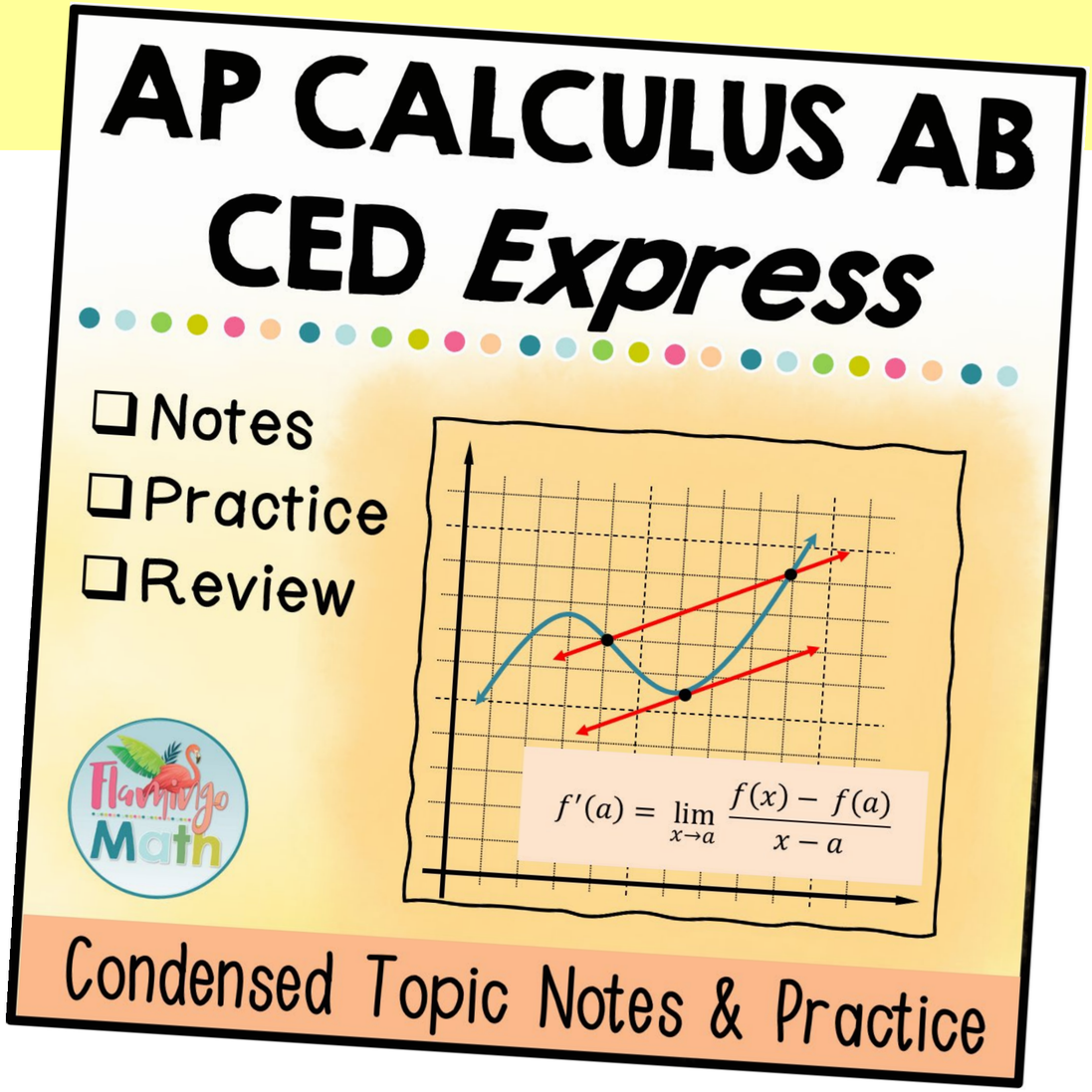
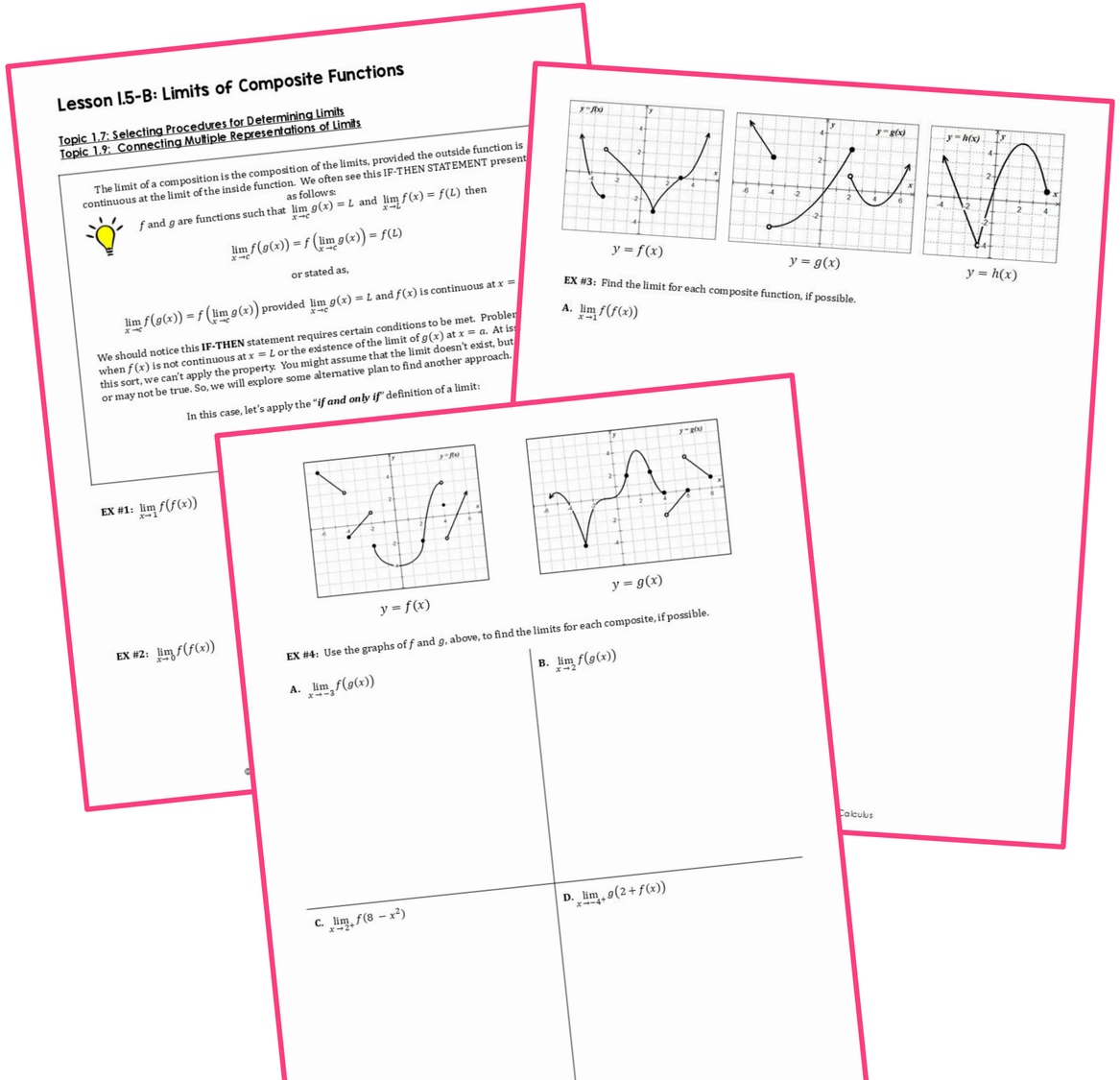
Do you want lessons that Align to the CED Topics to teach AP Calculus AB?

