MTY Academy      Syllabus

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**Course Name:**  Fall 08-Algebra (which is the continuation of Spring 07 Algebra class)

**Objectives:**   This course provides students with the following topics:

- Complex numbers

  (1)  Operations on complex numbers $(+, \ -, \ \times, \ \div)$
  (2)  The conjugates of complex numbers and their properties
  (3)  The lengths of complex numbers and their properties
  (4)  Revisiting quadratic equations

- Linear functions and its applications

- Quadratic functions

  (1)  Two different forms
  (2)  Graphs of quadratic functions
  (3)  Equations of parabolas
  (4)  Applications of quadratic functions - extrema problems

- Polynomial functions

  (1)  The remainder theorem and the factor theorem
  (2)  Zeroes of polynomials
  (3)  The conjugate zeroes theorem and the fundamental theorem
  (4)  The rational zero theorem
  (5)  Graphs of polynomial functions
  (6)  Building up polynomial functions from given information


**Attendance Policy:**   Students are expected to attend each scheduled class meeting. Regular attendance is essential to your success in this course. If you are not in class, you are responsible for the material covered.

**Lecture Notes:**   Well written lecture notes will be posted online before or after each class. Students are required to read them before doing homework.

**Homework:**   Homework will be posted online after each class and must be submitted it online before the next class. It will be graded and the results will be posted online. It is the essential for the students to do the homework as exercises in order to digest the material covered in the class.

**Quizzes:**   A weekly-quiz will be given at the end of each class except the first and the last class. Each quiz is worth of 10 points. Quiz questions will be similar to the questions in the previous homework assignment. Each quiz will be graded and its score will be posted online afterward.

**Makeup Quizzes:**   If a student misses a class, he/she can make it up within two days by printing out the quiz, work it out at home with parent's supervision, and then email it to the teacher for grading with parent's signature on the top of the quiz.

**Final Exam:**   The final exam will be given at the last class. To be prepared for the final exam, student are required to do all problems on the review sheet posted online.

**Awards:**   The students' grades will be evaluated based on their performance in homework assignments, quizzes, and the final exam. The course grade will be calculated as follows:

Homework assignments: 20%
Quizzes: 50%
Final exam: 30%

Top three scored students will be awarded at the end of the semester.