

Cord Algebra 1, Mathematics in Context, 3rd edition
correlation to Tennessee Algebra 1 Course Level Expectations

Course Level Expectations	Cord Algebra 1 Lesson(s)
Standard 1 – Mathematical Processes	
CLE 3102.1.1 Use mathematical language, symbols, definitions, proofs and counterexamples correctly and precisely in mathematical reasoning.	Mathematical language and symbols are used throughout the text. Definitions are highlighted in yellow throughout the text.
CLE 3102.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including testing cases, estimation, and then checking induced errors and the reasonableness of the solution.	Problem solving is demonstrated throughout the text in examples, problem solving features, and application questions. Problem solving features are included in Lessons 1.5, 3.2, 4.5, 5.6, 6.1, 7.6, 8.3, 9.7, 10.3, 11.4, and 13.6
CLE 3102.1.3 Develop inductive and deductive reasoning to independently make and evaluate mathematical arguments and construct appropriate proofs; include various types of reasoning, logic, and intuition.	The topics of reasoning, logic, and intuition are used throughout the text to solve the real world problems included in each lesson. Chapter 3 includes justification of equations using mathematical properties.
CLE 3102.1.4 Move flexibly between multiple representations (contextual, physical, written, verbal, iconic/pictorial, graphical, tabular, and symbolic), to solve problems, to model mathematical ideas, and to communicate solution strategies.	Various representations of mathematical ideas are used throughout the text in examples, exercises, labs, and application questions. Specifically, Chapter 4 covers the transition between graphs and equations.
CLE 3102.1.5 Recognize and use mathematical ideas and processes that arise in different settings, with an emphasis on formulating a problem in mathematical terms, interpreting the solutions, mathematical ideas, and communication of solution strategies.	These topics are covered in Lesson 1.1, and in the labs and application questions for each Chapter. They are also covered in the Workplace Communication features in Lessons 2.5, 3.4, 5.4, 6.2, 7.2, 8.5, 9.3, 10.6, and 13.4.

<p>CLE 3102.1.6 Employ reading and writing to recognize the major themes of mathematical processes, the historical development of mathematics, and the connections between mathematics and the real world.</p>	<p>Cultural Connections are included throughout the text which focuses on mathematical themes and math in history, and are included in Lessons 1.4, 2.4, 3.5, 4.3, 5.5, 6.2, 7.5, 8.4, 9.1, 10.2, 11.6, and 13.3.</p> <p>Connections between math and the real world are also included in the Math Applications sections of each Chapter.</p>
<p>CLE 3102.1.7 Use technologies appropriately to develop understanding of abstract mathematical ideas, to facilitate problem solving, and to produce accurate and reliable models.</p>	<p>Technology is used throughout the text in labs and could be used by students to complete some of the suggested project ideas. Specifically, technology is used in the following labs: Comparing Pulse Rates, Counting Sand Grains, Matrix Operations Using a Graphing Calculator, Rate and Distance, Radius and Volume of a Sphere, Indirect Measurement of Height, Balancing Equations, Rectangles and Rectangular Prisms Using Coordinates, Measuring in Inches and Centimeters, The Equation of Lines, Price and Size of Pizza, Game that Uses Dice, Comparing Reaction Time, Using Technology to Create Statistical Graphs, Solving a Linear Equation as a System, Distribution of Student Heights, The Triangle Inequality, Linear Programming, Generating Polynomials Using Spreadsheets, The Drinking Fountain, Fitting a Quadratic Function to Data, Families of Rational Functions, Measuring the Slope of a Parking Lot, and Calculating Diagonal Lengths of Rectangles.</p>

Standard 2 – Number & Operations	
CLE 3102.2.1 Understand computational results and operations involving real numbers in multiple representations.	Lessons 1.1, 1.2, 1.3, 1.4, 1.5, 2.2, 2.3
CLE 3102.2.2 Understand properties of and relationships between subsets and elements of the real number system.	Lessons 1.1, 13.3
Standard 3 – Algebra	
CLE 3102.3.1 Use algebraic thinking to analyze and generalize patterns.	Lesson 1.2
CLE 3102.3.2 Understand and apply properties in order to perform operations with, evaluate, simplify, and factor expressions and polynomials.	Lessons 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7
CLE 3102.3.3 Understand and apply operations with rational expressions and equations.	Lessons 12.1, 12.2, 12.3, 12.4, 12.5
CLE 3102.3.4 Solve problems involving linear equations and linear inequalities.	Lessons 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7
CLE 3102.3.5 Manipulate formulas and solve literal equations.	Lessons 3.3, 3.4
CLE 3102.3.6 Understand and use relations and functions in various representations to solve contextual problems.	Lessons 4.3, 4.4, 4.5, 4.6, 4.7, Chapter 4 Applications 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, Chapter 5 Applications
CLE 3102.3.7 Construct and solve systems of linear equations and inequalities in two variables by various methods.	Lessons 8.1, 8.2, 8.3, 8.4, 8.5, 9.7
CLE 3102.3.8 Solve and understand solutions of quadratic equations with real roots.	Lessons 11.1, 11.2, 11.3, 11.4, 11.5, 11.6
CLE 3102.3.9 Understand and use exponential functions to solve contextual problems.	Lesson 5.6, Chapter 5 Applications, Chapter 11 Applications
Standard 4 – Geometry & Measurement	
CLE 3102.4.1 Use algebraic reasoning in applications involving geometric formulas and contextual problems.	2.2, 2.3, 2.4, 2.5, Chapter 2 Applications
CLE 3102.4.2 Apply appropriate units of measure and convert measures in problem solving situations.	2.1, 2.2, Chapter 2 Applications

Standard 5 – Data Analysis, Statistics, & Probability	
CLE 3102.5.1 Describe and interpret quantitative information.	Lessons 7.1, 7.2, 7.3, 7.4, 7.5, 7.6
CLE 3102.5.2 Use statistical thinking to draw conclusions and make predictions.	Lessons 7.1, 7.2, 7.3, 7.4, 7.5, 7.6
CLE 3102.5.3 Understand basic counting procedures and concepts of probability.	Lessons 6.1, 6.2, 6.3, 6.4, 6.5