AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
Precalculus Review		
	Introduction to AP Calculus	
	Writing Two-Variable Linear Equations	
		Create linear equations given information about points, slope, and intercepts.
		Solve problems by writing two-variable linear equations.
	Reading Lesson 1.1	
	Composition of Functions	
		Write an expression for the composition of functions.
		Find the domain of the composition of functions.
		Evaluate the composition of functions.
	Symmetry	
		Determine the symmetry of a relation from a graph.
		Determine the symmetry of a function algebraically.
	Piecewise Defined Functions	
		Graph piecewise defined functions.
		Evaluate piecewise defined functions.
		Determine the domain, range, and continuity of piecewise defined functions.
	Reading Lesson 1.2	
	Graphing Exponential Functions	
		Identify exponential functions.
		Determine the domain and range of exponential functions.
		Graph exponential functions.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Base e	
		Apply properties of logarithms and exponents to solve exponential and logarithmic equations having base e.
		Analyze exponential and logarithmic functions in base e to determine key features of the graph.
		Determine the domain and range of exponential and logarithmic functions in base e.
	Modeling with Exponential and Logarithmic Equations	
		Model and solve real-world problems using exponential and logarithmic functions.
	Reading Lesson 1.3	
	Parametric Equations	
		Define curves parametrically.
		Graph parametric equations.
		Determine the Cartesian equation that contains a given parametric equation.
	Reading Lesson 1.4	
	Function Inverses	
		Find the inverse of a function.
		Use composition to verify that functions are inverses.
	Graphing Logarithmic Functions	
		Identify logarithmic functions.
		Determine the domain and range of logarithmic functions.
		Identify and analyze the graphs of logarithmic functions.
	Properties of Logarithms	
		Evaluate, expand, and simplify logarithmic expressions using properties of logarithms.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Reading Lesson 1.5	
	Radian Measure	
		Convert between degree and radian measure.
		Use the definition of radian measure to calculate arc lengths, radii, and angle measures.
	Evaluating the Six Trigonometric Functions	
		Evaluate the six trigonometric functions for angles in degrees or radians based on one or more given trigonometric function values.
		Evaluate the six trigonometric functions for angles in degrees or radians given a point on the terminal ray.
	Solving Trigonometric Equations	
		Analyze key features of inverse trigonometric functions from equations and graphs.
		Evaluate inverse trigonometric functions over a specified domain.
		Solve trigonometric equations over a specified domain.
	Modeling with Periodic Functions	
		Model and solve real-world problems using periodic functions.
	Reading Lesson 1.6	
	Technology Corner	
	Unit Test	
		Find the domain of the composition of functions.
		Determine the symmetry of a function algebraically.
		Determine the domain, range, and continuity of piecewise-defined functions.
		Apply properties of logarithms and exponents to solve exponential and logarithmic equations having base e.
		Analyze exponential and logarithmic functions in base e to determine key features of the graph.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Model and solve real-world problems using exponential and logarithmic functions.
		Evaluate, expand, and simplify logarithmic expressions using properties of logarithms.
		Evaluate the six trigonometric functions for angles in degrees or radians based on one or more given trigonometric function values.
		Analyze key features of inverse trigonometric functions from equations and graphs.
		Solve trigonometric equations over a specified domain.
		Model and solve real-world problems using periodic functions.
		Define curves parametrically.
Limits and Continuity		
	Introduction to Unit 2	
	Rates of Change, Limits, and the Squeeze Theorem	
		Determine average speed.
		Compare average speed to instantaneous speed.
		Define the limit of a function and the properties of limits.
		Identify conditions under which a limit does and does not exist.
		Determine one-sided and two-sided limits of functions.
		Use the squeeze theorem to indirectly find limits.
	Reading Lesson 2.1	
	Limits Involving Infinity and Vertical and Horizontal Asymptotes	
		Calculate limits as x goes to positive and negative infinity.
		Find vertical and horizontal asymptotes using limits.
		Determine end behavior of a function using limits.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Reading Lesson 2.2	
	Continuous Functions and Intermediate Value Theorem	
		Identify intervals of continuity and discontinuity over intervals of a function.
		Identify types of discontinuity, including jump, infinite, and oscillating.
		Modify or extend a function to remove discontinuities.
		Use properties of continuous functions to determine function continuity over algebraic combinations.
		Use the intermediate value theorem to verify continuity.
	Reading Lesson 2.3	
	Slope, Tangent Line, and Normal Line	
		Calculate the average rate of change of a function.
		Determine the slope of the tangent line at a point using limits.
		Determine the equation of the tangent line to a curve at a given point.
		Determine the equation of the normal line to a curve at a given point.
	Reading Lesson 2.4	
	Unit 2 Project	
	Technology Corner	
	Unit Test	
		Determine average speed.
		Compare average speed to instantaneous speed.
		Identify conditions when a limit does and does not exist.
		Define the limit of a function and the properties of limits.

