CollegeBoard AP

AP DAILY VIDEOS

AP Calculus AB

AP Daily is a series of on-demand, short videos—created by expert AP teachers and faculty—that can be used for in-person, online, and blended/hybrid instruction. These videos will cover every topic and skill outlined in the AP Course and Exam Description and launch on AP Classroom, unit-by-unit, on a rolling basis.

Unit 1 RELEASE DATE: 9/1/2020

Unit 2 RELEASE DATE: 9/28/2020

Unit 3 RELEASE DATE: 10/15/2020

Unit 4 RELEASE DATE: 10/29/2020

Unit 5 RELEASE DATE: 11/10/2020

Unit 6 RELEASE DATE: 12/8/2020

Unit 7 RELEASE DATE: 1/18/2021

Unit 8 RELEASE DATE: 2/10/2021

Unit 1

Video Title	Topic	Video Focus	Instructor
1.1: Daily Video 1	Introducing Calculus—Can Change Occur at an Instant?	Using limits to define the concept of instantaneous rate of change versus average rate of change.	Mark Kiraly
1.1: Daily Video 2	Introducing Calculus—Can Change Occur at an Instant?	Applying the concept of instantaneous rate of change to a diverse problem set.	Mark Kiraly
1.2: Daily Video 1	Defining Limits and Using Limit Notation	How to use and read symbolic notation of limits.	Mark Kiraly
1.2: Daily Video 2	Defining Limits and Using Limit Notation	Using, reading, and interpreting symbolic notation of limits.	Mark Kiraly
1.3: Daily Video 1	Estimating Limit Values from Graphs	Evaluating limits of a function $f(x)$ when provided a function graph; distinguishing evaluation of a function at an x value from evaluation of its limit approaching that x value.	Jerome White
1.3: Daily Video 2	Estimating Limit Values from Graphs	Evaluating limits of a function when provided a function graph and distinguishing $f(a)$ from the limit of $f(x)$ as x approaches a.	Jerome White
1.3: Daily Video 3	Estimating Limit Values from Graphs	Using an electronic grapher to evaluate limits; discussing the ways electronic graphers may misrepresent a function.	Jerome White
1.4: Daily Video 1	Estimating Limit Values from Tables	Evaluating limits from a table of x and $f(x)$ values.	Jerome White
1.5: Daily Video 1	Determining Limits Using Algebraic Properties of Limits	Evaluating limits of function sums, differences, products, and quotients.	Jerome White
1.6: Daily Video 1	Determining Limits Using Algebraic Manipulation	Using algebra to rewrite functions, by factoring and then "dividing out," in order to determine the value of a limit.	Jerome White
1.6: Daily Video 2	Determining Limits Using Algebraic Manipulation	Using algebra to rewrite functions in a way that allows us to determine the value of a limit. (Rationalizing with conjugates.)	Jerome White
1.7: Daily Video 1	Selecting Procedures for Determining Limits	Selecting strategies for determining limits when the method isn't prescribed.	Mark Kiraly
1.7: Daily Video 2	Selecting Procedures for Determining Limits	Selecting strategies for determining limits when the method isn't prescribed (cont.)	Mark Kiraly

