

## **GREATER NEW YORK ACADEMY**

**41-32 58<sup>th</sup> Street  
Woodside, NY 11377  
(718) 639-1752**

### **MATH A COURSE SYLLABUS**

*Fall 2006 - Spring 2007*

#### **GENERAL INFORMATION**

<b>Instructor:</b>	Mrs. S. Bailey
<b>Required Text:</b>	New York Math A (An Integrated Approach) - Volume 1: Prentice Hall ( <b>ISBN: 0130536148</b> )
<b>Length of course:</b>	2 Semesters
<b>Prerequisite:</b>	Completion of grade 8 math
<b>Class Materials:</b>	Textbook, Notebook, Loose Leaf, Graph Paper, Scientific Calculator, Pens (black or blue ink only), Pencils, Ruler and the previous class' assignment.

#### **COURSE OVERVIEW**

This course is designed to help students understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

#### **GENERAL GOALS**

- Gain an understanding and appreciation for God, the Creator, who is orderly, precise, and infinite.
- Develop spiritual values by emphasizing Christian principles in mathematical applications.
- Become skillful and confident in their ability to perform, communicate, and connect mathematics.
- Develop reasoning, problem solving, and critical thinking skills.

- Acquire an appreciation for mathematics.
- Select and use appropriate technology.

## **COURSE OUTLINE:**

### **Semester 1**

#### **September 6 – 22**

**Tools of Algebra:** modeling relationships with variables, order of operations, adding and subtracting integers, multiplying and dividing integers, real numbers and rational numbers, matrices.

- **Test on Chapter 1**

#### **September 25 -October 6**

**Algebraic Concepts and Simple Equations:** modeling and solving equations, modeling and solving two step equations, combining like terms to solve equations, using the distributive property, rational numbers and equations, percent equations, percent of change.

- **Test on Chapters 1 and 3**

#### **October 9 - 27**

**Equations and Inequalities:** using proportions, equations with variables on both sides, solving absolute value equations, transforming formulas, solving inequalities using addition and subtraction, solving inequalities using multiplication and division, solving multi-step inequalities, compound inequalities, interpreting solutions.

- **Test on Chapters 1, 3 & 4**

#### **October 30 - November 10**

**Graphing and Writing Linear Equations:** slope, rates of change, direct variation, slope-intercept form, writing the equation of a line, scatter plots and equations of lines,  $Ax + By = C$  Form, Parallel and perpendicular lines, using the x-intercept.

- **Test on Chapters 1, 3, 4 & 5**

#### **November 13 – December 1**

**Systems of Equations and Inequalities:** solving systems by graphing, solving systems by elimination or substitution, writing systems, linear inequalities, systems of linear inequalities, concepts of linear programming, systems with nonlinear equations.

- **Test on Chapters 1, 3, 4, 5, & 6**

#### **December 4 - 15**

**Functions and Their Graphs:** Analyzing data using scatter plots, relating graphs to events, linking graphs to tables, functions, writing a function rule, the three views of a function, families of functions.

- **Test on Chapters 1-6**

**December 18 - 22**

**Probability:** experimental and theoretical probability, the probability formula, using probability.

**CHRISTMAS/NEW YEAR BREAK**

**January 3 – 19**

**Quadratic Equations and Functions:** exploring quadratic functions, graphing simple quadratic functions, graphing quadratic functions, square roots, solving quadratic equations, using the quadratic formula, using the discriminant.

- **End of Semester Exam (Chapters 1-7)**

**Semester 2**

**February 5 – March 2**

**Exponents and Exponential Functions:** properties of exponents (zero and negative exponents, dividing and multiplying exponents), exponential growth and decay, scientific notation.

- **Test on Chapters 1-8**

**March 5 - 23**

**Right Triangles and Radical Expressions:** The Pythagorean Theorem, The distance formula, trigonometric ratios, simplifying radicals (square roots), adding and subtracting radicals.

- **Test on Chapters 1-9**

**March 26 – April 6**

**Polynomials:** factoring, adding, subtracting, and multiplying polynomials

- **Test on Chapters 1-10**

**April 16 – April 27**

**Rational Expressions and Functions:** inverse variation, rational functions, rational expressions, solving rational equations.

- **End of Year Exam**

**GRADING POLICY**

Tests	30%
Classwork	30%
Quizzes	20%
Homework	20%

<b>Letter</b>	<b>Percentage</b>	<b>Letter</b>	<b>Percentage</b>
<b>A</b>	<b>93-100</b>	<b>C+</b>	<b>76-78</b>
<b>A-</b>	<b>89-92</b>	<b>C</b>	<b>73-75</b>
<b>B+</b>	<b>86-88</b>	<b>C-</b>	<b>69-72</b>
<b>B</b>	<b>83-85</b>	<b>D+</b>	<b>66-68</b>
<b>B-</b>	<b>79-82</b>	<b>D</b>	<b>63-65</b>
		<b>F</b>	<b>Below 63</b>

### **DATES AND DEADLINES**

These will be stated when the assignment is given. Homework is usually due the next scheduled class and should be done on loose leaf. Classwork is due at the end of the class period. Otherwise, assignments are due on the dates set or agreed upon by the teacher and students.

### **COURSE REQUIREMENTS**

1. Points will be subtracted from work submitted after due dates.
2. Quizzes are usually given at the middle of each chapter.
3. All students must be present for and sit all exams given. Make-up tests will be given after school for absentees with a doctor's note or a note from parent/guardian. This must be done within the first two (2) days of return to school. All tests missed and not made-up will receive a zero grade.
4. All homework will be deposited in the "homework bin" upon entering the classroom.
5. Students are required to keep legible and neat notes, as there will be a notebook check during and at the end of each nine-week marking period.
6. Headings: must be at the top of your assignment. Also it must have the:
  - i. first and last name
  - ii. date the assignment was given
  - iii. subject/class
  - iv. assignment category
  - v. page of the assignment

Example:

- i. Stacy Bailey
- ii. September 6, 2006
- iii. Math A

- iv. Classwork/Homework/Quiz/Test  
v. Page 28: #2,6,12,24

### **CLASSROOM REGULATIONS**

1. Each student is expected to familiarize himself/herself with all school policies in the Greater New Academy Bulletin and follow them.
2. Students should be punctual for class at **ALL** times.
3. In order to maintain an atmosphere conducive to learning students should refrain from talking, walking aimlessly around the room and engaging in disruptive classroom activity.
4. Upon entering the classroom, take your seat, and start on the “Do Now” on the board under your class name (Math A).
5. Students are not to call out answers but to raise his/her hand to be recognized by the teacher.
6. When the bell rings signaling the end of class, all students are to remain seated until dismissed.

### **CLASS PREPARATION AND DEPARTMENT**

- **ABSOLUTELY NO EATING ANYTHING IN CLASS (GUM, MINTS, CANDY, FOOD, DRINKS, ETC.)**
- **WEAR PROPER UNIFORM TO ENTER THE CLASSROOM**
- **LEAVE WORK AREA AROUND CHAIR CLEAN**
- **BRING TEXTBOOKS, NOTEBOOKS, AND CALCULATOR TO CLASS EVERYDAY**
- **ALWAYS BE COURTEOUS, KIND, AND RESPECTFUL**
- **CARRY A CONFIDENT, SUCCESSFUL, CHRISTIAN ATTITUDE TO CLASS**

*HAVE A WONDERFUL AND SUCCESSFUL SCHOOL YEAR AND  
REMEMBER,  
“I CAN DO ALL THINGS THROUGH CHRIST WHO STRENGTHENS  
ME.”  
Philippians 4:13*