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Publisher Resource:

Precalculus with Limits (student logins will be provided)
Videos by Chapter and Section

Other Course Supplemental Resources:

LarsonPrecalculus.com (videos, pre- and post- tests by chapter)
Khan Academy Pre-Calculus
Free Pre-Calculus Math Videos
IXL Pre-Calculus
<table>
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<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
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</thead>
</table>
| 1 8/10 – 8/14 | **Unit 1 – Chapter 4 – Trigonometric Functions**  
- Introductions/Syllabus  
- Section 4.1 – Radian and Degree Measure  
- Section 4.1 – Arc Length, Terminal and Coterminal angles  
- Section 4.3 – Right Triangle Trigonometry  
- Section 4.2 – Unit Circle | Radians and Degrees - Khan Academy  
Special Right Triangles Proof - Khan Academy  
Deprecated Radians on the Unit Circle - Khan Academy |
| 2 8/17 – 8/21 | **Unit 1 – Chapter 4 – Trigonometric Functions**  
- Section 4.2 – Unit Circle  
- Section 4.3 – Identities  
- Section 4.4 – Trigonometric Functions of Any Angle | Depreciated Radians on the Unit Circle - Khan Academy  
Special Right Triangles Proof - Khan Academy |
| 3 8/24 – 8/28 | **Unit 1 – Chapter 4 – Trigonometric Functions**  
- Section 4.4 – Trigonometric Functions of Any Angle  
  Assessment  
- Section 4.5 – Graphs of Sine and Cosine Functions | Graph Sinusoidal Functions - Khan Academy |
| 4 8/31 – 9/4 | **Unit 1 – Chapter 4 – Trigonometric Functions**  
- Section 4.5 – Graphs of Sine and Cosine Functions  
- Section 4.6 – Graphs of Other Trigonometric Functions  
- Labor Day Holiday – 9/7 | Graph Sinusoidal Functions - Khan Academy - Graph sinusoidal functions  
Graph of y=tan(x) - Khan Academy |
| 5 9/7 – 9/11 | **Unit 1 – Chapter 4 – Trigonometric Functions**  
- Section 4.7 – Inverse Trigonometric Functions  
- Section 4.8 – Applications and Models  
  Assessment | Trigonometric Equations and Identities - Khan Academy |
| 6 9/14 – 9/18 | **Unit 1 – Chapter 4 – Trigonometric Functions** | Trigonometric Equations and Identities - Khan Academy |

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| 7   | 9/21 – 9/25 | • Section 4.8 – Applications and Models
  |      |           | Assessment
  |      |           | **Unit 1 – Chapter 4 – Trigonometric Functions**
  |      |           | • Section 5.1 – Using Fundamental Identities
  |      |           | • Section 5.2 – Verifying Trigonometric Identities
  | 8   | 9/28 – 10/2 | See links for Khan Academy, Sections 4.1 - 4.7
  |      |           | **Unit 2 – Chapter 5 – Analytic Trigonometry**
  |      |           | • Section 5.2 – Verifying Trigonometric Identities
  |      |           | • Section 5.3 – Solving Trigonometric Equations
  |      |           | Assessment
  | 9   | 10/5 – 10/9 | Proof of the Sine Angle Addition Identity - Khan Academy
  |      |           | **Unit 2 – Chapter 5 – Analytic Trigonometry**
  |      |           | • Section 5.3 – Solving Trigonometric Equations
  |      |           | Assessment
  |      |           | Proof of the Cosine Angle Additional Identity - Khan Academy

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### Quarter 2
#### Oct 12 – Dec 18

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<thead>
<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
</tr>
</thead>
</table>
| 1 10/12 – 10/16 | Teacher Planning Day 10/12  
| | PSAT 10/14  
| | **Unit 2 – Chapter 5 – Analytic Trigonometry**  
| | Section 5.4 – Sum and Difference Formulas  
| | Section 5.5 – Multiple Angle Formulas: Double-Angle and Half-Angle  
| | Assessment  
| | **Unit 2 – Chapter 5 – Analytic Trigonometry**  
| | Section 5.5 – Multiple Angle Formulas: Double-Angle and Half-Angle  
| | Assessment  
| 2 10/19 – 10/23 | **Unit 3 – Chapter 6 – Additional Topics in Trigonometry**  
| | Section 6.1 – Law of Sines  
| | Section 6.2 – Law of Cosines  
| | Assessment  
| 3 10/26 – 10/30 | **Unit 3 – Chapter 6 – Additional Topics in Trigonometry**  
| | Section 6.2 – Law of Cosines  
| | Assessment  
| | **Unit 3 – Chapter 6 – Vectors**  
| | Section 6.3 – Vectors in the Plane  
| 4 11/2 – 11/6 | Veterans Day 11/11  
| | **Unit 3 – Chapter 6 – Vectors**  
| | Section 6.3 – Vectors in the Plane  
| | Section 6.4 – Vectors and Dot Product  
| | Assessment  
| 5 11/9 – 11/13 | **Unit 3 – Chapter 6 – Vectors**  
| | Section 6.3 – Vectors in the Plane  
| | Section 6.4 – Vectors and Dot Product  
| | Assessment  
| 6 11/16 – 11/20 | **Unit 3 – Chapter 6 – Vectors**  
| | Section 6.4 – Vectors and Dot Product  
| | Section 6.5 - Trigonometric Form of a Complex Number  