Video Title	Topic	Video Focus	Instructor
1.7: Daily Video 3	Selecting Procedures for Determining Limits	Selecting strategies for determining limits of two more types of functions.	Mark Kiraly
1.8: Daily Video 1	Determining Limits Using the Squeeze Theorem	Introduction to the squeeze theorem; using the squeeze theorem to determine limits.	Mark Kiraly
1.8: Daily Video 2	Determining Limits Using the Squeeze Theorem	Applying the squeeze theorem and exploring cases where it fails to determine a limit.	Mark Kiraly
1.8: Daily Video 3	Determining Limits Using the Squeeze Theorem	Using the squeeze theorem to determine the limits of two special functions.	Mark Kiraly
1.9: Daily Video 1	Connecting Multiple Representations of Limits	Connecting analytical, numerical, graphical, and verbal representations of limits.	Mark Kiraly
1.10: Daily Video 1	Exploring Types of Discontinuities	The classifications of discontinuities encountered when working with functions; connecting the understanding of limits to those classifications.	Jerome White
1.11: Daily Video 1	Defining Continuity at a Point	Connecting the understanding of limits to a formal definition of continuity at a point.	Jerome White
1.11: Daily Video 2	Defining Continuity at a Point	Practice with connecting the understanding of limits to a formal definition of continuity at a point.	Jerome White
1.12: Daily Video 1	Confirming Continuity over an Interval	What it means for a function to be continuous over an interval; how the classification of a function may allow us to draw conclusions about its continuity.	Jerome White
1.13: Daily Video 1	Removing Discontinuities	With algebra, defining piecewise functions to be continuous at a boundary to the partitions of their domains.	Jerome White
1.13: Daily Video 2	Removing Discontinuities	With algebra and an electronic grapher, defining piecewise functions to be continuous at a boundary to the partitions of their domains.	Jerome White
1.14: Daily Video 1	Connecting Infinite Limits and Vertical Asymptotes	Interpreting the behavior of functions growing without bound near a specific value.	Mark Kiraly
1.14: Daily Video 2	Connecting Infinite Limits and Vertical Asymptotes	Exploring symbolic and tabular representations of the behavior of functions growing without bound near a specific value.	Mark Kiraly
1.14: Daily Video 3	Connecting Infinite Limits and Vertical Asymptotes	Practicing problems with the behavior of function values growing without bound.	Mark Kiraly

Video Title	Topic	Video Focus	Instructor
1.15: Daily Video 1	Connecting Limits at Infinity and Horizontal Asymptotes	Interpreting the limit as the independent variable grows without bound as end behavior.	Mark Kiraly
1.15: Daily Video 2	Connecting Limits at Infinity and Horizontal Asymptotes	Exploring limits at positive and negative infinity as end behavior.	Mark Kiraly
1.15: Daily Video 3	Connecting Limits at Infinity and Horizontal Asymptotes	Practicing problems with limits at infinity and resulting end behavior.	Mark Kiraly
1.16: Daily Video 1	Working with the Intermediate Value Theorem (IVT)	Explaining and interpreting the behavior of a function on an interval using the intermediate value theorem.	Mark Kiraly
1.16: Daily Video 2	Working with the Intermediate Value Theorem (IVT)	Applying the intermediate value theorem to given situations.	Mark Kiraly

Unit 2

Video Title	Topic	Video Focus	Instructor
2.1: Daily Video 1	Defining Average and Instantaneous Rates of Change at a Point	We will define average rate of change as a difference quotient and instantaneous rate of change as a limit of a difference quotient.	Jerome White
2.1: Daily Video 2	Defining Average and Instantaneous Rates of Change at a Point	We will apply definitions of average rate of change and instantaneous rate of change to an example.	Jerome White
2.1: Daily Video 3	Defining Average and Instantaneous Rates of Change at a Point	We will practice applying definitions of average rate of change and instantaneous rate of change.	Jerome White
2.2: Daily Video 1	Defining the Derivative of a Function and Using Derivative Notation	We will develop and apply the definition of derivative of a function, and we will introduce various notations for the derivative.	Jerome White
2.2: Daily Video 2	Defining the Derivative of a Function and Using Derivative Notation	We will apply the definition of derivative of a function and continue to discuss various notations for the derivative.	Jerome White
2.2: Daily Video 3	Defining the Derivative of a Function and Using Derivative Notation	We will apply the definition of derivative and write the equation of a line tangent to a function at a specified x value.	Jerome White
2.3: Daily Video 1	Estimating Derivatives of a Function at a Point	We will estimate the derivative at a point from information given in a table.	Virge Cornelius
2.3: Daily Video 2	Estimating Derivatives of a Function at a Point	We will estimate the derivative at a point from a graph.	Virge Cornelius
2.3: Daily Video 3	Estimating Derivatives of a Function at a Point	We can use a calculator to help us estimate the derivative of a function at a point.	Virge Cornelius
2.4: Daily Video 1	Connecting Differentiability and Continuity—Determining When Derivatives Do and Do Not Exist	We will learn that if a function is differentiable at a point, then it is continuous at that point.	Virge Cornelius