AP Calculus AB - MA5186	Scope and Sequence
Unit Lesson	**Objectives**
	Determine one-sided and two-sided limits of functions.
	Use the sandwich theorem to find limits indirectly.
	Determine end behavior of a function using limits.
	Find vertical and horizontal asymptotes using limits.
	Calculate limits as x goes to positive and negative infinity.
	Identify intervals of continuity and discontinuity over intervals of a function.
	Identify types of discontinuity, including jump, infinite, and oscillating.
	Modify or extend a function to remove discontinuities.
	Use properties of continuous functions to determine function continuity after algebraic combinations.
	Use the intermediate value theorem to verify continuity.
	Determine the slope of the tangent line at a point using limits.
	Determine the equation of the tangent line at a given point.
	Determine the equation of the normal line to a curve at a given point.
	Calculate the average rate of change of a function.
Derivatives	
Introduction to Unit 3	
Derivatives of Functions	
	Determine the derivative of a function using the definition of a derivative.
	Calculate the derivative of a function at a point.
	Sketch a graph of the derivative of a function when given its graph.
	Sketch a graph of a function when given the graph of its derivative.
	Approximate the derivative of a function from a given data set.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Determine if a function is differentiable on a closed interval.
	Reading Lesson 3.1	
	Derivatives and Continuity	
		Estimate derivatives using graphs and numerical approximation.
		Identify different types of non-differentiable points, including discontinuities, vertical tangents, corners, and cusps.
	Reading Lesson 3.2	
	Differentiation Rules	
		Use the power rule to find derivatives.
		Use the product rule to find derivatives.
		Use the quotient rule to find derivatives.
		Calculate second derivatives and higher-order derivatives using rules of differentiation.
		Calculate instantaneous rate of change using the derivative.
	Reading Lesson 3.3	
	Applications of Derivatives	
		Use derivatives to solve problems involving motion in a straight line.
		Solve real-world problems involving rates of change using derivatives.
	Reading Lesson 3.4	
	Differentiating Trigonometric Functions	
		Determine derivatives of trigonometric functions.
	Reading Lesson 3.5	
	Unit 3 Project	
	Technology Corner	

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	AP Multiple Choice/Free Response	
	Unit Test	
		Compute the derivative of a function using the definition of a derivative.
		Compute the derivative of a function at a point.
		Sketch a graph of the derivative of a function when given its graph.
		Sketch a graph of a function when given the graph of its derivative.
		Sketch a graph of the derivative of a function when given a data set.
		Determine if a function is differentiable on a closed interval.
		Identify different types of non-differentiable points, including discontinuities, vertical tangents, corners, and cusps.
		Estimate derivatives using graphs and numerical approximation.
		Use the power rule to find derivatives.
		Use the product rule to find derivatives.
		Use the quotient rule to find derivatives.
		Calculate second derivatives and higher order derivatives using rules of differentiation.
		Use derivatives to solve problems involving motion in a straight line.
		Solve real-world problems involving rates of change using derivatives.
		Determine the derivatives of the six basic trigonometric functions using the rules of differentiation.
More Derivatives		
	Introduction to Unit 4	
	Differentiating Functions Using the Chain Rule	
		Apply the chain rule to find the derivative of a composite function.
		Use the chain rule to determine the slopes of curves defined parametrically.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Reading Lesson 4.1	
	Differentiating Functions Using Implicit Differentiation	
		Determine derivatives using implicit differentiation.
		Use the power rule to find the derivative of a function raised to a rational power of x.
	Reading Lesson 4.2	
	Differentiating Functions Containing Inverse Trigonometric Functions	
		Determine derivatives of inverse functions using the chain rule.
		Determine derivatives of inverse trigonometric function.
	Reading Lesson 4.3	
	Differentiating Exponential and Logarithmic Functions	
		Calculate derivatives of exponential functions with a base of e.
		Calculate derivatives of exponential functions with a base other than e.
		Calculate derivatives of natural logarithmic functions.
		Calculate derivatives of logarithmic functions with a base other than e.
	Reading Lesson 4.4	
	Unit 4 Project	
	Technology Corner	
	Unit 4 AP Practice Questions	
	Unit Test	
		Apply the chain rule to find the derivative of a composite function.
		Use the chain rule to determine the slope of curves defined parametrically.

