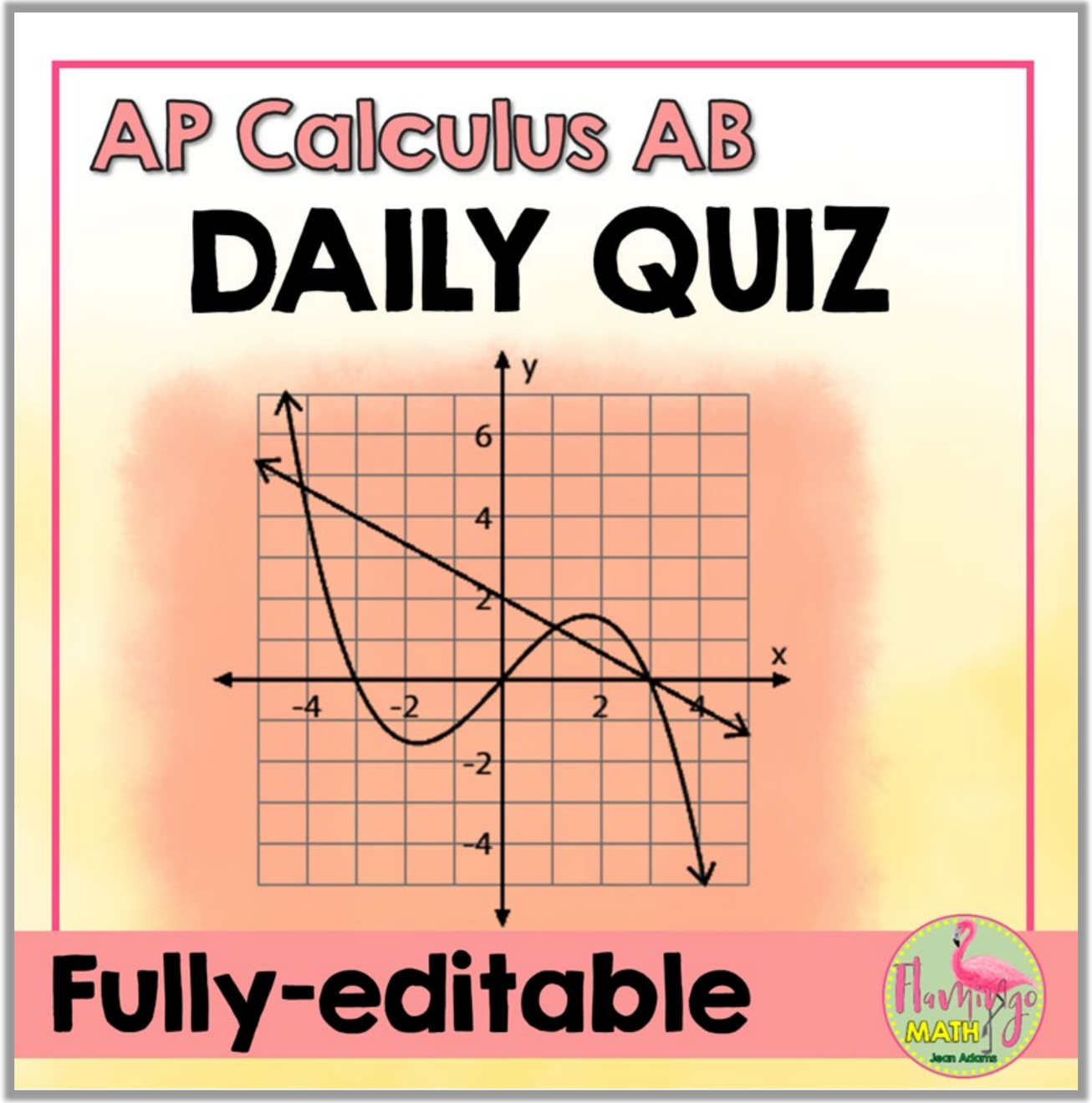
The AP Calculus AB DAILY QUIZ Bundle provides **fully-editable daily content quiz** to meet the needs of your classroom and bell schedule!

