Cord Algebra I, Mathematics in Context, 3rd edition
correlation to South Carolina Elementary Algebra Indicators

Indicators	**Cord Algebra 1 Lesson(s)**
Standard EA-1: The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.	
EA-1.1 Communicate a knowledge of algebraic relationships by using mathematical terminology appropriately.	Covered throughout the textbook.
EA-1.2 Connect algebra with other branches of mathematics.	Covered throughout the textbook, especially in Math Applications sections at the end of each chapter.
EA-1.3 Apply algebraic methods to solve problems in real-world contexts.	Covered throughout the textbook, especially in Math Applications sections at the end of each chapter.
EA-1.4 Judge the reasonableness of mathematical solutions.	Covered throughout the textbook, especially in Math Applications sections at the end of each chapter.
EA-1.5 Demonstrate an understanding of algebraic relationships by using a variety of representations (including verbal, graphic, numerical, and symbolic).	Covered throughout the textbook.
EA-1.6 Understand how algebraic relationships can be represented in concrete models, pictorial models, and diagrams.	Covered throughout the textbook.
EA-1.7 Understand how to represent algebraic relationships by using tools such as handheld computing devices, spreadsheets, and computer algebra systems (CASs).	Covered throughout the textbook, especially in Math Labs sections at the end of each chapter.

Indicators	Cord Algebra 1 Lesson(s)
Standard EA-2: The student will demonstrate through the mathematical processes an understanding of the real number system and operations involving exponents, matrices, and algebraic expressions**.**	
EA-2.1 Exemplify elements of the real number system (including integers, rational numbers, and irrational numbers).	1.1, 13.3
EA-2.2 Apply the laws of exponents and roots to solve problems.	10.2, 10.3, 13.3
EA-2.3 Carry out a procedure to perform operations (including multiplication and division) with numbers written in scientific notation.	1.7
EA-2.4 Use dimensional analysis to convert units of measure within a system.	2.1, 2.2
EA-2.5 Carry out a procedure using the properties of real numbers (including commutative, associative, and distributive) to simplify expressions.	3.1, 3.3
EA-2.6 Carry out a procedure to evaluate an expression by substituting a value for the variable.	1.7
EA-2.7 Carry out a procedure (including addition, subtraction, multiplication, and division by a monomial) to simplify polynomial expressions.	10.1, 10.2, 10.3, 10.4
EA-2.8 Carry out a procedure to factor binomials, trinomials, and polynomials by using various techniques (including the greatest common factor, the difference between two squares, and quadratic trinomials).	10.5, 10.6, 10.7
EA-2.9 Carry out a procedure to perform operations with matrices (including addition, subtraction, and scalar multiplication).	1.6
EA-2.10 Represent applied problems by using matrices.	1.6, p. 67 #17

Indicators	**Cord Algebra 1 Lesson(s)**
Standard EA-3: The student will demonstrate through the mathematical processes an understanding of relationships and functions.	
EA-3.1 Classify a relationship as being either a function or not a function when given data as a table, set of ordered pairs, or graph.	5.1
EA-3.2 Use function notation to represent functional relationships.	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, Chapter 5 Math Applications
EA-3.3 Carry out a procedure to evaluate a function for a given element in the domain.	5.1, 5.2
EA-3.4 Analyze the graph of a continuous function to determine the domain and range of the function.	5.1, 5.3, 5.4, 5.5
EA-3.5 Carry out a procedure to graph parent functions (including $y = x,\ y = x^2,\ y = \sqrt{x},\ y = \lvert x \rvert,$ and $y = \frac{1}{x}$).	5.1, 5.3, 5.4, 5.5
EA-3.6 Classify a variation as either direct or inverse.	5.3
EA-3.7 Carry out a procedure to solve literal equations for a specified variable.	3.4
EA-3.8 Apply proportional reasoning to solve problems.	3.2

