

# Summer Packet Online Videos

## AP Calculus AB Summer Packet

\*most videos are located on Khan Academy when possible.

Topic	Video Link
<b><i>Fractional and Negative Exponents</i></b>	<p>Overview of Exponential Properties: <a href="https://www.khanacademy.org/math/pre-algebra/exponents-radicals/exponent-properties">https://www.khanacademy.org/math/pre-algebra/exponents-radicals/exponent-properties</a></p> <p>Fractional and Negative Exponents: <a href="https://www.khanacademy.org/math/pre-algebra/exponents-radicals/negative-exponents-tutorial/v/zero-negative-and-fractional-exponents">https://www.khanacademy.org/math/pre-algebra/exponents-radicals/negative-exponents-tutorial/v/zero-negative-and-fractional-exponents</a></p>
<b><i>Domain</i></b>	<p>Domain of a Square Root Function: <a href="https://www.youtube.com/watch?v=lj_JB8sfyIM">https://www.youtube.com/watch?v=lj_JB8sfyIM</a></p> <p>Domain of a Rational Function: <a href="https://www.youtube.com/watch?v=MS_vs4IsGN0">https://www.youtube.com/watch?v=MS_vs4IsGN0</a></p> <p>Domain of a Radical involving a Quadratic: <a href="https://www.youtube.com/watch?v=UMG8HrzQZgg">https://www.youtube.com/watch?v=UMG8HrzQZgg</a></p>
<b><i>Solving Inequalities</i></b>	<p>Absolute Value Linear Inequalities: <a href="https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/absolute-value-equations/v/absolute-value-inequalities">https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/absolute-value-equations/v/absolute-value-inequalities</a></p> <p>Quadratic Inequalities: <a href="https://www.khanacademy.org/math/algebra2/polynomial-and-rational/quad-ineq/v/quadratic-inequalities">https://www.khanacademy.org/math/algebra2/polynomial-and-rational/quad-ineq/v/quadratic-inequalities</a></p> <p>Rational Inequalities: <a href="https://www.khanacademy.org/math/algebra2/rational-expressions/solving-rational-equations/v/rational-inequalities">https://www.khanacademy.org/math/algebra2/rational-expressions/solving-rational-equations/v/rational-inequalities</a></p>
<b><i>Even and Odd Functions</i></b>	<p>Visual Symmetry Idea of Even and Odd Functions: <a href="https://www.khanacademy.org/math/algebra2/functions-and-graphs/analyzing-functions/v/recognizing-odd-and-even-functions">https://www.khanacademy.org/math/algebra2/functions-and-graphs/analyzing-functions/v/recognizing-odd-and-even-functions</a></p> <p>Algebraic Theorem Applied for Even and Off Functions: <a href="https://www.youtube.com/watch?v=DxaUcs2BigQ">https://www.youtube.com/watch?v=DxaUcs2BigQ</a></p>

