

SUMMER STUDY PACKET

AP CALCULUS

Introduction (Read please!)

This summer packet will enable you to be successful in knowing the prerequisites for the AP exam. As you know, the requirements for the student include two years of algebra and a year of geometry, a grounding in elementary functions and their graphs, including trigonometry. Attitude prerequisites include a willingness to work both in and out of class, a desire to collaborate with class mutual understanding, and a sincere intent to place out of the first semester or year of college rather than repeat it.

You are responsible for doing all the exercises noted before the first day of classes. If you do not know how to do a problem, you are expected to use the sources available to you (notes, handouts, books, internet, etc.) to figure it out independently. The best study routines, during the summer months, is to constantly review topics and do a few problems each day; do not attempt to do the entire handout the day before school starts.

The problems should be done in chronological order. Each problem should include a summary of the problem statement, a complete step-by-step solution, and a boxed final answer. You should not use a calculator to solve problems, but you may use your calculator to check your answer.

This summer assignment contains a review of the following:

- 1.1 Lines
- 1.2 Functions and Graphs
- 1.3 Exponential Functions
- 1.4 Part A Parent Functions and Transformations
- 1.4 Part B Introduction to Conic Sections
- 1.5 Functions and Logarithms
- 1.6 Trigonometric and Inverse Trigonometric Functions

Instructions

Watch the video recordings, provided in the next section, to answer the lesson worksheets. (The worksheet may be different from the video. For each Topic (e.g., 1.1 Lines):

Step 1. After watching the videos, answer the topic questions [Lesson Worksheets](#)

Step 2. After the lesson worksheet of that topic is completed, proceed to the questions on the [Practice Worksheets](#).

Step 3. Once you finish the AP Calculus Summer work, proceed to the [Science Department Addendum](#) and complete the exercises ONLY of your elective Science Course (notice that AP science courses are not included in this addendum, as these have their separate summer assignment)

Video Recordings

- [1.1 Lines](#)
- [1.2 Functions and graphs](#)
- [1.3 Exponential Functions](#)
- [Transformations](#)
- [Conics](#)
- [1.5 Functions and Logarithms](#)
- [1.6 Trigonometric Functions](#)

Students who did not take AP PreCalculus last year are responsible for knowing the following topics:

- [Inverse Trigonometric Functions](#)

You are expected to know how to solve all the problems. There will be a brief review of these topics during the first week of class, and then you will be formally evaluated on your knowledge of these topics. This test will count as 10% of your first quarter grade. The prepared AP Calculus student should easily score over 90% on such an exam.

Dr. Eva Petocz