

Publisher: Kinetic Books®  
 Program Title: *Algebra I*  
 Components:  
 Grade Level(s): High School

**NEW YORK STANDARDS MAP**  
**(Algebra I)**

<b>Standard No.</b>	<b>Standard Language</b>	<b>Publisher Citations</b>	
	<b>ALGEBRA I</b>	<b>Primary Citations</b>	<b>Supporting Citations</b>
A.A.1	Translate a quantitative verbal phrase into an algebraic expression	1.04 1.12 to 1.15 1.17	1.10 to 1.11 1.16 1.21 to 1.22 1.39
A.A.2	Write a verbal expression that matches a given mathematical expression	1.16 1.19	1.04 1.10 to 1.15 1.17 1.21 to 1.22 1.39
A.A.3	Distinguish the difference between an algebraic expression and an algebraic equation	1.25	1.28 to 1.29 1.39
A.A.4	Translate verbal sentences into mathematical equations or inequalities	1.26 8.08 8.13 8.14 12.50 to 12.51	1.27 to 1.29 1.39 8.11 to 8.12 8.21 to 8.22 8.40 12.52 to 12.53 12.69
A.A.5	Write algebraic equations or inequalities that represent a situation	1.26 8.08 8.13 8.14 12.50 to 12.51	1.27 to 1.29 1.39 8.11 to 8.12 8.21 to 8.22 8.40 12.52 to 12.53 12.69
A.A.6	Analyze and solve verbal problems whose solution requires solving a linear equation in one variable or linear inequality in one	1.26 8.09 to 8.10	1.28 to 1.29 1.39

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	variable		8.11 to 8.12 8.40
A.A.7	Analyze and solve verbal problems whose solution requires solving systems of linear equations in two variables.	7.06 7.10 7.12 to 7.13 7.17 7.23 to 7.28	7.20 to 7.21 7.30 to 7.31 7.47
A.A.8	Analyze and solve verbal problems that involve quadratic equations	13.07 13.09 to 13.10 13.16 13.18 13.29 13.34	13.11 to 13.12 13.19 to 13.20 13.37 to 13.38 13.63
A.A.9	Analyze and solve verbal problems that involve exponential growth and decay	None	
A.A.10	Solve systems of two linear equations in two variables algebraically	7.01 7.11 to 7.17 7.22 to 7.28	7.02 to 7.04 7.18 to 7.21 7.29 to 7.31 7.47
A.A.11	Solve a system of one linear and one quadratic equation in two variables, where only factoring is required	13.55 to 13.56	13.57 to 13.58 13.63
A.A.12	Multiply and divide monomial expressions with a common base, using the properties of exponents	10.20 10.35	10.27 to 10.28 10.41 to 10.42 10.85
A.A.13	Add, subtract, and multiply monomials and polynomials	10.14 to 10.17 10.20 to 10.25 10.29 to 10.32	9.01 to 9.23 10.18 to 10.19 10.26 to 10.28 10.33 to 10.34 10.85
A.A.14	Divide a polynomial by a monomial or binomial, where the quotient has no remainder	10.36 to 10.40	10.41 to 10.42 10.85
A.A.15	Find values of a variable for which an algebraic fraction is undefined	11.01 to 11.04	11.08 to 11.09 11.51

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A.A.16	Simplify fractions with polynomials in the numerator and denominator by factoring both and renaming them to lowest terms	11.02 to 11.05	11.06 to 11.09 11.51
A.A.17	Add or subtract fractional expressions with monomial or like binomial denominators	11.19 to 11.20	11.24 to 11.25 11.51
A.A.18	Multiply and divide algebraic fractions and express the product or quotient in simplest form	11.10 to 11.11 11.13 to 11.16	11.12 11.17 to 11.18 11.51
A.A.19	Identify and factor the difference of two perfect squares	13.06 to 13.07	13.11 to 13.12 13.63
A.A.20	Factor algebraic expressions completely, including trinomials with a lead coefficient of one (after factoring a GCF)	10.51 to 10.53 10.55 to 10.59 10.64 to 10.67 10.71 to 10.72 10.75 to 10.76	10.54 10.61 to 10.63 10.68 to 10.70 10.73 to 10.74 10.77 to 10.78 10.85
A.A.21	Determine whether a given value is a solution to a given linear equation in one variable or linear inequality in one variable	3.02 8.01	3.01 3.11 to 3.12 3.61 8.11 to 8.12 8.40
A.A.22	Solve all types of linear equations in one variable	3.02 to 3.09 3.15 to 3.16 3.21 to 3.22 3.30 to 3.31 3.34 to 3.35 3.40 to 3.41 3.45 to 3.47 3.51 to 3.53	3.11 to 3.12 3.17 to 3.20 3.23 to 3.25 3.32 to 3.33 3.37 to 3.39 3.42 3.49 to 3.50 3.54 to 3.55 3.61
A.A.23	Solve literal equations for a given variable	3.56 to 3.57	3.58 to 3.59 3.61

