

# Year at a Glance

Pre-Calculus Honors  
1200340



## 2021-2022 School Year

### Course Description:

[CPALMS Description](#)

### Textbook Publisher:

[Precalculus: Graphical, Numerical, Algebraic](#), Demana, Waits, Foley, Kennedy, Bock 9th Edition (Students have online access through [My.SarasotaCountySchools.net](http://My.SarasotaCountySchools.net))

### Other Supplemental Resources:

[Khan Academy](#)

[FSA Portal](#)

### Standards:

Available on [CPalms](#)

[Pre-Calculus Honors](#)

Quarter	Major Concepts/Topics
Quarter 1	<b>Appendix A1 -A3:</b> <ul style="list-style-type: none"><li>• Radicals and Rational Exponents</li><li>• Polynomials and Factoring</li><li>• Fractional Expressions</li></ul>
	<b>Chapter P: Prerequisites</b> <ul style="list-style-type: none"><li>• Real Numbers</li><li>• Cartesian Coordinate System</li><li>• Linear Equations and Inequalities</li><li>• Lines n the Plane</li><li>• Solving Equations</li><li>• Complex Numbers</li><li>• Solving Inequalities</li></ul>
	<b>Chapter 1: Functions and Graphs</b> <ul style="list-style-type: none"><li>• Modeling and Equation Solving</li><li>• Functions and Their Properties</li><li>• Twelve Basic Functions</li><li>• Building Functions from Functions</li><li>• Inverse Relations and Inverse Functions</li><li>• Graphical Transformations</li><li>• Modeling with Functions</li></ul>

Teachers may use additional resources as noted on an individual teacher's syllabus. For specific questions regarding individual classrooms please contact the teacher for clarification.

	<p><b>Chapter 2: Polynomials, Power, and Rational Functions</b></p> <ul style="list-style-type: none"> <li>• Linear and Quadratic Functions and Modeling</li> <li>• Power Functions with Modeling</li> <li>• Polynomial Functions of Higher Degree</li> <li>• Real Zeros of Polynomial Functions</li> <li>• Complex Zeros and the Fundamental Theorem of Algebra</li> <li>• Graphs of Rational Functions</li> <li>• Solving Equations in One Variable</li> <li>• Solving Inequalities in One Variable</li> </ul>
Quarter 2	<p><b>Chapter 3: Exponential, Logistic, and Logarithmic Functions</b></p> <ul style="list-style-type: none"> <li>• Exponential and Logistic Functions</li> <li>• Exponential and Logistic Modeling</li> <li>• Logarithmic Functions and Their Graphs</li> <li>• Properties of Logarithmic Functions</li> <li>• Equation Solving and Modeling</li> <li>• Mathematics of Finance</li> </ul> <p><b>Chapter 4: Trigonometric Functions</b></p> <ul style="list-style-type: none"> <li>• Angles and Their Measures</li> <li>• Trigonometric Functions of Acute Angles</li> <li>• Trigonometry Extended: Circular Functions</li> <li>• Graphs of Sine and Cosine: Sinusoids</li> <li>• Graphs of Tangent, Cotangent, Secant, and Cosecant</li> <li>• Inverse Trigonometric Functions</li> <li>• Solving Problems with Trigonometry</li> </ul> <p><b>Chapter 5a: Analytic Trigonometry</b></p> <ul style="list-style-type: none"> <li>• Fundamental Identities</li> <li>• Proving Trigonometric Identities</li> </ul>
Quarter 3 *optional topic	<p><b>Chapter 5b: Analytic Trigonometry</b></p> <ul style="list-style-type: none"> <li>• Sum and Difference Identities</li> <li>• Multiple-Angle Identities</li> <li>• The Law of Sines</li> <li>• The Law of Cosines</li> </ul> <p><b>Chapter 6: Applications of Trigonometry</b></p> <ul style="list-style-type: none"> <li>• Vectors in the Plane</li> <li>• *Parametric Equations and Motion</li> <li>• Polar Coordinates</li> <li>• Graphs of Polar Equations</li> <li>• DeMoivre's Theorem and nth Roots</li> </ul> <p><b>Chapter 8: Analytic Geometry in Two and Three Dimensions</b></p> <ul style="list-style-type: none"> <li>• Conic Sections and Parabolas</li> <li>• Circles and Ellipses</li> </ul>

This guide represents a recommended sequence that can be used voluntarily by teachers. Dates may vary depending on individual classrooms. For specific questions regarding pacing please contact the individual teacher for clarification.

	<ul style="list-style-type: none"> <li>• Hyperbolas</li> </ul>
Quarter 4	<b>Chapter 11: An Introduction to Calculus</b> <ul style="list-style-type: none"> <li>• Limits and Motion: The Tangent Problem</li> <li>• Limits and Motion: The Area Problem</li> <li>• More on Limits</li> </ul>
	<b>Chapter 9a: Discrete Mathematics</b> <ul style="list-style-type: none"> <li>• The Binomial Theorem</li> </ul>
	<b>Chapter 9b: Discrete Mathematics (if time allows)</b> <ul style="list-style-type: none"> <li>• Basic Combinatorics</li> <li>• Sequences</li> <li>• Series</li> <li>• Mathematical Induction</li> </ul>

### Graduation Requirements:

Students earning a standard high school diploma must earn four credits in math. Pre-Calculus satisfies one of those credits. More information on graduation requirements and concordant scores can be found here: [Graduation Requirements for Florida's Statewide Assessments](#).