Advanced Placement Math Galena High School
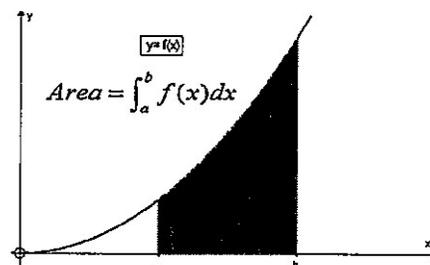
AP CALCULUS

The goal of the course is to provide students with a rigorous experience in the study of differential and integral calculus. Students will come to know calculus as the mathematics of change, the blood and soul of mathematics. Calculus can be applied in all human disciplines, it is a classic subject with an exciting history, and It has immense power and elegance. Students will study the topic from the four main themes of discourse: graphically, analytically, numerically, and verbally. See the College Board Website: http://apcentral.collegeboard.com/ for a wealth of information about the course.

What are the pre-requisites for AP Calculus? Students are required to have com- pleted Algebra 1, Geometry, Algebra 2, and Pre-Calculus with Trigonometry to sign up for Calculus. Students should be motivated to pursue a rigorous course of study. A graphing calculator is required, the Tl-84 CE is recommended.

$$Area = \int_a^b f(x)dx$$

How much college credit can receive for passing the AP Exam? Students have the potential to receive one of the greatest benefits of any high school class. A student passing the AB Calculus Exam can earn 4 college credits at the University of Nevada. This can be a savings of nearly $1,000 in credit fees, and also advancement of a full semester.

If a student also passes the BC Calculus Exam another 4 college credits can be earned and another $1,000 and a full year advancement. These credits are equivalent to two full semesters of calculus. The student can then begin college with Calculus Ill (three-dimensional space, multiple integrals, vectors), or even take Calculus Ill at a community college as a senior in high school. Students should check with their intended college to find the passing score required to earn credits as sometimes a passing score of 4 or above is required.

What is Calculus AB and Calculus BC? Calculus AB is the first semester college course in calculus. Students study the foundation concept of limits and then proceed to two new mathematical operations: differentiation and integration. These operations are new to students and widely applicable in real world situations. Students may pursue Calculus AB the entire school year with the second semester being primarily review for the AP Exam. Calculus BC is the second semester of college calculus. Students learn more advanced differentiation and integration techniques and study a third branch of calculus called series. The study of a series is an elegant look at the power of calculus through the idea of an infinite summation producing a finite result. Students can choose to take Calculus 3C in the second semester and take the Calculus BC exam which contains the AB exam for the potential to earn 8 college credits.

Who typically signs up for Calculus AB and BC? Students in Calculus range and sophomores to primarily juniors and seniors. Students wishing to pursue majors such as engineering and business sign up for the course. However, any desires to see how they handle a challenge is CollegeBoard encouraged to take the opportunity to put themselves to the test. from freshman quantitative student who