

# I CAN Learn<sup>®</sup> Algebra Lessons

www.icanlearn.com

## UNIT 1 OPERATIONS OF NUMBERS AND EXPRESSIONS

- HA1-003 Order of Operations
- HA1-015 Graphing Real Numbers Using a Number Line
- HA1-020 Classifying Numbers into Subsets of Real Numbers
- HA1-025 Comparing and Ordering Real Numbers
- HA1-030 Using Opposites and Absolute Values
- HA1-035 Adding Real Numbers Using a Number Line
- HA1-040 The Addition Rule for Real Numbers
- HA1-045 Subtracting Real Numbers
- HA1-050 Multiplying Real Numbers
- HA1-055 Dividing Real Numbers
- HA1-062 Adding, Subtracting, Multiplying, and Dividing Real Numbers
- HA1-060 Evaluating Expressions Using the Order of Operations
- HA1-810 Simplifying Expressions Using the Multiplication Properties of Exponents
- HA1-815 Simplifying Expressions with Negative and Zero Exponents
- HA1-818 Simplifying Expressions Using the Division Properties of Exponents
- HA1-235 Applying Scientific Notation

## UNIT 2 ALGEBRAIC EXPRESSIONS

- HA1-005 Evaluating Algebraic Expressions
- HA1-065 Evaluating Expressions Containing Exponents
- HA1-095 Translating Word Phrases into Algebraic Expressions
- HA1-070 Evaluating Formulas for Given Values of the Variables
- HA1-075 Simplifying Algebraic Expressions by Combining Like Terms
- HA1-076 Basic Distributive Property
- HA1-085 Simplifying Expressions Using the Properties of Real Numbers
- HA1-079 Using a Concrete Model to Simplify Algebraic Expressions
- HA1-090 Simplifying Expressions Using the Property of -1
- HA1-080 Simplifying and Evaluating Algebraic Expressions Containing Grouping Symbols
- HA1-130 Identifying Postulates, Theorems, and Properties
- HA1-881 Completing and Validating Algebraic Proofs

## UNIT 3 EQUATIONS

- HA1-104 Translating Word Statements into Equations
- HA1-115 Using the Addition and Subtraction Properties for Equations
- HA1-120 Using the Multiplication and Division Properties for Equations
- HA1-124 Using a Concrete Model to Solve One- and Two-Step Equations
- HA1-125 Solving Equations Using More Than One Property
- HA1-140 Solving Equations by Combining Like Terms
- HA1-144 Using a Concrete Model to Solve Equations with Variables on Both Sides
- HA1-145 Solving Equations with Variables on Both Sides
- HA1-360 Expressing Ratios in Simplest Form and Solving Equations Involving Proportions
- HA1-382 Solving Linear Equations Using the Graphing Calculator
- HA1-449 Applying Inductive and Deductive Reasoning
- HA1-150 Writing an Equation to Solve Word Problems
- HA1-155 Writing an Equation to Solve Consecutive Integer Problems
- HA1-160 Writing an Equation to Solve Distance, Rate, and Time Problems
- HA1-362 Solving Work Problems
- \*HA1-472 Solving Mixture Problems
- HA1-165 Using Equations to Solve Percent Problems
- HA1-170 Solving Percent of Change Problems
- HA1-135 Evaluating Formulas
- HA1-175 Solving Literal Equations

## UNIT 4 INEQUALITIES

- HA1-100 Finding Solution Sets of Open Sentences from Given Replacement Sets
- HA1-105 Translating Word Statements into Inequalities
- HA1-180 Graphing Equations and Inequalities on the Number Line
- HA1-185 Solving Inequalities Using the Addition and Subtraction Properties
- HA1-190 Solving Inequalities Using the Multiplication and Division Properties

## UNIT 4 CONTINUED

- HA1-195 Solving Inequalities Using More Than One Property
- HA1-200 Combined Inequalities
- HA1-205 Solving Combined Inequalities
- HA1-210 Solving Equations Involving Absolute Value
- HA1-215 Solving Absolute Value Inequalities

## UNIT 5 GRAPHING LINEAR EQUATIONS AND INEQUALITIES

- HA1-370 Graphing Ordered Pairs on a Coordinate Plane
- HA1-375 Identifying Solutions of Equations in Two Variables
- HA1-380 Graphing Linear Equations
- HA1-385 Finding the Slope of a Line from its Graph or from the Coordinates of Two Points
- HA1-398 Graphing Linear Equations Using Slope and y-Intercept or Slope and a Point
- HA1-401 How Variations of "m" and "b" Affect the Graph of  $y = mx + b$
- HA1-394 Interchanging Linear Equations Between Standard Form and Slope-Intercept Form
- HA1-405 Determining an Equation of a Line Given the Slope and Coordinates of One Point
- HA1-410 Determining an Equation of a Line Given the Coordinates of Two Points
- HA1-395 Finding the Equation of a Line Parallel or Perpendicular to a Given Line
- HA1-415 Graphing Linear Inequalities with Two Variables
- HA1-416 Graphing Linear Inequalities with Two Variables Using the Graphing Calculator

