

MATH
(2-18-10)

MIDDLE SCHOOL MATH

Math 6

Course Description: The instructional curriculum for sixth grade mathematics is based on a balance of conceptual understanding, connections to prior knowledge, skill proficiency, and problem solving experiences. Instruction includes hands-on activities and problem solving strategies. Reasoning, rather than memorization of rules and procedures, is stressed. Practice of skills taught builds skill proficiency and the ongoing review of previously taught skills ensures proficiency in mathematical skills and procedures.

Grade Level: This course is taken by all 6th graders.

Math 7

Course Description: This course is a study designed to lay a solid foundation of the basic computational skills together with an attempt to improve the student's ability to apply those skills in everyday life. Problem solving, estimating, geometry, measuring, percentage, and probability are among the topics studied.

Grade Level: This course is for average seventh graders.

Prerequisite: Math 6

Pre Algebra

Course Description: This course includes a careful study of arithmetic with attention to both structure and skills. The topics studied, together with the associated skills, form a solid foundation for the study of Algebra.

Grade Level: This course is taken by above average 7th graders and average 8th graders.

Prerequisite: Math 6

HIGH SCHOOL MATH

Algebra 1-A and Algebra 1-B

Course Description: The Algebra 1-A and Algebra 1-B combination allows below average math students to study the basic structure of algebra over a two-year period. The two-year pacing allows more time for the review of prerequisite skills as well as more opportunities to use activities and reteaching and practice materials.

Algebra 1-A is a yearlong course, which covers the first half of standard Algebra 1. Algebra 1-B is also a yearlong course and covers the second half of standard Algebra 1.

Students must complete both courses to meet the Algebra 1 graduation requirement.

Grade Level: Algebra 1-A is a required course for 8th and 9th graders whose performance in Pre Algebra was below 77% and whose SAT scores and teacher recommendation identifies them as below grade level in math.

Algebra 1-B is a required course for 9th and 10th graders who have completed Algebra 1-A.

Only students with the Math Department Chair's approval will be allowed to take Algebra 1-A and Algebra 1-B.

Prerequisite: For Algebra 1A: Pre Algebra
For Algebra 1B: Algebra 1A

Algebra 1

Course Description: Algebra 1 is a basic study in the structure of algebra and the development of the real number system. Emphasis is given to the basic properties and operations and their application to the set of real numbers. Practical applications are interjected through problem solving experiences.

Grade Level: This is a required course taken in the 8th or 9th grade.

Prerequisite: Pre-Algebra

Geometry

Course Description: This course provides exploratory development of the formal representation of logical arguments as well as application of logical principles to geometric proofs. Problem solving skills in the development of geometric concepts are integrated throughout the course.

Grade Level: This is a required course taken in the 9th, 10th, or 11th grade.

Prerequisite: Algebra 1

Algebra 2

Course Description: Algebra 2 is an extension of the study of the number system that began in Algebra 1. Elementary trigonometry, exponential and logarithmic functions and complex numbers are an integral part of the course content. Algebra 2 is considered essential for college-bound students.

Grade Level: This is a required course taken in the 10th, 11th, or 12th grade.

Prerequisite: Geometry

Finite Math

Course Description: Finite Math is an extension of algebra to areas that have applications to business, economics, and social studies. Such topics as linear equations, linear systems, matrices, linear programming, permutations and combinations, probability, statistics, and financial mathematics are covered. Finite Math is considered an alternative to Pre-Calculus with Trigonometry for college-bound students who will not need Calculus at the college level.

Grade Level: This is an elective course for 11th and 12th graders.

Prerequisite: Algebra 2

Pre-Calculus with Trigonometry

Course Description: This course covers various topics of advanced level math. It is essential for those who will need calculus at the college level.

Grade Level: This course is an elective for 11th and 12th graders.

Prerequisite: Algebra 2

Calculus

Course Description: This course consists of a full academic year of work in single variable calculus and related topics. The major concentration of the course work is on topics in differential calculus with an introduction to integral calculus. This course is highly recommended for college bound students who meet the prerequisite but do not wish to take Advanced Placement Calculus.

Grade Level: This is an elective taken in the 12th grade.

Prerequisite: Pre-Calculus with trigonometry

Advanced Placement Calculus AB

Course Description: AP Calculus is a college level course designed to meet the specifications of the College Board for a first year one-quarter course in calculus that concentrates on differentiation, integration, and their applications. The student should be highly motivated and willing to accept an academic challenge.

All students who complete this course will be required to take the Advanced Placement Calculus exam. Those who score well usually receive college credit, based on the Advanced Placement policy of the student's chosen college.

Grade Level: This is an elective course for 12th graders.

Prerequisite: Completion of Pre-Calculus with trigonometry with at least a B average and a PSAT math score of at least 57 or instructor's approval.