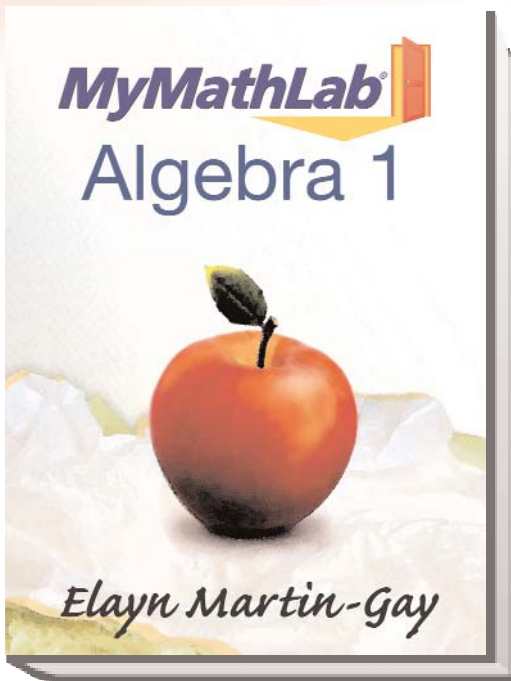


Prentice Hall

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C O R R E L A T E D T O

Alabama Course of Study, 2009 Draft: Algebra I

PEARSON

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**Correlated to:**  
**Alabama Course of Study Adopted Draft, April 2009, for Algebra I**

<b>ALABAMA COURSE OF STUDY ADOPTED DRAFT, APRIL 2009, FOR ALGEBRA I</b>	<b>MyMathLab Algebra I © 2011</b>
ALGEBRA I	
Number and Operations	
Students will:	
1. Simplify numerical expressions, including those involving square roots, radical form, and decimal approximations using properties of real numbers and order of operations.	<b>SE/TE:</b> 1.3, 1.4, 1.5, 1.6, 1.8, 1.9, 6.1, 6.5, 6.6, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7
<ul style="list-style-type: none"> <li>• Applying laws of exponents to simplify expressions, including those containing zero and negative integral exponents</li> </ul>	<b>SE/TE:</b> 6.1, 6.5
Algebra	
2. Analyze linear functions from their equations for their characteristics, including slopes and intercepts.	<b>SE/TE:</b> 3.6, 3.7
<ul style="list-style-type: none"> <li>• Determining the slope of a line from its equation or by applying the slope formula</li> </ul>	<b>SE/TE:</b> 3.4, 3.5
<ul style="list-style-type: none"> <li>• Determining equations of linear functions given two points, a point and the slope, tables of values, graphs, or ordered pairs</li> </ul>	<b>SE/TE:</b> 3.5, 3.7
<ul style="list-style-type: none"> <li>• Graphing two-variable linear equations and inequalities on the Cartesian plane</li> </ul>	<b>SE/TE:</b> 3.2, 3.3, 3.5, 4.5
3. Determine properties of a relation, including domain, range, and whether it is a function, when given graphs, tables of values, mappings, or sets of ordered pairs.	<b>SE/TE:</b> 3.6
<ul style="list-style-type: none"> <li>• Finding the range of a function when given its domain</li> </ul>	<b>SE/TE:</b> 3.6
4. Construct graphs of common relations, including $x = \text{constant}$ , $y = \text{constant}$ , $y = x$ , $y = x^2$ , and $y = xyx$ .	<b>SE/TE:</b> 3.6, 3.7, 3.8, 6.6, 6.7, 8.7, 8.8, 9.1, 10.5
<ul style="list-style-type: none"> <li>• Identifying applications modeled by common relations, including <math>x = \text{constant}</math>, <math>y = \text{constant}</math>, <math>y = x</math>, <math>y = x^2</math>, and <math>y = xyx</math></li> </ul>	<b>SE/TE:</b> 3.7, 6.6, 6.7, 8.7, 10.5
5. Perform operations of addition, subtraction, and multiplication on polynomial expressions.	<b>SE/TE:</b> 6.2, 6.3, 6.4, 8.2, 8.3, 8.4, 8.5
<ul style="list-style-type: none"> <li>• Dividing a polynomial by a monomial</li> </ul>	<b>SE/TE:</b> 6.8
<ul style="list-style-type: none"> <li>• Evaluating polynomial functions</li> </ul>	<b>SE/TE:</b> 6.2
6. Use GCF, difference of squares, perfect square trinomials, and grouping to factor binomials, trinomials, and other polynomials.	<b>SE/TE:</b> 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 8.1
7. Solve multistep equations and inequalities, including linear, radical, absolute value, and literal equations.	<b>SE/TE:</b> 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 4.1, 4.2, 4.3, 4.4, 8.5, 9.5, 9.6
<ul style="list-style-type: none"> <li>• Writing the solution of an equation or inequality in set notation</li> </ul>	<b>SE/TE:</b> 2.4, 4.1, 4.2

