

AP Precalculus Exam

Regularly Scheduled Exam Date: Monday afternoon, May 13, 2024

Late-Testing Exam Date: Thursday morning, May 23, 2024

Section I	Total Time: 2 hours Number of Questions: 40 Percent of Total Score: 62.5% Writing Instrument: Pencil required	Part A: Number of Questions: 28	Time: 1 hour and 20 minutes <i>No calculator allowed</i>
		Part B: Number of Questions: 12	Time: 40 minutes <i>Graphing calculator required</i>
Section II	Total Time: 1 hour Number of Questions: 4 Percent of Total Score: 37.5% Writing Instrument: Either pencil or pen with black or dark blue ink Note: In Section II, if students finish Part A before the end of the timed 30 minutes, they cannot begin Part B—they must wait until the full time for Part A is complete. During the timed portion for Part B, students may work on the questions in Part A without the use of a calculator.	Part A: Number of Questions: 2	Time: 30 minutes Percent of Section II Score: 50% <i>Graphing calculator required</i>
		Part B: Number of Questions: 2	Time: 30 minutes Percent of Section II Score: 50% <i>No calculator allowed</i>

Note: A graphing calculator is required for Section I, Part B, and Section II, Part A of the AP Precalculus Exam. See “Calculator Policy” in **Part 2** of the *2023-24 AP Coordinator’s Manual* for details about the calculator policy.

Before Distributing Exams: Check that the title on all exam covers is *Precalculus* and the correct date is listed for the administration. If there are any exam booklets with a different title or the wrong date, contact the AP coordinator immediately.

What Proctors Need to Bring to This Exam

- Exam packets
- Answer sheets
- The personalized AP ID label sheet for each student taking the exam
- The school code (provided by the AP coordinator); have on hand in case any student is missing an AP ID label sheet
- Part 2** of the *2023-24 AP Coordinator’s Manual*
- This book—*2023-24 AP Exam Instructions*
- AP Exam Seating Chart template
- Extra graphing calculators
- Calculator Release Statement (from **Part 2** of the *AP Coordinator’s Manual*), if needed
- Pencil sharpener
- Container for students’ electronic devices (if needed)
- Extra No. 2 pencils with erasers
- Extra pens with black or dark blue ink
- Unlined paper
- Stapler
- Watch
- Signs for the door to the testing room
 - “Exam in Progress”
 - “No Devices”

Calculator Use

Graphing calculators are required to answer some of the questions on the AP Precalculus Exam. Before starting the exam administration, make sure each student has a graphing calculator from the approved list on the “AP-Approved Graphing Calculators” table in **Part 2** of the *2023-24 AP Coordinator’s Manual*. It is recommended students use a graphing calculator from the “Approved Graphing Calculators for the AP Precalculus Exam” table in the *AP Coordinator’s Manual*—these calculators have the expected built-in capabilities needed for the exam. If a student does not have a graphing calculator from the approved list, you may provide one from your supply. If the student does not want to use the calculator you provide or does not want to use a calculator at all, they must hand copy, date, and sign the “Calculator Release Statement,” which is in **Part 2** of the *2023-24 AP Coordinator’s Manual*.

During the administration of Section I, Part B, and Section II, Part A, students may have **no more than two** graphing calculators on their desks. Calculators may not be shared. **Calculator memories do not need to be cleared before or after the exam.** Students with Hewlett-Packard 48–50 Series and Casio FX-9860 graphing calculators may use cards designed for use with these calculators. Proctors should make sure infrared ports (Hewlett-Packard) are not facing each other.

Since graphing calculators can be used to store data, including text, proctors should monitor that students are using their calculators appropriately. Attempts by students to use the calculator to remove exam questions and/or answers from the room may result in the cancellation of AP Exam scores.

Accessible Technology for the Braille or ATC version of the AP Precalculus Exam

Accessible technology with the capabilities expected for the AP Precalculus Exam is available for students who are blind or visually impaired. For braille or ATC-format exams or the standard format of the exam with an accommodation, use of accessible technology is expected. It can be used **only** on the parts requiring a graphing calculator: Section I, Part B and Section II, Part A. Students must receive approval for these accommodations from the College Board SSD office prior to the exam administration.

SECTION I: Multiple Choice

Before starting the exam administration, make sure each student has an appropriate calculator for the exam. See details in the section above. Calculators are **not** permitted on Section I: Part A.

› **Do not begin the exam instructions below until you have finished reading the General Instructions to students.**

Make sure you administer the exams on the scheduled date and begin the exams at the designated time.