Indicators	**Cord Algebra 1 Lesson(s)**
Standard EA-4: The student will demonstrate through the mathematical processes an understanding of the procedures for writing and solving linear equations and inequalities.	
EA-4.1 Carry out a procedure to write an equation of a line with a given slope and a *y*-intercept.	4.4, 4.5
EA-4.2 Carry out a procedure to write an equation of a line with a given slope passing through a given point.	4.4, 4.5
EA-4.3 Carry out a procedure to write an equation of a line passing through two given points.	4.4, 4.5
EA-4.4 Use a procedure to write an equation of a trend line from a given scatterplot.	7.3
EA-4.5 Analyze a scatterplot to make predictions.	7.3
EA-4.6 Represent linear equations in multiple forms (including point-slope, slope-intercept, and standard).	4.3, 4.4, 4.5
EA-4.7 Carry out procedures to solve linear equations for one variable algebraically.	3.1, 3.2, 3.3, 3.4, 3.5
EA-4.8 Carry out procedures to solve linear inequalities for one variable algebraically and then to graph the solution.	9.1, 9.2, 9.3, 9.4
EA-4.9 Carry out a procedure to solve systems of two linear equations graphically.	8.1
EA-4.10 Carry out a procedure to solve systems of two linear equations algebraically.	8.2, 8.3, 8.4, 8.5

Indicators	Cord Algebra 1 Lesson(s)
Standard EA-5: The student will demonstrate through the mathematical processes an understanding of the graphs and characteristics of linear equations and inequalities.	
EA-5.1 Carry out a procedure to graph a line when given the equation of the line.	4.3, 4.4, 4.5, 4.6, 4.7
EA-5.2 Analyze the effects of changes in the slope, m, and the y-intercept, b, on the graph of $y = mx + b$.	4.4, 4.5, 4.6, 4.7
EA-5.3 Carry out a procedure to graph the line with a given slope and a y-intercept.	4.4, 4.5, 4.6, 4.7
EA-5.4 Carry out a procedure to graph the line with a given slope passing through a given point.	4.4, 4.5, 4.6, 4.7
EA-5.5 Carry out a procedure to determine the x-intercept and y-intercept of lines from data given tabularly, graphically, symbolically, and verbally.	4.4, 4.5, 4.6, 4.7
EA-5.6 Carry out a procedure to determine the slope of a line from data given tabularly, graphically, symbolically, and verbally.	4.2, 4.3, 4.4, 4.5, 4.6, 4.7
EA-5.7 Apply the concept of slope as a rate of change to solve problems.	4.2
EA-5.8 Analyze the equations of two lines to determine whether the lines are perpendicular or parallel.	4.6
EA-5.9 Analyze given information to write a linear function that models a given problem situation.	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, Chapter 5 Math Applications
EA-5.10 Analyze given information to determine the domain and range of a linear function in a problem situation.	5.1, 5.2, 5.3, 5.4, 5.5, Chapter 5 Math Applications
EA-5.11 Analyze given information to write a system of linear equations that models a given problem situation.	8.1, 8.2, 8.3, 8.4, 8.5, Chapter 8 Math Applications
EA-5.12 Analyze given information to write a linear inequality in one variable that models a given problem situation.	9.1, 9.2, 9.3, 9.4, Chapter 9 Math Applications

Indicators	**Cord Algebra 1 Lesson(s)**
Standard EA-6: The student will demonstrate through the mathematical processes an understanding of quadratic relationships and functions.	
EA-6.1 Analyze the effects of changing the leading coefficient *a* on the graph of $y = ax^2$.	11.1, 11.2
EA-6.2 Analyze the effects of changing the constant *c* on the graph of $y = x^2 + c$.	11.1, 11.2
EA-6.3 Analyze the graph of a quadratic function to determine its equation.	11.1, 11.2
EA-6.4 Carry out a procedure to solve quadratic equations by factoring.	11.3
EA-6.5 Carry out a graphic procedure to approximate the solutions of quadratic equations.	11.1, 11.2, 11.3, 11.4, 11.5, 11.6
EA-6.6 Analyze given information to determine the domain of a quadratic function in a problem situation.	11.1, 11.2