Advanced Placement Calculus AB 2021-2022

Please Note:

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Publisher Resource:

College Board

Other Course Supplemental Resources:

For All Topics – Help Materials and Online Tutorials

For All Topics – AP Calculus AB Help (Varsity Tutors)

For All Topics – AP Calculus Notes and Videos (WOWmath.org)

For All Topics – Online Tutorials

Exam Practice:

AP Calculus AB Sample Questions

The AP Calculus AB Exam - AP Central

AP Calculus Questions with Answers (Practice)

AP Calculus AB-BC - Albert

AP Calculus Practice Questions – Khan Academy

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	Week	Major Concepts / Topics	Possible Resources
Quarter 1 Aug 16 – Oct 15	1 8/16 – 8/20	• Lesson 3 – Functions and Their Graphs • Lesson 1.2 – Finding Limits Graphically and Numerically	*Unit: Limits and continuity* - *Khan Academy* Finding limits graphically – Khan Academy
	2 8/23 – 8/27	• Lesson 1.3 – Evaluating Limits Analytically • Quiz • Lesson 1.4 – Continuity and One-Sided Limits	*Estimating limit values from graphs unit* - *Khan Academy* *Determining limits using algebraic properties unit*- *Khan Academy* One sided limits - Khan Academy
	3 8/30 – 9/3	• Lesson 1.4 – Continuity and One-Sided Limits • Lesson 1.5 – Infinite Limits	Introduction to infinite limits - Khan Academy
	4 9/6 – 9/10	• Labor Day Holiday – 9/6 • Quiz • Assessment • Lesson 2.1 – The Derivative and the Tangent Line Problem	*Unit: Differentiation: definition and basic derivative rules* - *Khan Academy* Derivative and tangent line equations – Khan Academy
	5 9/13 – 9/17	• Interims Issued – 9/14 • Lesson 2.1 – The Derivative and the Tangent Line Problem • Lesson 2.2 – Basic Differentiation Rules and Rates of Change	Secant lines and average rates of change – Khan Academy
	6 9/20 – 9/24	• Lesson 2.3 – Product and Quotient Rules and Higher-Order Derivatives • Quiz • Lesson 2.4 – The Chain Rule	Product rule - Khan Academy Quotient rule - Khan Academy Chain Rule - Khan Academy
	7 9/27 – 10/1	• Lesson 2.4 – The Chain Rule • Lesson 2.5 – Implicit Differentiation • Quiz	*Unit: Differentiation: composite, implicit, and inverse functions* - *Khan Academy* Implicit differentiation - Khan Academy
	8 10/4 – 10/8	• Assessment • Lesson 2.6 – Related Rates and Project	*Unit: Contextual applications of differentiation* - *Khan Academy* *Related rates unit* - *Khan Academy*
	9 10/11 – 10/15	• Lesson 2.6 – Related Rates and Project • Quiz • Lesson 3.1 – Extrema on an Interval	Finding absolute extrema on an a closed interval - Khan Academy

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Quarter 2 Oct 19 – Dec 21	1 10/19 – 10/22	• Lesson 3.2 – Rolle's Theorem and the Mean Value Theorem • Lesson 3.3 – Increasing and Decreasing Functions and the First Derivative Test	*Unit: Applying derivatives to analyze functions* - Khan Academy Mean value theorem - Khan Academy *Using the first derivative test unit* - Khan Academy
	2 10/25 – 10/29	• Report Cards – 10/26 • Lesson 3.4 – Concavity and the Second Derivative • Lesson 3.5 – Limits at Infinity	Second derivative test - Khan Academy
	3 11/1 – 11/5	• Lesson 3.6 – A Summary of Curve Sketching • Quiz • Assessment	Curve sketching - Khan Academy
	4 11/8 – 11/12	• Veterans Day 11/11 • Lesson 3.7 – Optimization Problems and Project	*Optimization unit* - Khan Academy
	5 11/15 – 11/19	• Interims Issued – 11/16 • Lesson 3.7 – Optimization Problems and Project • Lesson 3.9 – Differentials • Lesson 4.1 – Antiderivatives and Indefinite Integration	*Unit: Differential equations* - Khan Academy *Unit: Integration and accumulation of change* - Khan Academy Indefinite integrals - Khan Academy
	6 11/22 – 11/26	• Thanksgiving Packet • Thanksgiving Holiday 11/24 – 11/26	*Approximating with Riemann sums unit* - Khan Academy *Riemann sums, summation notation and definite integral notation unit* - Khan Academy *Applying properties of definite integrals unit* - Khan Academy
	7 11/29 – 12/3	• Lesson 4.1 – Antiderivatives and Indefinite Integration • Lesson 4.2 – Area • Lesson 4.3 – Riemann Sums and Definite Integrals	*Fundamental theorem of calculus and accumulation functions unit* - Khan Academy
	8 12/6 – 12/10	• Lesson 4.3 – Riemann Sums and Definite Integrals • Lesson 4.4 – The Fundamental Theorem of Calculus	
	9 12/13 – 12/17	• Assessment • Standards Review	

