Going into AP calculus, there are certain skills that you have learned over the previous years that we assume you retain. If you do not have these skills, you will find that you will consistently get problems incorrect next year, even though you understand the calculus concepts. It is frustrating for students when they struggle with the algebra. We have a summer assignment that you will find on the school website (Academics, AP Program, Summer Reading, AP Calculus AB) or on <http://brookwoodcalculus.weebly.com> that is intended to help you brush up and possibly relearn these topics. Included in the site are helpful videos and tutorials that will guide you through the summer assignment.

**This is due on the first day of school. There will also be a test on this material on Tuesday, August 14th.**

We assume that you have basic skills in algebra. These include being able to solve equations, graph functions, work with algebraic expressions, and basic factoring. These are skills that are used continually in AP Calculus.

Realize also that certain concepts are interrelated. Domain, for example, may require you to be expert at working with inequalities. Solving quadratic equations may involve techniques used in solving fractional equations. The summer work includes review on the following topics:

* Analyzing functions: increasing, decreasing, max, min, domain, range, end behavior, asymptotes, inverses, compositions, even, odd, and graphing
* Simplifying and solving polynomial, rational, radical, trigonometric, exponential & logarithmic equations & inequalities
* Evaluating trig, inverse trig, piecewise, exponential, and logarithmic expressions
* Equations of lines

You need to get off to a good start so print out the problems and spend some quality time on this packet this summer. Staple the pages and be sure your name appears on the first page. Work needs to be shown when needed. Also do not rely on the calculator. Half of your AP exam next year is taken without the calculator. So paper and pencil techniques only.

It is a mistake to decide to do this now. Let it go until mid-summer. We want these techniques to be relatively fresh in your mind in the fall. Also, do not wait to do them at the very last minute. Be sure to allow yourself enough time to review and do a good job. For example, if you start on July 5 and work/learn 3 pages a week, you will be finished by the end of July. That gives you a week to catch up if you get behind or a week to relax if you stayed on schedule.

If you have questions about any of these problems or techniques used in solving them, you can contact us at:

Dr. Hadaway- Nelda\_Hadaway@gwinnett.k12.ga.us

Mrs. Hanley- Ginny\_Hanley@gwinnett.k12.ga.us

Coach Martin- Titus\_Martin@gwinnett.k12.ga.us

Also you can check [www.brookwoodcalculus.weebly.com](http://www.brookwoodcalculus.weebly.com) for review sessions over the summer.

Please sign the list to indicate you have received this letter and commit to do the work.

When you get a chance, check out these very useful websites:

<http://patrickjmt.com/>

Free Calculus Cliffs Notes <http://www.cliffsnotes.com/WileyCDA/CliffsReviewTopic/Calculus.topicArticleId-39909.html>

An interactive Calculus page with great notes and examples <http://www.intmath.com/>

This site has neat flashcards of Calculus Facts and Calculus Common Mistakes <http://mathmistakes.info/>

Great place to find Calculus definitions, theorems, and examples <http://www.mathwords.com/index_calculus.htm>

Have a great summer. See you August 6th!