

AP CALCULUS BC 2023-24

$x^2 - 3x - 4 = 0$
 $4x^2 - 3x - 1 = 0$

$\int_a^b f'(x) dx = f(b) - f(a)$

$m \frac{d^2 x}{dt^2} = -kx$

Calculus

$\frac{df(x)}{dz}$

$\frac{dA}{dt} = \frac{dB}{dt} = -\frac{dC}{dt} = -\frac{dD}{dt} = (d_1)T^{\frac{1}{2}}AB - (d_2)T^{\frac{1}{2}}CD$

$x^2 = A \frac{dT}{dt} = (c_3) \frac{dA}{dt} - (c_4)(T_0 - T)$

$\left[x + \frac{b}{2a} \right]^2 = \frac{b^2 - 4ac}{4a^2} \implies x + \frac{b}{2a} = \pm \frac{\sqrt{b^2 - 4ac}}{2a} \text{ or } x + \frac{b}{2a} = -\frac{\sqrt{b^2 - 4ac}}{2a} \text{ (} x+h, f(x+h) \text{)}$

Take a minute now to Sign up for Remind

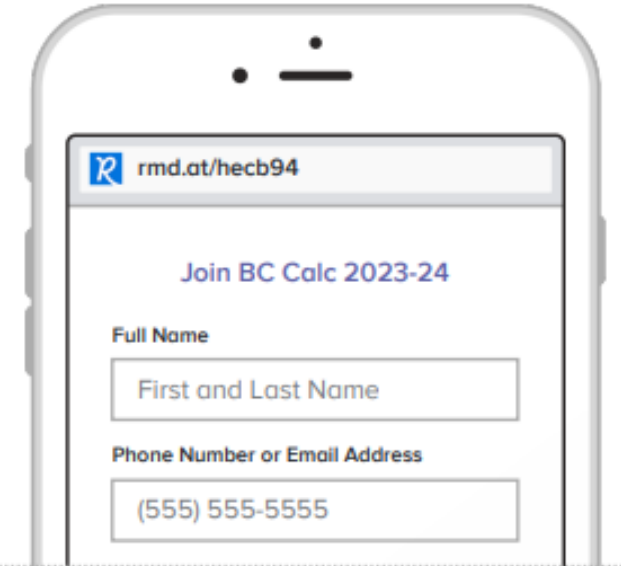
Pick a way to receive messages for BC Calc 2023-24:

A If you have a smartphone, get push notifications.

On your iPhone or Android phone, open your web browser and go to the following link:

rmd.at/hecb94

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.

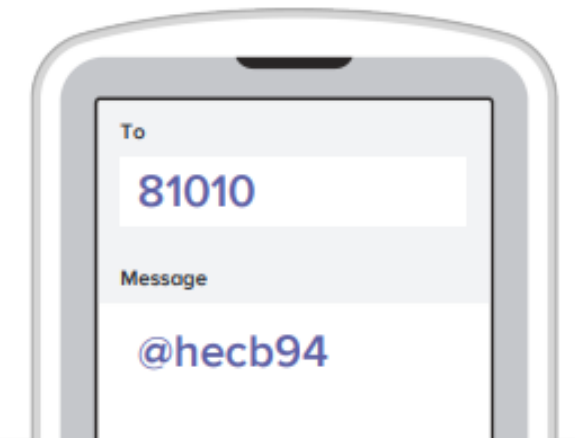


B If you don't have a smartphone, get text notifications.

Text the message @hecb94 to the number 81010.

If you're having trouble with 81010, try texting @hecb94 to (563) 265-6842.

** Standard text message rates apply.*



My Teacher Website: mryangteacher.weebly.com

(Also embedded on Class TEAMS Page under “Class Website”)



Mr. Yang's Teacher Website

Calculus AB Accel Pre-Calculus Calculus BC Non-AP Calculus Geometry Math Team Mu Alpha Theta more...

