

Math Analysis

09-10 COURSE SYLLABUS

Mr. Petty

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Schoolnotes page: <http://new.schoolnotes.com/jpetty01/>

Course Description: Math Analysis is designed to review and expand upon the concepts discovered and used in Algebra 1A, Algebra 1B, and Geometry. The course involves the use of equations and inequalities, exponents, polynomials, roots and radicals and quadratic equations. This course is designed to be similar to the Elementary Algebra course at a junior college; however, college credit will not be awarded for successful completion of this class. The purpose of the class is to prepare students for success in Intermediate Algebra or College Algebra and on the all important ACT.

Instructional Philosophy: This course will be broken up into chapters. Each chapter will include homework assignments, quizzes, and at least one authentic assessment activity. There will be a major test at the end of each chapter and a quarter final at the end of each quarter, which will be over all material covered in the given quarter. It is expected that all students will show their steps in the solution process of every problem, essentially **STUDENTS MUST SHOW WORK!** Students are given an opportunity to work on assignments in class. This is a privilege and if abused can and will be taken away, meaning no time in class for assignments. An emphasis will be made in this class to focus on the ACT and all things leading to our students being successful on this all-important test as well as in high school and post secondary education.

Major Course Goals:

1. Solving algebraic equations and formulas
2. Graphing lines and reading graphs of lines
3. Exploring polynomials and exponents
4. Factoring polynomials
5. Solving rational equations including complex rational expressions
6. Solving systems of equations and inequalities
7. Using and exploring radicals
8. Solving quadratic equations with real numbers, radicals, and imaginary numbers.

Major Course Objectives/Benchmarks by Quarter:

Being able to answer the questions for each quarter will let you know that you have mastered the subject matter for that quarter.

1st Quarter: How do I solve an algebraic equation/formula and how can this make life easier in the real world? How can I predict information by being able to graph and read the graph of a line?

2nd Quarter: How do you factor a polynomial of any degree and how can this be used in a real-world situation?

3rd Quarter: How do I solve a system of equations and inequalities and use this information to determine the best route to take for my business, etc.?

4th Quarter: What is the quadratic formula and how can it be used to solve quadratic equations that would be impossible otherwise?

Major Course Projects and Instructional Activities: Instructional activities will include but are not limited to: lecture, homework assignments, authentic assessments, quizzes, chapter tests, quarter finals, reading assignments, and writing assignments. There will be a major project each semester. These projects will show how math can be applied in real-world situations.

Recommended/Required Reading: In this class, you will be required to read the equivalent of 2 books for the entire year. Most of the reading will be in your textbook. You will be given a reading assignment every chapter and will be expected to read and show understanding of what you have read. You will fill out a reading log for each assignment and turn in the reading log at the end of the semester.

Course Assessment Plan: Tests and quizzes will be worth 55% of your grade. Homework, authentic assessments, and projects will be worth 25 % of your grade. Each quarter there will be a quarter exam worth 20% of your grade. Your final course grade for the semester will be based on the following: 1st quarter (50%), 2nd quarter (50%).

Classroom Expectations:

- 1) Students will respect their fellow classmates and the teacher.
- 2) Students will always use their ears and minds at all times in class.
- 3) Students will devote the entire period to mathematics.
- 4) Students will not bring food or drinks into the classroom.
- 5) Students will ask questions when they do not understand.
- 6) Students will bring pencil, paper, textbook, and a willingness to learn and work hard to class everyday.
- 7) Students will be expected to attend class everyday (on time). This is a must to be successful in the real-world, as well as school. If you must be absent, try to get your assignments ahead of time if possible.

Supplies and Materials Needed: All students need to bring paper and pen/pencil to class everyday, along with their homework and textbook for that day. Calculators will **NOT BE PROVIDED** for use in the classroom. On most assignments, a calculator may be used but I will not provide them for students. The student is responsible for buying a calculator and bringing it to class every day. All assignments and test work can be done without a calculator, but they can be time saving and beneficial. Planners must be in class with you everyday. **All students should invest in a scientific calculator; these are relatively inexpensive and can be an investment for classes at a post-secondary school.**

Homework Policy and Grading Scale: Please refer to the Student Handbook for the Homework Policy. The grading scale is as follows:

A.....100-95 A-.....94-90 B+.....89-87 B.....86-83 B-.....82-80 C+.....79-77
C.....76-73 C-.....72-70 D+.....69-67 D.....66-63 D-.....62-60 F.....59-0

Extra Help: I am more than willing to help any and all students to be successful in this class, but it is the student's responsibility to ask for help. If a student needs help before school, they can make plans with me to be here early. Students may also take advantage of our extra help program P.A.S.S., which takes place after school. My P.A.S.S. days are Tuesday and Thursday from 2:42- 3:30. **Please know that a student does not have to be assigned to pass in order to take advantage of the program.**

Time and place to be reached by parent: My school e-mail is jpetty@centralr3.org. This is probably the best and quickest way to reach me. I can also be reached by calling the school at 573-431-2616 EXT 4161 and leave a message. I will get back with you at my earliest convenience.