Video Title	Topic	Video Focus	Instructor
2.4: Daily Video 2	Connecting Differentiability and Continuity—Determining When Derivatives Do and Do Not Exist	We will meet two continuous functions that fail to be differentiable at the origin.	Virge Cornelius
2.4: Daily Video 3	Connecting Differentiability and Continuity—Determining When Derivatives Do and Do Not Exist	We will learn that if a point is not in the domain of a function, then it is not in the domain of its derivative.	Virge Cornelius
2.5: Daily Video 1	Applying the Power Rule	We will learn what a power function is.	Virge Cornelius
2.5: Daily Video 2	Applying the Power Rule	We will apply the power rule to calculate derivatives of familiar functions.	Virge Cornelius
2.5: Daily Video 3	Applying the Power Rule	We will examine the derivative of the squaring function from multiple perspectives.	Virge Cornelius
2.6: Daily Video 1	Derivative Rules—Constant, Sum, Difference, and Constant Multiple	We will learn to apply the constant and constant multiple rules.	Virge Cornelius
2.6: Daily Video 2	Derivative Rules—Constant, Sum, Difference, and Constant Multiple	We will learn to apply the sum and difference rules.	Virge Cornelius
2.6: Daily Video 3	Derivative Rules—Constant, Sum, Difference, and Constant Multiple	We will practice these rules via an AP-style problem involving a table and search for a constant multiple.	Virge Cornelius
2.7: Daily Video 1	Derivatives of cos x, sin x, ex, and ln x	We will discover graphically how the derivatives of each of these transcendental functions yield familiar functions.	Virge Cornelius
2.7: Daily Video 2	Derivatives of cos x, sin x, ex, and ln x	We will learn a strategy for determining a limit when the given limit is the definition of the derivative of a known function (Part I).	Virge Cornelius
2.7: Daily Video 3	Derivatives of cos x, sin x, ex, and ln x	We will learn a strategy for determining a limit when the given limit is the definition of the derivative of a known function (Part II).	Virge Cornelius
2.8: Daily Video 1	The Product Rule	We will develop and apply a rule for differentiating the product of two functions.	Jerome White
2.9: Daily Video 1	The Quotient Rule	We will develop and apply a rule for differentiating the quotient of two functions.	Jerome White
2.9: Daily Video 2	The Quotient Rule	We will practice applying the quotient rule and discuss when it is and when it is not the best method for differentiating a function.	Jerome White

Video Title	Topic	Video Focus	Instructor
2.10: Daily Video 1	Finding the Derivatives of Tangent, Cotangent, Secant, and/or Cosecant Functions	We will use differentiation rules and trigonometric identities to find derivatives of the tangent, cotangent, secant, and cosecant functions.	Jerome White
2.10: Daily Video 2	Finding the Derivatives of Tangent, Cotangent, Secant, and/or Cosecant Functions	We will practice applying the derivatives of the tangent, cotangent, secant, and cosecant functions.	Jerome White

