List of Concepts for Algebra

Before Algebra
- ► Exponents Review
- ► Adding/Subtracting Fractions Review
- ► Multiplying Fractions Review
- ► Simple Probability Review
- ► Compound Probability Review
- ► Permutations, Combinations, and Counting Principle Review
- ► Similar Figures and Scale Factor Concepts Review
- ► Using Similar Figures and Scale Factor Review
- ► Mean, Median, and Mode Review

Foundational Tools of Algebra
- ► Exponent Review
- ► Translation: Words to Math
- ► Translation: Math to Words
- ► Order of Operations (PEMDAS)
- ► Evaluating Expressions
- ► Testing Solutions of Equations and Inequalities
- ► Combining Like Terms
- ► Distribution

Integers, Rational/Irrational Numbers, and Word Problems
- ► Sets of Numbers - Integers
- ► Graphing Inequalities
- ► Adding/Subtracting Integers
- ► Combining Like Terms with Integers
- ► Absolute Value
- ► Sets of Numbers - Rational Numbers
- ► Comparing Rational Numbers
- ► Adding/Subtracting Rational Numbers
- ► Negatives in Fractions
- ► Negatives and Exponents
- ► Multiplying/Dividing Rational Numbers
- ► Simplifying Expressions
- ► Sets of Numbers - Irrational Numbers
- ► Square Roots
- ► Translating Word and Math Sentences

Solving Equations, and Ratios, Proportions & Percents
- ► Solving One-Step Equations
- ► Solving Multi-Step Equations
- ► Solving Equations With Combining Like Terms
- ► Combining Like Terms Across the Equal Sign
- ► Consecutive Integer Problems
- ► Solving Equations With Distribution
- ► Solving Complex Equations

- ► Special Situations
- ► Solving Literal Equations
- ► Is It a Proportion?
- ► Solving Proportions
- ► Percent of a Number Problems
- ► Percent Change Problems

Relations and Functions
- ► The Coordinate Plane and Plotting Points
- ► Relations, Domain and Range
- ► Inverse Relations
- ► Solutions of Equations in Two Variables
- ► Standard Form of Linear Equations
- ► Graphing Lines Using a Table of Values
- ► Function or No Function?
- ► Evaluating/Simplifying Functions

Linear Equations
- ► Slope: Concept Questions
- ► Slope: Practice Questions
- ► Slope: Using Slope Formula
- ► Finding Slope and Intercepts
- ► Writing Slope-Intercept Equations
- ► Point-Slope Form of a Linear Equation
- ► Using Scatter Plots
- ► Correllation
- ► Graphing Linear Equations
- ► Parallel and Perpendicular Lines
- ► Vertical and Horizontal Lines

Linear Inequalities
- ► Inequality Basics and Set Builder Notation
- ► Graphing Inequalities
- ► Solving Addition and Subtraction Inequalities
- ► Solving Multiplication and Division Inequalities
- ► Solving Multi-Step Inequalities
- ► Compound Inequality Basics
- ► Solving Compound Inequalities
- ► Solving Absolute Value Equations
- ► Solving Absolute Value Inequalities
- ► Graphing Absolute Value Equations
- ► Graphing Linear Inequalities

Systems of Linear Equations and Inequalities
- ► Linear System Basics
- ► Solving Linear Systems -- Graphing
- ► Solving Linear Systems -- Substitution
- ► Solving Linear Systems -- Basic Elimination
- ► Solving Linear Systems -- Advanced Elimination

- ► Graphing Systems of Linear Inequalities
- ► Writing a System of Linear Inequalities From a Graph
- ► Value-Number Word Problems
- ► Uniform Motion Problems
- ► Mixture Problems
- ► Mix of Linear System Word Problems

Exponents and Exponential Functions
- ► Exponent Laws -- Product of Powers
- ► Exponent Laws -- Power to a Power
- ► Exponent Laws -- Power of a Product
- ► Exponent Laws -- Dividing with Exponents
- ► Exponent Laws -- Zero and Negative Exponents
- ► Exponent Laws -- Advanced Problems
- ► Scientific Notation -- Conversions
- ► Scientific Notation -- Multiplying and Dividing
- ► Simple Interest
- ► Compound Interest
- ► Exponential Function Concepts
- ► Graphing Exponential Functions
- ► Equality of Exponential functions
- ► Exponential Growth and Decay Concept Questions
- ► Exponential Growth and Decay Word Problems

Polynomials and Factoring
- ► Polynomial Basics
- ► Adding and Subtracting Polynomials
- ► Multiplying by a Monomial
- ► Multiplying Binomials and Trinomials
- ► Factoring: Undistribution
- ► Factoring: Factoring by Grouping
- ► Factoring: Simple Normal Trinomial Factoring
- ► Factoring: Advanced Normal Trinomial Factoring
- ► Factoring: Difference of Two Squares
- ► Factoring: Perfect Square Trinomials
- ► Factoring: Mixed Review

Quadratics
- ► Quadratics Basics and Standard Form
- ► Solving Simple Quadratics
- ► Parabola Concept Questions
- ► Graphing Quadratics
- ► Solving Quadratics: Graphing
- ► Graphing Quadratic Inequalities
- ► Solving Quadratics: Factoring
- ► Solving Quadratics: Completing the Square
- ► Solving Quadratics: Quadratic Formula
- ► Using the Discriminant

Rational Expressions and Equations
- ► Simplifying Rational Expressions
- ► Multiplying Rational Expressions (Without Factoring)
- ► Multiplying Rational Expressions (With Factoring)
- ► Conversions Using Unit Multipliers
- ► Dividing Rational Expressions (Without Factoring)
- ► Dividing Rational Expressions (With Factoring)
- ► Dividing Polynomials by Splitting a Fraction
- ► Polynomial Long Division
- ► Adding/Subtracting Rational Expressions (Like Denominators)
- ► Adding/Subtracting Rational Expressions (Unlike Denominators)
- ► Solving Rational Equations

Radicals, The Pythagorean Theorem, and Shifting Graphs
- ► Simplifying Radicals (No Perfect Squares in the Radical)
- ► Simplifying Radicals (Ratoinalizing the Denominator)
- ► Simplifying Radicals (Radical Fractions)
- ► Simplifying Radicals (Mixed Review)
- ► Adding and Subtracting Radicals
- ► Radical Expressions with Variables
- ► FOILing Radical Expressions
- ► Solving Radical Equations
- ► Pythagorean Theorem
- ► Distance Formula
- ► Function Transformations