

Glencoe
Algebra 1: Integration, Applications, Connections
Volume One ©2001

correlated to

SOUTH CAROLINA
MATH CURRICULUM STANDARDS
Mathematics for the Technologies 1

OBJECTIVES	LESSON REFERENCES
<p>I. Generalizations and algebraic symbols.</p> <p>A. Use unit analysis to check measurement computations of English and metric units (e.g., 5 mph = x ft per second).</p> <p>B. Make judgments about the appropriateness of units of measure within a system and between systems.</p> <p>C. Determine patterns.</p> <p>D. Recognize and justify the effects of such operations as multiplication, division, and computing powers and roots on the magnitudes of quantities.</p>	<p>2-7, 3-6</p> <p>PC-6, 3-4, 4-3, 4-4</p> <p>1-2, 1-3, 1-ST, 1-SGA, 2-3, 2-ST, 2-5, 2-6 2-CR, 4-ST, 5-6, 5-SGA, 7-1, CT-1, CT-5</p> <p>PC-2, PC-3, PC-4, PC-5, 2-3A, 2-3, 2-ST, 2-5, 2-6A, 2-6, 2-7, 2-8, 2-9, 2-SGA, CT-2</p>

KEY CR = Cumulative Review
 CT = Chapter Test
 PC = Prerequisite Concept

REV = Review
 SGA = Study Guide and Assessment
 ST = Self Test

OBJECTIVES	LESSON REFERENCES
<p>II. Algebraic expressions in problem-solving situations.</p> <p>A. Find specific function values and evaluate expressions.</p> <p>B. Simplify polynomial expressions using addition and subtraction.</p> <p>C. Identify the steps to simplify algebraic expressions using the commutative, associative, and distributive properties.</p> <p>D. Use symbolic representation and reasoning to verify statements about numbers.</p> <p>E. Given a problem situation, determine the type of solution required and an appropriate technique (a rough estimate, an approximation, and an exact answer).</p> <p>F. Select a suitable method of computing including (mental mathematics, paper and pencil combinations, calculators, and computers).</p> <p>III. Equations and inequalities.</p> <p>A. Transform and solve linear equations and inequalities using forms (one-step and multi-step) and properties (commutative, associative, distributive and equality).</p>	<p>1-3, 1-6, 1-SGA, 2-3, 2-5, 2-6, 2-7, 2-8, 2-SGA, CR-2, 5-5, 5-SGA, CT-1, CT-2, CT-5</p> <p>1-7, 1-8, 1-9, 1-SGA, CT-1</p> <p>1-7, 1-8, 1-9, 1-SGA, CT-1</p> <p>PC-2, PC-3, PC-4, PC-5, 2-1, 2-3A, 2-3, 2-4, 2-5, 2-6A, 2-6, 2-8A, 2-8</p> <p>PC-2, PC-3, PC-4, PC-5, PC-6, PC-7, PC-9, PC-10, PC-11, 1-7, 1-8, 1-SGA, 2-1, 2-3, 2-5, 2-6, 2-7, 2-8A, 2-8, 2-9, 2-SGA, 3-1, 3-2, 3-3, 3-4, 3-6, 3-7, 3-SGA, 4-1, 4-2, 4-3, 4-4, 4-5, 4-7, 4-8, 4-SGA, 5-2, 5-5, 5-6, 5-SGA, 6-1, 6-3, 6-4, 6-5, 7-1, 7-2, 7-3, 7-4, 7-6, 7-SGA</p> <p>PC-2, PC-3, PC-4, PC-5, PC-7, 1-1, 1-3, 1-4, 1-ST, 1-6, 1-7, 1-8, 1-SGA, 2-1, 2-3, 2-ST, 2-5, 2-6A, 2-6, 2-7, 2-8, 2-9, 2-SGA, CT-1, CT-2</p> <p>PC-7, 3-1, 3-2, 3-3, 3-ST, 3-5, 3-6, 3-SGA, 7-1, 7-2, 7-3, 7-SGA, CT-3, CT-7</p>

