

MATHEMATICS

High Level

IB Course Content

Two-year course sequence. AP Calculus AB (equivalent to one semester of college calculus) is the first course, after which the AP exam may be taken. It is followed in the second year with IB Math HL, a program of study in algebra and coordinate geometry, quadratics, functions, index laws, higher level algebra, binomial expansions, sequences and series, trigonometry, formal proof, calculus, complex numbers, matrices and vectors, and analysis and approximation. (Note: It is possible for AP Calculus BC, equal to two semesters of college calculus, to be substituted for AB. However, it requires 2 class periods.)

IB Course Assessment

Unit tests (about 5-6 per year)

Unit worksheets (about 5-6 per year)

Portfolios (2-3 per year) **Students** select their best two portfolios for grading purposes.

The purpose of the portfolio is to provide students with opportunities to be rewarded for mathematics carried out under ordinary conditions, that is, without the time limitations and pressure associated with written examinations. Consequently, the emphasis should be on good mathematical writing and thoughtful reflection.

All assessments performed by the teacher. However, the portfolio is also externally moderated by the IBO to ensure grading consistency.

IB Examination

Paper 1: Short work-and-answer questions, normally 20 to be completed in 2 hours.

Paper 2: Extended problem-solving. This exam lasts 3 hours and normally includes 6 multi-level questions.

Paper 3: Extended problem-solving. This exam will have 2-3 questions covering mostly calculus-related problems. (Students who have taken AP Statistics may choose the statistics and probability option.)

Mathematics SL & Math Studies

IB Course Content

Math SL: Two-year course sequence. These courses offer study in numbers and algebra, functions and equations, circular functions and trigonometry, vector geometry, statistics and probability, and calculus.

Math Studies: One year. This course offers study in algebra, sets and logic, geometry, trigonometry, statistics and probability, functions, financial mathematics, and introductory differential calculus.

IB Course Assessment

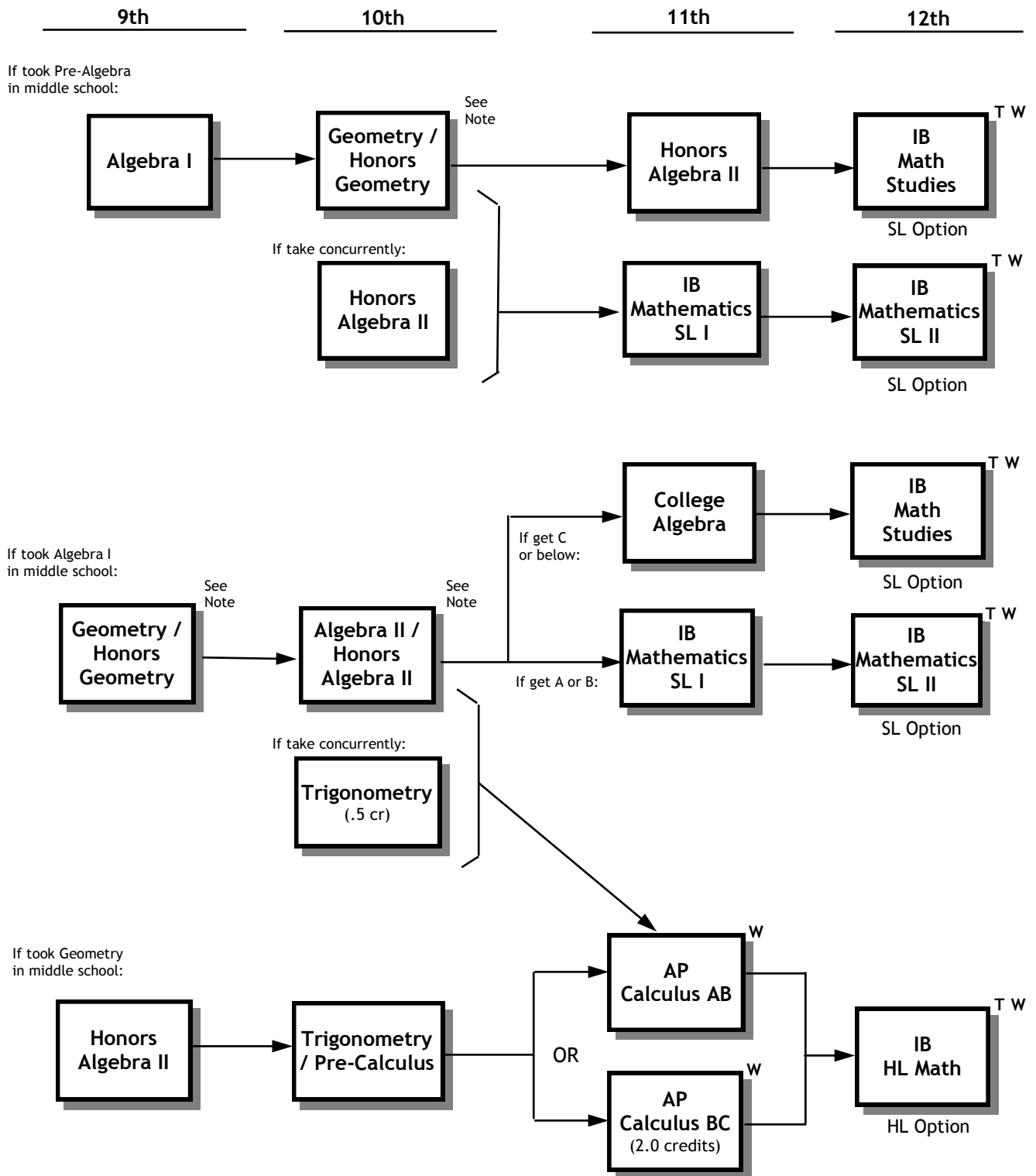
Same as HL, except for Studies which usually includes a statistics project rather than a portfolio.

IB Examination

Same as HL, except no Paper 3.

MATHEMATICS

The math curriculum offers 3 options: HL Math at the High Level, and Math Studies or Math SL offered at the Standard Level.



Notes: All courses are 1.0 credit (full-year) unless otherwise specified.
 Year references at top show only typical years that courses are taken; this may vary by student.
 AP Calculus BC takes up 2 class periods.
 "W" refers to weighted courses. "T" refers to the course after which the IB test is given.
 For Math SL and Math HL options, Honors Geometry and Honors Algebra II should be taken.