Mathematics Department- Academic Expectations for AP and Honors Math Classes

AP courses provide students with the mathematics content and analytical skills expected in a college level course. Teachers of AP courses follow a required course outline and prepare students with the knowledge and skills necessary to be successful on the Advanced Placement examination which takes place in May. Before signing up for an AP course, please review the chart below and ask yourself if you are a student who

- is interested in the content?
- has excellent attendance?
- is willing to invest the extra time needed for a college level class?
- has strong organizational and time management skills?
- has strong reading and writing skills and is willing to improve them?
- is an independent learner?

The chart below provides an approximation of the time and assignments for each AP course offered in the Mathematics Department and may vary from student to student. Different teachers for the same course may have slightly different procedures, but the time commitment is about the same. And according to school policy, students are reminded that they may not drop an AP course until the end of the first quarter and until they show sufficient effort in the class.

Area of Study	# of pages to read/prepare for each class	# of hours to study/prepare for each class	Tests, Essays, Papers	Major Projects	Summer Assignments	Comments
AP® Calculus AB *Emphasizes the theory of elementary functions and presents the differential and integral Calculus of one-variable functions. Equivalent to one semester of college Calc.*	10-15 pages of reading in the textbook or notes. 20-40 homework problems a night.	At least one hour for each class. One-two hours for quizzes or exams.	2-3 quizzes per Unit 1 major AP college level exam per Unit	Project after the AP exam	Review Packet of major concepts and skills from Precalculus with Trigonometry.	In addition to content interest students should: - have excellent attendance - have a strong grasp of mathematics concepts studied in previous years. - be willing to invest extra time before/after school - be willing to ask questions for clarification
AP® Calculus BC *Same as AB Calculus, plus the Calculus of series, polars, parametrics, and vector-valued functions. Equivalent to two semesters of college Calculus.*	5-10 pages of reading in the textbook or 4-8 pages of notes. 10-30 homework problems a night.	At least one hour for each class. One-two hours for quizzes or exams.	3-4 quizzes per Unit/Month 1 major test per Unit- both multiple choice and free-response parts; both calculator and non-calculator parts	2-3 projects throughout the year	Review Packet of major concepts and skills from Precalculus Honors and Calculus A material.	This is an extremely fast-paced class. On account of this, students are expected - To have taken Precalculus Honors: this covers advanced topics such as polar functions and partial fraction decomposition, etc. - possess all qualities that make students successful in Calculus AB
AP® Statistics *Comprehensive Introduction To Experimental Design, Data Analysis, Probability, and Inferential Statistics.*	30-50 pages per week in textbook and notes. 5-10 homework problems a class.	One hour for each class One hour for quizzes or exams.	1-2 quizzes per Unit/Month 1 exam per Unit/Month with AP-level questions in free-response and multiple-choice styles. Free response are graded according to AP® Rubrics.	During the year - Survey & Data Analysis - Survey & Inference -Probability & Simulation After the AP Exam -Class project -Individual project	Review Packet of introductory skills and concepts from a general knowledge base.	This course develops critical thinking skills and involves substantially more reading than traditional math classes. Students should exhibit strong organizational and time management skills.

Centreville High School

Precalculus with Trigonometry Honors *Includes analytical functions, trigonometry and differential Calculus*	Approximately 10 pages of reading in the textbook or notes each class. 30-50 homework problems a class.	One to two hours for each class.	2-3 quizzes per unit. One test per unit.		Review Packet of major concepts and skills from Algebra 2 and the Trigonometry portion of Geometry	This is a rigorous and fast-paced course. Students must be willing to seek help outside of class if necessary. Strong Algebra and analytical skills are highly recommended.
Honors Algebra 2	4-6 pages of notes 30 problems for homework	At least one hour for each class. One-two hours for quizzes or exams.	3-4 quizzes & 1 test per Unit (3-4 weeks) Questions are free response	1-3 per year	Review Packet of major concepts and skills from Algebra 1 and Geometry	In addition to content interest students should: - have excellent attendance - have a strong grasp of mathematics concepts studied in previous years. - be willing to invest extra time before/after school - be willing to ask questions for clarification
Honors Geometry	Required Chapter readings of 1 to 2 sections a night plus notes taken by each student. 12-25 homework questions a night	60-90 minutes per class	2 to 3 tests per quarter, with quizzes throughout a chapter. Tests will consist of problems of varying difficulty. Some questions will require making many connections.			This class requires a different type of thinking than a typical Math course. It can prove to be challenging. It requires a dedication to spend extra time if difficulties arise. It is a challenging class but very rewarding in the end.
Honors Algebra 1	Required Chapter readings of 1 to 2 sections a night plus notes taken by each student. 25-30 homework questions a night	30 minutes per class	2 to 3 tests per quarter, with quizzes throughout a chapter. Tests will consist of problems of varying difficulty. There are many application problems and real-world examples.			This is the course a student who excels in math and has a passion for math. You are expected to ask questions, come for help and work hard to excel. You will be asked higher level questions and be expected to work hard to answer them.