Unit 3

Video Title	Topic	Video Focus	Instructor
3.1: Daily Video 1	The Chain Rule	We will learn to identify composite functions that require the chain rule. We will learn how to apply the chain rule.	Vicki Carter
3.1: Daily Video 2	The Chain Rule	We will learn to apply the chain rule to some specific types of functions.	Vicki Carter
3.1: Daily Video 3	The Chain Rule	We will apply the chain rule to problems that feature multiple representations. We will also gain experience with AP-style questions.	Vicki Carter
3.2: Daily Video 1	Implicit Differentiation	We will understand the difference between an explicitly defined function and an implicitly defined relation.	Virge Cornelius
3.2: Daily Video 2	Implicit Differentiation	We will practice implicit differentiation.	Virge Cornelius
3.2: Daily Video 3	Implicit Differentiation	We will gain experience with AP-style questions which require implicit differentiation.	Virge Cornelius
3.3: Daily Video 1	Differentiating Inverse Functions	We will review what mathematical inverses are.	Virge Cornelius
3.3: Daily Video 2	Differentiating Inverse Functions	We will take a close look at the cubing function and understand the relationship between tangent line slopes at mapped points.	Virge Cornelius
3.3: Daily Video 3	Differentiating Inverse Functions	We will establish the formula for the derivative of a function relative to its inverse and then solve problems where we have a modicum of information about a function and its inverse.	Virge Cornelius
3.4: Daily Video 1	Differentiating Inverse Trigonometric Functions	We will use implicit differentiation to derive the inverse sine function.	Virge Cornelius
3.4: Daily Video 2	Differentiating Inverse Trigonometric Functions	We will learn how to use the chain rule while differentiating inverse trigonometric functions.	Virge Cornelius
3.4: Daily Video 3	Differentiating Inverse Trigonometric Functions	We will do a matching activity with not only inverse trig functions, but also with other functions since many of these derivatives look similar.	Virge Cornelius
3.5: Daily Video 1	Selecting Procedures for Calculating Derivatives	We will learn to distinguish among the various differentiation rules.	Vicki Carter
3.5: Daily Video 2	Selecting Procedures for Calculating Derivatives	We will learn to apply the various differentiation rules.	Vicki Carter

Video Title	Topic	Video Focus	Instructor
3.6: Daily Video 1	Calculating Higher-Order Derivatives	We will learn the notations and process for finding higher-order derivatives using basic derivative rules.	Vicki Carter
3.6: Daily Video 2	Calculating Higher-Order Derivatives	We will learn the notations and process for finding higher-order derivatives using the chain rule and implicit differentiation.	Vicki Carter

Unit 4

Video Title	Topic	Video Focus	Instructor
4.1: Daily Video 1	Interpreting the Meaning of the Derivative in Context	We will learn the four components necessary for interpreting a derivative in context.	Sarah Stecher
4.2: Daily Video 1	Straight-Line Motion—Connecting Position, Velocity, and Acceleration	We will connect position, velocity, and acceleration with derivatives and learn how to justify a particle's behavior.	Sarah Stecher
4.2: Daily Video 2	Straight-Line Motion—Connecting Position, Velocity, and Acceleration	We will solve particle motion problems given information in tabular and graphical forms.	Sarah Stecher
4.3: Daily Video 1	Rates of Change in Applied Contexts Other Than Motion	We will identify similarities in contextual rate of change problems and learn strategies for interpreting them appropriately.	Sarah Stecher
4.3: Daily Video 2	Rates of Change in Applied Contexts Other Than Motion	We will explore contexts that involve a rate in and a rate out and determine key information about the context using derivatives.	Sarah Stecher
4.4: Daily Video 1	Introduction to Related Rates	We will use the chain rule to differentiate with respect to time, t.	Vicki Carter
4.5: Daily Video 1	Solving Related Rates Problems	We will solve related rates problems involving perimeter, area, and the Pythagorean theorem.	Vicki Carter
4.5: Daily Video 2	Solving Related Rates Problems	We will solve related rates problems involving volume.	Vicki Carter
4.5: Daily Video 3	Solving Related Rates Problems	We will solve related rates problems involving angles and similar triangles.	Vicki Carter
4.6: Daily Video 1	Approximating Values of a Function Using Local Linearity and Linearization	We will learn how to use tangent lines at a particular point to approximate values of a function near that point.	Sarah Stecher
4.6: Daily Video 2	Approximating Values of a Function Using Local Linearity and Linearization	We will determine when the tangent line approximation is an overestimate or underestimate of the actual value of the function.	Sarah Stecher

