

Introduction to the Teacher's Manual

5 Steps to a 5 is pleased to be one of the first resources for teachers for their AP Precalculus class. No longer limited to just the teacher and the textbook, today's teachers can utilize online simulations, apps, computer-based homework, video lectures, etc. Even the College Board itself provides so much material related to the AP Precalculus exam that the typical teacher—and student—can easily become overwhelmed by an excess of teaching materials and resources.

This book is a vital resource for your class because it explains in straight forward language exactly what a student needs to know for the AP Precalculus exam and provides a review program students can use to review for the test. This teacher's manual will provide guidance on using this book in your class and advice on utilizing the best practices and best resources in your class.

This teacher's manual will take you through the 5 steps of teaching AP Precalculus. These steps are:

1. Prepare a strategic plan for the course
2. Hold an interesting class every day
3. Evaluate your student's progress
4. Get students ready to take the AP exam
5. Become a better teacher every year

I'll discuss each of these steps, providing suggestions and ideas that I use in my class. I present them here because, over the years, I found that they work. You may have developed a different course strategy, teaching activities, and evaluation techniques. That's fine; different things work for different teachers. But I hope you find in this teacher's manual something that will be useful to you.

STEP 1

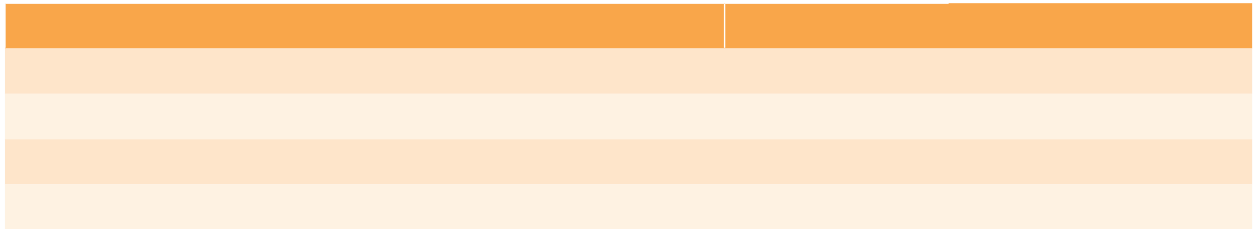
Prepare a Strategic Plan for the Course

The Course and Exam Description (CED) from the College Board, which can be found at: <https://apcentral.collegeboard.org/courses/ap-precalculus/course>, lays out a suggested scope and sequence for the AP Precalculus class. The College Board has set it up in a way that topics and skills build as the year goes on. Over the

see if my students are struggling with the idea of transformations or a specific function, like a logarithmic function, is the problem.

The chart below shows the units and the time suggested for each unit in the CED. The number of class periods is based on a typical 45-minute class. If your school is on a form of block schedule or other non-typical schedule, you will need to adjust the pacing to fit your class needs.

As you plan your year, make sure to leave plenty of time for review. We like to leave at least one month of dedicated review time just before the test. Although you should be giving students practice with released multiple-choice and free response questions at the end of each unit, allowing students a full month of practice helps prepare them for the types of questions they will see on the AP exam.



In addition, you might consider joining the AP Teacher Community or Facebook group that is specifically for AP Precalculus teachers. Here you will find more ideas than you could possibly do in one year!

Looking for a fun way to prepare your students for the Free-Response Questions (FRQs)? Here are a few activities that have worked well in my classroom.

- 8 FRQ Mocktail Party: Give each student a copy of the same FRQ. With only the question in their hand (no pens or pencils), have them walk around the room and mingle with their classmates, asking others about how they would approach the solution. After 10 minutes, students sit down and write out their solution individually. As a bonus, have snacks and beverages in your room for students to eat

STEP 3

Evaluate Your Students' Progress

As mentioned before, I am a big proponent of students doing. From day one, my students know about William Glasser's thoughts on education: "We learn 10 percent of what we read, 20 percent of what we hear, 30 percent of what we see, 50 percent of what we see and hear, 70 percent of what we discuss, 80 percent of what we experience, and 95 percent of what we teach others." My students are frequently in

I recommend incorporating released AP questions from the College Board (found in AP Classroom) on your unit exams. You can also

STEP 4

Get Students Ready to Take the AP Exam

I review using various activities in my class and allow the students to review in whatever ways work best for them. Here are some of my activities:

- × Activity 1: Review a Chapter in 5 Steps to a 5 AP Precalculus. If you have multiple copies of this book, students can use it to review. This is especially important if the diagnostic test showed there was a unit that they just didn't get the first time. The text in the book explains the subject, key terms are identified and defined, and review questions to check the student's understanding.
- × Activity 2: Make Your Own Review Card. You know those laminated poster-like cards they sell to students to review? They can make their own now that they know what topics they need to study. When they walk away with personalized study cards just for them. I provide the students with a blank file folder and a variety of markers.
- × Activity 3: Flash Cards. I have a list of over 100 terms and formulas that are beneficial for students to know for the exam. A good place to start is the list of terms and their definitions at the end of each of the three units.

STEP 5

Become a Better Teacher Every Year

A good AP teacher tries to do better, regardless of how they measure success. If there is anything that didn't work as well as you had hoped this year, there's always next year to try to revise it or do something different. The message is the same whether you are a novice at AP or a veteran: Your goal is to become a better teacher every year.

For all AP teachers, both new and experienced, the best thing you can do to improve is to use the Instructional Planning Report you receive after student scores are calculated. You can access this document in your AP Classroom. You get a breakdown of scores by unit, by question type (MCQ and FRQ), etc. This information is what you need to adjust

A qualifying score on the AP exam is considered a 3 or better. I tell teachers that a 3 or better means "college done." They earned a score that, at most universities, will mean they get college credit and they do not have to take the class again. However, what about a 2? I say a 2 is "college ready." This means that the student that makes a 2 is ready to do very well in this course when they take it in college. They have the background knowledge, and, with just a little more time and practice, they will be ready to earn that A in their college precalculus class. Keep this in mind when you receive the score reports in July; you can be proud of those students who made a qualifying score but also celebrate those students who are college ready!

How do you judge success? There is no right or wrong answer to this. We all teach at different schools with different students. A few students come to you with strong Algebra 2 skills and, let's be honest, could probably pass the exam on day 1 with or without you depending on how in-depth their Algebra 2 course covered units 1 and 2. Most students may lack some of the skills or knowledge that is needed to do well on the AP exam. These students are the ones who need us most and, when they succeed, it is because of their effort and our support.

Additional Resources for Teachers

Make sure to always use the College Board's Course and Exam Description (CED) for the course (<https://apcentral.collegeboard.org/media/pdf/ap-precalculus-course-and-exam-description.pdf>). If the topic is in the CED, it