Unit	Lesson	Objectives
		Determine derivatives using implicit differentiation.
		Use the power rule to find the derivative of a function raised to a rational power of x.
		Determine derivatives of inverse functions using the chain rule.
		Determine derivatives of inverse trigonometric functions.
		Determine derivatives of exponential functions with a base of e.
		Determine derivatives of exponential functions with a base other than e.
		Determine derivatives of natural logarithmic functions.
		Determine derivatives of logarithmic functions with a base other than e.
Applications of Derivatives		
	Introduction to Unit 5	
	Relative and Absolute Extrema	
		Identify the relative minimum and maximum values of a function.
		Identify the absolute minimum and maximum values of a function.
		Determine if the extreme value theorem applies to a function on a specific interval.
		Determine critical points of a function.
	Reading Lesson 5.1	
	The Mean Value Theorem	
		Use the mean value theorem to determine the value where the derivative is equal to the average rate of change.
		Determine increasing and decreasing intervals of a function.
	Reading Lesson 5.2	
	First and Second Derivative Test	
		Use the first derivative test to determine relative extrema.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Use the second derivative test to determine concavity and points of inflection.
		Use the first and second derivative tests to graph f(x) from f'(x).
	Reading Lesson 5.3	
	Application Problem Solving	
		Solve optimization problems using derivatives.
	Reading Lesson 5.4	
	Newton's Method, Linearization, and Differentials	
		Apply Newton's method to approximate zeros of a function.
		Use linearization to approximate tangent lines.
		Approximate the change in f using differentials.
	Reading Lesson 5.5	
	Application of Implicit Differentiation	
		Use implicit differentiation to solve related rate problems.
	Reading Lesson 5.6	
	Unit 5 Project	
	Technology Corner	
	Unit 5 AP Practice Questions	
	Unit Test	
		Use the extreme value theorem to determine if a function is continuous.
		Identify the relative maximum and minimum values of a function.
		Determine critical points of a function.
		Use the mean value theorem to determine the value where the derivative is equal to the average change.

AP Calculus AB - MA5186	Scope and Sequence
Unit Lesson	**Objectives**
	Determine increasing and decreasing intervals of a function.
	Use the first derivative test to determine relative extrema.
	Use the second derivative test to determine concavity and points of inflection.
	Use the first and second derivative test to graph f from f'.
	Solve optimization problems using derivatives.
	Approximate the change in f using differentials.
	Use linearization to approximate tangent lines.
	Use implicit differentiation to solve related rate problems.
Cumulative Exam	
Cumulative Exam	
	Analyze key features of inverse trigonometric functions from equations and graphs.
	Evaluate inverse trigonometric functions over a specified domain.
	Compare average speed to instantaneous speed.
	Identify conditions when a limit does and does not exist.
	Define the limit of a function and the properties of limits.
	Determine one-sided and two-sided limits of functions.
	Use the sandwich theorem to find limits indirectly.
	Determine end behavior of a function using limits.
	Find vertical and horizontal asymptotes using limits.
	Identify intervals of continuity and discontinuity over intervals of a function.
	Use the intermediate value theorem to verify continuity.
	Determine the equation of the tangent line at a given point.

Unit Lesson	Objectives
	Determine the equation of the normal line to a curve at a given point.
	Compute the derivative of a function using the definition of a derivative.
	Compute the derivative of a function at a point.
	Sketch a graph of the derivative of a function when given its graph.
	Sketch a graph of a function when given the graph of its derivative.
	Sketch a graph of the derivative of a function when given a data set.
	Identify different types of non-differentiable points, including discontinuities, vertical tangents, corners, and cusps.
	Estimate derivatives using graphs and numerical approximation.
	Use the power rule to find derivatives.
	Use the product rule to find derivatives.
	Use the quotient rule to find derivatives.
	Calculate second derivatives and higher order derivatives using rules of differentiation.
	Solve motion along a straight line problems using derivatives.
	Determine the derivatives of the six basic trigonometric functions using the rules of differentiation.
	Apply the chain rule to find the derivative of a composite function.
	Determine derivatives using implicit differentiation.
	Use the power rule to find the derivative of a function raised to a rational power of x.
	Determine derivatives of inverse functions using the chain rule.
	Determine derivatives of inverse trigonometric functions.
	Determine derivatives of exponential functions with a base of e.
	Determine derivatives of exponential functions with a base other than e.
	Determine derivatives of natural logarithmic functions.