Video Title	Topic	Video Focus	Instructor
4.7: Daily Video 1	Using L'Hospital's Rule for Determining Limits of Indeterminate Forms	We will introduce L'Hospital's rule and demonstrate some proper ways to verify an indeterminate form.	Vicki Carter
4.7: Daily Video 2	Using L'Hospital's Rule for Determining Limits of Indeterminate Forms	We will complete several AP-style problems using L'Hospital's rule.	Vicki Carter

Unit 5

Video Title	Topic	Video Focus	Instructor
5.1: Daily Video 1	Introduction to Optimization Problems	We will learn the formal statement of the mean value theorem, and a restatement in plain language. Geometric connections will be shown.	Mark Howell
5.1: Daily Video 2	Introduction to Optimization Problems	We will analyze the hypothesis of the mean value theorem using graphs. We will also review an AP Exam question.	Mark Howell
5.1: Daily Video 3	Introduction to Optimization Problems	We will practice applying the mean value theorem to justify conclusions, using problems from past AP Exams.	Mark Howell
5.2: Daily Video 1	Extreme Value Theorem, Global Versus Local Extrema, and Critical Points	We will learn the distinction between global extrema and local extrema, and the definition of critical points.	Mark Howell
5.2: Daily Video 2	Extreme Value Theorem, Global Versus Local Extrema, and Critical Points	We will learn what the extreme value theorem says, and examine the hypothesis from a graphical perspective.	Mark Howell
5.3: Daily Video 1	Determining Intervals on Which a Function Is Increasing or Decreasing	We will learn the connection between the sign of a derivative and intervals where a function is increasing or decreasing and describe justifications.	Mark Howell
5.3: Daily Video 2	Determining Intervals on Which a Function Is Increasing or Decreasing	We will practice finding intervals where a function is increasing or decreasing using sign analysis of the derivative.	Mark Howell
5.4: Daily Video 1	Using the First Derivative Test to Determine Relative (Local) Extrema	We will learn how to justify a relative maximum and relative minimum using information from the first derivative.	Sarah Stecher
5.4: Daily Video 2	Using the First Derivative Test to Determine Relative (Local) Extrema	We will work through applications of the first derivative test in a variety of representations.	Sarah Stecher
5.5: Daily Video 1	Using the Candidates Test to Determine Absolute (Global) Extrema	We will explore connections between the candidates test and the extreme value theorem and discuss the details of applying the test.	Mark Howell

Video Title	Topic	Video Focus	Instructor
5.5: Daily Video 2	Using the Candidates Test to Determine Absolute (Global) Extrema	We will solve problems using the candidates test and learn to write justifications of absolute extrema of a continuous function on a closed interval.	Mark Howell
5.6: Daily Video 1	Determining Concavity of Functions over Their Domains	We will learn the connection between concavity of a graph and the increasing/decreasing nature of the first derivative, as well as the sign of the second derivative.	Mark Howell
5.6: Daily Video 2	Determining Concavity of Functions over Their Domains	We will practice determining concavity, finding points of inflection, and writing justifications.	Mark Howell
5.7: Daily Video 1	Using the Second Derivative Test to Determine Extrema	We will explore how the concavity of a function can determine whether a critical point is a maximum or a minimum.	Sarah Stecher
5.8: Daily Video 1	Sketching Graphs of Functions and Their Derivatives	We will use information from a function's first and second derivative presented in multiple representations to describe the behavior of the original function.	Sarah Stecher
5.9: Daily Video 1	Connecting a Function, Its First Derivative, and Its Second Derivative	We will explore how specific function features are presented across the graphs of f, f', and f''.	Sarah Stecher
5.9: Daily Video 2	Connecting a Function, Its First Derivative, and Its Second Derivative	We will practice connecting features on the graph of f, f', and f''.	Sarah Stecher
5.10: Daily Video 1	Using the Mean Value Theorem	We will explore what it means to optimize within constraints and identify the underlying structure of optimization problems.	Sarah Stecher
5.10: Daily Video 2	Using the Theorem	We will apply the general structure of an optimization problem to varied examples.	Sarah Stecher
5.11: Daily Video 1	Solving Optimization Problems	We will identify optimization problems in a variety of contexts and interpret minimum and maximum values in their applied context.	Sarah Stecher
5.12: Daily Video 1	Exploring Behaviors of Implicit Relations	We will explore connections between the first derivative in an implicit relation and its graphical behavior.	Mark Howell
5.12: Daily Video 2	Exploring Behaviors of Implicit Relations	We will explore the connections between the second derivative in an implicit relation and its graphical behavior.	Mark Howell
5.12: Daily Video 3	Exploring Behaviors of Implicit Relations	We will practice solving problems involving the behavior of an implicit relation as it connects to the first two derivatives.	Mark Howell