All new condensed notes and practice sets, plus unit reviews to save you time

Take a look inside!



WHAT IS INCLUDED?



Lesson I.5-B: Limits of Composite Functions

Topic 1.7: Selecting Procedures for Determining Limits
Topic 1.9: Connecting Multiple Representations of Limits

The limit of a composition is the composition of the limits, provided the outside function is continuous at the limit of the inside function. We often see this IF-THEN STATEMENT presented as follows:

f and g are functions such that $\lim_{x \to c} g(x) = L$ and $\lim_{x \to L} f(x) = f(L)$ then

$$\lim_{x \to c} f(g(x)) = f\left(\lim_{x \to c} g(x)\right) = f(L)$$

or stated as,

$\lim_{x \to c} f(g(x)) = f\left(\lim_{x \to c} g(x)\right)$ provided $\lim_{x \to c} g(x) = L$ and $f(x)$ is continuous at $x =$

We should notice this **IF-THEN** statement requires certain conditions to be met. Problem when $f(x)$ is not continuous at $x = L$ or the existence of the limit of $g(x)$ at $x = a$. At issue this sort, we can't apply the property. You might assume that the limit doesn't exist, but or may not be true. So, we will explore some alternative plan to find another approach.

In this case, let's apply the "***if and only if***" definition of a limit:

EX #1: $\lim_{x \to 1} f(f(x))$

EX #2: $\lim_{x \to 0} f(f(x))$

$y = f(x)$ $y = g(x)$ $y = h(x)$

EX #3: Find the limit for each composite function, if possible.

A. $\lim_{x \to 1} f(f(x))$

$y = f(x)$ $y = g(x)$

EX #4: Use the graphs of f and g, above, to find the limits for each composite, if possible.