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<table>
<thead>
<tr>
<th></th>
<th>Unit 3 – Chapter 6 – Vectors</th>
<th>Unit 4 – Chapter 8 – Binomial Theorem</th>
<th>Vector Dot Product and Vector Length - Khan Academy</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
<td>Assessment</td>
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<td>8</td>
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<td>Review</td>
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<tr>
<td>11/30 – 12/4</td>
<td>Assessment</td>
<td>Review semester content</td>
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<tr>
<td>9</td>
<td></td>
<td>Review semester content</td>
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</tr>
<tr>
<td>12/7 – 12/11</td>
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<td>District exams</td>
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<tr>
<td>12/14 – 12/18</td>
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### Quarter 3
Jan 5 – Mar 11

<table>
<thead>
<tr>
<th>Week</th>
<th>Major Concepts / Topics</th>
<th>Possible Resources</th>
</tr>
</thead>
</table>
| 1    | *Unit 5 – Chapter 1 – Functions and Their Graphs*  
  - Section 1.2 – Functions  
  - Section 1.3 – Graphs of Functions |  
  Assessment  
  *Unit 5 – Chapter 1 – Functions and Their Graphs*  
  - Section 1.4 – Shifting, Reflecting, and Stretching Graphs  
  - Section 1.5 – Combinations of Functions  
  - Section 1.6 – Inverse Functions |  
  Deprecated Domain and Range of Piece-Wise Functions - Khan Academy  
  Shifting and Reflecting Functions - Khan Academy  
  Adding Functions - Khan Academy  
  Verifying Inverse Functions by Composition - Khan Academy |
| 2    |  
  - Martin Luther King Jr. Holiday 1/18 |  
  *Unit 6 – Chapter 2 – Polynomial and Rational Functions*  
  - Section 2.1 – Quadratics |  
  Vertex and Axis of Symmetry of a Parabola - Khan Academy |
| 3    |  
  - Teacher Inservice 1/29 |  
  *Unit 6 – Chapter 2 – Polynomial and Rational Functions*  
  - Section 2.1 – Quadratics  
  - Section 2.2 - Polynomial Functions of Higher Degree  
  - Section 2.3 – Real Zeros of Polynomial Functions |  
  The Parts of Polynomial Expressions - Khan Academy  
  Zeros of Polynomials and Their Graphs - Khan Academy  
  Classify Complex Numbers - Khan Academy |
| 4    |  
  - Teacher Inservice 1/29 |  
  *Unit 6 – Chapter 2 – Polynomial and Rational Functions*  
  - Section 2.1 – Quadratics  
  - Section 2.2 - Polynomial Functions of Higher Degree  
  - Section 2.3 – Real Zeros of Polynomial Functions |  
  The Fundamental Theorem of Algebra - Khan Academy  
  Graphing Rational Functions 2 - Khan Academy |
| 5    |  
  - Teacher Inservice 1/29 |  
  *Unit 6 – Chapter 2 – Polynomial and Rational Functions*  
  - Section 2.3 – Real Zeros of Polynomial Functions |  
  Classify Complex Numbers - Khan Academy  
  The Fundamental Theorem of Algebra - Khan Academy  
  Graphing Rational Functions 2 - Khan Academy |

