Carroll ISD Advanced Algebra II
2025-2026 Year-at-a-Glance

	1st Grading Period	2nd Grading Period	3rd Grading Period	4th Grading Period
Process Standards	**2A.1 A, B, C, D, E, F, G** Math Process Standards, how students understand and learn mathematics, used throughout the course			
TEKS	**Unit 1 - Absolute Value Equations, Introduction to Piecewise Functions, and Transformations** **2A.2A**, 2A.6C, 2A.6D, A.6E, 2A.6F, 2A.7I **Unit 2 - Linear Systems and Matrices** **2A.3A, 2A.3B**, 2A.3E 2A.3F, 2A.3G	**Unit 3 - Factoring and Solving Quadratic Functions** 2A.3C, 2A.3D, **2A.4F** 2A.7A **Unit 4 - Graphing Quadratic Functions** 2A.4A, 2A.4D, 2A.4E 2A.4H, 2A.7I **Unit 5 - Writing Quadratic Functions & Piecewise Functions** 2A.4A, 2A.4B	**Unit 6 - Polynomial Operations and Solving** 2A.7B, 2A.7C, 2A.7D **2A.7E** **Unit 7 - Higher Order Polynomial Functions** **2A.2A,** 2A.6A, 2A.6B **Unit 8 - Rational Exponents and Radicals** 2A.6H, **2A.6I**, 2A.6J, **2A.7F**, 2A.7G, 2A.7H	**Unit 9 - Square Root and Cube Root Functions, Function Operations and Composite, and Inverse Functions** 2A.2B, 2A.2C, 2A.2D **2A.4C,** 2A.6A, 2A.6B **Unit 10 - Exponential and Logarithmic Functions** 2A.5A, 2A.5B, 2A.5C 2A.5D, 2A.5E, 2A.8A 2A.8B, 2A.8C **Unit 11 - Solving and Graphing Rational Functions** 2A.6G, 2A.6H, **2A.6I** 2A.6J, 2A.6K, 2A.6L
Topic Focus	**Unit 1** ● First Day - Review and Take Questions over the Summer Assignment ● Review Graphing and Solving Compound Inequalities ● Identify Solutions Using Interval and Set Notation ● Solve and Graph Absolute Value	**Unit 3** ● Solve Quadratics by Factoring, Using Square Roots and the Quadratic Formula Without a Calculator ● Solve Quadratics on a Calculator ● Solve Quadratic Applications ● Understand and Simplify Complex Numbers **Unit 4**	**Unit 6** ● Simplify Exponential Expressions Using the Properties of Exponents ● Add, Subtract, and Multiply, Polynomials ● Divide Polynomials using Long and Synthetic Division ● Factor and Solve Polynomial Equations (Introduce Sum and Difference of Cubes) **Unit 7**	**Unit 9** ● Graph Square Root and Cube Root Functions ● Identify Restrictions on the Domain ● Evaluate and Simplify Functions to Include The Difference Quotient ● Simplify, Evaluate and Create Composite Functions ● Graph and Write Inverse Functions ● Prove if Two Functions are Inverses

	Equations and Inequalities • Introduce and Graph Piecewise Functions • Describe Transformations and Create Transformation Tables **Unit 2** • Solve 2- and 3-Variable Systems of Equations and Inequalities Algebraically and Using Matrices • Graph and Solve Applications of Systems to Include Linear Programming • Graph Polygons from a System of Equations, then Solve for Area or Volume Created by Rotating those Solids	• Graph Quadratic Functions and Inequalities Using Standard Form, Intercept Form, Vertex Form, and Parabolic Conic Form • Convert from Standard Form to Vertex Form by Completing the Square • Graph Quadratics Using Transformation Tables • Graphing Quadratic Equations using Parabolic Vocabulary (Vertex, Directrix, Focus) • Determine Minimum and Maximum Points of Quadratic Applications • Solve Linear/Quadratic Systems Algebraically and Graphically • Graph and Evaluate Piecewise Functions Including Quadratics **Unit 5** • Write Quadratic Functions from Data (Regression), Roots, and a Graph • Write Quadratic Equations using Parabolic Vocabulary (Vertex, Directrix, Focus) • Writing Piecewise Functions from a Graph	• Graph Higher Order Polynomial Functions • Analyze Graphs of Polynomial Functions including End Behavior • Graph Cubic Functions using Transformation Tables • Write Polynomial Equations using Finite Differences, Roots, and Graphs **Unit 8** • Convert Rational Exponential Expression to Radical Form • Evaluate n^{th} Roots • Simplify and Solve Radical and Rational Exponent Equations	**Unit 10** • Rewrite Exponential Expressions as Log Expressions and visa versa • Solve Exponential, Logarithmic, and Natural Log Equations • Graph Log and Exponential Functions • Solve Exponential and Logarithmic Applications using Simple Growth/Decay, Compound Interest, Half-Life Decay and Double-Growth Formulas • Identify and Write Inverse Functions • Write Exponential and Log Equations using Regression **Unit 11** • Add, Subtract, Multiply and Divide Rational Expressions • Simplify Rational Expressions • Solve Rational Equations • Write and Solve Direct and Inverse variation • Graph Rational Equations using Transformation Tables • Graph Rational Functions using RATEY (to include how to identify holes and slant asymptotes)

<table>
<tr><td rowspan="2">Additional Resources
McGraw Hill Algebra 2 TX 2016</td><td>Unit 1 - Chapter 1 and 2 (1.4, 1.5, 1.6, 2.4, 2.8)

Unit 2 - Chapter 3 (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8)</td><td>Unit 3 - Chapter 4 (0.3, 4.3, 4.4, 4.6)

Unit 4 - Chapter 4 (4.1, 4.2, 4.5, 4.7, 4.8, 9.2)
Unit 5 - Chapter 4 (4.2, 4.7, 9.2) and teacher created material</td><td>Unit 6 - Chapter 5 (5.1, 5.2, 5.5, 5.7)

Unit 7 - Chapter 5 (5.3, 5.4, 5.7)

Unit 8 - Chapter 6 (6.4, 6.5, 6.6, 6.7)</td><td>Unit 9 - Chapter 6 (6.1, 6.2, 6.3)

Unit 10 - Chapter 7 (7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8)

Unit 11 - Chapter 8 (8.1, 8.2, 8.3, 8.4, 8.5, 8.6)</td></tr>
<tr><td colspan="4">khanacademy.org
Deltamath.com (you will use your login and password)
For some topics and skills, we demonstrate on a TI84+ Calculator
Many topics and most assessments will be broken into two parts: calculator-allowed and non-calculator</td></tr>
</table>

Power Standards: 2A.2A, 3A, 2A.3B, 2A.4C, 2A.4F, 2A.5A, 2A.6I, 2A.7E, 2A.7F