AP Calculus AB - MA5186	Scope and Sequence
Unit Lesson	**Objectives**
	Determine derivatives of logarithmic functions with a base other than e.
	Use the extreme value theorem to determine if a function is continuous.
	Use the mean value theorem to determine the value where the derivative is equal to the average change.
	Use the second derivative test to determine concavity and points of inflection.
	Use the first and second derivative test to graph f from f '.
	Solve optimization problems using derivatives.
	Approximate the change in f using differentials.
	Use linearization to approximate tangent lines.
	Use implicit differentiation to solve related rate problems.
Definite Integrals	
Introduction to Unit 6	
Estimating with Finite Sums	
	Approximate a distance using area under a velocity curve.
	Approximate the area under a curve by using left, right, and midpoint sums.
	Solve accumulation problems by approximating the area under a curve.
Reading Lesson 6.1: Estimating with Finite Sums	
Definite Integrals	
	Use integral notation to express a limit of Riemann sums.
	Evaluate a definite integral using an area formula.
	Use definite integrals to solve problems involving accumulation.
	Evaluate definite integrals of functions with discontinuities.
Reading Lesson 6.2: Definite Integrals	

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Definite Integrals and Antiderivatives	
		Solve problems using the properties of definite integrals.
		Apply the mean value theorem to determine a point at which a function assumes its average value over a closed interval.
		Calculate the area under a curve using antidifferentiation.
	Reading Lesson 6.3: Definite Integrals and Antiderivatives	
	Fundamental Theorem of Calculus, Parts 1 and 2	
		Use the first part of the fundamental theorem of calculus to solve problems.
		Use the second part of the fundamental theorem of calculus to solve problems.
	Reading Lesson 6.4: Fundamental Theorem of Calculus	
	Trapezoidal Rule	
		Approximate the area under a curve using the trapezoidal rule.
		Compare the trapezoidal rule to other area approximations including left, right, and midpoint sums.
	Reading Lesson 6.5: Trapezoidal Rule	
	Unit 6 Project	
	Technology Corner	
	Unit 6 AP Practice Questions	
	Unit Test	
		Approximate a distance using area under a velocity curve.
		Approximate the area under a curve by using left, right, and midpoint sums.
		Solve accumulation problems by approximating the area under a curve.
		Use integral notation to express a limit of Riemann sums.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Evaluate a definite integral using an area formula.
		Use definite integrals to solve problems involving accumulation.
		Evaluate definite integrals of functions with discontinuities.
		Solve problems using the properties of definite integrals.
		Apply the mean value theorem to determine a point at which a function assumes its average value over a closed interval.
		Calculate the area under a curve using antidifferentiation.
		Use the first part of the fundamental theorem of calculus to solve problems.
		Use the second part of the fundamental theorem of calculus to solve problems.
		Approximate the area under a curve using the trapezoidal rule.
		Compare the trapezoidal rule to other area approximations including left, right, and midpoint sums.
Mathematical Modeling Using Differential Equations		
	Introduction to Unit 7	
	Slope Fields	
		Use initial conditions to find solutions to differential equations.
		Use a slope field to find a graphical solution for a given differential equation.
	Reading Lesson 7.1: Slope Fields and Euler's Method	
	Antidifferentiation by Substitution	
		Verify an antiderivative formula.
		Evaluate indefinite integrals without using substitution.
		Use substitution as a method of evaluating indefinite and definite integrals.
	Reading Lesson 7.2: Antidifferentiation by Substitution	