Unit 6

Video Title	Topic	Video Focus	Instructor
6.1: Daily Video 1	Exploring Accumulations of Change	We will explore the connection between area and the accumulation of a rate of change in the context of the velocity of a particle moving on a line.	Mark Howell
6.1: Daily Video 2	Exploring Accumulations of Change	We will practice solving problems involving the connection between area and the accumulation of a rate of change.	Mark Howell
6.2: Daily Video 1	Approximating Areas with Riemann Sums	We will approximate a definite integral for a function represented graphically, numerically, analytically, and verbally using a left Riemann sum.	Teresita Lemus
6.2: Daily Video 2	Approximating Areas with Riemann Sums	We will be approximating the definite integral for a function represented graphically, numerically, analytically, and verbally using right and midpoint Riemann sums.	Teresita Lemus
6.2: Daily Video 3	Approximating Areas with Riemann Sums	We will be approximating the definite integral using trapezoidal Riemann sums and analyzing the function's behavior with the approximations.	Teresita Lemus
6.3: Daily Video 1	Riemann Sums, Summation Notation, and Definite Integral Notation	We will understand the definition of the definite integral as a limiting case of the Riemann sum.	Teresita Lemus
6.3: Daily Video 2	Riemann Sums, Summation Notation, and Definite Integral Notation	We will learn the connection between a Riemann sum and the definite integral.	Teresita Lemus
6.4: Daily Video 1	The Fundamental Theorem of Calculus and Accumulation Functions	We will learn what the derivative part of the Fundamental Theorem says and use it to calculate the derivative of functions defined by an integral.	Mark Howell
6.4: Daily Video 2	The Fundamental Theorem of Calculus and Accumulation Functions	We will apply the Fundamental Theorem to functions defined by an integral.	Mark Howell
6.5: Daily Video 1	Interpreting the Behavior of Accumulation Functions Involving Area	We will learn how to use the Fundamental Theorem to analyze functions defined by an integral.	Mark Howell
6.5: Daily Video 2	Interpreting the Behavior of Accumulation Functions Involving Area	We will practice solving problems involving accumulation functions presented in multiple representations.	Mark Howell

