AP Calculus AB

Course Description:

AP Calculus AB focuses on students' understanding of calculus concepts and provides experiences with methods and applications. Through the use of big ideas of calculus (e.g., modeling change, approximation and limits, and analysis of functions), the course becomes a cohesive whole rather than a collection of unrelated topics. The course requires students to use definitions and theorems to build arguments and justify conclusions. The course features a multi-representational approach to calculus, with concepts, results, and problems expressed graphically, numerically, analytically, and verbally. Exploring connections among these representations builds understanding of how calculus applies limits to develop important ideas, definitions, formulas, and theorems. A sustained emphasis on clear communication of methods, reasoning, justifications, and conclusions is essential. Teachers and students should regularly use technology to reinforce relationships among functions, to confirm written work, to implement experimentation, and to assist in interpreting results. AP Calculus AB is designed to be the equivalent to a first semester college course devoted to topics in differential and integral calculus.

Academic Suitability:

Students should have successfully completed all math courses through Accelerated Precalculus prior to taking AP Calculus AB.

Out of Class Commitment:

Students should spend 1/2 to 1 full hour per day more than previous math courses on AP Calculus AB coursework.

Summer Suggested Preparation:

None

School Issued Text Name:

Hard Copies of *Pearson's Calculus: Graphical, Numerical, Algebraic, 3rd Edition* are available upon request

Additional Resources:

- AP Classroom by College Board may be used throughout the course
- Students will also need access to a graphing calculator

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