Section 5.4: Solving Proportions
  - Section 5.5: Solving Application Problems with Proportions
- 6. Percent
  - Section 6.1: Basics of Percent
  - Section 6.2: Percents and Fractions
  - Section 6.3: Using the Percent Proportion and Identifying the Components in a Percent Problem
  - Section 6.4: Using Proportions to Solve Percent Problems
  - Section 6.5: Using the Percent Equation
  - Section 6.6: Solving Application Problems with Percent
  - Section 6.7: Simple Interest
  - Section 6.8: Compound Interest
- 7. Geometry and Measurement
  - Section 7.1: Lines and Angles
  - Section 7.2: Rectangles and Squares
  - Section 7.3: Parallelograms and Trapezoids
  - Section 7.4: Triangles
  - Section 7.5: Circles
  - Section 7.6: Volume and Surface Area
  - Section 7.7: Pythagorean Theorem
  - Section 7.8: Congruent and Similar Triangles
  - Section 7.9: Problem Solving with U.S. Customary Measurements
  - Section 7.10: The Metric System--Length
  - Section 7.11: The Metric System--Capacity and Weight (Mass)
  - Section 7.12: Problem Solving with Metric Measurement
  - Section 7.13: Metric--U.S. Customary Conversions and Temperature
- 8. Statistics
- 9. The Real Number System
  - Section 9.1: Exponents, Order of Operations, and Inequality
  - Section 9.2: Variables, Expressions, and Equations

- Section 9.3: Real Numbers and the Number Line
- Section 9.4: Adding Real Numbers
- Section 9.5: Subtracting Real Numbers
- Section 9.6: Multiplying and Dividing Real Numbers
- Section 9.7: Properties of Real Numbers
- Section 9.8: Simplifying Expressions

10. Equations, Inequalities, and Applications (partially included)

- Section 10.1: The Addition Property of Equality
- Section 10.2: The Multiplication Property of Equality
- Section 10.3: More on Solving Linear Equations
- Section 10.4: An Introduction to Applications of Linear Equations
- Section 10.5: Formulas and Applications from Geometry
- Section 10.6: Solving Linear Inequalities
- Section 10.7: Compound Inequalities
- Section 10.8: Absolute Value Equations
- Section 10.9: Absolute Value Inequalities

11. Graphs of Equations, Functions, and Inequalities in Two Variables (partially included)

- Section 11.1: Reading Graphs: Linear Equations in Two Variables
- Section 11.2: Graphing Linear Equations in Two Variables
- Section 11.3: Slope of a Line
- Section 11.4: Equations of Lines
- Section 11.5: Graphing Linear Inequalities in Two Variables
- Section 11.6: Introduction to Functions
- Section 11.7: Graphing Linear Functions
- Section 11.8: Piecewise-Defined Functions; Shifting & Reflecting Graphs
- Section 11.9: Distance and Midpoint Formulas; Circles
- Section 11.10: More on Functions and Their Graphs

12. Exponents and Polynomials (partially included)

- Section 12.1: Adding and Subtracting Polynomials
- Section 12.2: The Product Rule and Power Rules for Exponents
- Section 12.3: Multiplying Polynomials
- Section 12.4: Special Products