Video Title	Topic	Video Focus	Instructor
6.6: Daily Video 1	Applying Properties of Definite Integrals	We will understand the properties of the definite integral and mathematical rules to simplify integration.	Teresita Lemus
6.6: Daily Video 2	Applying Properties of Definite Integrals	We will understand the properties of the definite integral and apply knowledge of geometry and mathematical rules to simplify integration.	Teresita Lemus
6.7: Daily Video 1	The Fundamental Theorem of Calculus and Definite Integrals	We will learn what the evaluation part of the Fundamental Theorem says and use it to evaluate integrals.	Mark Howell
6.7: Daily Video 2	The Fundamental Theorem of Calculus and Definite Integrals	We will use the Fundamental Theorem to solve problems presented in a variety of representations.	Mark Howell
6.7: Daily Video 3	The Fundamental Theorem of Calculus and Definite Integrals	We will practice using integrals to solve contextual problems involving the accumulation of a rate of change.	Mark Howell
6.8: Daily Video 1	Finding Antiderivatives and Indefinite Integrals—Basic Rules and Notation	We will learn what an antiderivative is, and how to find basic antiderivatives.	Mark Howell
6.8: Daily Video 2	Finding Antiderivatives and Indefinite Integrals—Basic Rules and Notation	We will practice answering questions involving antiderivatives, stated in a variety of ways.	Mark Howell
6.9: Daily Video 1	Integrating Using Substitution	We will learn when to apply u-substitution and the power rule.	Teresita Lemus
6.9: Daily Video 2	Integrating Using Substitution	We will learn when to apply u-substitution to trigonometric, exponential, and logarithmic functions.	Teresita Lemus
6.9: Daily Video 3	Integrating Using Substitution	We will apply u-substitution to any function and definite integrals.	Teresita Lemus
6.10: Daily Video 1	Integrating Functions Using Long Division and Completing the Square	We will apply long division to find the indefinite integral of rational functions.	Teresita Lemus
6.10: Daily Video 2	Integrating Functions Using Long Division and Completing the Square	We will apply the algebraic technique of completing the square to functions with radicals in the denominators and rational functions.	Teresita Lemus

Video Title	Topic	Video Focus	Instructor
6.14: Daily Video 1	Selecting Techniques for Antidifferentiation	We will learn strategies for recognizing the form of an integrand in order to facilitate antidifferentiation.	Mark Howell
6.14: Daily Video 2	Selecting Techniques for Antidifferentiation	We will learn more strategies for recognizing antiderivatives of various forms and practice finding antiderivatives.	Mark Howell
6.14: Daily Video 3	Selecting Techniques for Antidifferentiation	We will do more practice finding antiderivatives of various forms.	Mark Howell

Unit 7

Video Title	Topic	Video Focus	Instructor
7.1: Daily Video 1	Modeling Situations with Differential Equations	We will be interpreting verbal statements as differential equations.	Teresita Lemus
7.2: Daily Video 1	Verifying Solutions for Differential Equations	We will verify solutions to differential equations.	Tanya Hickson
7.3: Daily Video 1	Sketching Slope Fields	We will be relating a differential equation to its graphical representation.	Teresita Lemus
7.3: Daily Video 2	Sketching Slope Fields	We will interpret the behavior of the first order differential equation related to its graphical representation.	Teresita Lemus
7.4: Daily Video 1	Reasoning Using Slope Fields	We will solve differential equations to find solutions to general functions.	Teresita Lemus
7.6: Daily Video 1	Finding General Solutions Using Separation of Variables	We will be solving differential equations to find general solutions.	Teresita Lemus
7.6: Daily Video 2	Finding General Solutions Using Separation of Variables	We will be finding the general solution of a given differential equation using antidifferentiation.	Teresita Lemus
7.7: Daily Video 1	Finding Particular Solutions Using Initial Conditions and Separation of Variables	We will be solving differential equations to find particular solutions.	Tanya Hickson
7.7: Daily Video 2	Finding Particular Solutions Using Initial Conditions and Separation of Variables	We will use separation of variables to find particular solutions to differential equations.	Tanya Hickson
7.7: Daily Video 3	Finding Particular Solutions Using Initial Conditions and Separation of Variables	We will continue to use separation of variables to find particular solutions to differential equations.	Tanya Hickson
7.8: Daily Video 1	Exponential Models with Differential Equations	We will learn to use exponential functions to model growth and decay in applied problems.	Tanya Hickson

