

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

ALABAMA STANDARDS MAP
(Algebra I)

Standard No.	Standard Language	Publisher Citations	
	ALGEBRA I	Primary Citations	Supporting Citations
1a	Simplify numerical expressions using properties of real numbers and order of operations, including those involving square roots, radical form, or decimal approximations.	1.05 1.07 to 1.08 2.10 to 2.12 2.21 to 2.23 2.26 12.01 to 12.02	1.39 2.14 to 2.15 2.19 to 2.20 2.27 to 2.30 2.55 12.03 12.07 to 12.08 12.69
1b	Applying laws of exponents to simplify expressions, including those containing zero and negative integral exponents	2.31 to 2.35 9.01 to 9.09 9.12 to 9.16 9.18 to 9.20	2.36 to 2.37 9.10 to 9.11 9.17 9.21 to 9.23 9.39
2a	Analyze linear functions from their equations, slopes, and intercepts.	5.08 to 5.10 5.13 5.27 to 5.31 6.04 6.07 to 6.08	5.11 to 5.12 5.14 to 5.17 5.24 to 5.26 6.01 to 6.03 6.05 to 6.06
2b	Finding the slope of a line from its equation or by applying the slope formula.	5.24 5.27 to 5.28	5.25 to 5.26 5.37 5.39 to 5.40 5.65
2c	Determining the equations of linear functions given two points, a point and the slope, tables of values,	5.30 5.32 to 5.34	5.38 to 5.40 5.65

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	graphs, or ordered pairs.		
2d	Graphing two-variable linear equations and inequalities on the Cartesian plane	5.13 to 5.18 8.28 to	5.21 to 5.22 5.65 8.29 to 8.34 8.40
3a	Determine characteristics of a relation, including its domain, range, and whether it is a function, when given graphs, tables of values, mappings, or sets of ordered pairs.	6.02 6.06 6.11	6.13 to 6.14 6.33
3b	Finding the range of a function when given its domain.	6.10	6.13 to 6.14 6.33
4a	Represent graphically common relations, including $x = \text{constant}$, $y = \text{constant}$, $y = x$, $y = \sqrt{x}$, $y = x^2$, and $y = x $.	5.13 5.16 6.09 13.46 to 13.47	5.14 5.65 6.33 13.63
4b	Identifying situations that are modeled by common relations, including $x = \text{constant}$, $y = \text{constant}$, $y = x$, $y = \sqrt{x}$, $y = x^2$, and $y = x $.	3.32 5.14 13.07	3.61 5.65 13.63
5a	Perform operations of addition, subtraction, and multiplication on polynomial expressions.	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
5b	Dividing by a monomial	10.36 to 10.40	10.41 to 10.42 10.85
6	Factor binomials, trinomials, and	10.51 to 10.53	10.54

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	other polynomials using GCF, difference of squares, perfect square trinomials, and grouping.	10.55 to 10.59 10.64 to 10.67 10.71 to 10.72 10.75 to 10.76	10.60 10.62 to 10.63 10.68 to 10.70 10.73 to 10.74 10.77 to 10.85
7a	Solve multi-step equations and inequalities including linear, radical, absolute value, and literal equations.	3.08 3.15 to 3.16 3.27 3.56 to 3.57 12.48 to 12.49	3.07 3.11 to 3.12 3.17 3.28 to 3.29 3.34 to 3.39 3.45 to 3.55 3.58 to 3.59 3.63 12.51 to 12.53 12.69
7b	Writing the solution of an equation or inequality in set notation.	8.18	8.21 to 8.22
7c	Graphing the solution of an equation or inequality.	8.23 to 8.24	8.25 to 8.26
7d	Modeling real-world problems by developing and solving equations and inequalities, including those involving direct and inverse variation.	3.34 to 3.35 3.40 to 3.41 3.45 to 3.47 3.51 to 3.53 6.16 6.18 8.09 to 8.10 8.31	3.36 to 3.37 3.39 3.42 3.49 to 3.50 3.55 3.61 6.20 to 6.21 6.33 8.11 to 8.12 8.33 to 8.34 8.40
8a	Solve systems of linear equations and inequalities in two variables graphically or algebraically.	7.01 to 7.02 7.05 to 7.07 7.12 to 7.19 7.22 to 7.25	7.03 to 7.04 7.08 to 7.10 7.20 to 7.21 7.26 to 7.31

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		7.32 to 7.34 7.37 to 7.45	7.35 to 7.36 7.46 to 7.47
8b	Modeling real-world problems by developing and solving systems of linear equations and inequalities	7.06 7.17 7.23 7.25 to 7.28 7.33 8.31	7.30 to 7.31 7.47 8.33 to 8.34 8.40
9a	Solve quadratic equations using the zero product property.	10.79 to 10.80 13.03 to 13.10	10.85 13.11 to 13.12 13.63
9b	Approximating solutions graphically and numerically	13.48 to 13.50 13.55 13.59 to 13.60	13.51 to 13.54 13.56 to 13.58 13.61 to 13.63
10a	Calculate length, midpoint, and slope of a line segment when given coordinates of its endpoints on the Cartesian plane.	5.24 5.27 to 5.28 5.38	5.25 to 5.26 5.30 5.37 5.39 to 5.40 5.65
10b	Deriving the distance, midpoint, and slope formulas	5.37	5.39 to 5.40 5.65
11a	Solve problems algebraically that involve area and perimeter of a polygon, area and circumference of a circle, and volume and surface area of right circular cylinders or right rectangular prisms.	1.30 to 1.33	1.36 to 1.37 1.39
11b	Applying formulas to solve word problems	1.35 3.57 6.26	1.31 1.33 1.36 to 1.37

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		10.82 12.51 13.16 13.28	1.39 3.58 to 3.59 3.61 6.31 to 6.33 10.85 12.69 13.63
12a	Compare various methods of data reporting, including scatterplots, stem-and-leaf plots, histograms, box-and-whisker plots, and line graphs, to make inferences or predictions.	4.01 to 4.08 5.58 to 5.59 5.61	4.09 to 4.11 4.22 5.60 5.65
12b	Determining effects of linear transformations of data	5.23 to 5.24 5.27 to 5.29 5.32 5.35 to 5.36 5.38 5.50 5.55	5.39 to 5.40 5.51 to 5.54 5.56 to 5.57 5.65
12c	Determining effects of outliers	4.12 4.16 to 4.18 5.63	4.13 to 4.15 4.19 to 4.22 5.65
12d	Evaluating the appropriateness of the design of a survey	N/A	4.0 to 4.22 5.58 to 5.65
13	Identify characteristics of a data set, including measurement or categorical and univariate or bivariate.	4.12 to 4.13 4.16 to 4.18	4.0 to 4.11 4.14 to 4.15 4.19 to 4.22
14	Use a scatterplot and its line of best	5.58 to 5.63	5.64 to 5.65

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	fit or a specific line graph to determine the relationship existing between two sets of data, including positive, negative, or no relationship.		
15a	Estimate probabilities given data in lists or graphs.	9.14	9.22 to 9.23
15b	Comparing theoretical and experimental probabilities	N/A	N/A