Complete a seating chart for this exam; return it to the AP coordinator to be kept on file for six months. See pages 284–285 for a seating chart template and instructions. See exam seating requirements in the “Seating Policy” section in either **Part 2** of the *2023-24 AP Coordinator’s Manual* or the *2023-24 AP Exam Instructions*.

When you are ready to begin, read the appropriate information from the boxes.

If you are giving the regularly scheduled exam, say:

It is Monday afternoon, May 13, and you will be taking the AP Precalculus Exam.

If you are giving the alternate exam for late testing, say:

It is Thursday morning, May 23, and you will be taking the AP Precalculus Exam.

Look at your exam packet and confirm that the exam title is “AP Precalculus.”
Raise your hand if your exam packet has any other exam title and I will help you.

Once you confirm that all students have the correct exam, say:

Before you open the exam packet, remember that by opening this packet, you agree to all of the AP Program’s policies and procedures referenced in the AP Exam Terms and Conditions.

You may now remove the shrinkwrap only from the outside of your exam packet. Do not open the Section I booklet; do not remove the shrinkwrap from the Section II booklets. Put the white seals and the shrinkwrapped Section II booklets aside. . . .

Carefully remove the AP Exam label from the top left of your exam booklet cover. Place it on the front of your answer sheet on the light blue box near the bottom that reads “AP Exam Label.”. . .

If students accidentally place the exam label in the space for the AP ID label or vice versa, advise them to leave the labels in place. They should not try to remove the label; their exam can still be processed correctly.

Now turn over your answer sheet to the side marked page 2 and look at the section at the top of the page called “AP Exam I’m Taking.” Print the name of this exam, the exam form, and the form code.

The exam form and the form code are on the front cover of the Section I booklet in the lower right corner; ignore the large number under these two items—it is not part of the form or form code.

Look up when you have finished. . . .

When students are finished, say:

Listen carefully to all my instructions. I will give you time to complete each step. Please look up after completing each step. Raise your hand if you have any questions.

Give students enough time to complete each step. Don’t move on until all students are ready.

Read the statements on the front cover of the Section I booklet. . . .

Sign your name and write today’s date. . . .

Now print your full legal name where indicated. . . .

Does anyone have any questions? . . .

Turn to the back cover of your exam booklet and read it completely. . . .

Give students a few minutes to read the entire back cover.

Are there any questions? . . .

You’ll take the multiple-choice portion of the exam first. You should have in front of you the Section I multiple-choice booklet and your answer sheet. You may never discuss the multiple-choice exam content at any time in any form with anyone, including your teacher and other students. If you disclose the multiple-choice exam content through any means, your AP Exam score will be canceled.

You must complete the answer sheet using a No. 2 pencil only. Mark all of your responses on page 2 of your answer sheet, one response per question. The answer sheet has circles marked A–E for each question. You will use only the circles marked A–D. Completely fill in the circles. If you need to erase, do so carefully and completely. No credit will be given for anything written in the exam booklet. Scratch paper is not allowed, but you may use the margins or any blank space in the exam booklet for scratch work.

Your score on the multiple-choice section will be based solely on the number of questions answered correctly.

Section I is divided into two parts. Each part is timed separately, and you may work on each part only during the time allotted for it. Calculators are not allowed in Part A. Please put your calculators under your chair.

Are there any questions? . . .

You have one hour and 20 minutes for Part A. Part A questions are numbered 1 through 28. Mark your responses for these questions on your answer sheet. Do not go on to Part B until instructed to do so. Once final time is called for Part A, stop working immediately.

Now open your Section I booklet and begin.



Note Start Time _____ . **Note Stop Time** _____ .

Check that students are marking their answers in pencil on their answer sheets and that they are not looking beyond Part A. The line of A's at the top of each page will assist you in monitoring students' work. Make sure they've placed their calculators and AP ID label sheets under their chairs.

After one hour and 10 minutes, say:

There are 10 minutes remaining.

After 10 more minutes, say:

Stop working on Part A and turn to page 24 in your Section I booklet. . . .

On that page, you should see an area marked "PLACE SEAL HERE." Making sure all of your other exam materials, including your answer sheet, are out of the way, take one of your seals and press it on that area and then fold the seal over the open edge to the front cover. Be sure you don't seal the Part B section of the booklet or let the seal touch anything except the marked areas. . . .

After all students have sealed Part A, say:

Graphing calculators are required for Part B, so get your calculators from under your chair and place them on your desk. Part B questions are numbered 76 through 87. You have 40 minutes for Part B. Once final time is called for Part B, stop working immediately. You may begin.



Note Start Time _____ . **Note Stop Time** _____ .