Unit 8

Video Title	Topic	Video Focus	Instructor
8.1: Daily Video 1	Finding the Average Value of a Function on an Interval	We will find the average value of a function on an interval.	Tanya Hickson
8.1: Daily Video 2	Finding the Average Value of a Function on an Interval	We will continue to find the average value of a function on an interval.	Tanya Hickson
8.2: Daily Video 1	Connecting Position, Velocity, and Acceleration of Functions Using Integrals	We will use integration to connect position, velocity, and acceleration functions	Tanya Hickson
8.2: Daily Video 2	Connecting Position, Velocity, and Acceleration of Functions Using Integrals	We will continue to use integration to connect position, velocity, and acceleration functions	Tanya Hickson
8.3: Daily Video 1	Using Accumulation Functions and Definite Integrals in Applied Contexts	We will learn how to use definite integrals to solve problems involving change.	Mark Kiraly
8.3: Daily Video 2	Using Accumulation Functions and Definite Integrals in Applied Contexts	We will use definite integrals to solve problems involving change.	Mark Kiraly
8.3: Daily Video 3	Using Accumulation Functions and Definite Integrals in Applied Contexts	We will explore different ways definite integrals and problems involving change can be presented.	Mark Kiraly
8.4: Daily Video 1	Finding the Area Between Curves Expressed as Functions of x	We will use integration to find the area between two curves expressed as a function of x.	Tanya Hickson
8.4: Daily Video 2	Finding the Area Between Curves Expressed as Functions of x	We will continue to use integration to find area between two curves expressed as a function of x.	Tanya Hickson
8.5: Daily Video 1	Finding the Area Between Curves Expressed as Functions of y	We will use integration to find the area between two curves expressed as a function of y.	Tanya Hickson

Video Title	Topic	Video Focus	Instructor
8.6: Daily Video 1	Finding the Area Between Curves That Intersect at More Than Two Points	We will find the total area of the regions between two curves that intersect at more than two points.	Tanya Hickson
8.7: Daily Video 1	Volumes with Cross Sections—Squares and Rectangles	We will learn how to use square and rectangular cross-sectional areas to find volumes of objects.	Mark Kiraly
8.7: Daily Video 2	Volumes with Cross Sections—Squares and Rectangles	We will explore using square and rectangular cross sections to find volumes.	Mark Kiraly
8.7: Daily Video 3	Volumes with Cross Sections—Squares and Rectangles	We will practice using square and rectangular cross sections to find volumes.	Mark Kiraly
8.8: Daily Video 1	Volumes with Cross Sections—riangles and Semicircles	We will explore using triangular and semicircular cross sections to find volumes.	Mark Kiraly
8.8: Daily Video 2	Volumes with Cross Sections—Triangles and Semicircles	We will use and practice using triangular and semicircular cross sections to find volumes.	Mark Kiraly
8.9: Daily Video 1	Volume with Disc Method—Revolving Around the x- or y-Axis	We will revolve shapes around the axes to generate three dimensional volumes.	Mark Kiraly
8.9: Daily Video 2	Volume with Disc Method—Revolving Around the x- or y-Axis	We will use circular cross sections to find the volumes of shapes generated by revolving about an axis.	Mark Kiraly
8.10: Daily Video 1	Volume with Disc Method—Revolving Around Other Axes	We will learn about finding volumes generated by revolving curves around other axes.	Mark Kiraly
8.11: Daily Video 1	Volume with Washer Method—Revolving Around the x- or y-Axis	We will learn about volumes generated by revolving around the x and y axes resulting in a ring shape.	Mark Kiraly

Video Title	Topic	Video Focus	Instructor
8.11: Daily Video 2	Volume with Washer Method—Revolving Around the x- or y-Axis	We will use washers to find volumes generated by revolving around the x and y axes.	Mark Kiraly
8.12: Daily Video 1	Volume with Washer Method—Revolving Around Other Axes	We will learn about volumes generated by revolving around other axes resulting in a ring shape.	Mark Kiraly