THE BEACON SCHOOL

NEW YORK CITY DEPARTMENT OF EDUCATION
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Algebra 2 Syllabus 2015-2016

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Letter to Students

Before anything else, let me welcome you to Algebra 2 at Beacon! Algebra 2 will build on your work with linear, quadratic, and exponential functions learned in Algebra 1. You will extend your repertoire of functions to include polynomial, rational, and radical functions. You will work closely with the expressions that define the functions and continue to expand and hone your abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Our studies will focus on three critical areas:

1. Polynomial, Rational, and Radical Relationships
2. Exponential and Logarithmic Functions
3. Inferences and Conclusions from Data

You probably know from your experience in school that you learn best when you understand the concepts and are actively engaged in the learning process. Our class is designed with you, the learner, in mind. You will "learn by doing." You will be encouraged to think and to make conjectures while you persevere through challenging problems and exercises. You will make errors—and that is ok! Learning and understanding occur when you make errors and push through mental roadblocks to comprehend and solve new and challenging problems.

You will also be required to explain your thinking and your analysis of diverse problems and exercises. Being actively involved in learning will help you develop mathematical reasoning and use it to solve math problems and work through other everyday challenges.

Please read and review this *entire* syllabus. Please sign the last page and have a parent/guardian sign it as well. Please return it to me no later than **Wednesday, September 16th**. If your parent/guardian would like to speak with me, let them know that they are more than welcome to send a note with you, e-mail me, or call me. Your education and your ideas are very important to me, so feel free to talk to me anytime.

I look forward to a fun and fruitful year working with you. Thank you for your support and cooperation.

Sincerely,

Ms. Lozada

Important Information

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- Return signed contract by Wednesday, September 16th.
- Bring a binder, dividers, and graph loose leaf ASAP.
- Beginning TODAY, September 10th, you will have nightly homework.

Goals for the year

- To develop the skill of using evidence to support arguments in discussion and develop the communication and collaboration skills that support college a career readiness
- To engage in activities that are both cognitively challenging and accessible with the aim of building persistence through new or challenging tasks

Scope and Sequence*

Chapter	Overview of Unit
Linear Functions	You will explore transformations of linear and absolute value functions.
Quadratic Functions	You will extend your knowledge of quadratic functions.
Quadratic Equations and Complex Numbers	You will learn five strategies for solving quadratic equations with real and complex solutions.
Polynomial Functions	You will learn what the degree of a polynomial tells you about its related polynomial function, how the factors, zeroes, and x-intercepts are related, and how the factors and roots are related.
PBA Mid-Term Exam (Late January)	
Rational Exponents and Radical Functions	You will learn how to simplify the nth root of an expression, solve radical equations, and how a function and its inverse are related.
Exponential and Logarithmic Functions	You will learn how exponents and logarithms are related.
Rational Functions	You will learn how to identify and describe inverse and direct variation functions and what kinds of asymptotes are possible for a rational function.
PBA Project (March-April)	
Sequences and Series	You will learn how to represent the terms of a sequence explicitly and recursively and work with arithmetic and geometry sequences.
Probability	You will learn the difference between a permutation and combination and experimental and theoretical probability.
Data Analysis and Statistics	You will learn how measures of central tendency are different from standard deviation.
PBA Final Exam (Mid-June)	

*Note: Scope and Sequence is subject to change

Plagiarism & Cheating

Plagiarism and cheating is unacceptable and will not be tolerated. Any evidence of plagiarism and/or cheating will result in a grade of zero on that assignment with absolutely no opportunity for a make up.

Grading

85% of your grade will be based on how well you understand the material you learn. You can demonstrate your mastery of a concept through your work graded on the following scale:

10% Homework
10% Performance Tasks/Projects
15% Quizzes
20% Semester Final Exam
30% Tests

In addition to your mastery of the content, you will also be graded on:

15% Preparation and Participation (including classwork and attendance)

You *participate* by being engaged in the learning activities (i.e. actively taking notes and completing classwork), contributing to a positive learning environment by following all

protocols, and you are *prepared* with your notes and pencil out and ready at the start of class. ***ALL YOUR WORK MUST BE DONE IN PENCIL!*** Only work in pencil will be accepted.

Your grades will be readily available to you on engrade.com. Students, you will receive your access code during the first week of school. Your parents will receive an e-mail invitation once you return the signed contract.

