

Cord Algebra 2, Learning in Context, 1st edition
correlation to Indiana Algebra II American Standards

American Standard	Cord Algebra 2 Lesson(s)
Standard 1 Functions	
A2.1.1 Find the zeros, domain, and range of a function.	4.1, 4.2, 4.3, 4.4, 4.5, 6.1, 8.1, 8.2, 9.1, 10.1
A2.1.2 Use and interpret function notation, including evaluation of functions represented by tables, graphs, words, equations or a set of ordered pairs.	4.1, 4.2, 4.3, 4.4, 4.5
A2.1.3 Recognize and describe the relationships among the solutions of an equation, the zeros of a function, the x -intercepts of a graph, and the factors of a polynomial expression.	4.1, 9.1
Standard 2 Linear and Absolute Value Equations, Inequalities and Functions	
A2.2.1 Solve systems of linear equations and inequalities in three variables by substitution and elimination.	2.5
A2.2.2 Solve problems that can be modeled using systems of linear equations up to three variables, interpret the solutions, and determine whether the solutions are reasonable.	2.1, 2.2, 2.3, 2.4, 2.5
A2.2.3 Graph piecewise-defined functions.	4.4
A2.2.4 Solve equations and inequalities involving the absolute value of a linear function.	1.3
Standard 3 Quadratic Equations and Functions	
A2.3.1 Define, add, subtract, multiply and divide complex numbers. Represent complex numbers, and the addition, subtraction and absolute value of complex numbers, in the complex plane.	5.5
A2.3.2 Solve quadratic equations in the complex number system.	6.6
A2.3.3 Analyze, describe, and sketch graphs of quadratic functions including the lines of symmetry.	6.1, 7.3
A2.3.4 Determine how the graph of a parabola changes if a , b , and c changes in the equation $y = a(x - b)^2 + c$. Find an equation for a parabola given sufficient information.	7.3
A2.3.5 Solve problems that can be modeled using quadratic equations and functions, interpret the solutions, and determine whether the solutions are reasonable.	6.1, 6.2, 6.3, 6.4, 6.5, 6.6

Standard 4 Polynomial Expressions, Equations and Functions	
A2.4.1 Analyze, describe, and sketch graphs of polynomial functions by examining intercepts, zeros, domain and range, and end behavior.	9.1, Ch. 9 Math Labs
A2.4.2 Use the binomial theorem to expand binomial expressions raised to positive integer powers.	11.5
A2.4.3 Perform arithmetic operations, including long division and division with remainders, on polynomials by others of equal or lower degree.	9.3, 9.4
A2.4.4 Factor polynomials completely and solve polynomial equations by factoring.	9.2, 9.3, 9.4, 9.5
A2.4.5 Use graphing technology to find approximate solutions for polynomial equations.	9.1, 9.5
A2.4.6 Solve problems that can be represented or modeled using polynomial equations, interpret the solutions, and determine whether the solutions are reasonable.	9.1, 9.2, 9.3, 9.4, 9.5, Ch.9 Math Applications
A2.4.7 Find a polynomial function of lowest degree with real coefficients given its roots and use the relationship between solutions of an equation, zeros of a function, x -intercepts of a graph and factors of a polynomial expression to solve problems.	9.4
Standard 5 Rational and Radical Expressions, Equations and Functions	
A2.5.1 Analyze, describe, and sketch graphs of rational functions by examining intercepts, zeros, domain and range, and asymptotic and end behavior.	10.1
A2.5.2 Add, subtract, multiply, divide, reduce and evaluate rational expressions with polynomial denominators. Simplify rational expressions, including expressions with negative exponents in the denominator.	10.2, 10.3
A2.5.3 Understand the properties of rational exponents and use the properties to simplify, multiply, divide, and find powers of expressions containing negative and fractional exponents. Relate expressions containing rational exponents to the corresponding radical expressions.	5.3
A2.5.4 Analyze, describe, and sketch graphs of square root and cube root functions by examining intercepts, zeros, domain and range, and end behavior.	4.4

A2.5.5 Solve equations that contain radical expressions and identify extraneous roots when they occur.	5.4
A2.5.6 Solve problems that can be modeled using equations involving rational and radical functions, including problems of direct and inverse variation. Interpret the solutions, and determine whether the solutions are reasonable.	5.3, 5.4, 5.5, Ch. 5 Math Applications, 10.4, 10.6, Chapter 10 Math Applications
Standard 6 Exponential and Logarithmic Functions	
A2.6.1 Analyze, describe, and sketch graphs of exponential functions by examining intercepts, zeros, domain and range, and asymptotic and end behavior.	8.1
A2.6.2 Know that the inverse of an exponential function is a logarithm, use laws of exponents to derive laws of logarithms, and use the inverse relationship between exponential functions and logarithms and the laws of logarithms to solve problems.	8.2, 8.3
A2.6.3 Solve exponential and logarithmic equations.	8.5
A2.6.4 Solve problems that can be modeled using exponential and logarithmic equations, interpret the solutions, and determine whether the solutions are reasonable using technology as appropriate.	8.1, 8.2, 8.3, 8.4, 8.5, 8.6, Ch. 8 Math Applications
Standard 7 Sequences and Series	
A2.7.1 Write the recursive formula for arithmetic and geometric sequences and find specific terms of arithmetic and geometric sequences.	11.2, 11.3, 11.4
A2.7.2 Write the formula for the general term for arithmetic and geometric sequences and make connections to linear and exponential functions.	11.2, 11.3, 11.4
A2.7.3 Find partial sums of arithmetic and geometric series.	11.2, 11.3, 11.4
A2.7.4 Solve problems involving applications that can be modeled using sequences and finite arithmetic and geometric series, interpret the solutions, and determine whether the solutions are reasonable using spreadsheets as appropriate.	11.2, 11.3, 11.4, 11.5, Ch. 11 Math Applications

Standard 8 Data Analysis and Probability	
A2.8.1 Use the relative frequency of a specified outcome of an event to estimate the probability of the outcome and apply the law of large numbers in simple examples.	14.1, 14.2
A2.8.2 Determine the probability of simple events involving independent and dependent events and conditional probability. Analyze probabilities to interpret odds and risk of events.	14.1, 14.2
A2.8.3 Know and apply the characteristics of the normal distribution. <ul style="list-style-type: none"> • Identify settings in which the normal distribution may be useful. • Determine whether a set of data appears to be uniform, skewed or normally distributed. • Use the empirical rule to find probabilities that an event will occur in a specific interval that can be described in terms of one, two or three standard deviations about the mean. 	Not covered
A2.8.4 Use permutations, combinations, and other counting methods to determine the number of ways that events can occur and to calculate probabilities, including the probability of compound events.	14.3, 14.4