What makes this AP Calculus AB Curriculum different?

- ❑ Your purchase is one-and-done, no yearly subscriptions.
- ❑ Each daily quiz is fully planned and classroom-ready!
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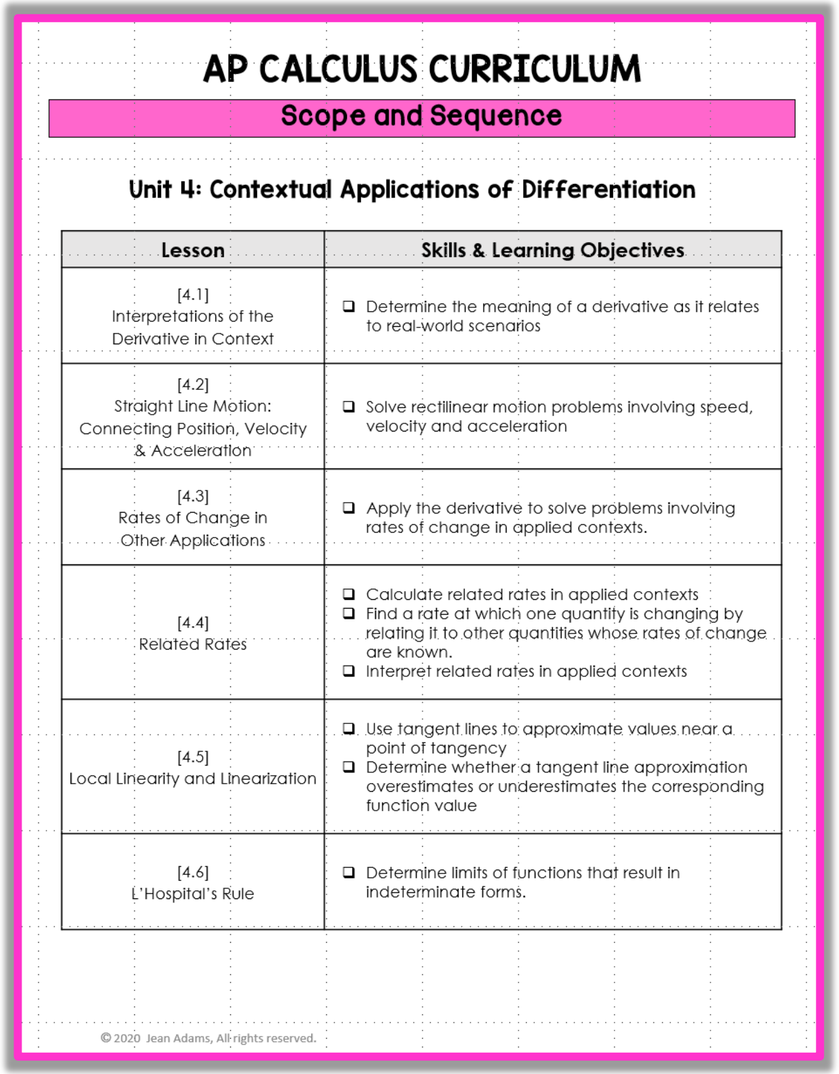
Take a look!



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Each Unit Includes . . .

- ❑ Scope and Sequence with learning objectives.
- ❑ A planning calendar with pacing for a daily 50-minute class.
- ❑ A ***fully-editable version*** for every daily content quiz [You must have Microsoft PowerPoint to edit.]
- ❑ Binder covers and spine labels.
- ❑ Full solution sets and answer keys.
- ❑ A complete PDF set of student notes.
- ❑ Bundled PDF sets of keys.