<b>Function Transformation</b>	Summary of Transformations: <a href="http://www.youtube.com/watch?v=An29CALYjAA&amp;sns=em">http://www.youtube.com/watch?v=An29CALYjAA&amp;sns=em</a>
<b>Factor Theorem</b>	<a href="http://www.youtube.com/watch?v= IPqCaspZO&amp;sns=em">http://www.youtube.com/watch?v= IPqCaspZO&amp;sns=em</a>
<b>Special Factorization</b>	Overview of Most Types of Factoring: <a href="https://www.khanacademy.org/math/algebra2/polynomial_and_rational">https://www.khanacademy.org/math/algebra2/polynomial_and_rational</a> Factoring Out GCF of Fractional Exponent: <a href="https://www.youtube.com/watch?v=ZUJX-K7aX_w">https://www.youtube.com/watch?v=ZUJX-K7aX_w</a>
<b>Solving by Factoring or Quadratic Formula</b>	Review the factoring videos on Khan Academy <a href="https://www.khanacademy.org/math/algebra/multiplying-factoring-expression">https://www.khanacademy.org/math/algebra/multiplying-factoring-expression</a>
<b>Asymptotes</b>	<a href="https://www.khanacademy.org/video/finding-asymptotes-example">https://www.khanacademy.org/video/finding-asymptotes-example</a>
<b>Simplifying Expressions</b>	Too broad of a topic to find a specific video on
<b>Composition of Functions</b>	<a href="https://www.khanacademy.org/math/algebra2/functions_and_graphs/composing-functions/v/function-composition">https://www.khanacademy.org/math/algebra2/functions_and_graphs/composing-functions/v/function-composition</a>
<b>Rationalizing Denominators and Numerators</b>	<a href="http://www.youtube.com/watch?v=ERicgvK0jIw&amp;sns=em">http://www.youtube.com/watch?v=ERicgvK0jIw&amp;sns=em</a>
<b>Logarithms and Exponentials</b>	Exponential Properties: <a href="https://www.khanacademy.org/math/algebra/exponent-equations/exponent-properties-algebra/v/evaluating-exponential-expressions-3">https://www.khanacademy.org/math/algebra/exponent-equations/exponent-properties-algebra/v/evaluating-exponential-expressions-3</a> Logarithm Basics: <a href="https://www.khanacademy.org/math/algebra2/logarithms-tutorial/logarithm_basics/v/logarithms">https://www.khanacademy.org/math/algebra2/logarithms-tutorial/logarithm_basics/v/logarithms</a> Natural Log: <a href="https://www.khanacademy.org/math/algebra2/logarithms-tutorial/natural_logarithm/v/natural-logarithm-with-a-calculator">https://www.khanacademy.org/math/algebra2/logarithms-tutorial/natural_logarithm/v/natural-logarithm-with-a-calculator</a> Log Properties: <a href="https://www.khanacademy.org/math/algebra2/logarithms-tutorial/logarithm_properties/v/introduction-to-logarithm-properties">https://www.khanacademy.org/math/algebra2/logarithms-tutorial/logarithm_properties/v/introduction-to-logarithm-properties</a>
<b>Unit Circle</b>	<a href="https://www.khanacademy.org/math/trigonometry/unit-circle-trig-func/Trig-unit-circle">https://www.khanacademy.org/math/trigonometry/unit-circle-trig-func/Trig-unit-circle</a> Inverse Trig: <a href="https://www.khanacademy.org/math/trigonometry/unit-circle-trig-func/inverse_trig_functions">https://www.khanacademy.org/math/trigonometry/unit-circle-trig-func/inverse_trig_functions</a>
<b>Solving Trig. Equations</b>	Basic: <a href="https://www.youtube.com/watch?v=26EWKD2Xha4">https://www.youtube.com/watch?v=26EWKD2Xha4</a> Using Factoring: <a href="https://www.youtube.com/results?search_query=solve+trig+equations+factoring">https://www.youtube.com/results?search_query=solve+trig+equations+factoring</a>

	Using Double Angles: <a href="https://www.youtube.com/watch?v=7Eo-fuy0f7g">https://www.youtube.com/watch?v=7Eo-fuy0f7g</a>
<b><i>Equations of Lines</i></b>	Writing the Equation of a Line: <a href="https://www.khanacademy.org/video/point-slope-and-slope-intercept-form-from-two-points">https://www.khanacademy.org/video/point-slope-and-slope-intercept-form-from-two-points</a> Parallel and Perpendicular Lines: <a href="https://www.khanacademy.org/video/equations-of-parallel-and-perpendicular-lines">https://www.khanacademy.org/video/equations-of-parallel-and-perpendicular-lines</a>
<b><i>Conic Sections</i></b>	Introduction: <a href="https://www.khanacademy.org/math/algebra2/conics_precalc/conic_section_intro/v/introduction-to-conic-sections">https://www.khanacademy.org/math/algebra2/conics_precalc/conic_section_intro/v/introduction-to-conic-sections</a>
<b><i>Difference Quotient</i></b>	<a href="https://www.youtube.com/watch?v=1O5NEI8UuHM">https://www.youtube.com/watch?v=1O5NEI8UuHM</a>
<b><i>Trig. Identities</i></b>	Basic: <a href="https://www.khanacademy.org/math/trigonometry/less-basic-trigonometry/pythagorean-identity/v/pythagorean-trig-identity-from-soh-cah-toa">https://www.khanacademy.org/math/trigonometry/less-basic-trigonometry/pythagorean-identity/v/pythagorean-trig-identity-from-soh-cah-toa</a> Pythagorean Identities: <a href="https://www.khanacademy.org/math/trigonometry/less-basic-trigonometry/pythagorean-identity/v/examples-using-pythagorean-identities-to-simplify-trigonometric-expressions">https://www.khanacademy.org/math/trigonometry/less-basic-trigonometry/pythagorean-identity/v/examples-using-pythagorean-identities-to-simplify-trigonometric-expressions</a> Using Trig. Identities with Fractions: <a href="https://www.youtube.com/watch?v=Jx6zJUbWJKY">https://www.youtube.com/watch?v=Jx6zJUbWJKY</a>