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Exponential Growth and Decay	
		Use separation of variables to solve initial value problems.
		Use exponential functions to model growth and decay.
		Predict temperatures by using Newton's law of cooling.
	Reading Lesson 7.4: Exponential Growth and Decay	
	Unit 7 Project	
	Technology Corner	
	Unit 7 AP Practice Questions	
	Unit Test	
		Use initial conditions to find solutions to differential equations.
		Use a slope field to find a graphical solution for a given differential equation.
		Evaluate indefinite integrals without using substitution.
		Verify an antiderivative formula.
		Use substitution as a method of evaluating indefinite and definite integrals.
		Use separation of variables to solve initial value problems.
		Use exponential functions to model growth and decay.
Applications of Definite Integrals		
	Introduction to Unit 8	
	Integral as Net Change	
		Calculate the displacement of an object from a given velocity function.
		Calculate the total distance an object travels from a given velocity function.
		Express the net change of a quantity as a definite integral.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Find the net, or accumulated, change of a quantity from a rate of change function.
		Find the net change of a quantity from a rate of change that is given in graphical or tabular form.
	Reading Lesson 8.1: Accumulation and Net Change	
	Areas in the Plane	
		Calculate the area between two curves defined by only two functions and over a closed interval by integrating with respect to x.
		Calculate the area between two curves defined by only two functions and over a closed interval by integrating with respect to y.
		Use subregions to calculate the area between two curves over a closed interval.
	Reading Lesson 8.2: Areas in the Plane	
	Volumes	
		Use a definite integral to express the volume of a solid.
		Find the volume of a solid with known cross sections.
		Find the volume of a solid generated by revolving a line or curve around a given line.
		Find the volume of a solid generated by revolving a region bounded by two or more lines or curves around a given line.
	Reading Lesson 8.3: Volumes	
	Applications from Science and Statistics	
		Use the definite integral to solve problems involving work.
		Use the definite integral to solve problems involving fluid pressure.
		Use the definite integral to solve problems involving probabilities.
	Reading Lesson 8.5: Applications from Science and Statistics	
	L'Hospital's Rule and Other Applications	

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Apply L’Hospital's rule to evaluate the limit of an indeterminate form.
		Compare the growth rates of functions.
	Reading Lesson 9.2 and 9.3: L'Hospital's Rule and Other Applications	
	Unit 8 Project	
	Technology Corner	
	Unit 8 AP Practice Questions	
	Unit Test	
		Calculate the displacement of an object from a given velocity function.
		Calculate the total distance an object travels from a given velocity function.
		Express the net change of a quantity as a definite integral.
		Find the net, or accumulated, change of a quantity from a rate of change function.
		Find the net change of a quantity from a rate of change that is given in graphical or tabular form.
		Calculate the area between two curves defined by only two functions and over a closed interval by integrating with respect to x.
		Calculate the area between two curves defined by only two functions and over a closed interval by integrating with respect to y.
		Use subregions to calculate the area between two curves over a closed interval.
		Use a definite integral to express the volume of a solid.
		Find the volume of a solid with known cross sections.
		Find the volume of a solid generated by revolving a line or curve around a given line.
		Find the volume of a solid generated by revolving a region bounded by two or more lines or curves around a given line.
		Apply l'Hopital's rule to evaluate the limit of an indeterminate form.

AP Calculus AB - MA5186	Scope and Sequence
Unit Lesson	**Objectives**
	Compare the growth rates of functions.
Cumulative Exam	
Cumulative Exam	
	Approximate a distance using area under a velocity curve.
	Approximate the area under a curve by using left, right, and midpoint sums.
	Solve accumulation problems by approximating the area under a curve.
	Use integral notation to express a limit of Riemann sums.
	Evaluate a definite integral using an area formula.
	Use definite integrals to solve problems involving accumulation.
	Evaluate definite integrals of functions with discontinuities.
	Solve problems using the properties of definite integrals.
	Apply the mean value theorem to determine a point at which a function assumes its average value over a closed interval.
	Calculate the area under a curve using antidifferentiation.
	Use the first part of the fundamental theorem of calculus to solve problems.
	Use the second part of the fundamental theorem of calculus to solve problems.
	Approximate the area under a curve using the trapezoidal rule.
	Compare the trapezoidal rule to other area approximations including left, right, and midpoint sums.
	Use initial conditions to find solutions to differential equations.
	Use a slope field to find a graphical solution for a given differential equation.
	Evaluate indefinite integrals without using substitution.
	Verify an antiderivative formula.
	Use substitution as a method of evaluating indefinite and definite integrals.

AP Calculus AB - MA5186	Scope and Sequence
Unit Lesson	**Objectives**
	Use separation of variables to solve initial value problems.
	Use exponential functions to model growth and decay.
	Calculate the displacement of an object from a given velocity function.
	Calculate the total distance an object travels from a given velocity function.
	Express the net change of a quantity as a definite integral.
	Find the net, or accumulated, change of a quantity from a rate of change function.
	Find the net change of a quantity from a rate of change that is given in graphical or tabular form.
	Calculate the area between two curves defined by only two functions and over a closed interval by integrating with respect to x.
	Calculate the area between two curves defined by only two functions and over a closed interval by integrating with respect to y.
	Use subregions to calculate the area between two curves over a closed interval.
	Use a definite integral to express the volume of a solid.
	Find the volume of a solid with known cross sections.
	Find the volume of a solid generated by revolving a line or curve around a given line.
	Find the volume of a solid generated by revolving a region bounded by two or more lines or curves around a given line.
	Use the definite integral to solve problems involving work.
	Use the definite integral to solve problems involving fluid pressure.
	Use the definite integral to solve problems involving probabilities.
	Apply l'Hopital's rule to evaluate the limit of an indeterminate form.
	Compare the growth rates of functions.
Review	
Preparing for the Exam	

