



AP Calculus 1 Outline 2020

		Topic		Larson Text	
First Semester	Unit 1: Limits and Their Properties	A	Finding Limits Graphically and Numerically	1.2	
		B	Evaluating Limits Analytically	1.3	
		C	Continuity and One-Sided Limits	1.4	
		D	Infinite Limits	1.5	
	Midterm				
	Unit 2: Differentiation	A	The Derivative and the Tangent Line Problem	2.1	
		B	Basic Differentiation Rules and Rates of Change	2.2	
		C	Product and Quotient Rules and Higher-Order Derivatives	2.3	
		D	The Chain Rule	2.4	
		E	Derivatives of Logarithms and Exponentials	5.1, 5.4	
		F	Derivatives of trigonometric Functions	5.6	
		G	Implicit Differentiation	2.5	
	Derivative Midterm				
	Unit 3: Applications of Differentiation	A	Extrema on an Interval	3.1	
		B	Rolle's Theorem and the Mean Value Theorem	3.2	
		C	Increasing and Decreasing Functions and the First Derivative Test	3.3	
		D	Concavity, the Second Derivative Test, and Curve Sketching	3.4, 3.6	
		E	Limits at Infinity and L'Hospital's rule.	3.5	
		F	Related Rates	2.6	
		G	Optimization Problems	3.7	
Final					

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Second Semester	Unit 4: Integration	A	Antiderivatives and Indefinite Integration	4.1	
		B	Area	4.2	
		C	Riemann Sums and Definite Integrals	4.3	
		D	The Fundamental Theorem of Calculus	4.4	
		E	Integration by Substitution	4.5	
		F	Numerical Integration	4.6	
	Integral Midterm				
	Unit 5: Integrating Transcendental Functions	A	The Natural Logarithmic Function: Integration	5.2	
		B	Inverse Functions	5.3	
		C	Exponential Functions: Integration	5.4, 5.5	
		D	Inverse Trigonometric Functions: Integration	5.7	
	Integral Apps Midterm				
	Unit 6: Differential Equations	A	Slope Fields and Euler's Method	6.1	
		B	Differential Equations: Growth and Decay	6.2	
		C	Separation of Variables	6.3	
		D	First-Order Linear Differential Equations	6.4	
	Unit 7: Applications of Integration	A	Area of a Region Between Two Curves	7.1	
		B	Volume: The Disk Method	7.2	
		C	Volume: The Shell Method	7.3	
	Final				