A. $\lim_{x \to -3} f(g(x))$

B. $\lim_{x \to 2} f(g(x))$

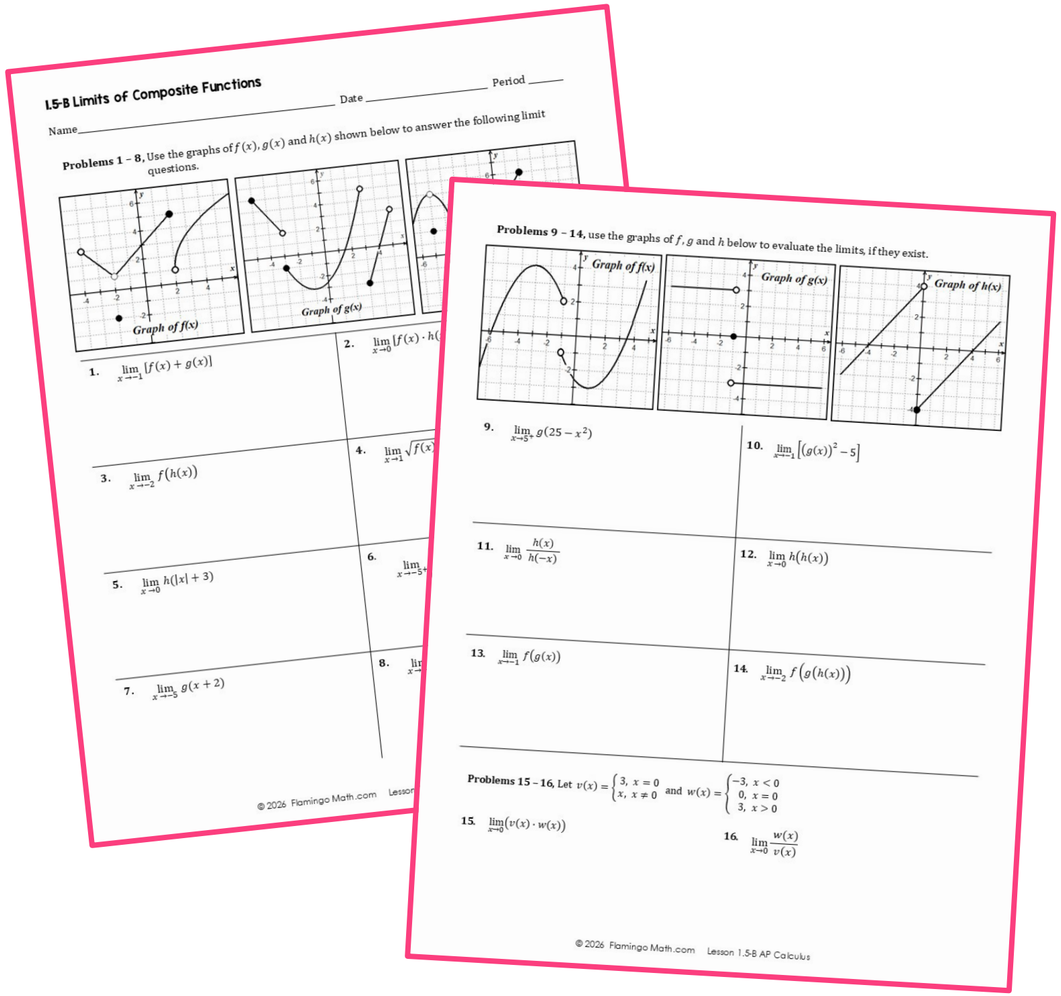
C. $\lim_{x \to 2^+} f(8 - x^2)$

D. $\lim_{x \to -4^+} g(2 + f(x))$

Calculus

- Condensed Student Notes
- Practice sets
- Unit Reviews
- Solution sets
- Scope and Sequence
- Pacing Guide/Calendar

Condensed lessons and practice sets designed for 50-minute class sessions and aligned to CED course standards is here.



- Where do you find extra time to write AP-Style notes and practice sets?
- Is your class instruction aligned to the CED learning objectives and topics?
- You need resources that will challenge your students to the AP® rigor for success.