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Review: Limits and Continuity	
	Review: Derivatives	
	Review: Applications of Derivatives	
	Review: Integrals	
	Review: Applications of Integrals	
	Review: Differential Equations	
	Practice Exam 1 – Part A	
		Express limits symbolically using correct notation.
		Interpret limits expressed symbolically.
		Estimate limits of functions.
		Determine limits of functions.
		Deduce and interpret behavior of functions using limits.
		Analyze functions for intervals of continuity or points of discontinuity.
		Determine the applicability of important calculus theorems using continuity.
		Identify the derivative of a function as the limit of a difference quotient.
		Calculate derivatives.
		Determine higher-order derivatives.
		Recognize the connection between differentiability and continuity.
		Interpret the meaning of a derivative within a problem.
		Verify solutions to differential equations.
		Recognize antiderivatives of basic functions.
		Interpret the definite integral as the limit of a Riemann sum in integral notation.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Express the limit of a Riemann sum in integral notation.
		Calculate a definite integral using areas and properties of definite integrals.
		Analyze functions defined by an integral.
		Calculate antiderivatives.
		Evaluate definite integrals.
		Interpret the meaning of a definite integral within a problem.
		Apply definite integrals to problems involving the average value of a function.
		Analyze differential equations to obtain general and specific solutions.
		Solve problems involving slope of a tangent line.
	Practice Exam 1 – Part B	
		Estimate derivatives.
		Use derivatives to analyze properties of a function.
		Solve problems involving slope of a tangent line.
		Solve problems involving related rates, optimization, and rectilinear motion.
		Solve problems involving rates of change in applied contexts.
		Estimate solutions to differential equations.
		Apply the mean value theorem to describe the behavior of a function over an interval.
		Approximate a definite integral.
		Apply definite integrals to problems involving motion.
		Apply definite integrals to problems involving areas and volume.
		Use the definite integral to solve problems in various contexts.
		Interpret, create, and solve differential equations from problems in contexts.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Practice Exam 1 – Free-Response Section	
	Practice Exam 2 – Part A	
		Express limits symbolically using correct notation.
		Interpret limits expressed symbolically.
		Estimate limits of functions.
		Determine limits of functions.
		Deduce and interpret behavior of functions using limits.
		Analyze functions for intervals of continuity or points of discontinuity.
		Determine the applicability of important calculus theorems using continuity.
		Identify the derivative of a function as the limit of a difference quotient.
		Calculate derivatives.
		Determine higher-order derivatives.
		Recognize the connection between differentiability and continuity.
		Interpret the meaning of a derivative within a problem.
		Verify solutions to differential equations.
		Recognize antiderivatives of basic functions.
		Interpret the definite integral as the limit of a Riemann sum in integral notation.
		Express the limit of a Riemann sum in integral notation.
		Calculate a definite integral using areas and properties of definite integrals.
		Analyze functions defined by an integral.
		Calculate antiderivatives.
		Evaluate definite integrals.

AP Calculus AB - MA5186		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Interpret the meaning of a definite integral within a problem.
		Apply definite integrals to problems involving the average value of a function.
		Analyze differential equations to obtain general and specific solutions.
		Solve problems involving slope of a tangent line.
	Practice Exam 2 – Part B	
		Estimate derivatives.
		Use derivatives to analyze properties of a function.
		Solve problems involving slope of a tangent line.
		Solve problems involving related rates, optimization, and rectilinear motion.
		Solve problems involving rates of change in applied contexts.
		Estimate solutions to differential equations.
		Apply the Mean Value Theorem to describe the behavior of a function over an interval.
		Approximate a definite integral.
		Apply definite integrals to problems involving areas and volume.
		Use the definite integral to solve problems in various contexts.
		Interpret, create, and solve differential equations from problems in contexts.
		Apply definite integrals to problems involving motion.
	Practice Exam 2 – Free-Response Section	