Homework

You will have nightly homework. Homework will **always** be due the following class period, unless otherwise specified. Homework must always be completed neatly on a clean page in pencil. **NO LATE HOMEWORK** will be accepted. If you are late to class, then your homework is late and will not be accepted so get to class ON TIME. If you are absent, you must be ready to turn in all homework that was due while you were absent on the day you return to class.

Homework will be graded as a check plus (✓+), check (✓), or check minus (✓-).
✓+ (110%) = you have complete **all** the assigned problems with all correct solutions, shown all your work, have problems neatly written out and organized, and written any questions you may have at the end of the assignment. This work is above and beyond.
✓ (100%) = you have completed the assignment adequately, some work may be missing, but it is completed to the best of your ability with **all** problems attempted. Any questions are written out and every problem has some work shown.
✓- (50%) = you have not completed the assignment, problems are missing, work is missing, and is generally disorganized or illegible.

Attendance and Lateness

You must attend class promptly everyday. If you are late or absent, then you are missing an important learning opportunity. It is *your* responsibility to get the notes from a peer outside of class, collect any missed papers, and make-up any work during tutoring. If you miss an assessment day, then you will take the assessment the next day you attend school in tutoring.

Tutoring

Tutoring hours are TBA. I highly encourage you to attend tutoring whenever you would like some individual attention or extra help; however, you MUST come to tutoring prepared with a problem or questions so our time together is efficient and productive. If you would like to meet at another time, please e-mail me at least 24 hours in advance.

Performance Based Assessments (PBA's)

PBA's allow you to demonstrate your mastery of fundamental concepts through examinations and projects. For Algebra 2, you are expected to meet PBA requirements composed of:

- Two semester final examinations
- One course project

The components of your PBA will also be included in your semester grade. This means that your grades on each semester final and the course project will count *twice*! Remember that PBA's at Beacon are in lieu of the New York State Regents examination so take your PBAs very *very* seriously.

Materials

For this class, you will need:

- A pencil
- A red pen
- A highlighter
- A centimeter ruler
- Loose leaf graph paper
- A 1" 3-ring binder
- 5 3-ring binder dividers
- Extra credit: 1 ream of paper
- Recommended: TI-84 Plus Graphing Calculator

You are responsible for bringing all your materials to class each and every day.

Food in the Classroom

There is no food or drink allowed in this classroom because we need a clean work area. Only bottles of water are allowed. Any food or drink not permitted will be confiscated.

Cell Phones & Electronics

Cell phones and other electronic devices are **not to be seen or heard** during class because they create distractions. They will be confiscated immediately.

Bathroom

Only one student at a time may use the restroom. NO students are permitted to go to the bathroom during the Warm Up, when the teacher is giving notes or instructions, or during the final ten minutes of class. To go to the bathroom during work time, you must raise your hand and wait patiently for me to come to you.

Classroom Culture and Behavior

Algebra 2 is exciting, yet challenging so it is crucial that you hold *yourself* and *your peers* to the utmost level of respect, responsibility, and academic perseverance. We are in this together, and you are responsible for any infractions of classroom rules. Behavior problems will not be tolerated and will be dealt with immediately. Let's work together to create a great environment for exploring math.

Student and Parent Contract for Ms. Lozada's Algebra 2 class

I am aware that:

1. I am expected to adhere to all classroom rules, and noncompliance of any kind will not be tolerated.

2. Inappropriate language and demeaning behavior will not be tolerated.

3. I am expected to come to every class prepared and ready to learn. I have my homework complete, notebook ready, and a pencil in hand.

4. I am expected to work to try my hardest and work to the best of my ability. All assignments will be turned in promptly and complete, knowing that I have given my best effort.

5. Taking risks and participating are encouraged. I should not be afraid to ask appropriate questions. I will learn the most by being *actively* involved in my learning.

6. Mostly importantly, everything I do or say in the classroom should help create a positive learning environment. I will work hard, help others and never be afraid to try!

By signing below, I agree to follow all the rules and expectations of both Ms. Lozada and Beacon High School. I am aware of the consequences and rewards for all my actions. I will contribute positively to the learning environment in my classroom.

_____ _____

Student Name Student e-mail

_____ _____

Student Signature Date

_____ _____

Parent Signature Date

_____ _____

Parent e-mail Parent Phone Number