## UNIT 6 POLYNOMIAL OPERATIONS

- HA1-220 Identifying and Multiplying Monomials
- HA1-225 Dividing Monomials and Simplifying Expressions Having an Exponent of Zero
- HA1-230 Raising a Monomial or Quotient of Monomials to a Power
- HA1-240 Identifying the Degree of Polynomials and Simplifying by Combining Like Terms
- HA1-245 Adding and Subtracting Polynomials
- HA1-920 Simplifying Algebraic Expressions Using the Distributive Property
- HA1-255 Multiplying Two Binomials Using the FOIL Method
- HA1-260 Squaring a Binomial and Finding the Product of a Sum and Difference

## UNIT 7 POLYNOMIAL FACTORING

- HA1-265 Writing a Number in Prime Factorization and Finding the Greatest Common Factor
- HA1-270 Factoring the Greatest Common Monomial Factor from a Polynomial
- HA1-271 Factoring Trinomials and the Differences of Squares Using Algebra Tiles
- HA1-275 Factoring the Difference Between Two Squares and Perfect Trinomial Squares
- HA1-276 Factoring Sums and Differences of Cubes
- HA1-280 Factoring  $x^2 + bx + c$  When  $c$  is Greater Than Zero
- HA1-285 Factoring  $x^2 + bx + c$  When  $c$  is Less Than Zero
- HA1-290 Factoring  $ax^2 + bx + c$
- HA1-291 Factoring Quadratic Expressions Using the Graphing Calculator
- HA1-295 Factoring by Removing a Common Factor and Grouping
- HA1-300 Factoring a Polynomial Completely
- HA1-305 Solving Polynomial Equations by Factoring
- HA1-310 The Practical Use of Polynomial Equations

## UNIT 8 FOUNDATIONS OF FUNCTIONS

- HA1-436 Identifying Relations
- HA1-437 Identifying Relations as Functions
- HA1-438 Finding the Domain and Range of Functions
- HA1-439 Using Function Notation
- HA1-402 Translating Among Multiple Representations of Functions
- HA1-892 Data Analysis Using the Graphing Calculator

Continued on next page



JRL Enterprises, Inc.  
1820 St. Charles Avenue, Ste. 203  
New Orleans, LA 70130  
(888) 263-1390

**UNIT 8 CONTINUED**

- HA1-441 Applications of Functions and Relations Involving Distance, Rate, and Time
- HA1-442 Interpreting Graphs of Functions in Real-Life Situations
- HA1-445 Evaluating Composite Functions
- HA2-446 Performing Operations with Functions
- HA1-447 Identifying Number Patterns
- HA1-448 Finding the  $n$ th Term of a Pattern
- HA1-450 Solving Problems Involving Direct Variation
- HA1-453 Solving Problems Involving Inverse Variation
- HA1-950 Graphing Absolute Value Functions
- HA1-955 Analyzing Linear Functions
- HA1-960 Real-World Applications of Linear Functions
- HA1-887 Applications of Absolute Value, Step, and Constant Functions

**UNIT 9 SYSTEMS OF LINEAR EQUATIONS AND INEQUALITIES**

- HA1-455 Solving Systems of Linear Equations by Graphing
- HA1-460 Solving Systems of Linear Equations by the Substitution Method
- HA1-465 Solving Systems of Linear Equations by the Addition/Subtraction Method
- HA1-470 Solving Systems of Linear Equations by the Multiply/Add/Subtract Method
- HA1-806 Solving Systems of Linear Equations Using the Graphing Calculator
- HA1-475 Graphing the Solution Set of a System of Linear Inequalities
- HA1-870 Solving Problems with Systems of Linear Equations and Inequalities

**UNIT 10 RATIONAL EXPRESSIONS AND EQUATIONS**

- HA1-315 Defining Rational Expressions and Determining the Restricted Values
- HA1-320 Simplifying Rational Expressions
- HA1-325 Multiplying Rational Expressions
- HA1-330 Dividing Rational Expressions
- HA1-335 Finding the LCD of Rational Expressions and Changing Fractions to Equivalent Fractions
- HA1-340 Adding and Subtracting Rational Expressions
- HA1-345 Adding and Subtracting Polynomials and Rational Expressions
- HA1-350 Simplifying Complex Fractions
- HA1-365 Solving Rational Equations

**UNIT 11 POLYNOMIAL DIVISION**

- HA1-355 Dividing Polynomials
- HA1-862 Dividing Polynomials Using Factoring
- HA1-863 Dividing Polynomials Using Long Division
- HA1-864 Dividing Polynomials Using Synthetic Division

