

# AP CALCULUS AB SUMMER ASSIGNMENT

**To: All students enrolled in AP Calculus AB for the school year, 2009-2010**

**From: Mrs. Mullen, AP Calculus AB Teacher**

Going into AP Calculus, there are certain math skills necessary in order to be successful for the year and ultimately on the AP exam. This packet is designed for you to review/ relearn/ learn those topics so that you will be ready to learn calculus! I have included websites to refer to if you need help. You can also email me ([Christy\\_mullen@gwinnett.k12.ga.us](mailto:Christy_mullen@gwinnett.k12.ga.us)) if you have specific questions.

If you do not fully understand the topics in this packet, it is possible that you will get bogged down in calculus not because you don't understand the calculus but because you do not understand the algebra or trigonometry behind it. If and when you are unsure of how to attempt these problems, examine the websites listed below. Students are notoriously weak in these subjects, even students who have achieved well prior to AP calculus.

You are expected to complete the entire packet. I will check that you have attempted every problem the first day of school. Don't do this the first week of summer. Give yourself a break then pick it up mid-summer and tackle subjects one at a time. Also, don't wait until the last minute-these problems take some thought and time.

Several websites to use:

<http://www.purplemath.com/modules/index.html>

<http://www.mathematicshelpcentral.com/index/html>

<http://www.math.com/homeworkhelp/Trigonometry.html>

Topics to make sure you know (From Chapter 1-Prerequisites for calculus)

- Lines: slope, parallel and perpendicular lines, equations of lines and applications
- Functions and their graphs: domain, range, even and odd functions and symmetry, functions defined in pieces, absolute value functions and composite functions.
- Exponential Functions: exponential growth and decay, applications, The number  $e$
- Parametric Equations: relations, circles, ellipses, lines and other curves

- **Functions and Logarithms: one-to-one functions, inverses, logarithmic functions, properties of logarithmic functions and their applications**
- **Trigonometric functions: radian measure, graphs, periodicity, even and odd trigonometric functions, transformations of trigonometric graphs, inverse trigonometric functions and its applications.**

**So, make sure you can do and understand all of the questions in this packet. Make notes on concepts you don't understand. We will review the first week back after summer break and will have a test on this chapter after the review.**

**I will scan the first chapter of the text and place it on my school teacher page in sections so you will have extra problems to work and explanations of how to do the problems. Also, look at the end of chapter review questions. Once you have done that, try to work the enclosed "test". If you can work all of these questions, you should not have a problem with the test upon your summer return. If you want the answers, email me this summer and I will send them to you after you have attempted to work them. Good luck and .....**

**H A V E   A   G R E A T   S U M M E R I I I**