AP CALCULUS CURRICULUM

Scope and Sequence

Unit 4: Contextual Applications of Differentiation

Lesson	Skills & Learning Objectives
[4.1] Interpretations of the Derivative in Context	❑ Determine the meaning of a derivative as it relates to real-world scenarios
[4.2] Straight Line Motion: Connecting Position, Velocity & Acceleration	❑ Solve rectilinear motion problems involving speed, velocity and acceleration
[4.3] Rates of Change in Other Applications	❑ Apply the derivative to solve problems involving rates of change in applied contexts.
[4.4] Related Rates	❑ Calculate related rates in applied contexts ❑ Find a rate at which one quantity is changing by relating it to other quantities whose rates of change are known. ❑ Interpret related rates in applied contexts
[4.5] Local Linearity and Linearization	❑ Use tangent lines to approximate values near a point of tangency ❑ Determine whether a tangent line approximation overestimates or underestimates the corresponding function value
[4.6] L'Hospital's Rule	❑ Determine limits of functions that result in indeterminate forms.

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Teacher Resources. . .

AP CALCULUS CURRICULUM

Scope and Sequence

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Unit 8 AB: Applications of Integration

	Day 2 **Lesson 8.1** Finding Average Value for Integrals EX #1-4 Practice #9-16	Day 3 **Lesson 8.2** Another Look at Particle Motion EX #1-4 Practice #1-8	Day 4 **Lesson 8.2** Another Look at Particle Motion EX #5-7 Practice #9-12	Day 5 **Cooperative Activity:** Another Look at Particle Motion Stations Activity
	Day 7 **Lesson 8.3** Accumulation Functions in Context EX #6-7 Practice #8-13	Day 8 **Lesson 8.4** Area Between Two Curves EX #1-4 Practice #1-6	Day 9 **Lesson 8.4** Area Between Two Curves EX #5-7 Practice #7-12	Day 10 **AP QUIZ**
	Day 12 **Lesson 8.5** Volumes by Cross Sections EX #4-5 Practice #10-18			
	Day 17 **Lesson 8.7** Volume About a Line EX #6-10 Practice #6-9			

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Unit 5: Analytical Applications of the Derivative

TOPIC	Lesson Topic	Learning Objectives	Essential Knowledge	Mathematical Practices
5.1	Using the Mean Value Theorem	FUN-1.B	FUN-1.B.1	3.E
5.2	Extreme Value Theorem, Global Versus Local Extrema, and Critical Points	FUN-1.C	FUN-1.C.1	3.E
5.3	Determining Intervals on Which a Function is Increasing or Decreasing	FUN-4.A	FUN-4.A.1	2.E
5.4	Using the First Derivative Test to Determine Relative (Local) Extrema	FUN-4.A		
		FUN-4.A		
		FUN-4.A		
		UN-4.A		
		N-4.A		
		4.A		
		4.B		
		.C		
		D E		

Unit 8: Applications of Integration

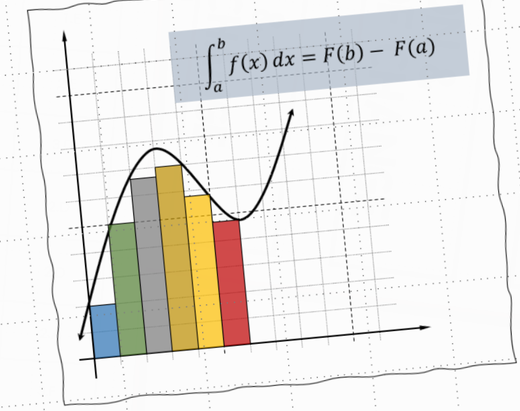
	AB	BC
AP EXAM WEIGHTING	10% - 15%	6% - 9%
PACING GUIDE	19 - 20 days	13 - 14 days
Topic 8.1	**Finding the Average Value of a Function on an Interval**	
Enduring Understanding	**CHA-4:** Definite integrals allow us to solve problems involving the accumulation of change over an interval.	
Learning Objective	**Essential Knowledge**	
CHA-4.B: Determine the average value of a function using definite integrals.	**CHA-4.B.1** The average value of a continuous function f over an interval $[a, b]$ is $\frac{1}{b-a}\int_a^b f(x)\,dx$	
Topic 8.2	**Connecting Position, Velocity, and Acceleration of Functions Using Integrals**	
Enduring Understanding	**CHA-4:** Definite integrals allow us to solve problems involving the accumulation of change over an interval.	
Learning Objective	**Essential Knowledge**	
CHA-4.C: Determine values for positions and rates of change using definite integrals in problems involving rectilinear motion.	**CHA-4.C.1:** For a particle in rectilinear motion over an interval of time., the definite integral of velocity represents the particle's displacement over the interval of time, and the definite integral of speed represents the particle's total distance traveled over the interval of time.	

