

North Carolina State Core Curriculum
Standards adopted 2003
Algebra I

Strand	Reference	Description	Boardworks High School Algebra presentations
Number and Operations	1.01	Write equivalent forms of algebraic expressions to solve problems:	
	1.01a	Apply the laws of exponents.	Exponent laws Negative exponents and reciprocals Rational exponents
	1.01b	Operate with polynomials	Operations with polynomials Dividing polynomials The factor theorem
	1.01c	Factor polynomials	Factoring Factoring quadratic expressions Quadratic equations and factoring Solving quadratic equations The factor theorem
	1.02	Use formulas and algebraic expressions, including iterative and recursive forms, to model and solve problems.	Equations, formulas and identities Equations with parentheses and fractions Using equations to solve problems Substituting into formulas Formula problems Rearranging a formula Manipulating formulas Generating formulas Sequences and rules Arithmetic sequences Geometric sequences Other types of sequences
	1.03	Model and solve problems using direct variation.	Direct proportion
	Geometry and Measurement	2.01	Find the lengths and midpoints of segments to solve problems.
2.02		Use the parallelism or perpendicularity of lines and segments to solve problems.	Parallel and perpendicular lines Coordinate geometry
	3.01	Use matrices to display and interpret data.	–

Data Analysis and Probability	3.02	Operate (addition, subtraction, scalar multiplication) with matrices to solve problems.	–
	3.03	Create linear models for sets of data to solve problems.	
	3.03a	Interpret constants and coefficients in the context of the data.	Scatter plots Lines of best fit Measuring correlation
	3.03b	Check the model for goodness-of-fit and use the model, where appropriate, to draw conclusions or make predictions	Non-linear relationships Measuring correlation Scatter plots Lines of best fit
Algebra	4.01	Use linear functions or inequalities to model and solve problems; justify results.	
	4.01a	Solve using tables, graphs, and algebraic properties.	Solving linear equations Using equations to solve problems Solving linear inequalities Inequalities and regions Inequalities in two variables Inequalities and regions Linear graphs Slopes and intercepts
	4.01b	Interpret constants and coefficients in the context of the problem.	Linear graphs Slopes and intercepts
	4.02	Graph, factor, and evaluate quadratic functions to solve problems.	Factoring Factoring quadratic expressions Quadratic equations and factoring Quadratics and completing the square Solving quadratic equations Graphs of quadratic functions
	4.03	Use systems of linear equations or inequalities in two variables to model and solve problems. Solve using tables, graphs, and algebraic properties; justify results.	Solving linear equations Using equations to solve problems Solving linear inequalities Inequalities and regions Inequalities in two variables Inequalities and regions Linear graphs

	4.04	Graph and evaluate exponential functions to solve problems.	The laws of logarithms Solving equations involving logarithms Exponentials and logarithms Exponential growth and decay
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