



NEWCOMERS HIGH SCHOOL

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SYLLABUS/ CLASS CONTRACT (High level math class)

Class Code & Section: MR21E **Subject:** Mathematics **Term:** Fall 2011

Teacher: Mr. Pineda **Email:** mpineda2@schools.nyc.gov **Website:** mr.pineda.com

1. Course goals & objectives

- Academic skills- **This curriculum uses Problem Solving, Reasoning and Proof, Communication, Connections, and Representations to highlight ways of acquiring and using the knowledge of Number Sense and Operations, Algebra, Geometry, Measurement, and Statistics and Probability, in order to develop Mathematical Proficiency.**
- Language skills- **There are a strong usage of visual aids to help support language acquisition. The students will also have ample opportunities to apply new language skills by providing pertinent vocabulary and its proper application.**
- Content- **The curriculum focuses on building a strong foundation. It is based on the Process Strands of Problem Solving, Reasoning and Proof, Communication, Connections and Representation.**
- Brief explanation of why it is important to study and learn class subject- **The goal of this course is to provide students with the knowledge and understanding of the mathematics necessary to function in a world very dependent upon the application of mathematics.**

2. Course Requirements & Expectations

- Lateness & Absences: **I agree to be in class everyday on time prepared to share in the learning process. I agree it is my responsibility to be prepared with a pencil or pen, paper, textbook, and required materials. If I am absent I must provide a letter from my parents/guardian explaining the reason(s) for my nonattendance(s).**
- Note-taking: **I understand that I am expected to take an active role by taking proper notes and asking appropriate questions during class.**
- Behavior in class: **I understand that I am expected to come to class on time and prepared to learn and participate. I understand that all homework assignments are due at the end of each marking period and that Mr. Pineda will not accept late work.**
- Use of textbooks: **It is the responsibility of the school to provide a textbook to take home with the purpose of completing homework. It is the student's responsibility to return the textbook at the end of the semester.**



- Class participation: **I understand Mr. Pineda expects me to take responsibility for myself and my education. This means paying attention and participating during class, asking questions when necessary, and being responsible for obtaining make-up work.**

3. Themes & Topics

- First Marking Period Themes and/or Topics

1. How do we perform operations with polynomial expression containing rational coefficients?
2. How do we divide polynomials?
3. How do we solve first degree equations and inequalities?
4. How do we solve compound linear inequalities involving the conjunction and disjunction?
5. How do we graph value relations and functions?
6. How do we solve linear equations in one variable involving absolute values?
7. How do we solve linear absolute value inequalities involving one variable?
8. How do we solve quadratic equations by factoring?
9. How do we graph the parabola $Y = ax^2 + bx + c$?
10. How do we solve and graph a quadratic inequality algebraically?
11. How can we use the graph of a parabola to solve quadratic inequalities in two variables?
12. How do we simplify radicals?

- Second Marking Period Themes and/or Topics

1. How can we rationalize a fraction with a radical denominator (monomial or binomial)?
2. How can we complete the square?
3. How do we apply the quadratic formula to solve quadratic equations with radical roots?
4. How do we apply the quadratic to solve verbal problems?
5. What are properties of complex numbers?
6. How do we find complex of a quadratic using the quadratic formula?
7. How do we solve quadratic-linear systems of equations using the graphing calculator?
8. How do we reduce rational expressions?
9. How do we reduce complex fractions?
10. How do we solve rational equations?
11. How do we evaluate expressions involving negative and rational exponents?
12. How do we find the solutions set for radical equations?

- Third Marking Period Themes and/or Topics

1. What are functions?
2. How do we find the inverse of a given relation?
3. What is an exponential function?
4. What is the inverse of the exponential function?
5. How do we use logarithms to find values of products and quotients?
6. How do we use logarithms for raising a number to a power or finding roots of numbers?
7. How do we solve exponential equations?
8. How do we solve verbal problems involving exponential growth or decay?
9. What are geometric translations, dilations, rotations and reflections?
10. How do we perform transformations of the plane on relations and functions?
11. How do we graph and write the equation of a circle?

12. What is direct and inverse variation?

13. How do we find the roots of polynomial equations of higher degree by factoring and by applying the quadratic formula?

4. Assessment Policy

- Homework (20%)
- Exams/Quizzes (50%)
- Notebooks/Class Participation (20%)
- Projects (10%)

5. Closing statement to parents & students

Homework Textbook: Amsco's – Algebra 2 and Trigonometry.

It is imperative that the process of a proper education be a partnership among parents, students and teachers. We are to provide the necessary academic tools to expand and enhanced each student's potential; however, it is the responsibility of the parents to continue this academic process by providing the proper atmosphere at home.

I have read and understand the above requirements are expected of me to succeed in Mr. Pineda's math class.

-----Cut-off and return to teacher-----

Student Name (print)

class

Student Signature

Parent/Guardian

Phone Number(s)

Date