Calculus Sequence
CONNECT
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Topics	BCC	BSC	CCCC	MCC	UMD	MMA
Graphs and Models	1			1		1
Linear Models and Rates of Change	1		1	1	1	1
Functions and Their Graphs/A library of functions	1	1	1	1	1	1
Finding Limits Graphically and Numerically	1	1	1	1	1	1
Evaluating Limits Analytically	1	1	1	1	1	1
Continuity and One-Sided Limits	1	1	1	1	1	1
Infinite Limits	1	1	1	1	1	1
The Derivative and the Tangent Line Problem	1	1	1	1	1	1
Basic Differentiation Rules and Rates of Change	1	1	1	1	1	1
Product and Quotient Rules and Higher-Order Derivatives	1	1	1	1	1	1
The Chain Rule	1	1	1	1	1	1
Implicit Differentiation	1	1	1	1	1	1
Related Rates	1	1	1	1	1	1
Extrema on an Interval	1	1	1	1	1	1
Rolle's Theorem and the Mean Value Theorem	1	1	1	1		1
Increasing and Decreasing Functions and the First Derivative Test	1	1	1	1		1
Concavity and the Second Derivative Test	1	1	1	1	1	1
Limits at Infinity	1	1	1	1	1	1
A Summary of Curve Sketching	1	1	1	1	1	1
Optimization Problems	1	1	1	1		1
Newton's Method	1		1	1		1
Differentials	1	1	1	1	1	1
Antiderivatives	*1*	2	1	1	1	1
Approximate area under a curve using upper and lower sums	1		1	1	1	1
Evaluate definite integrals using the limit definition.	1	2	1	1	1	1
Approximate the value of a definite integral using the midpoint rule, the trapezoidal rule , and Simpson's rule	1		1	1	1	1
Use error analysis for the trapezoidal rule and Simpson's rule	1		1 opt		1	1
Use the Fundamental Theorem of Calculus to evaluate definite integrals and calculate area	1	2	1	1	1	1
Use the Second Fundamental Theorem of Calculus	1	2	1	1		1

Prepared by j.devoe 12/12/08

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Evaluate integrals using change of variable and substitution	2	2	1	2	2	1,2
Evaluate definite integrals using integration rules	2	2	2	2	2	1
Use differentiation rules for logarithmic, exponential, inverse trigonometric, hyperbolic, and inverse hyperbolic functions	2	2?	2	2	1	1,2
Use logarithmic differentiation	2		2	2	1	3
Use integration formulas for logarithmic, exponential , hyperbolic, and inverse hyperbolic functions	2	2	2	2	2	1,2
Evaluate integrals that result in inverse trigonometric functions	2	2	2	2	2	2
Solve problems using applications of exponential functions	2	2	2	2	2	1
Solve differential equations using separation of variables.		2	2	2	2	
Find the area of the region between two curves	2	2	1	2	2	2
Find the volume of a solid of revolution by the disc or washer method or by the shell method.	2	2	1	2	2	2
Find the arc length of the graph of a curve.	2	2	1	2 opt.	2	2
Find the area of a surface of revolution.		2	opt	2 opt.	1	2
: Find work done by constant and variable forces	2		opt	2 opt.	1	2
Integration by Parts	2	2	2	2	2	2
Trigonometric Integrals	2	2	2	2	2	1,2
Trigonometric Substitution	2	2	2	2	2	2
Partial Fractions	2	2	2	2	2	2
Integration by Tables and Other Integration Techniques	2	2	2	2	2	2
Indeterminate Forms and L'Hôpital's Rule	2	2	1,2	2	1	3
Improper Integrals	2	2	1,2	2	2	3
Sequences	2	3	2	3	2	3
Series and Convergence	2	3	2	3	2	3
The Integral Test and p-Series	2	3	2	3	2	3
Comparisons of Series	2	3	2	3	2	3
Alternating Series	2	3	2	3	2	3
The Ratio and Root Tests	2	3	2	3	2	3
Taylor Polynomials and Approximations	2	3	2	3	2	3
Power Series	2	3	2	3	2	3
Representations of Functions by Power Series	2	3	2	3	2	3

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Taylor and MacLaurin Series	2	3	2	3	2	3
Conics and Calculus	3	3	opt	3		3
Plane Curves and Parametric Equations	3	4	3	3	1	
Parametric Equations and Calculus	3	4	3	3	1	
Polar Coordinates and Polar Graphs	3	4	2,,3	3	1	3
Area and Arc Length in Polar Coordinates	3		3		1	
Polar Equations of Conics and Kepler's Laws	3		3	3		
Partial Derivatives	3	3	3	3		2,3
Directional Derivatives	3	3	3			3
Max/Min	3	3	3			
Multiple Integration	3	3	3	3		
Vector Differentiation	3	4	3			3
Vector Integration	3	4	3			
Line Integrals		4	3			3
Green's Theorem		4	3			
Limits *	3	4	3			3
Continuity*	3	4	3			
Differentiability*		4	3			
Integrability*		4	3			
Differential Equations, Introduction	*1,2,3,4*			1,2,3		