

ROSLYN MIDDLE SCHOOL
MATH 1 RESEARCH HONORS

I. Aims and Objectives

Math 1 Research Honors is a course whose curriculum centers around the New York State Mathematics A curriculum. Many of the topics will be embellished as the students are exposed to Algebra, Geometry, Probability, Statistics, and Logic. Problem solving and the development of critical thinking skills will be a major component of this course. Students will be challenged by SAT type questions, as well as by problems that have appeared on previous mathematics competitions.

In addition, students will be required to write a research paper and make an oral presentation to the class on a topic agreed upon with their teacher. This will account for 10% of the third quarter grade. Those students whose projects are approved will be recommended to compete in the Long Island Math Fair held annually at Hofstra University. Students may make use of the school library where there will be a section of books devoted to Math Research. The Bryant Library and college libraries at C. W. Post, Hofstra, or Nassau Community College may also be used. Students will be acquainted with the computer software that will be necessary in order to prepare their paper. The English department has agreed to review the papers for proper style and grammar. Parents are encouraged to support their youngster's project and provide them with a forum to rehearse their presentations.

II. Course Content

The units listed below will be discussed during the course. There are many sub-topics that will be developed within each major unit

- | | |
|--|--|
| ✍ Order of Operations | ✍ Systems of Linear Equations & Inequalities |
| ✍ Properties of Real Numbers | ✍ Exponents & Exponential Functions |
| ✍ Writing Linear Equations | ✍ Quadratic Equations & Functions |
| ✍ Solving & Graphing Linear Inequalities | ✍ Polynomials & Factoring |
| ✍ Solving & Graphing Linear Equations | ✍ Rational Equations & Functions |
| ✍ Radicals & Connections to Geometry & Functions | |

III. Expectations/Requirements

Students are expected to actively participate in classroom discussion, demonstrate outstanding achievement on a consistent basis (maintain a 90 average or higher), and adhere to all deadlines concerning their research project.

IV. Evaluation

A student will be evaluated on the basis of periodic tests and quizzes, both announced and unannounced, performance on midterm exam, neat and accurate class notes, regular completion of homework assignments, research project, and the final examination.

Note: This is a high school course and therefore is subject to the grading policies of the High School. The final grade will be recorded on the student's high school transcript.

V. Course Sequence to Follow

Integrated Geometry Research Honors

VI. New York State Assessment

All 8th grade students are required to take the New York State 8th Grade Assessment in mathematics in the March of 2009.