Carroll ISD Algebra III
2021-2022 Year-At-A-Glance

	1st Grading Period	2nd Grading Period	3rd Grading Period	4th Grading Period
Process Skills	**1A, B, C, D, E, F, G** Math Process Standards: how students understand and learn mathematics, used throughout the course.			
Topics	**Unit 1: Algebra Basics, Solve Equations and Inequalities** **Unit 2: Functions and Relations**	**Unit 3: Linear Functions** **Unit 4: Systems of Equations and Inequalities** **Unit 5: Polynomials and Exponents**	**Unit 6: Factoring** **Unit 7: Solving Quadratic Functions** **Unit 8: Graphing Quadratic Functions**	**Unit 9: Square Root and Cubic Functions** **Unit 10: Log Functions, Radicals, Rational Exponents** **Unit 11: Trig functions/ Unit circle**
Topic Focus	**Unit 1** • Algebra I basics • Solve Equations • Solve Inequalities • Solve Absolute Value Equations and Inequalities **Unit 2** • Determine the difference between a function and a relation • Find the domain and range of functions • Graph horizontal and vertical lines • Interpret graphs and make conclusions from the data	**Unit 3** • Three forms of a linear equation: point-slope form, standard form, and slope-intercept form • Parallel and perpendicular lines and their slope relationship • Graph inequalities in two variables **Unit 4** • Graph linear regression equations • Graph and determine relationships in scatter plots	**Unit 6** • Greatest common factor • Difference of two squares • Trinomial with a leading coefficient of 1 • Trinomial with a leading coefficient other than 1 • Factoring by grouping • Sum and difference of cubes • Know the difference between factoring and solving • Application problems with factoring **Unit 7**	**Unit 9** • Parent Function: Square Root and Cube Root (graph and characteristics) • Graph and identify max and min, x- intercept(s) (compare to solutions, roots, zero's), y-intercept, domain and range, symmetry, end behaviors, and increasing, decreasing, and constant intervals from the graph, the table of values, and the equation • Graph polynomial functions **Unit 10** • Rational Exponents • Radicals

	● Write domain and range in interval notation ● Graph lines in slope-intercept form **Project:** ● Point-slope form ● Standard form ● Slope-intercept form	● Graph system of equations and inequalities to determine a solution or solution set ● Solve by substitution ● Solve by elimination ● Write and solve word problem application problems with systems of equations; choose appropriate way to solve ● Solve by using matrices **Unit 5** ● Multiply and divide using exponent rules ● Negative exponents ● Scientific and standard notation ● Add and subtract polynomials ● Multiply polynomials ● Special product rules	● Solve quadratics using square roots ● Solve quadratics using the quadratic formula ● Solve quadratics by completing the square ● Solve quadratics by factoring ● Choose appropriate ways of solving quadratics **Unit 8** ● Parent Function: Quadratic Functions ● Transformations of quadratic functions ● Graph Quadratic functions in multiple forms: standard, intercept, and vertex form ● Write and solve equations and word problems/ applications ● Solve quadratics by graphing and calculating the zeroes	● Parent Function: Logarithm (graph and characteristics) ● Teach logarithms as an inverse of exponentials ● Condense and Expand logarithmic functions ● Solve logarithmic equations **Unit 11** ● Develop unit circle with degrees only, no radians, by using special right triangles ● Trig ratios (SOH, CAH, TOA) ● Go over sine, cosine, and tangent in quadrant I ● Memorize 30, 60 and ● 45 degree angles in quadrant I **Project** Function Notebook
Additional Resources	ALEKS - As assigned by teachers			