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A.A.24	Solve linear inequalities in one variable	8.03 to 8.04 8.06 to 8.07 8.09 to 8.10	8.05 8.11 to 8.12 8.40
A.A.25	Solve equations involving fractional expressions	3.21 12.51	3.24 to 3.25 3.61 12.52 to 12.53 12.69
A.A.26	Solve algebraic proportions in one variable which result in linear or quadratic equations	6.15 to 6.16 11.39 to 11.42	6.20 to 6.21 6.33 11.51
A.A.27	Understand and apply the multiplication property of zero to solve quadratic equations with integral coefficients and integral roots	13.03 to 13.10	13.11 to 13.12 13.63
A.A.28	Understand the difference and connection between roots of a quadratic equation and factors of a quadratic expression	13.03 to 13.10 13.13	13.11 to 13.12 13.63
A.A.29	Use set-builder notation and/or interval notation to illustrate the elements of a set, given the elements in roster form	8.18	2.03 2.55 8.21 to 8.22 8.40
A.A.30	Find the complement of a subset of a given set, within a given universe	None	
A.A.31	Find the intersection of sets (no more than three sets) and/or union of sets (no more than three sets)	8.19 to 8.20	8.21 to 8.22 8.40
A.A.32	Explain slope as a rate of change between dependent and independent variables	5.27 to 5.28 5.30 5.36 5.50 5.52 5.55	5.39 to 5.40 5.51 5.53 to 5.54 5.56 to 5.57 5.65
A.A.33	Determine the slope of a line, given the coordinates of two points on the line	5.23 to 5.24 5.34 5.36 5.50 to 5.51	5.25 to 5.26 5.31 5.37 5.39 to 5.40

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		5.55	5.56 to 5.57 5.65
A.A.34	Write the equation of a line, given its slope and the coordinates of a point on the line	5.32 to 5.33	5.39 to 5.40 5.65
A.A.35	Write the equation of a line, given the coordinates of two points on the line	5.34 5.38	5.39 to 5.40 5.65
A.A.36	Write the equation of a line parallel to the x- or y-axis	5.45	5.42 5.44 5.47 to 5.48 5.65
A.A.37	Determine the slope of a line, given its equation in any form	5.27 5.30	5.39 to 5.40 5.65
A.A.38	Determine if two lines are parallel, given their equations in any form	5.42 5.44	5.47 to 5.48 5.65
A.A.39	Determine whether a given point is on a line, given the equation of the line	5.08 to 5.09 6.06 6.08	5.11 to 5.12 5.65 6.09 6.13 to 6.14 6.33
A.A.40	Determine whether a given point is in the solution set of a system of linear inequalities	8.27 to 8.31	8.32 to 8.34 8.40
A.A.41	Determine the vertex and axis of symmetry of a parabola, given its equation	13.46 to 13.47	13.53 to 13.54 13.63
A.A.42	Find the sine, cosine, and tangent ratios of an angle of a right triangle, given the lengths of the sides	None	
A.A.43	Determine the measure of an angle of a right triangle, given the length of any two sides of the triangle	None	
A.A.44	Find the measure of a side of a right triangle, given an acute angle and the length of another side	None	
A.A.45	Determine the measure of a third side of a right triangle using the Pythagorean theorem, given the lengths of any two sides	12.38 to 12.39 13.08	12.43 to 12.44 12.69 13.11 to 13.12

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