AP CALCULUS BC

***** AP Calculus BC Summer Packet (voluntary Pre-Calculus review, optional assignment, not a grade)*****

[AP Calculus AB/BC 2023 Summer Packet \(and Key\)](#)

I. [BC Class Notes & Videos](#) [Fall Summary \(AB topics\)](#) [Spring Summary \(BC topics\)](#)

II. [Class Calendar AP Calculus BC: August 2023](#)

III. a) Sullivan & Miranda Calculus Textbook (3rd edition BFW publishers)
b) Sullivan & Miranda Calculus Exercise Problem Solutions

IV. [Syllabus Fall 2023-24](#) Day 1 PowerPoint Class Overview (Aug 2023)
[AP Calculus Student Supply List 2023-24](#)
[Remind Text Reminders Instructions & Join Code \(Calc BC 2023-24\)](#)

V. [Online Resources](#)

Calculus BC Tab

➤ Class Notes

➤ Begin with

Ch. I Limits

Class Calendar

➤ Syllabus

My Teacher Website: mryangteacher.weebly.com

(Also embedded on Class TEAMS Page under “Class Website”)

Calculus AB

Accel Pre-Calculus

Calculus BC

Non-AP Calculus

Geometry

Math Team

Mu Alpha Theta

more...

BC Class Notes

>

BC Unit 1 Limits

Online Resources

BC Unit 2 Derivatives

AP CALCULUS

***** AP Calculus BC Summer Packet(voluntary Pre-Calculus review, c
[AP Calculus AB/BC 2023 Summer Packet \(and Key\)](#)

BC Unit 3 Chain, Implicit,
Inverse Derivatives

I. BC Class Notes & Videos

[Fall Summary](#)

BC Unit 4 Related Rates &
Applications

[Summary \(BC topics\)](#)

II. Class Calendar AP Calculus BC: Au

BC Unit 5 Curve Sketching

III. a) Sullivan & Miranda Calculus Textbook (3rd ed

b) Sullivan & Miranda Calculus Exercise Proble

BC Unit 6 Integration &
Accumulation of Change

BC Unit 7 Differential
Equations

IV. Syllabus Fall 2023-24

Day 1 PowerPoint Cl

BC Unit 8 Area & Volume

3)

Go to "Chapter I" Page, and practice accessing [Exercise problems](#), [HW Calendar](#), [Notes](#), [Key](#), [Video](#), and [Homework Solutions](#)

Calculus AB

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more...

BC Unit 1: Limits

0) [Textbook Exercise Problems: Ch. 1.1](#) [Ch. 1.2](#) [Ch. 1.3](#) [Ch. 1.4](#) [Ch. 1.5](#)

---Aug 2023--- [BC HW Calendar August 2023](#)

Ch. 1 BC Limits Student Notes Packet

1) Mon (8/7): Day 1 Course Intro (Syllabus & BC Course Overview PowerPoint)

[1.1 - Introducing Calculus Rates of Change, Defining Limits](#)

[Notes.Key](#)

[1.1 Notes.Video](#)

[1.1 Homework Solutions](#)

2) Tues (8/8): [1.2 Techniques for Finding Limits: \(Algebraic, Numeric, Graphically\)](#)

[Notes.Key](#)

[1.2 Notes.Video](#)

[1.2 Homework Solutions](#)

Highlights from our Class Syllabus

- Grading Scale: **Major (Tests): 55%** **Minor (quizzes): 35%** **Practice (homework): 10%**
- All Tests and Quizzes will be **CLOSED NOTES**.
- No Final Exam this Fall semester
- Homework will be assigned and checked daily. **Daily routine:** 1) check for HW completion (looking for your work, your steps, corrections: Writing down just problems and answers is not sufficient) 2) Go over selected HW problems. 3) Answer questions 4) Start new lesson
- Each HW assignment will be worth 4 points. Any late HW shown to me before the next assessment (quiz or test) will earn 3 points per assignment. Late HW will not be accepted after the Unit test is given. (For each unit, your HW percentage grade will be entered out of 100 points in the practice category)

Highlights from our Class Syllabus

(...continued)

- Cell Phones are to be placed in the Wall Pockets at the front of the classroom when you enter the classroom. Students can retrieve their devices 5 mins before the bell. **Cell Phones are to stay in the wall pockets even when using the Hall Pass for restroom.**
- All devices and/or laptop computers are to be put away off your desk during classroom instruction time.
- Students will have opportunity to recover each **test** grade up to a 75. (Recovery test need to be completed **before** the next unit test)
- I'll hold morning help sessions day of quiz/tests 7:15am (or the afternoon the day before test/quiz depending on schedule 3:40 pm). Help Sessions M-F 7:30-8:10am & 3:30-4pm
- Help Sessions will be recorded and uploaded to YouTube (links on my website)
- We will have 1 day this week to go to Media Hub during class to pick up Textbook for those who want one. (Keep at home for reference. No need to have in your locker or bring to textbook to class)

