

Class: Algebra 2

Time: M/T/W/R/F room :422

Teacher: Ms. Tsiklauri and Ms. Dixon

Email: Ms. Tsiklauri: NTsiklauri@schools.nyc.gov or ntsiklauri@aelnyc.org

Classroom expectations:

- 1) Start on time / Complete the daily attendance question
- 2) Wear your mask and maintain a 6 feet distance with anyone in the room.
- 3) Only one person allowed to leave the room at a time, no bathroom 10 minutes at the beginning or at the end of class.
- 4) One Mic, raise your hand, listen actively
- 5) Be open to the learning process
- 6) Participate in class discussions and procedures.
- 7) Respect classmates, teacher and yourself.
- 8) Be responsible for your actions.
- 9) Ask questions when needed.

Materials

A Graphing calculator (TI-83 or 84)

A notebook (for your own use)

3-hole binder (for your own use)

Pencils (for your own use)

Quiz/test

There will be a weekly quiz. There will be a test at the end of each unit and at the end of each marking period.

Homework:

Homework will be given daily. Homework will be graded based on completion and effort. Home will be called if failure to complete homework.

Academic Honesty:

Acts of academic dishonesty (e.g. plagiarism, cheating on examinations, and obtaining unfair advantage) are regarded as serious offenses against the values of intellectual honesty. This will not be tolerated.

Course Overview:

Topics introduced in algebra 1 provide the foundations student require for future success in high school mathematics, critical thinking and problem solving. Algebra 1 topics include recognizing and developing patterns using tables, graphs, and equations. In addition, students will explore operations on algebraic expressions; apply mathematical properties to algebraic equations. Students will solve problems using equations, graphs and tables to investigate relationships. After completing this course, students will have gained the mathematical skills and a deeper understanding of various topics they will be tested on during the Algebra 1 Common Core Regents.

Assignment Type

Weight

Quizzes/ Exam/ Projects 35% Classwork/notebook/hw 35% Participation 30%

Course Outline

<u>Unit 1: Relations and Functions</u> Topic 1: Functions and Continuity Topic 2: Linearity, Intercepts, and Symmetry Topic 3: Extrema and End Behavior Topic 4: Sketching Graphs and Comparing Functions Topic 5: Graphing Linear Functions and Inequalities Topic 6: Special Functions Topic 7: Transformations of Functions	<u>Unit 2: Linear Equations, Inequalities, and Systems</u> Topic 1: Solving Linear Equations and Inequalities Topic 2: Solving Absolute Value Equations and Inequalities Topic 3: Equations of Linear Functions Topic 4: Solving Systems of Equations Graphically Topic 5: Solving Systems of Equations Algebraically Topic 6: Solving Systems of Inequalities	<u>Unit 3: Quadratic Functions</u> Topic 1: Graphing Quadratic Functions Topic 2: Solving Quadratic Equations by Graphing Topic 3: Complex Numbers Topic 4: Solve Quadratic Equations by Factoring Topic 5: Solving Quadratic Equations by Completing the Square Topic 6: Using the Quadratic Formula and the Discriminant Topic 7: Quadratic Inequalities Topic 8: Solving linear-nonlinear systems	<u>Unit 4: Polynomials and Polynomial Functions</u> Topic 1: Polynomial Functions Topic 2: Analyzing Graphs of Polynomial Functions Topic 3: Operations with Polynomials Topic 4: Dividing Polynomials Topic 5: Powers of Binomials
<u>Unit 5: Polynomial Equations</u> Topic 1: Solving Polynomial Equations by Graphing Topic 2: Solving Polynomial Equations Algebraically Topic 3: Proving Polynomial Identities Topic 4: The Remainder and Factor Theorems	<u>Unit 6: Inverse and Radical Functions</u> Topic 1: Operations on Functions Topic 2: Inverse Relations and Functions Topic 3: n th Roots and Rational Exponents Topic 4: Graphing Radical Functions Topic 5: Operations	<u>Unit 7: Relations and Functions</u> Topic 1: Graphing Exponential Functions Topic 2: Solving Exponential Equations and Inequalities Topic 3: Special Exponential Functions Topic 4: Geometric Sequences and Series	<u>Unit 9: Rational Functions</u> Topic 1: Multiplying & Dividing Rational Expressions Topic 2: Adding & Subtracting Rational Expressions Topic 3: Graphing Reciprocal Functions Topic 4: Graphing Rational Functions