OBJECTIVES	LESSON REFERENCES
<p>B. Represent relationships among quantities using representations (concrete models, tables, graphs, diagrams, verbal descriptions, equations, inequalities) and tools (computer algebra systems (CAS), spreadsheets, and graphing calculators).</p> <p>C. Analyze problem situations (describe functional and recursive relations, write equations, and write inequalities).</p> <p>D. For given contexts use concrete models to interpret and determine the reasonableness of solutions to linear equations and inequalities.</p> <p>E. Use supporting data to explain why a solution is mathematically reasonable.</p>	<p>PC-7, 1-5, 2-9, 2-SGA, 3-1A, 3-1, 3-2, 3-3A, 3-3, 3-ST, 3-4, 3-5, 3-6, 4-1, 4-2, 4-5, 4-7, 4-8, 4-SGA, 5-4A, 5-4, 5-ST, 5-6, 5-7A, 5-SGA, 7-8A, 7-8, 7-SGA, CT-3, CT-5, CT-6, CT-7</p> <p>PC-7, 2-9, 2-SGA, 3-1, 3-2, 3-3, 3-ST, 3-4, 3-5, 3-6, 4-1, 4-2, 4-4, 4-5, 4-7, 4-8, 4-SGA, 5-5, 5-6, 5-SGA, 6-2, 6-4, 6-SGA, 7-1, 7-2, 7-3, 7-4, 7-ST, 7-6, 7-SGA</p> <p>PC-2, PC-3, PC-4, PC-5, PC-9, PC-11, 3-1A, 3-1, 3-2, 3-3A, 3-3, 7-2A</p> <p>3-1, 3-2, 3-3, 3-ST, 3-5, 3-SGA, 4-1, 4-4, 4-5, 4-7, 7-1, 7-2, 7-3, 7-SGA</p>
<p>IV. Slopes of lines.</p> <p>A. Develop the concept of slope as a rate of change, and determine slope using graphs, tables, and algebraic representations.</p> <p>B. Interpret the meaning of slope and intercepts in situations involving data, symbolic representations, and graphs.</p> <p>C. With and without a graphing calculator, investigate, describe, and predict the effects of changes in m and b on the</p>	<p>6-1A, 6-1, 6-SGA, CT-6</p> <p>6-1A, 6-1, 6-2, 6-4, 6-ST, 6-5, 6-6, 6-SGA, CT-6</p> <p>6-1, 6-5A, 6-5, 6-SGA, CT-6</p>

OBJECTIVES	LESSON REFERENCES
<p>graph of $y = mx + b$ and the results of these changes in applied situations.</p> <p>D. Graph and write equations of lines with given characteristics (two points, one point and a slope, and a slope and a y-intercept.)</p> <p>E. Determine the intercepts of linear functions using graphs and tables.</p> <p>V. Linear functions and data representations.</p> <p>A. For a variety of situations, identify and determine reasonable domain and range of values.</p> <p>B. Match situations to given graphs, and justify or interpret the match.</p> <p>C. Create situations that fit given graphs. Represent, display, and interpret data, including representations on graphing calculators and computers (scatter plots and bar graphs).</p>	<p>5-4A, 5-4, 5-ST, 5-6, 5-SGA, 6-2, 6-4, 6-ST, 6-5A, 6-5, 6-6, 6-SGA, CT-5, CT-6</p> <p>6-4, 6-5A, 6-5, CT-6</p> <p>5-2, 5-4, 5-5, 5-6, 5-SGA, CT-5</p> <p>1-9, 1-SGA, 2-8, 5-3, 5-4, 5-5, 5-6, 5-SGA</p> <p>1-1, 1-4, 2-4, 3-1, 3-2, 3-7, 3-CR, 4-5, 4-CR, 5-7, 6-3, 6-4, 6-6, 6-CR, 7-6, 7-8, CT-6</p>