**UNIT 12 RADICAL EXPRESSIONS AND EQUATIONS**

- HA1-480 Finding the Square Roots of Rational Numbers
- HA1-485 Writing Rational Numbers as Decimals or Fractions
- HA1-490 Simplifying Square Roots
- HA1-492 Simplifying Square and Cube Roots
- HA1-495 Simplifying Sums and Differences of Radicals
- HA1-500 Simplifying Products of Radicals
- HA1-505 Simplifying Quotients of Radicals
- HA1-510 Solving Radical Equations
- HA1-515 Using the Pythagorean Theorem
- HA1-516 Applications of the Pythagorean Theorem
- HA1-520 Finding the Distance Between Two Points on a Coordinate Plane
- HA1-876 Applying Length, Midpoint and Slope of a Segment on a Cartesian Plane

**UNIT 13 QUADRATIC EQUATIONS AND FUNCTIONS**

- HA1-927 Graphing  $f(x) = ax^2$  Using Dilations
- HA1-928 Graphing  $f(x) = ax^2$  Using Dilations and Reflections
- HA1-929 Graphing  $f(x) = ax^2 + c$  Using Dilations, Reflections, and Vertical Translations
- HA1-935 Analyzing Graphs of Quadratic Functions
- HA1-940 Applications of Quadratic Equations
- HA1-945 Real-World Applications of Quadratic Functions
- HA1-820 Graphing Exponential Functions
- HA1-825 Exponential Growth and Decay
- HA1-525 Solving Quadratic Equations Involving Perfect Square Expressions

**UNIT 13 CONTINUED**

- HA1-530 Solving Quadratic Equations by Completing the Square
- HA1-535 Developing the Quadratic Formula and Using it to Solve Quadratic Equations
- HA1-536 Solving Quadratic Equations Using the Graphing Calculator
- HA1-930 Graphing Quadratic Functions with Horizontal and Vertical Shifting
- HA1-931 Graphing Quadratic Functions with Dilations, Reflections, and Transformations
- \*HA1-537 Solving Systems of Linear and Nonlinear Equations
- HA1-805 Applying Algebra Concepts
- HA1-905 Quadratic Equations with Irrational Roots
- HA1-910 Complex Numbers
- HA1-915 Algebraic Operations with Complex Numbers
- HA1-925 Using the Discriminant to Analyze the Solution of a Quadratic Equation
- HA2-443 Finding the Inverses of Linear and Quadratic Functions

**Unit 14 PROBABILITY AND STATISTICS**

- \*HA1-545 Using Frequency Tables
- HA1-540 Finding the Mean, Median, and Mode from Data and Frequency Distribution Tables
- HA1-541 Analyzing Data Using the Measures of Central Tendency and the Range
- HA1-965 Determining the Best-Fitting Line
- \*HA1-605 Interpreting the Correlation Coefficient of a Linear Fit
- HA1-885 Histograms and the Normal Distribution
- HA1-555 Computing the Range, Variance, and Standard Deviation of a Set of Data
- HA1-877 Drawing Inferences and Making Predictions from Tables and Graphs
- HA1-879 Applying Counting Techniques to Permutations and Combinations
- HA1-560 Determining Probability of an Event and Complementary Event from a Random Experiment
- HA1-565 Solving Problems Involving Independent, Dependent, and Mutually Exclusive and Inclusive Events
- HA1-886 Unions and Intersections of Sets Using Venn Diagrams

**UNIT 15 GEOMETRY**

- HA1-889 Complementary and Supplementary Angles
- HA1-890 Using Models to Derive Formulas for Two-Dimensional Geometric Figures
- HA1-891 Using Models to Derive Formulas for Three-Dimensional Solids
- HA1-893 Constructing Solids from Different Perspectives

**UNIT 16 MATRICES**

- HA1-840 Introduction to Matrices
- HA1-845 Operations with Matrices
- HA1-850 Identifying Matrices and Dimensions of a Matrix
- HA1-851 Performing Row Operations on Matrices
- HA1-852 Solving Systems of Linear Equations in Three Variables Using the Gauss-Jordan Method

**UNIT 17 LOGARITHMS**

- HA1-853 Applying the Laws of Logarithms
- HA1-854 Determining the Value of Common and Natural Logarithms and Irrational Exponents
- HA1-855 Solving Exponential Equations
- HA1-856 Translating Exponential and Logarithmic Equations
- HA1-857 Solving Logarithmic Equations

**UNIT 18 ADVANCED ALGEBRA TOPICS**

- HA1-859 Using the Algebraic System
- HA1-800 Solving Equations
- HA1-801 Solving Inequalities
- HA1-802 Factoring
- HA1-860 Using the Laws of Exponents
- HA1-861 Simplifying Expressions with Negative and Zero Exponents
- HA1-866 Drawing a Line Using Slope-Intercept Form and Determining if Two Lines are Parallel or Perpendicular
- HA1-867 Identifying Domain and Range of Relations Given Graphs, Tables, or Sets of Ordered Pairs
- HA1-804 Solving Systems of Equations by Graphing
- HA1-803 Solving Systems of Equations
- HA1-871 Simplifying Radical Expressions
- HA1-872 Simplifying Sums and Differences of Radicals
- HA1-873 Simplifying Products of Radicals
- \* Fall 2011