Check that students have sealed their booklets properly and are now working on Part B. The large B's in an alternating shaded pattern at the top of each page will assist you in monitoring their work. Make sure that students are using their calculators appropriately. You should also make sure Hewlett-Packard calculators' infrared ports are not facing each other and that students are not sharing calculators.

After 30 minutes, say:

There are 10 minutes remaining.

After 10 more minutes, say:

Stop working and put your pencil down. Close your exam booklet and put your answer sheet faceup on your desk. Make sure your AP ID label and AP Exam label are on your answer sheet. Sit quietly while I collect your answer sheets.

Collect an answer sheet from each student. Check that each answer sheet has an AP ID label and an AP Exam label.

After all answer sheets have been collected, say:

Now you must seal your Section I booklet. Remove the remaining white seals from the backing and press one on each area of your exam booklet cover marked "PLACE SEAL HERE." Fold each seal over the back cover. When you have finished, place the booklet faceup on your desk.

When students have finished sealing their booklets, say:

I will now collect your Section I booklet. . . .

Collect a Section I booklet from each student. Check that each student has signed the front cover and sealed the booklet. Confirm that the number of answer sheets you collected matches the number of exam takers.

There is a 10-minute break between Sections I and II.

When all Section I materials have been collected and accounted for and you are ready for the break, say:

Please listen carefully to these instructions before we take a 10-minute break. Get your AP ID label sheet from under your chair and put it on your desk. You must leave your shrinkwrapped Section II packet and your AP ID label sheet on your desk during the break. Please put all of your calculators under your chair. Your calculators and any other items you placed under your chair must stay there. You are not permitted to open or access them in any way. You are not allowed to consult teachers, other students, notes, textbooks, or any other resources during the break. You may not make phone calls, send text messages, use your calculators, check email, use a social networking site, or access any electronic or communication device. You may not leave the designated break area. Remember, you may never discuss the multiple-choice exam content with anyone, and if you disclose the content through any means, your AP Exam score will be canceled. Are there any questions? . . .



You may begin your break. Testing will resume at _____ .

Make sure students understand where the designated break area is.

IMPORTANT: Both the exam room and students in the designated break area must be monitored.

At the start of the break, walk around the room to ensure all Section II booklets are accounted for on students' desks. Immediately contact the Office of Testing Integrity (OTI) if any exam booklet is missing. Testing must not resume until the booklet is located or OTI is contacted. (See contact information for OTI on the inside front cover of the *2023-24 AP Exam Instructions*.)

SECTION II: Free Response

After the break, say:

May I have everyone's attention? Please look at your AP ID label sheet and double-check that your name is printed at the top to ensure you've returned to the correct seat. . . .

Confirm that students have their AP ID label sheet, then say:

For this section of the exam you will use a pen with black or dark blue ink or a No. 2 pencil to write your responses. Keep in mind that responses are scanned and will be scored in black and white only. Your responses should not depend on writing in multiple colors. Does everyone have a pen or pencil? . . .

You may now remove the shrinkwrap from the Section II packet, but do not open any booklets yet. I'll tell you when you can open them. . . .

You should now have in front of you:

- your AP ID label sheet,
- the orange Section II: Free Response, Questions booklet, and
- the Section II: Free Response booklet with a shaded block of important identification information on the front cover. This booklet is where you'll write your responses.

First, look at the front cover of the orange Questions booklet. Read the bulleted statements. Look up when you have finished. . . .

Read the last statement. . . .

Print the first, middle, and last initials of your legal name in the boxes and print today's date where indicated. This constitutes your signature and your agreement to the statements on the front cover. . . .

Now look at the front cover of the Section II: Free Response booklet, and complete Items 1 through 3 under "Important Identification Information." For Item 3, your school code is printed at the top right of your AP ID label sheet. . . .

Give students enough time to complete Items 1 through 3.

Write today's date in Item 4—include month, day, and year.

Now read the bulleted items under "As you complete this booklet." . . .

Are there any questions? . . .

Now take an AP ID label from your label sheet and place it on the shaded box marked "AP ID Label" at the bottom of the free-response booklet. If you don't have any AP ID labels, write your AP ID in the box. Look up when you have finished. . . .

Now I will collect your AP ID label sheet. Leave your label sheet on your desk. While I collect them, read the information on the back cover of the orange Questions booklet, paying careful attention to the bulleted statements in the instructions. Do not open any booklets until you are told to do so. Look up when you have finished. . . .

At this point, collect the AP ID label sheet from every student.

When you've finished collecting AP ID label sheets, say:

Are there any questions? . . .