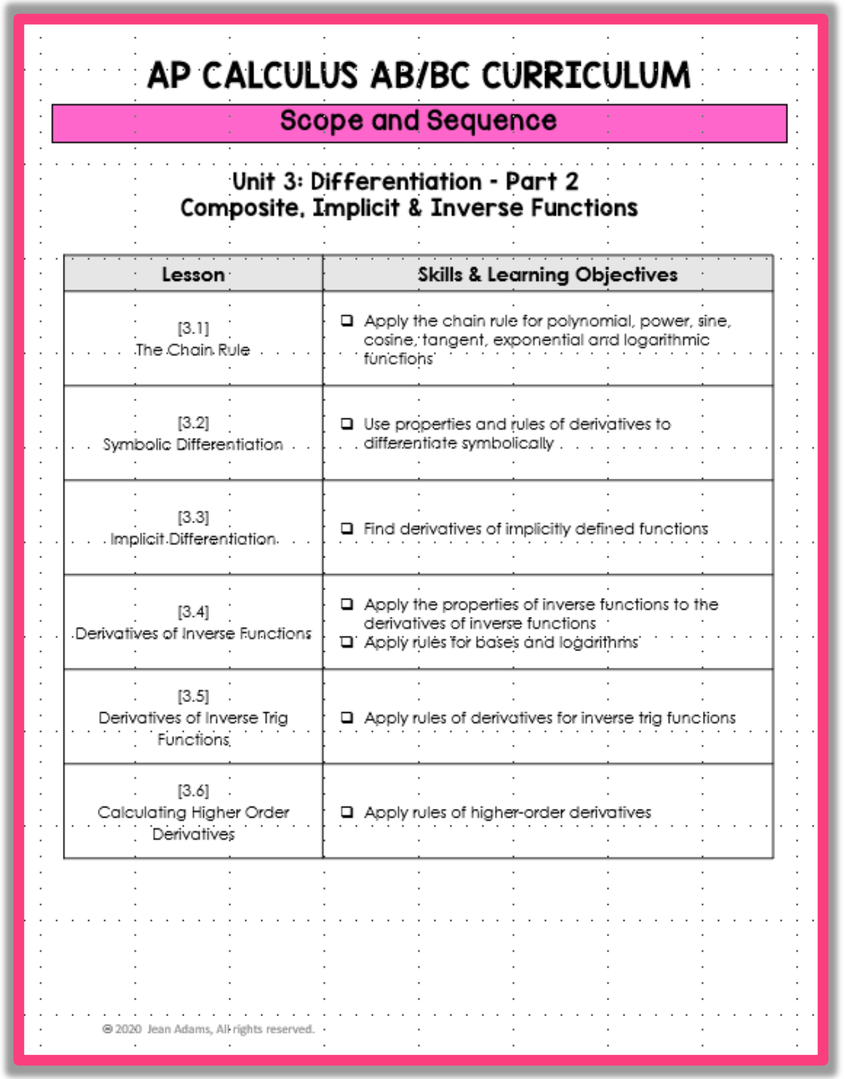
Flamingo Math will help bring balance into your teacher life!

Flamingo Math by Jean Adams

Print Less, Teach More . . .

Each condensed lesson will provide you and your students with the skills and learning objectives necessary for success in the AP Environment.

- ❑ The CED *Express* Edition is a direct solution to school copy limits and paper usage.
- ❑ Each lesson number corresponds to the topic number from the CED.
- ❑ An editable Scope and Sequence Guide for your AB class is included. This will help you track the learning objectives for the unit.



AP CALCULUS AB/BC CURRICULUM

Scope and Sequence

Unit 3: Differentiation - Part 2
Composite, Implicit & Inverse Functions

Lesson	Skills & Learning Objectives
[3.1] The Chain Rule	❑ Apply the chain rule for polynomial, power, sine, cosine, tangent, exponential and logarithmic functions
[3.2] Symbolic Differentiation	❑ Use properties and rules of derivatives to differentiate symbolically
[3.3] Implicit Differentiation	❑ Find derivatives of implicitly defined functions
[3.4] Derivatives of Inverse Functions	❑ Apply the properties of inverse functions to the derivatives of inverse functions ❑ Apply rules for bases and logarithms
[3.5] Derivatives of Inverse Trig Functions	❑ Apply rules of derivatives for inverse trig functions
[3.6] Calculating Higher Order Derivatives	❑ Apply rules of higher-order derivatives

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Teacher Reviews. . .

"After exploring Calc AB Unit 1, I can say that I LOVEEEE it! The notes have everything covered but are concise. I'm excited to use these!

Sara U.

"The lessons are concise and straightforward without sacrificing mathematical rigor or challenge!"

Jeff S.

"You are awesome! I love the new CED Express Curriculum."

Lori M.

"Thanks for creating these condensed notes! It's making a huge difference for my classroom!"

Susanne F.

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Full Year Curriculum

The MEGA Bundle provides eight units for the entire AP Calculus AB course, including activities, video lessons, presentation tools, and so much more.

- Save over 20% when you purchase the full year curriculum bundle.
- Let Flamingo Math help you teach!

> “Excellent resource to prepare for the AP calc test. Just finished an AP workshop and am really impressed how aligned this bundle is for getting the Calculus taught. Thank you fir all the hard work put into it. It’s a fabulous resource. *Linda A.*”

