# Algebra 1

# **Course Description:**

Thinkwell Algebra 1 offers comprehensive coverage of foundational concepts to Algebra 1 and higher math, emphasizing the comprehension and extension of skills introduced in the Middle Grades through analysis and practical application. Topics covered in Thinkwell Algebra 1 focus on expressions, equations, inequalities, functions, data analysis, and probability.

Prof. Edward Burger presents lessons through approximately 19 hours of video lectures. The student's grade is determined by their scores on quizzes (40%), tests (40%), one midterm exam (10%), and one final exam (10%).

# **Algebra 1 Overview**

### • Foundations for Algebra

- Variables and algebraic expressions
- Operations with real numbers
- o Exponents, square roots, and the order of operations
- o Set theory
- o Rates, ratios, proportions, and percents
- Percent increase and decrease
- Properties of exponents
- Scientific notation
- o Operations with algebraic expressions and polynomials
- Factoring polynomials

thinkwell 📚 homeschool

### • Equations and Inequalities

- Solving linear and quadratic equations
- o Graphing, writing, and solving linear and compound inequalities
- Solving systems of linear equations and inequalities

### • Functions

- Writing function rules
- o Graphing linear and quadratic functions
- Transforming linear and quadratic functions
- Rate of change and the slope of a line
- o Intercepts
- Slope-intercept and point-slope forms
- Scatter plots and trend lines

### • Data Analysis and Probability

- Bar, circle, and line graphs
- o Stem-and-leaf and box-and-whisker plots
- o Histograms
- o Experimental and theoretical probability
- Combinations and permutations
- o Mean, median, mode, and range

# Algebra 1 Course Information:Recommended Course Duration36 weeksTopics77Hours of Video Content19Practice Exercise and Worksheet Questions1500+Number of Graded Assessments (Quizzes, Tests, & Exams)32