Graphing calculators are required for Part A, so make sure your calculators are on your desk now.

Section II has two parts that are timed separately. You have 30 minutes to answer the questions in Part A. You are responsible for pacing yourself and may proceed freely from one question to the next within Part A. Do not break the seals for Part B until you are told to do so.

You may make notes in the orange booklet. No credit will be given for any work written in the orange booklet.

You must write your responses in the free-response booklet. If you use a pencil, be sure that your writing is dark enough to be easily read.

Show your work and write your response to each question on the correct designated page in the free-response booklet. Numbers across the top of the page indicate which question to answer on the page.

If you run out of space, raise your hand.

Once final time is called for Part A, stop working immediately.

Are there any questions? . . .

Then say:

Now open both booklets and begin.



Note Start Time _____ . Note Stop Time _____ .

Make sure students are working on Part A only and writing their responses in their free-response booklet, **not** in their orange booklet. The pages for the Part A questions are marked with large 1's or 2's at the top of each page to assist you in monitoring their work.

Make sure that students are using their calculators appropriately. You should also make sure that Hewlett-Packard calculators' infrared ports are not facing each other and that students are not sharing calculators.

If a student runs out of space and raises their hand, give them extra paper and instruct them to write the following on the top of each sheet they use:

- their AP ID,
- the exam title, and
- the question number they are working on.

They must not write their name.

After 20 minutes, say:

There are 10 minutes remaining in Part A.

After 10 more minutes, say:

Stop working on Part A. Calculators are not allowed for Part B. Please put all of your calculators under your chair. . . .

Turn to page 11 in the orange Questions booklet and turn to page 8 in the free-response booklet. You have 30 minutes for Part B. During this time you may go back to Part A, but you may not use your calculator. Remember to show your work and write your response to each question on the correct designated page and part in the free-response booklet. Once final time is called for Part B, stop working immediately. Are there any questions? . . .

Using your finger, break open the seals on Part B in your orange Questions booklet. Do not peel the seals away from the booklet. You may go on to the next page and begin Part B.



Note Start Time _____ . Note Stop Time _____ .

After 20 minutes, say:

There are 10 minutes remaining in Part B.

After 10 more minutes, say:

Stop working and put your pen or pencil down. Close both booklets and place them faceup on your desk. Keep your booklets separate; don't put one inside the other. . . .

If any students used extra paper for a question in the free-response section, have those students staple the extra sheet(s) to the first page corresponding to that question in their free-response booklets. Return these free-response booklets with the extra sheets attached in the Incident Report return envelope (see page 281). An IR form must be submitted online through AP Registration and Ordering. Provide your AP coordinator with whatever information they need to complete the IR form.

Then say:

Remain in your seat, without talking, while the exam materials are collected.

Collect a free-response booklet and orange booklet from each student. Check for the following:

- Free-response booklet front cover
 - ◆ The student placed an AP ID label on the shaded box at the bottom, and
 - ◆ Completed the “Important Identification Information” area.
- The student wrote responses in the free-response booklet and not in the orange booklet.
 - ◆ If any students wrote their responses in the orange booklet instead of the free-response booklet, see “Answers written in an orange booklet instead of the free-response booklet (or written-response booklet)” on page 282 of the Administration Incidents table for instructions.
- Orange Questions booklet front cover
 - ◆ The student printed their initials and today’s date.

The orange booklet must be returned with the rest of your exam materials. Keep the orange booklets separate from the free-response booklets. Do not place free-response booklets inside the orange booklets or vice versa.

Then say:

I have a few final reminders.

You can have one AP score report sent for free. If you haven’t already done so, June 20 is the deadline to indicate or change the college, university, or scholarship program that you’d like to receive your free score report.

If you are giving the regularly scheduled exam, say:

Never discuss or share the free-response exam content with anyone unless it’s released on the College Board website in about two days. Your AP Exam scores will be available online in July.

If you are giving the alternate exam for late testing, say:

Never discuss or share the content in this exam with anyone at any time. Your AP Exam scores will be available online in July.

When all exam materials have been collected and accounted for, return to students any electronic devices you may have collected before the start of the exam.

Then say:

You are now dismissed.

After-Exam Tasks

Return the following to the AP coordinator:

- Exam Materials
- AP ID Label Sheets
- Completed Seating Chart, to be kept on file at the school for six months
- Nonstandard Administration Reports (NARs), if applicable, to be kept on file at the school for six months
- Information Needed to Complete Incident Report(s), if applicable

See **Part 2** of the *2023-24 AP Coordinator’s Manual* for further information about these tasks.