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<th>Unit/Section</th>
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</tr>
</thead>
<tbody>
<tr>
<td>6 2/8 – 2/12</td>
<td>Unit 6 – Chapter 2 – Polynomial and Rational Functions</td>
<td>Graphing Rational Functions 3 - <a href="https://www.khanacademy.org">Khan Academy</a></td>
</tr>
<tr>
<td></td>
<td>• Section 2.4 – Complex Numbers</td>
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<tr>
<td></td>
<td>• Section 2.5 – The Fundamental Theorem of Algebra</td>
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<td></td>
<td>• Section 2.6 – Rational Functions and Asymptotes</td>
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<td>• Section 2.7 – Slant Asymptotes &amp; Graphs of Rational Functions</td>
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<td></td>
<td>• Review</td>
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<td>• Assessment</td>
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</tr>
<tr>
<td>7 2/15 – 2/19</td>
<td>• Presidents Day Holiday 2/15</td>
<td>Intro to Limits - <a href="https://www.khanacademy.org">Khan Academy</a></td>
</tr>
<tr>
<td></td>
<td>Unit 7 – Chapter 11-Limits</td>
<td>One-Sided Limits from Graphs - <a href="https://www.khanacademy.org">Khan Academy</a></td>
</tr>
<tr>
<td></td>
<td>• Section 11.1 – Introduction to Limits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Section 11.2 – Techniques for Evaluating Limits</td>
<td></td>
</tr>
<tr>
<td>8 2/22 – 2/26</td>
<td>Unit 7 – Chapter 11 – Limits</td>
<td>Derivative as a Limit - <a href="https://www.khanacademy.org">Khan Academy</a></td>
</tr>
<tr>
<td></td>
<td>• Section 11.2 – Techniques for Evaluating Limits</td>
<td>Infinite Limits Introduction - <a href="https://www.khanacademy.org">Khan Academy</a></td>
</tr>
<tr>
<td></td>
<td>• Section 11.3 – The Tangent Line Problem</td>
<td></td>
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<tr>
<td></td>
<td>• Section 11.4 – Limits at Infinity and Limits of Sequences</td>
<td></td>
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<tr>
<td>9 3/1 – 3/5</td>
<td>Unit 7 – Chapter 11 – Limits</td>
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<td></td>
<td>• Section 11.3 – The Tangent Line Problem</td>
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<td></td>
<td>• Section 9.1 - Circles</td>
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<td>• Assessment</td>
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<tr>
<td>10 3/8 – 3/11</td>
<td>Unit 8 – Chapter 9 – Conics</td>
<td>Introduction to the Binomial Theorem - <a href="https://www.khanacademy.org">Khan Academy</a></td>
</tr>
<tr>
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<td>• Section 9.1 – Parabolas</td>
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<tr>
<td></td>
<td>• Section 9.2 – Ellipses</td>
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<tr>
<td>1 3/15 – 3/19</td>
<td><strong>SPRING BREAK – NO SCHOOL</strong></td>
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</tbody>
</table>
| 2 3/22 – 3/26 | **Unit 8 – Chapter 9 – Conics/Trig. Form of Complex Numbers and Polar Coordinates**  
- Section 9.3 – Hyperbolas  
- Section 9.5 – Polar Coordinates  
Assessment | Features of a Circle From its Standard Equation - Khan Academy  
Equation of a Parabola From Focus and Directrix - Khan Academy  
Foci of an Ellipse - Khan Academy |
| 3 3/29 – 4/2 | **Unit 8 – Chapter 9 – Conics**  
- Review  
Assessment  
- Holiday 4/2 | Foci of an Ellipse - Khan Academy  
Foci of a Hyperbola - Khan Academy |
| 4 4/5 – 4/9 | **Unit 9 – Chapter 3 – Exponential and Logarithmic Functions**  
- Section 3.1 – Exponential Functions and Their Graphs  
- Section 3.2 – Logarithmic Functions and Their Graphs | Exponential and Logarithmic Functions - Khan Academy  
Properties of Logarithms - Khan Academy |
| 5 4/12 – 4/16 | **Unit 9 – Chapter 3 – Exponential and Logarithmic Functions**  
- Section 3.3 – Properties of Logarithms (change of base only)  
Assessment  
- Section 3.3 – Properties of Logarithms (complete) | Properties of Logarithms - Khan Academy |
| 6 4/19 – 4/23 | **Unit 9 – Chapter 3 – Exponential and Logarithmic Functions**  
- Section 3.4 – Solving Exponential and Logarithmic Equations  
- Section 3.5 – Exponential and Logarithmic Models | |
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<th>Exponential Logarithmic Functions - <a href="https://www.khanacademy.org">Khan Academy</a></th>
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<tbody>
<tr>
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<td>Assessment</td>
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<tr>
<td>4/26 – 4/30</td>
<td>• Course Review and AP Calculus Preparation</td>
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<td>8</td>
<td>• Course Review and AP Calculus Preparation</td>
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</tr>
<tr>
<td>5/3 – 5/7</td>
<td>• Course Review and AP Calculus Preparation</td>
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<tr>
<td>9</td>
<td>• Course Review and AP Calculus Preparation</td>
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<tr>
<td>5/10 – 5/14</td>
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<tr>
<td>5/17 – 5/21</td>
<td>• District Exams</td>
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<tr>
<td>11</td>
<td>• District Exams</td>
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<tr>
<td>5/24 – 5/25</td>
<td>• District Exams</td>
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