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<ul style="list-style-type: none"> <li>Formulating the design of application-based problems by developing and solving equations and inequalities, including those involving direct and inverse variation, distance, uniform motion, and mixture</li> </ul>	<b>SE/TE:</b> 2.2, 2.5, 2.6, 2.7, 2.8, 4.1, 8.6, 8.7, 9.6
8. Solve systems of linear equations and inequalities in two variables graphically and algebraically.	<b>SE/TE:</b> 5.1, 5.2, 5.3, 5.4, 5.5
<ul style="list-style-type: none"> <li>Designing models of application-based problems by developing and solving systems of linear equations and inequalities</li> </ul>	<b>SE/TE:</b> 5.4, 5.5
9. Solve quadratic equations using the zero product property.	<b>SE/TE:</b> 7.6, 7.7, 10.4
<ul style="list-style-type: none"> <li>Determining approximate solutions of quadratic equations graphically and numerically</li> </ul>	<b>SE/TE:</b> 10.1, 10.2, 10.4
<ul style="list-style-type: none"> <li>Solving quadratic equations using the quadratic formula and completing the square</li> </ul>	<b>SE/TE:</b> 10.2, 10.3
<b>Geometry</b>	
10. Calculate length, midpoint, and slope of a line segment when given coordinates of its endpoints on the Cartesian plane.	<b>SE/TE:</b> 9.6
<ul style="list-style-type: none"> <li>Deriving distance, midpoint, and slope formulas for line segments</li> </ul>	<b>SE/TE:</b> 9.6
<ul style="list-style-type: none"> <li>Utilizing the Pythagorean Theorem to solve application-based problems</li> </ul>	<b>SE/TE:</b> 9.6
<b>Measurement</b>	
11. Solve problems algebraically involving 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.	<b>SE/TE:</b> 7.7, 8.7
<ul style="list-style-type: none"> <li>Applying area and volume formulas to solve application-based problems</li> </ul>	<b>SE/TE:</b> 7.7, 8.7
<b>Data Analysis and Probability</b>	
12. 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.	<b>SE/TE:</b> 3.1, 5.6, 10.5
<ul style="list-style-type: none"> <li>Determining effects of linear transformations of data</li> </ul>	<b>SE/TE:</b> Appendix H
<ul style="list-style-type: none"> <li>Determining effects of outliers</li> </ul>	<b>SE/TE:</b> Appendix H
<ul style="list-style-type: none"> <li>Critiquing the design of a survey</li> </ul>	<b>SE/TE:</b> Appendix B
13. Identify characteristics of a data set, including numerical or categorical and univariate or bivariate.	<b>SE/TE:</b> 5.6, 5.7

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14. Use a scatterplot and its line of best fit or a specific line graph to determine the correlation existing between two sets of data, including positive, negative, or no correlation.	<b>SE/TE:</b> 3.1, 10.5
15. Calculate probabilities given data in lists or graphs.	<b>SE/TE:</b> Chapter 1 Extension: Probability and Odds
<ul style="list-style-type: none"><li>Comparing theoretical and experimental probabilities for data in lists or graphs</li></ul>	<b>SE/TE:</b> Chapter 1 Extension: Probability and Odds