

MATHEMATICS

Math Content Standards

- A... Numbers and Number Sense
- B... Computation
- C... Data Analysis and Statistics
- D... Probability
- E... Geometry
- F... Measurement

- G... Patterns, Relations, Functions
- H... Algebra Concepts
- I ... Discrete Mathematics
- J... Mathematical Reasoning
- K... Mathematical Communication

MATH REQUIREMENTS

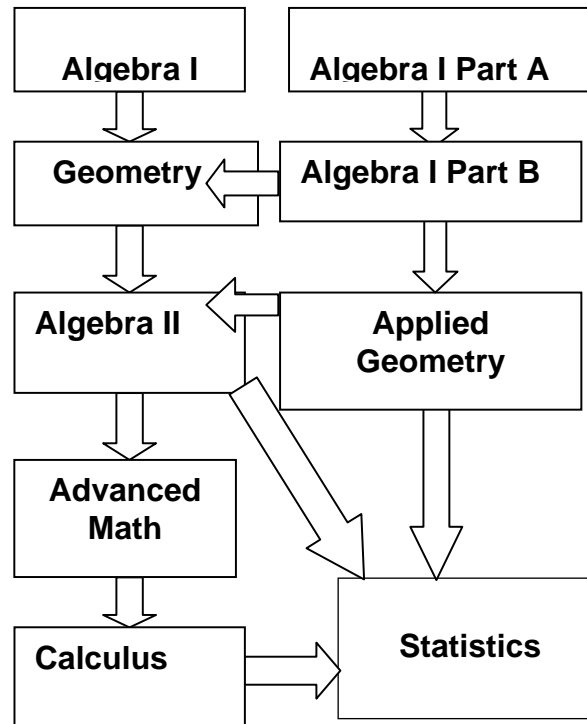
Students are required to take a minimum of three (3) years of math.

There are three (3) courses that begin the math sequence. Freshman may select from Algebra Part 1 A, Algebra I, or Geometry (for those that have completed Algebra I).

Upon the successful completion of a sequence including Applied Geometry or Geometry, State of Maine Math Content Standards will have been met.

Students may move from one sequence to another at appropriate times.

MATH COURSE SEQUENCES



ALGEBRA I

1 Credit

This introductory course in algebra is the basic course needed for all higher-level mathematics. It is required for admission to most colleges. Topics include solutions of linear equations, operations with algebraic expressions, factoring, graphing, and solving word problems. The emphasis is on group work and on understanding instead of memorizing rules. A scientific calculator is required.

ALGEBRA I PART A

1 Credit

This is the same course as Algebra I except the content will be covered over a 2-year period. Part A is for freshman. This course will include many lab activities to reinforce content. A scientific calculator is required.

ALGEBRA I PART B

1 Credit

This course is the second half of Algebra I and will include lab activities.

GEOMETRY

1 Credit

Geometry is the major study of two-and-three dimensional shapes and their relationships. Major topics of study include congruence, similarity, transformations and coordinates. Students will begin to learn how to do mathematical proofs. Algebra skills will continually be reinforced. The course is open to students who have successfully completed algebra I with a grade of "c" or better. It is required for admission to most colleges.

APPLIED GEOMETRY

1 Credit

This course is an introduction to Geometry. It stresses practical applications of mathematics in a variety of situations.

STATISTICS

1 Credit

Statistics is the study of data. This course is designed for the student who will not major in math or science in college. Topics covered will include data description, frequency distributions, graphs, probability, correlation and regression. This course will be a good introduction to the college statistics course that most college students not majoring in math or science have to take. Open to seniors who have successfully completed Algebra 1 and Geometry.

ALGEBRA II

1 Credit

Algebra II is a continuation of Algebra I and is required for most four-year colleges. More involved algebraic concepts, such as linear programming, quadratic equations, and functions, are studied. Many projects and laboratory activities are done. It is recommended that students have a graphing calculator, preferably a TI-84+. Open to students who have successfully completed Geometry or Applied Geometry.

ADVANCED MATH

1 Credit

Advanced Math is for the student who has completed Algebra II. It is a prerequisite for Calculus. The major topic of study is functions: linear, polynomial, rational, exponential and logarithmic. Approximately one-third of the course is a study of trigonometry. Projects that apply advanced mathematics to real-world situations are done frequently. It is recommended that students have a graphing calculator, preferably a TI-84+.

AP CALCULUS

1 Credit

Calculus is recommended for the student who plans on majoring in math or science in college. The first half of the course is a study of the derivative and its applications. The second half of the course is a study of definite and indefinite integrals and their applications. The Advanced Placement (AP) Calculus test will be given in May to interested students. Most colleges will give college Credit to students who pass the AP exam. A graphing calculator is essential.

INDEPENDENT STUDY

1 Credit

Students who have completed calculus and wish to further their study of mathematics may arrange an independent study course with the permission of the mathematics division chair. This may be for 1 or 2 semesters.

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