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	10 12/20 – 12/24	• Standards Review • Second Quarter/First Semester Ends – 12/21 • Winter Break – 12/22 – 1/4	

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Quarter 3 Jan 6 – Mar 10	1 1/6 – 1/7	• Lesson 4.5 – Integration by Substitution • Lesson 4.6 – Numerical Integration	Integrat*ing using substitution unit* - *Khan Academy*
	2 1/10 – 1/14	• Assessment • Lesson 5.1 – The Natural Logarithmic Function: Differentiation • Lesson 5.2 – The Natural Logarithmic Function: Integration	U-substitution: logarithmic function - Khan Academy Derivative of ln(x) - Khan Academy
	3 1/17 – 1/21	• Martin Luther King Jr. Holiday – 1/17 • Integration • Lesson 5.3 – Inverse Functions • Report Cards – 1/19	Derivatives of inverse functions - Khan Academy
	4 1/24 – 1/28	• Lesson 5.4 – Exponential Functions: Differentiation and Integration	*Exponential functions differentiation unit* - *Khan Academy*
	5 1/31 – 2/4	• Lesson 5.5 – Bases Other Than e and Applications • Assessment	Bases other than e - Khan Academy
	6 2/7 – 2/11	• Teacher Inservice – 2/7 • Interims Issued – 2/8 • Lesson 5.6 – Inverse Trigonometric Function: Differentiation • Lesson 5.7 – Inverse Trigonometric Functions: Integration	*Differentiating inverse trigonometric functions unit* - *Khan Academy*
	7 2/14 – 2/18	• Assessment • Lesson 6.1 – Slope Fields and Euler's Method • Lesson 6.2 – Differential Equations: Growth and Decay •	*Unit: Differential equations* - *Khan Academy* *Sketching slope fields unit* - *Khan Academy* *Reasoning using slope fields unit*- *Khan Academy* Euler's method: Khan Academy
	8 2/21 – 2/25	• Presidents Day Holiday – 2/21 • Lesson 7.1 – Area of a Region Between Two Curves	*Unit: Applications of integration* - *Khan Academy* *Finding the area between curves expressed as functions of x unit* - *Khan Academy*

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	9 2/28 – 3/4	• Lesson 7.2 – Volume: The Disc Method • Assessment • FRQ - Differential Equations	Volume with disc method: revolving around x or y axis unit - Khan Academy Volume with disc method: revolving around other axes unit - Khan Academy
	10 3/7 – 3/10	• Spring Break Packet	

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Quarter 4 Mar 14 – June 2	1 3/14 – 3/18	• **SPRING BREAK – NO SCHOOL** • Spring Break Packet	
	2 3/21 – 3/25	• AP Exam Prep	*Unit: AP Calculus AB solved frqs from past exams - Khan Academy*
	3 3/28 – 4/1	• Report Cards – 3/29 • AP Exam Prep	
	4 4/4 – 4/8	• AP Exam Prep	
	5 4/11 – 4/15	• AP Exam Prep • Holiday – 4/15	
	6 4/18 – 4/22	• Holiday – 4/18 • AP Exam Prep	
	7 4/25 – 4/29	• Interims Issued – 4/26 • AP Exam Prep	
	8 5/2 – 5/6	• 2022 AP Exams will be administered during the first two full weeks of May 2022, with late testing occurring during the 3rd week of May	
	9 5/9 – 5/13	• Project	
	10 5/16 – 5/20	• Project	
	11 5/23 – 5/27	• Project	
	12 5/30 – 6/2	• Memorial Day Holiday – 5/30 • Project	

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