



JC Schools College Algebra Yearly Standards

Unit	Priority Standards	Supporting Standards
<p>Unit 1</p> <p>Fundamental Concepts of Algebra</p> <p>11 Days</p>	<p>10-12.CA.LO.41 Perform operations with polynomials</p> <p>10-12.CA.LO.42 Factor polynomials, including factoring special products</p> <p>10-12.CA.LO.47 Simplify expressions using the laws of exponents</p> <p>10-12.CA.LO.49 Simplify radical expressions using the laws of radicals</p> <p>10-12.CA.LO.50 Simplify rational expressions</p>	<p>10-12.CA.LO.43 Factor out the greatest common factor</p> <p>10-12.CA.LO.44 Factor trinomials</p> <p>10-12.CA.LO.45 Factor polynomials by grouping</p> <p>10-12.CA.LO.46 Factor binomials</p> <p>10-12.CA.LO.48 Perform operations with radicals</p> <p>10-12.CA.LO.51 Rationalize radical expressions</p>
<p>Unit 2</p> <p>Equations and Inequalities</p> <p>20 Days</p>	<p>10-12.CA.LO.02 Solve fractional and rational equation that lead to linear equations</p> <p>10-12.CA.LO.05 Solve quadratic equations using the method of factoring, by the square root method, by the method of completing the square, and by quadratic formula</p> <p>10-12.CA.LO.07</p>	<p>10-12.CA.LO.01 Graph an equation using the point plotting method and by graphing calculator</p> <p>10-12.CA.LO.03 Solve word problems and formulas</p> <p>10-12.CA.LO.04 Recognize complex numbers and perform operations with complex numbers</p>

	<p>Solve absolute value and radical equations</p> <p>10-12.CA.LO.08 Solve linear inequalities including compound and absolute value inequalities</p> <p>10-12.CA.LO.23 Solve polynomial and rational inequalities</p> <p>10-12.CA.LO.35 Solve linear equations</p> <p>10-12-CA.LO.39 Solve radical inequalities</p>	<p>10-12.CA.LO.06 Solve word problems involving quadratic equations</p>
<p>Unit 3</p> <p>Functions and Graphs</p> <p>32 Days</p>	<p>10-12.CA.LO.11 Write the slope-intercept and point-slope equations of linear functions</p> <p>10-12.CA.LO.13 Combine functions using the operations sum, difference, product, division, and composition</p> <p>10-12.CA.LO.15 Apply the distance and midpoint formulas</p> <p>10-12.CA.LO.16 Write the standard and general equations of circles and sketch circles</p> <p>10-12.CA.LO.40 Analyze parent functions and their graphs</p>	<p>10-12.CA.LO.09 Know the basics of functions, function notation, and their graphs</p> <p>10-12.CA.LO.10 Analyze the graphs of functions to find the decreasing & increasing portions and the domain & range</p> <p>10-12.CA.LO.12 Understand the different transformations of functions</p> <p>10-12.CA.LO.17 Find the vertex and the intercepts to sketch the graph of a quadratic function</p> <p>10-12.CA.LO.36 Graph functions using transformation.</p> <p>10-12.CA.LO.38 Determine the domain of a composition of functions</p>
<p>Unit 4</p>	<p>10-12.CA.LO.18 Sketch the graph of higher degree polynomial functions</p>	<p>10-12.CA.LO.19</p>

<p>Polynomial Functions</p> <p>18 Days</p>	<p>10-12.CA.LO.22 Find vertical and horizontal asymptotes and sketch rational functions</p>	<p>Divide polynomials by binomials by the long and synthetic division</p> <p>10-12.CA.LO.20 Apply the Remainder and Factor Theorems</p> <p>10-12.CA.LO.21 Use the Rational Root Theorem to find the zeros of a polynomial</p>
<p>Unit 5</p> <p>Exponential and Logarithmic Functions</p> <p>19 Days</p>	<p>10-12.CA.LO.14 Find the inverse of a function</p> <p>10-12.CA.LO.24 Sketch exponential functions and use growth-decay exponential models</p> <p>10-12.CA.LO.25 Evaluate Logarithms, sketch logarithmic functions, and use logarithmic models</p> <p>10-12.CA.LO.26 Evaluate logarithmic values using the change of base formula</p> <p>10-12.CA.LO.28 Solve exponential and logarithmic equations</p>	<p>10-12.CA.LO.64 Use growth-decay exponential models</p> <p>10-12.CA.LO.65 Evaluate expressions using the change of base formula</p> <p>10-12.CA.LO.27 Apply the properties of logarithm and use common & natural logarithms</p>
<p>Unit 6</p> <p>Trigonometry: The Unit Circle and Graphing</p> <p>26 Days</p>	<p>10-12.CA.LO.52 Use a unit circle to find the sine and cosine values of quadrantal angles</p> <p>10-12.CA.LO.53 Find values of trigonometric functions of angles in all quadrants using the reference angle method</p> <p>10-12.CA.LO.54</p>	<p>10-12.CA.LO.55 Draw angles in standard position & use degree measure of angle</p> <p>10-12.CA.LO.56 Convert degree and radian measures by hand and with a calculator</p>

	Find the amplitude, period, & phase-shift and graph sine, cosine, and tangent functions	
Unit 7 Applications of Trigonometry 14 Days	10-12.CA.LO.57 Apply the Law of Sines and Cosines in solving oblique triangles and in applied problems	10-12.CA.LO.58 Solve right triangles using trigonometry and related applied problems 10-12.CA.LO.59 Apply the Pythagorean Theorem to solve right triangles 10-12.CA.LO.60 Find all trigonometric function values of an acute angle of a right triangle 10-12.CA.LO.61 Use trigonometric function values of special angles
Unit 8 Solving Systems of Equations and Inequalities 21 Days	10-12.CA.LO.29 Solve systems of linear and nonlinear equations in 2 variables by the graphical and algebraic methods 10-12.CA.LO.30 Solve two and three variable systems of linear equations by Gaussian elimination 10-12.CA.LO.63 Solve systems of linear equations in 2 and 3 variables by matrix operations	10-12.CA.LO.32 Perform matrix operations and find the inverse of a matrix 10-12.CA.LO.33 Solve a system of linear equation by the inverse matrix method 10-12.CA.LO.34 Find the determinant of a 2x2 matrix and apply the Cramer's rule to solve a 2 variable system 10-12.CA.LO.62 Find the determinant of a 3x3 matrix.