Student Class Supply List

1) Graphing Calculator - TI 83 Plus , TI-84 Plus, or **TI – 84 Plus CE**

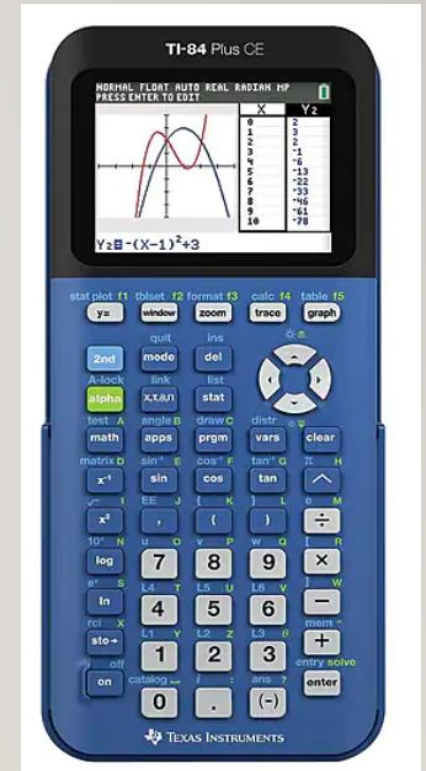
***Scientific calculator TI-36x Pro not allowed on AP exam.**

2) Loose-Leaf Paper, 3-Ring Binder, Class Folder, Printer Paper, Graph Paper

3) Pencil, Pen, Eraser, ruler, Highlighter, colored pens

4) Textbook - Sullivan & Miranda Calculus 3rd edition (BFW Publishers)

(we will provide each student with a textbook 1st week of school)



AP Calculus BC Pacing

<u>Fall Semester</u>	<u>Spring Semester</u>
<u>Unit P</u> : Preparing for Calculus	<u>Unit M</u> : Miscellaneous BC Topics (Ch. 6-8)
<u>Unit 1</u> : Limits and Properties	<u>Unit 9</u> : Parametric, Polar, Vector-Valued Functions
<u>Unit 2-3</u> : Differentiation	<u>Unit 10</u> : Infinite Series
<u>Unit 4</u> : Related Rates	<u>AP Exam Preparation & Review:</u> (Mid-March – May)
<u>Unit 5</u> : Curve Sketch & Theorems	<u>AP Exam Calculus BC:</u> Monday May 13 th , 2024 (8am)
<u>Unit 6</u> : Integration (Antiderivatives)	
<u>Unit E</u> : Exponentials, Logs, Trig Integrals	
<u>Unit 7</u> : Differential Equations	
<u>Unit 8</u> : Area and Volume	
<u>Fall Review</u> : AB Topics Review	

AP CALCULUS AB/BC EXAM FORMAT

AP Calculus AB/BC Exam Date

Monday, May 13th, 2024 (8am)

The exam is approximately **three hours and 15 minutes** long and has two parts: multiple choice and free response. Each section is worth 50% of the AP Score

Section 1: Multiple Choice

45 questions; 1 hour and 45 minutes

Part A — 30 questions; 60 minutes (no calculator)

Part B — 15 questions; 45 minutes (graphing calculator permitted)

Section 2: Free Response

6 Problems; 1 hour and 30 minutes

Part A — 2 problems; 30 minutes (graphing calculator permitted)

Part B — 4 problems; 1 hour (no calculator)



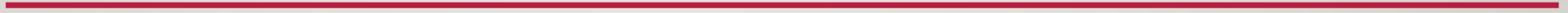
CALCULUS BIG IDEAS

- Fall Semester focus is Differential Calculus: **Derivatives** describes rate of change of one variable with respect to another. (In other words, rate of change is related to **Slope**)
- Spring Semester focus is Integral Calculus: **Definite integrals** describes the net change in one variable over an interval of another. (In other words, net change is related to **Area**)

DAY 2 TOMORROW (TUES 8/8)

- Look for your **assigned seats** (seating chart projected on the board)
- Look for your assigned number (desk number) to place your device in the Wall Pockets
- Begin/Continue Day 2 Notes Limits (Ch. 1)
- **Ch. 1.1-1.5 Homework due Monday (8/14) beginning of class**

ANY QUESTION?



I'M LOOKING FORWARD
TO SUPPORTING YOUR
LEARNING THIS
SCHOOL YEAR!!!

