Online Courses for High School Students
1-888-972-6237

Algebra 1 (Credit Recovery)

A diagnostic driven credit recovery course is designed to give an expanded opportunity for students who did not succeed the first time in the course.

Students are given the opportunity in each learning unit to demonstrate their knowledge in that area of study. If they demonstrate competency in their unit assessment they will be presented with the following unit. If they do not demonstrate competency then they are required to do the entire unit.

Requirement:
For a student to take a credit recovery course, they must have already taken the class unsuccessfully and have the appropriate seat time.

Prerequisite: Algebra 1 (Student must have taken Algebra 1 unsuccessfully and have the appropriate seat time).
Course Length: One Semester
Required Materials: A graphing calculator. Gcalc is a free download if you do not have a hand-held.

Semester A

In Algebra 1 CR, students learn about linear models, linear inequalities, statistics, linear functions, transformations, sequences, and systems of linear equations. The course also includes lessons on linear inequalities.

Module 1: Basic Tools

- Types of Numbers
- Signed Number Operations
- Order of Operations
- Exponent Rules 1
- Exponent Rules 2
- Properties of Operations
- Combining Like Terms
- Expressions and Equations
- Ratios, Rates, & Unit Rates
- Converting Measurements

Solving Equations and Inequalities

- Solving One-Step Equations

- Proportions and Reciprocals
- Cross Multiplying
- Proportions and Percentages
- Percent of Change
- The Distributive Property
- Other Multi-Step Equations
- Literal Equations
- Inequalities
- Multi-Step Inequalities

Linear Models

- The Coordinate Plane
- Slope of Line
- The Slope-Intercept Equation
- The Standard Form
- Point-Slope Form Equations
- Converting Representations
- Parallel & Perpendicular Lines
- Linear Functions
- Absolute Value Functions
- Linear Inequalities

Statistics

- Measures of Central Tendency
- Measures of Spread
- Representing Data
- Outliers and Comparisons
- Data Distributions
- Relative and Two-Way Frequency
- Scatterplots
- Lines of Best Fit
- Bias
- Correlations vs. Causation

Functions, Transformations, & Sequences

- Functions Defined
- Writing Linear Functions
- Domain and Range
- Evaluating Functions
- Translations
- Reflections
- Rotations
- Arithmetic Sequences
- An Explicit Formula
- A Recursive Formula

Systems of Linear Equations

- Systems of Equations
- Graphical Solutions
- Solving by Substitution
- Solving by Elimination
- Special Solutions
- The Best Method
- Compound Inequalities
- Systems of Inequalities
- Inequality System Solutions
- Linear Programming

Semester B

In the second semester of Algebra 1 CR, students focus on exponential and quadratic functions. They will learn how to read, write and graph these function types. They will also learn where they can find exponential and quadratic functions in their own worlds. In this semester, special attention is given to making meaningful comparisons of linear, exponential and quadratic growth. Students also spend time learning about geometric sequences, polynomials, factoring, radical equations, piece-wise defined functions, as well as rational expressions and equations. The semester concludes with a comprehensive review of the course.

Prerequisite: None
Course Length: One Semester
Required Text: None

Exponential Growth & Decay

- Properties of Exponents
- Scientific Notation
- Exponents and Radicals
- Simplifying Radicals
- Exponential Equations
- Graph Exponential Equations
- Geometric Sequences
- Explicit Geometric Formulas
- The Recursive Formula
- Exponential & Linear Growth

Polynomials

- Polynomials Defined
- Add & Subtract Polynomials
- Multiply by Monomials
- Multiplying Binomials
- Special Patterns
- Other Multiplying Methods
- Dividing Polynomials

- Polynomial Graphs
- Graphing Polynomials
- Systems Involving Polynomials

Factoring & Roots

- Factoring Using GCF
- Factoring When |a| = 1
- Factoring When |a| > 1
- Factoring Patterns
- Factoring by Grouping
- The Best Factoring Method
- The Zero Product Property
- The Quadratic Formula
- Completing the Square
- Quadratic Equation Graphs

Quadratic Graphs

- Parabola Basics
- The Standard Equations
- The Vertex Form
- Writing Equations from Graphs
- Quadratics from Equations
- Graphing Quadratic Equations
- Quadratic Translations
- Reflections and Dilations
- Quadratic Equation Systems
- Comparing Growth

Non-Linear Graphs and Equations

- Rational Expressions & GCF
- Multiply Rational Expressions
- Divide Rational Expressions
- Add & Subtract Rationals
- Rationals & Cross Products
- Rational Equations & LCD
- Rational Functions
- Radical Functions
- Step & Piecewise Functions
- Absolute Value Transforms

Semester Review

- Module 1 Review
- Module 2 Review

- Module 3 Review
- Module 4 Review
- Module 5 Review
- Module 6 Review
- Module 7 Review
- Module 8 Review
- Module 9 Review
- Module 10 Review
- Module 11 Review