

**Florida State Core Curriculum**  
Standards adopted 2007  
Algebra II

Reference	Description	Boardworks High School Algebra presentations
MA.912.A.2.5	Graph absolute value equations and inequalities in two variables.	Absolute value functions
MA.912.A.2.6	Identify and graph common functions (including but not limited to linear, rational, quadratic, cubic, radical, absolute value).	Graphs of important non-linear functions Plotting and sketching graphs Absolute value functions Simplifying rational functions
MA.912.A.2.7	Perform operations (addition, subtraction, division, and multiplication) of functions algebraically, numerically, and graphically.	Operations with polynomials Dividing polynomials The factor theorem
MA.912.A.2.8	Determine the composition of functions.	Domain, range and composite functions
MA.912.A.2.10	Describe and graph transformations of functions	Transforming functions part 1 Transforming functions part 2
MA.912.A.2.11	Solve problems involving functions and their inverses.	Inverse functions
MA.912.A.2.12	Solve problems using direct, inverse, and joint variations.	Direct proportion Inverse proportion
MA.912.A.3.3	Solve literal equations for a specified variable.	Equations, formulas and identities Substituting into formulas Formula problems Rearranging a formula Manipulating formulas Generating formulas
MA.912.A.3.6	Solve and graph the solutions of absolute value equations and inequalities with one variable.	Absolute value functions
MA.912.A.3.10	Write an equation of a line given any of the following information: two points on the line, its slope and one point on the line, or its graph. Also, find an equation of a new line parallel to a given line, or perpendicular to a given line, through a given point on the new line.	Slopes and intercepts Parallel and perpendicular lines Coordinate geometry The equation of a straight line

MA.912.A.3.14	Solve systems of linear equations and inequalities in two and three variables using graphical, substitution, and elimination methods.	Systems of equations and graphs The elimination method for systems of equations The substitution method for systems of equations Problems leading to systems of equations
MA.912.A.3.15	Solve real-world problems involving systems of linear equations and inequalities in two and three variables.	Systems of equations and graphs The elimination method for systems of equations The substitution method for systems of equations Problems leading to systems of equations
MA.912.A.4.3	Factor polynomial expressions.	Factoring Factoring quadratic expressions Quadratic equations and factoring Solving quadratic equations
MA.912.A.4.4	Divide polynomials by monomials and polynomials with various techniques, including synthetic division.	Dividing polynomials The factor theorem
MA.912.A.4.5	Graph polynomial functions with and without technology and describe end behavior.	Plotting and sketching graphs Graphs of quadratic functions
MA.912.A.4.6	Use theorems of polynomial behavior (including but not limited to the Fundamental Theorem of Algebra, Remainder Theorem, the Rational Root Theorem, Descartes' Rule of Signs, and the Conjugate Root Theorem) to find the zeros of a polynomial function.	Operations with polynomials Dividing polynomials The factor theorem Solving quadratic equations
MA.912.A.4.7	Write a polynomial equation for a given set of real and/or complex roots.	Factoring quadratic expressions
MA.912.A.4.8	Describe the relationships among the solutions of an equation, the zeros of a function, the x-intercepts of a graph, and the factors of a polynomial expression with and without technology.	Solving quadratic equations Graphs of quadratic functions Plotting and sketching graphs
MA.912.A.4.9	Use graphing technology to find approximate solutions for polynomial equations.	Plotting and sketching graphs Graphs of quadratic functions
MA.912.A.4.10	Use polynomial equations to solve real-world problems.	Problems leading to quadratic equations
MA.912.A.5.2	Add, subtract, multiply, and divide rational expressions.	Simplifying rational functions Operations with algebraic fractions Improper fractions
MA.912.A.5.3	Simplify complex fractions.	Simplifying rational functions

MA.912.A.5.5	Solve rational equations.	Simplifying rational functions Operations with algebraic fractions Improper fractions
MA.912.A.6.2	Add, subtract, multiply, and divide radical expressions (square roots and higher).	Manipulating radicals
MA.912.A.6.3	Simplify expressions using properties of rational exponents.	Zero, negative and fractional exponents
MA.912.A.6.4	Convert between rational exponent and radical forms of expressions.	Zero, negative and fractional exponents
MA.912.A.6.5	Solve equations that contain radical expressions.	Manipulating formulas Manipulating radicals
MA.912.A.7.3	Solve quadratic equations over the real numbers by completing the square.	Completing the square Solving quadratic equations
MA.912.A.7.4	Use the discriminant to determine the nature of the roots of a quadratic equation.	The quadratic formula Solving quadratic equations
MA.912.A.7.5	Solve quadratic equations over the complex number system.	–
MA.912.A.7.6	Identify the axis of symmetry, vertex, domain, range and intercept(s) for a given parabola.	Graphs of quadratic functions Domain, range and composite functions
MA.912.A.8.1	Define exponential and logarithmic functions and determine their relationship	The laws of logarithms Solving equations involving logarithms Exponentials and logarithms Exponential growth and decay
MA.912.A.8.2	Define and use the properties of logarithms to simplify logarithmic expressions and to find their approximate values.	The laws of logarithms Solving equations involving logarithms
MA.912.A.8.3	Graph exponential and logarithmic functions.	The laws of logarithms Solving equations involving logarithms Exponentials and logarithms Exponential growth and decay
MA.912.A.8.5	Solve logarithmic and exponential equations.	The laws of logarithms Solving equations involving logarithms Exponentials and logarithms Exponential growth and decay
MA.912.A.8.6	Use the change of base formula.	Solving equations involving logarithms
MA.912.A.8.7	Solve applications of exponential growth and decay.	Exponential growth and decay

MA.912.A.10.3	Decide whether a given statement is always, sometimes, or never true (statements involving linear or quadratic expressions, equations, or inequalities, rational or radical expressions, or logarithmic or exponential functions).	Solving linear equations Solving linear inequalities Solving quadratic inequalities Solving quadratic equations Exponentials and logarithms Simplifying rational functions
MA.912.D.11.1	Define arithmetic and geometric sequences and series.	Sequences and rules Arithmetic sequences Geometric sequences Other types of sequences Sequences and series The sum of an arithmetic series The sum of a geometric series
MA.912.D.11.3	Find specified terms of arithmetic and geometric sequences.	Arithmetic sequences Geometric sequences