6 INTEGRATION & ACCUMULATION

6 INTEGRATION & ACCUMULATION

6 INTEGRATION & ACCUMULATION

6 INTEGRATION & ACCUMULATION



Name _____

UNIT 6:

INTEGRATION

ACCUMULATION OF CHANGE

NOTES

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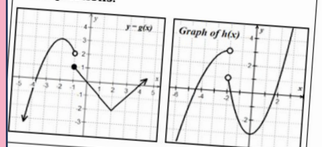
Content Quizzes. . .

1.4 Limits of Composite Functions Form A

Name _____

Date _____ Period _____

Use the graphs of $g(x)$ and $h(x)$ to answer the questions.



1. $\lim_{x \to 1} [g(x) + h(x)]$

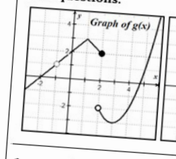
2. $\lim_{x \to 1} g(h(x))$

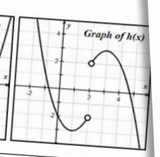
1.4 Limits of Composite Functions For

Name _____

Date _____ Period _____

Use the graphs of $g(x)$ and $h(x)$ to answer the questions.





1. $\lim_{x \to 3} [g(x) - h(x)]$

5.3 First Derivative Test Form A

Name _____

Date _____ Period _____

$f(x) = x + 2\cos(x)$ on $[0, \pi]$

1. Find the critical numbers of $f(x)$

2. Find the open intervals on which the function is increasing or decreasing.

5.3 First Derivative Test Form B

Name _____

Date _____ Period _____

$f(x) = -x^3 - 6x^2 - 9x - 2$

1. Find the critical numbers of $f(x)$

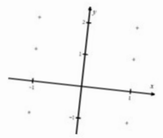
2. Find the open intervals on which the function is increasing or decreasing.

7.2 Slope Fields Form A

Name _____

Date _____ Period _____

1. Construct a slope field for the differential equation $\frac{dy}{dx} = x + 2y$



Find the general solution for the differential equation: $\frac{dy}{dx} = \frac{1}{x-3}$

7.2 Slope Fields

Name _____

Date _____

1. Construct a slope field for t equation $\frac{dy}{dx} = x - 2y$



2. Find the general solution for the d equation: $\frac{dy}{dx} = \frac{1}{x+4}$

8.3 Accumulation Functions in Context Form A

Name _____

Date _____ Period _____

1. The population of a beachside resort grows at a rate of $r(t)$ people per year, where t is time in years. At $t = 2$, the resort population is 4823 residents. What does the expression mean?

$$4823 + \int_2^5 r(t)\,dt = 7635$$

Questions 2 – 3: The temperature of a pot of chicken soup is increasing at a rate of $r(t) = 34e^{-0.8t}$ degrees Celsius per minute, where t is the time in minutes. At time $t = 0$, the soup is 26 degrees Celsius.

8.3 Accumulation Functions in Context Form B

Name _____

Date _____ Period _____

1. The number of residents in a nursing home that have been exposed to the flu is increasing at a rate of $r(t)$ people per day, where t is the time in days. At $t = 5$, there are 18 residents exposed to the flu. What does the expression mean?

$$18 + \int_5^{12} r(t)\,dt$$

Questions 2 – 3: The popularity of a country music group is increasing at a rate of $r(t) = 1.3e^{0.2t}$ percent of the group's listeners, where t is the time in months.

