

**SCHOOL DISTRICT U-46**  
**Pacing Guide for Honors Pre Calculus**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>- Review of Summer Packet</li> <li>- Graphing Calculator Skills               <ul style="list-style-type: none"> <li>* Finding: root, max, min, intersect, windows, table, shading inequalities, calculate menu, trace, mode settings, axes on/axes off, graph on/off, VARS menu, math menu, catalog, 2<sup>nd</sup> entry, 2<sup>nd</sup> answer</li> </ul> </li> </ul>	<p><u>Chapter 5: Analytic Trigonometry (Cont)</u></p> <ul style="list-style-type: none"> <li>- 5.2 Proving Trigonometric Identities</li> <li>- 5.3 Sum and Difference Identities</li> <li>- 5.4 Multiple Angle Identities</li> <li>- 5.5 Law of Sines</li> <li>- 5.6 Law of Cosines</li> </ul>	<p><u>Chapter 1: Functions and Graphs</u></p> <ul style="list-style-type: none"> <li>- Prerequisite 1: Real Numbers (Pg. 2)</li> <li>- Prerequisite 2: Cartesian Coordinate System (Pg. 14)</li> <li>- 1.1 Modeling and Equations solving</li> <li>- 1.2 Functions and Their Properties</li> <li>- 1.3 Twelve Basic Functions</li> <li>- 1.4 Building Functions from Functions</li> <li>- 1.5 Parametric Relations and Inverses</li> <li>- 1.6 Graphical Transformations</li> <li>- 1.7 Modeling With Functions</li> </ul>	<p><u>Appendix A.1: Radicals and Rational Exponents</u> A1 (Pg. 839)</p> <p><u>Chapter 3: Exponential, Logic, and Logarithmic Functions</u></p> <ul style="list-style-type: none"> <li>- 3.1 Exponential and Logistic Functions</li> <li>- 3.2 Exponential and Logistic Modeling</li> <li>- 3.3 Logarithmic Functions and Their Graphs</li> <li>- 3.4 Properties of Logarithmic Functions</li> <li>- 3.5 Equation Solving and Modeling</li> <li>- 3.6 Mathematics of Finance</li> </ul>
<p><u>Chapter 4: Trigonometric Functions</u></p> <ul style="list-style-type: none"> <li>-4.1 Angles and their Measurement</li> <li>-4.2 Trig Functions of Acute Angle</li> <li>-4.3 Trig Extended:The Circular Functions</li> <li>-4.4 Graphs of Sine and Cosine: Sinusoids</li> <li>-4.5 Graphs of Tangent, Cotangent, Secant, and Cosecant</li> <li>-1.5 Inverse Functions</li> <li>- 4.7 Inverse Trigonometric Functions</li> <li>- 4.8 Solve Problems with Trigonometry</li> </ul>	<p><u>Chapter 6: Applications of Trigonometry</u></p> <ul style="list-style-type: none"> <li>- 6.1 Vectors in the Plane</li> <li>- 6.2 Dot Product of Vectors</li> <li>- 1.5 Parametric Equation</li> <li>- 6.3 Parametric Equation and Motion</li> <li>- 6.4 Polar Coordinates</li> <li>- 6.5 Graphs of Polar Equations</li> <li>- Prerequisite 6: Complex Numbers (Pg. 53)</li> <li>- 6.6 De Moivre's Theorem and <math>n</math>th Roots</li> </ul>	<p><u>Chapter 2: Polynomial, Power, and Rational Functions</u></p> <ul style="list-style-type: none"> <li>- 2.1 Linear and Quadratic Functions and Modeling</li> <li>- 2.2 Power Functions with Modeling</li> <li>- 2.3 Polynomial Functions of Higher Degree with Modeling</li> <li>- 2.4 Real Zeros of Polynomial Functions</li> <li>- 2.5 Complex Zeros and the Fundamental Theorem of Algebra</li> <li>- 2.6 Graphs of Rational Functions</li> <li>- 2.7 Solving Equations in One Variable</li> <li>- 2.8 Solving Inequalities in One Variable</li> </ul>	<p><u>Chapter 9: Discrete Mathematics</u></p> <ul style="list-style-type: none"> <li>- 9.4 Sequences</li> <li>- 9.5 Series</li> <li>- 9.2 The Binomial Theorem</li> <li>- 9.1 Basic Combinations</li> <li>- 9.3 Probability</li> </ul>
<p><u>Chapter 5: Analytic Trigonometry</u></p> <ul style="list-style-type: none"> <li>- 5.1 Fundamental Identities</li> <li>- 5.2 Proving Trigonometric Identities</li> </ul>	<p><u>Chapter 8: Analytic Geometry in 2 and 3 Dim</u></p> <ul style="list-style-type: none"> <li>- 8.1 Conic Sections and Parabolas</li> <li>- 8.2 Ellipses</li> <li>- 8.3 Hyperbola</li> </ul>	<p><u>Appendix A: Fractional Expressions</u> A3 (Pg 82)</p> <p><u>Chapter 7: Systems and Matrices</u></p> <ul style="list-style-type: none"> <li>- 7.4 Partial Fractions</li> </ul>	<p><u>Chapter 10: An Introduction to Calculus: Limits, Derivatives, and Integrals</u></p> <ul style="list-style-type: none"> <li>- 10.1 Limits and Motion: The Tangent Problems</li> <li>- 10.3 More on Limits</li> </ul>
<p><b>Optional Sections:</b></p> <ul style="list-style-type: none"> <li>-4.6 Graphs of Composite Trigonometric Functions</li> </ul>	<p><b>Optional Sections:</b></p> <ul style="list-style-type: none"> <li>- 8.4 Translation and Rotation of Axes</li> <li>- 8.5 Polar Equations of Conics</li> <li>- 8.6 Three-Dimensional Cartesian Coordinate System</li> </ul>	<p><b>Optional Sections:</b></p> <ul style="list-style-type: none"> <li>- 7.1 Solving Systems of Two Equations</li> <li>- 7.2 Matrix Algebra</li> <li>- 7.3 Multivariate Linear Systems and Row Operations</li> <li>- 7.5 Systems of Inequalities in Two Variables</li> </ul>	<p><b>Optional Sections:</b></p> <ul style="list-style-type: none"> <li>- 10.2 Limits and Motion:The area problem</li> <li>- 10.4 Numerical Derivatives and Integrals</li> </ul>