ROSLYN HIGH SCHOOL

DEPARTMENT: MATHEMATICS
NAME OF COURSE: MATH 12
GENERAL DESCRIPTION:

Math 12 is intended for those students who have completed the three year non-Regents sequence in mathematics and want to enrich their mathematical background in topics included in advanced algebra and trigonometry courses. Math 12 includes topics which will be beneficial to students who go on to study mathematics in college. Such topics include the theory of equations, exponential and logarithmic functions, trigonometry, sequences and series, probability, and statistics. In addition to the development of skills necessary for the students' progression to higher level courses in this subject area, we seek to cultivate a sense of appreciation of mathematics for its aesthetic value.

MAJOR TOPICS COVERED:

Theory of equations: finding roots of linear, quadratic, and cubic equations; synthetic division; relations and functions; remainder and factor theorems
Exponential and logarithmic functions
Trigonometric functions: unit circle and wrapping function; sine, cosine and tangent functions; reciprocal functions
Trigonometric identities: cofunctions; reciprocals; quotients; Pythagorean; sum and difference of two angles; half angle; double angle
Inverse trigonometric functions
Law of sines; Law of cosines
Sequences and series: arithmetic and geometric
Probability: independent and dependent events
Statistics: mean, median, and mode; standard deviation; normal curve
SAT Review

REQUIREMENTS:

Students are expected to maintain a set of well organized notes in a mathematics notebook and complete daily homework assisgnments. A graphing calculator is required for this course. Regular attendance is expected, and students are to make up work missed due to absences. Students should seek extra help during the school day in the mathematics study center or after school with the teacher when necessary. Appropriate behavior, respect for self and others, and participation in classroom activities are expected.

GRADING PROCEDURES:

The grade for each of the four marking periods is determined by unit exams, quizzes, a final exam, and

timely completion of homework assignments. Extra credit options are given at the discretion of the teacher.