2. Write an expression that could be used to find the percentage of popularity during the sixth month.

3.5 Derivatives of Inverse Trigonometric Function Form C

Name _____

Date _____ Period _____

Find the derivative.

1. $f(x) = \sin^{-1}(x^3)$

2. $f(x) = (-3x^2)\cos^{-1}(x)$

3. $y = \tan^{-1}(x - 1)$

3.5 Derivatives of Inverse Trigonometric Function Form D

Name _____

Date _____ Period _____

Find the derivative.

1. $f(x) = \cos^{-1}(2x)$

2. $f(x) = (5x)\tan^{-1}(x)$

3. $y = \sin^{-1}(3x^2)$

4.5 Linear Approximation Form A

Name _____

Date _____ Period _____

1. Let g be a differentiable function with $g(-5) = 3$ and $g'(-5) = -2$. What is the value of the approximation of $g(-4.8)$ using the function's local linear approximation at $x = -5$.

2. Find the tangent line approximation for $f(x) = \sqrt{2 - x}$ at $x = -2$. Use it to estimate the value at $x = -2.1$.

3. Find the error for the estimate $L(-2.1)$

4. The local linear approximation to the function f at $x = -3$ is $y = 3x - 8$. What is the value of $f(-3)$ + $f'(-3)$?

4.5 Linear Approximation

Name _____

Date _____ Pe

1. Let h be a differentiable function w and $h'(-3) = 4$. What is the value approximation of $h(-3.2)$ using the local linear approximation at $x = -3$

2. Find the tangent line approximation for $f(x) = \sqrt[4]{x + 1}$ at $x = 7$. Use it to estima the value at $x = 7.1$.

3. Find the error for the estimate $L(7.1)$

4. The local linear approximation to the

6.7 Integration by Substitution Form C

Name _____

Date _____ Period _____

1. $\int (3 - x^2)^3 (2x)\,dx$

2. $\int \sin(6x)\,dx$

3. $\int e^{\sin 2x} \cos(2x)\,dx$

6.7 Integration by Substitution Form D

Name _____

Date _____ Period _____

1. $\int (1 - x^3)^2 (3x^2)\,dx$

2. $\int \cos(8x)\,dx$

3. $\int e^{\cos \pi x} \sin(\pi x)\,dx$

4. $\int \frac{x}{\sqrt{1 + x^2}}\,dx$

8.5 Volumes by Cross Sections Form C

Name _____

Date _____ Period _____

Find the volume of the solid whose base is bounded by the given function with the indicated cross section taken perpendicular to the x-axis.

1. $x^2 + y^2 = 4$, semi-circles.

2. $y = 2x + 1, x = 0, x = 2$
rectangles with height 2

8.5 Volumes by Cross Sections Form D

Name _____

Date _____ Period _____

Find the volume of the solid whose base is bounded by the given function with the indicated cross section taken perpendicular to the x-axis.

1. $y = 4 - x^2$, squares

2. $y = 2x + 1, x = 0, x = 2$
isosceles right triangle

Flamingo Math by Jean Adams

Teacher Reviews. . .

I use these as "do-nows" for my students and they align perfectly with AP Classroom and are a great resource for practice!

I enjoy using these on a weekly basis in my AP Calc class, mixing and matching questions as a spiral review twice a week.

I did a variation of a flipped classroom this year with my AP Calc AB students and used these daily quizzes at the beginning of each class period to get a baseline of students' understanding of the content. This allowed me to target misunderstanding and identify students needing more support and remediation.

I love using these as daily checks to see if my students understood the material from the previous class! And I love that there is more than one version available! Thank you!

Let's Connect!


www.Instagram.com/flamingomath_


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www.flamingomath.com


www.youtube.com/c/JeanAdamsFlamingoMath16