

GREATER NEW YORK ACADEMY

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Math B Course Syllabus *Fall 2006 - Spring 2007*

I. General Information

Instructor:	Mrs. S. Bailey
Required Text:	New York Math B -Volume 3: Prentice Hall
Length of Course:	2 semesters
Prerequisite:	Math A/B
Class Materials:	Textbook, Notebook, Loose Leaf, Graph Paper Scientific Calculator, Pens (black or blue ink only), Pencils, Ruler and the previous class' assignment.

II. Summary

Students will 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.

III. Objectives

1. Gain an understanding and appreciation for God, the Creator, who is orderly, precise and infinite.
2. Become skillful and confident in one's ability to perform, communicate, and connect mathematics.
3. Develop reasoning, problem solving and critical thinking skills.
4. Select and use appropriate technology.

IV. Methodology

The class is highly interactive and requires the input of all students on a regular basis. Students may participate in any way that best suits their style and ability. Students will work collaboratively with their peers, both informally and on more formally structured projects. The emphasis will be on preparing students to be self-sufficient learners as they move toward higher education.

V. Course Outline

Semester 1

September 6 - 29

Algebra Review (at the front of the textbook NY18-NY48)

- **Test on Algebra Review**

October 2 - 20

Models, Functions and Permutations: collecting and organizing data, slopes of lines, relations and functions, vertical and horizontal translations, counting methods and permutations, and real numbers.

- **Test on Chapter 1**

October 23 – November 3

Linear Relationships and Functions: linear equations and slopes, one-and-two variable equations and inequalities, parametric equations, and exploring probability.

- **Test on Chapters 1-2**

November 6 - 22

Matrices: organizing data into matrices, entering and transposing matrices, adding, subtracting, and multiplying matrices, geometric transformations with matrices, determinants, identity and inverse matrices.

- **Test on Chapters 1-3**

THANKSGIVING BREAK

November 27– December 8

Linear Systems: exploring and graphing systems, solving systems algebraically, graphs in three dimensions, systems with three variables.

- **Test on Chapters 1-4**

December 11 - 22

Quadratic Equations and Functions: modeling data with quadratic functions, properties of parabolas, comparing vertex and standard forms, inverses, quadratic and square root functions, complex numbers, completing the square and the quadratic formula.

- **Test on Chapters 1-5**

CHRISTMAS/NEW YEAR BREAK

January 3 – 15

Polynomials and Polynomial Functions: properties of exponents, power functions and their inverses, polynomial and linear factors and equations, dividing polynomials and combinations.

- **First Semester Final Exam (Chapters 1-6)**

Semester 2

January 29 – February 16

Exponents and Exponential Functions: exploring exponential models, exponential and logarithmic functions and equations, graphing inverses and natural logarithms.

- **Test on Chapters 1-7**

February 26 – March 9

Rational Functions: exploring inverse variation, graphing rational functions and inverse variations, adding and subtracting rational expressions, solving rational equations and probability of multiple events.

- **Test on Chapters 1-8**

March 12 - 30

Periodic Functions and Trigonometry: the unit circle, radian measure, sine, cosine and tangent functions, right angles and trigonometric ratios, and the law of sines with two triangles.

- **Test on Chapters 1-9**

April 2 - 20

Quadratic Relations: graphing relations, parabolas, circles, ellipses and hyperbolas.

- **Test on Chapters 1-10**

April 23 – May 4

More Probability and Statistics: analyzing data, standard deviation, binomial distributions and normal distributions.

- **Test on Chapter 1-11**

May 7 - 18

Sequences and Series: arithmetic, Fibonacci and geometric sequences/series, and exploring the area under a curve.

END OF SEMESTER AND MATH B REGENTS

GRADING POLICY

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

GRADE BREAKDOWN

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

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 B
- iv. Classwork/Homework/Quiz/Test

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 B).
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