

## The AP Calculus Summer Preparatory Study Recommendations

As-salaamu alaykum wa rahmatu Allahi wa barakatuh.

It is essential that you are determined to work hard if you wish to take calculus.

**Calculus AB** is a course in single-variable calculus that includes Fundamental Theorem of Calculus, techniques and applications of the derivative, and techniques and applications of the definite integral. It is equivalent to at least a semester of calculus at most colleges and universities.

**Review of precalculus:** To help you get ready and have a good start it is recommended that you review precalculus lessons during this summer break. A review of precalculus is chapter 1 of the calculus textbook. Calculus book chapter 1 has been posted as a pdf file on the Edline. You may use this file or borrow a Calculus textbook from the school.

**Qualifying test:** In the first week of school in Fall there will (in sha Allah) be a qualifying test based on calculus textbook chapter 1 that you must pass to be in the class. If you have questions you may email me at [ia.ibrahim@yahoo.com](mailto:ia.ibrahim@yahoo.com) or at IFS mail.

**The Princeton Review:** Please, buy yourself a copy of The Princeton Review AP-Calculus AB & BC, any Edition.

**Relax with Dhikrullah:** It is also essential that you come relaxed but poised ready to fly. So have an enjoyable summer and don't lose focus on Allah ta'ala and the ways of approach to Him.

Wa alaykum salaamu wa rahmatu Allahi wa barakatuh.

IAI.

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### Calculus AP Summer Work

The following is recommended to be done over the summer in preparation for AP Calculus class:

Text book:

Calculus - Graphical, Numerical, Algebraic, Auth.: Ross L. Finney et al, Pub.: McDougal Little, ISBN: 0-201-32445-8

1. Chapter 1-: Study and do the exercises: Prerequisites (all sections to be studied with the assignments as listed in the table below from the exercise pages)

Sec. 1: Lines	40- 48
Sec. 2: Functions-graphs	34,44,53,54
Sec. 3: Exponential Fns	10,14,24,32,36
Sec. 4: Parametric Fns	4,6,12,20,24,30
Sec. 5: Logarithms	1-6,10,18,24,36,40,51
Sec. 6: Trigono Fns	3,4,10,16,20,28,34

2. Chapter test-: Do the chapter one test attached
3. Do the attached Qualifier test in preparation for the actual qualifier test to be done in the first week of school.
4. You may study chapter 12 of Precalculus textbook. This is optional but helpful towards calculus chap. 2.