

# Carroll ISD AP Precalculus 2024-2025 Year-At-A-Glance

	1 <sup>st</sup> Grading Period	2 <sup>nd</sup> Grading Period	3 <sup>rd</sup> Grading Period	4 <sup>th</sup> Grading Period
<b>Mathematical Practices</b>	P1: Procedural and Symbolic Fluency- Algebraically manipulate functions, equations, and expressions. P2: Multiple Representations- Translate mathematical information between representations. P3: Communication and Reasoning- Communicate with precise language, and provide rationales for conclusions.		P1: Procedural and Symbolic Fluency- Algebraically manipulate functions, equations, and expressions. P2: Multiple Representations- Translate mathematical information between representations. P3: Communication and Reasoning- Communicate with precise language, and provide rationales for conclusions.	
<b>Course Content</b>	<b>Unit 1 - Polynomial and Rational Functions</b> 1.1, 1.2, 1.3, 1.4  <b>Unit 3 - Trigonometric and Polar Functions</b> 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9, 3.10, 3.11, 3.12	<b>Unit 3 - Trigonometric and Polar Functions</b> 3.12, 3.13, 3.14, 3.15  <b>Unit 4 - Functions Involving Parameters and Vectors</b> 4.1, 4.2, 4.3, 4.4, 4.8, 4.9  <b>Unit 1 - Polynomial and Rational Functions</b> 1.12  <b>Unit 2 - Exponential and Logarithmic Functions</b> 2.7, 2.8	<b>Unit 1 - Polynomial and Rational Functions</b> 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12  <b>Unit 2 - Exponential and Logarithmic Functions</b> 2.1, 2.2, 2.3, 2.4, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13	<b>Unit 1 - Polynomial and Rational Functions</b> 1.13, 1.14  <b>Unit 2 - Exponential and Logarithmic Functions</b> 2.5, 2.6, 2.14, 2.15  <b>Unit 3 - Trigonometric and Polar Functions</b> 3.7, 3.10  <b>Unit 5 - AP Review</b> Unit 1, Unit 2, Unit 3
<b>Topic Focus</b>	<b>Unit 1 - Polynomial and Rational Functions</b> Changes in Tandem Rates of Change Rates of Change in Linear and Quadratic Functions Polynomial Functions and Rates of Change	<b>Unit 3 - Trigonometric and Polar Functions</b> Equivalent Representations of Trigonometric Functions Trigonometry and Polar Coordinates Polar Function Graphs Rates of Change in Polar Functions	<b>Unit 1 - Polynomial and Rational Functions</b> Polynomial Functions and Complex Zeros Polynomial Functions and End Behavior Rational Functions and End Behavior Rational Functions and Zeros Rational Functions and Vertical Asymptotes Rational Functions and Holes Equivalent Representations of Polynomial and Rational Expressions	<b>Unit 1 - Polynomial and Rational Functions</b> Function Model Selection and Assumption Articulation Function Model Construction and Application

	<p><b>Unit 3 - Trigonometric and Polar Functions</b>          Periodic Phenomena          Sine, Cosine, and Tangent          Sine and Cosine Function Graphs          Sinusoidal Functions          Sinusoidal Function Transformations          The Tangent Function          Inverse Trigonometric Functions          Trigonometric Equations and Inequalities          The Secant, Cosecant, and Cotangent Functions          Equivalent Representations of Trigonometric Functions</p>	<p><b>Unit 4 - Functions Involving Parameters and Vectors</b>          Parametric Functions          Parametric Functions Modeling Planar Motion          Parametric Functions and Rates of Change          Parametrically Defined Circles and Lines          Vectors          Vector-Valued Functions</p> <p><b>Unit 1 - Polynomial and Rational Functions</b>          Transformations of Functions</p> <p><b>Unit 2 - Exponential and Logarithmic Functions</b>          Composition of Functions          Inverse Functions</p>	<p>Transformations of Functions</p> <p><b>Unit 2 - Exponential and Logarithmic Functions</b>          Change in Arithmetic and Geometric Sequences          Change in Linear and Exponential Functions          Exponential Functions          Exponential Function Manipulation          Composition of Functions          Inverse Functions          Logarithmic Expressions          Inverses of Exponential Functions          Logarithmic Functions          Logarithmic Function Manipulation          Exponential and Logarithmic Equations and Inequalities</p>	<p><b>Unit 2 - Exponential and Logarithmic Functions</b>          Exponential Function Context and Data Modeling          Competing Function Model Validation          Logarithmic Function Context and Data Modeling          Semi-log Plots</p> <p><b>Unit 3 - Trigonometric and Polar Functions</b>          Sinusoidal Function Context and Data Modeling          Trigonometric Equations and Inequalities</p> <p><b>Unit 5 - AP Review</b>          Polynomial and Rational Functions          Exponential and Logarithmic Functions          Trigonometric and Polar Functions</p>
<p><b>Additional Resources</b></p> <p>AP Classroom</p> <p>DeltaMath</p>				