



## **Integrated Algebra**

### **Overview**

Integrated Algebra provides tools and ways of thinking that are necessary for solving problems in a wide variety of disciplines, such as science, business, social sciences, fine arts, and technology. This course will assist students in developing skills and processes to be applied using a variety of techniques to successfully solve problems in a variety of settings. Problem situations may result in all types of linear equations in one variable, quadratic functions with integral coefficients and roots as well as absolute value and exponential functions. Coordinate geometry will be integrated into the investigation of these functions allowing students to make connections between their analytical and geometrical representations. Data analysis, including measures of central tendency and visual representations of data, will be studied. Students will solve problem situations requiring right triangle trigonometry. Elementary probability theory will be used to determine the probability of events including independent, dependent and mutually exclusive events.

### **Semester #2 Syllabus**

#### **MP #4: Linear, Quadratic, and Exponential Functions**

- Linear and Exponential Sequences
- Functions and Their Graphs
- Transformations of Functions
- Using Functions and Graphs to Solve Problems
- Quadratic Expressions, Equations, Functions, and Their Connections to Rectangles
- Using Different Methods to Solve Quadratic Functions
- Function Transformation & Modeling

**Grasp Project: What the Better Deal? (Salary Comparison)**

#### **MP #5: Descriptive Statistics**

- Shapes and Centers of Distribution
- Describing Variability and Comparing Distributions
- Categorical Data on Two Variables
- Numerical Data on Two Variables

**Grasp Project: Analyzing Real-World Data on a Scatter Plot**

#### **MP #6: A Synthesis of Modeling with Equations and Functions**

- Elements of Modeling
- Completing the Modeling Cycle
- Analysis of Word Problems: Strategy Exploration (Linear, Quadratic, Exponential)

**Grasp Project: Absent Allie Letter (Word Problem Analysis)**

**\*Regents Review\***

### **Grading**

Formative Assessments: 40% (Reflections, Quizzes, Weekly Homework, Do-Now Assignments)  
Summative Assessments: 60% (Unit Projects, Unit Tests)

### **Mr. Kearney's Contact Information**

Email: [Andrew.Kearney@K497.org](mailto:Andrew.Kearney@K497.org) (Room 232)

Feel free to schedule an appointment for extra support.

## Mr. Kearney's Classroom Expectations

Welcome!!! I hope you are ready for a great second semester. I am very excited to have all of you in class, and can't wait to get to know you better. Sophomore year is a very important year for you, and I want all of you to be successful. Here are a few guidelines to help you along your way.

I. **Student Created Classroom Norms:** In order to maintain a safe, productive, and enjoyable classroom environment, it is very important that we:

- Come to class prepared- Notebook, HW, pencil, ruler, protractor, compass, calculator.
- Actively participate during note-taking, inquiry activities, and board work assignments.
- Be respectful of one another's opinions, ideas, and beliefs.
- Make eye contact when speaking and listening.
- Do not use profanity.
- Arrive to class on time.
- Raise hands when contributing to classroom discussions.
- Do not fight with or bully classmates.
- Respect the classroom space and materials by keeping the room clean and organized.
- Maintain a positive attitude and persevere through challenges.
- Do not eat or drink in the classroom.
- Use or display any cell phones or electronic devices.

II. **Homework:** Since homework is such a vital part of the math curriculum, it is important that you follow a few simple rules when completing your homework:

- A.) **Be Neat-** It is important that you can understand your answers and the process you took to solve the problem. (*Note: If you can't read it, neither can I.*)
- B.) **Show all of your work-** Write the problem, show all of the steps to solve the problem, and lastly, circle the answer. Always draw any picture that you need to solve the problem.
- C.) **Put your name and date on every assignment-** Homework will be checked daily and may be collected at any point during the unit, so stay organized!

III. **Miscellaneous Topics:**

**Absence** - It is your responsibility to see me the day after you are absent to obtain missing work. Classroom notes must be obtained from a classmate. Any test or quiz that is missed due to absence must be completed on the day you return to school following your absence or it will be recorded as a 40%.

**Behavior** - As upperclassmen, you understand what is expected of you. I ask that everyone is respectful of each other and help to create a cooperative and dynamic learning environment. Any behavior that is disruptive to the learning environment will not be tolerated and will be dealt with immediately.

**Supply List -**

- 1 Three Ring Binder (1 inch or larger)
- Notebook Dividers (Labeled: Do-Now, Class Notes, Activities/Handouts, and HW)
- Lined paper
- Pencils
- Scientific calculator (graphing calculator is not required)



## Parent – Student – Teacher Contract

Please return to Mr. Kearney no later than Friday, February 6, 2015

*“I have read (discussed with my child) the Syllabus and Classroom Expectations. I will do all that I can to ensure that I am (my child is) successful.”*

Student Name (Print) \_\_\_\_\_ Signature  
\_\_\_\_\_

Guardian Name (Print) \_\_\_\_\_ Signature  
\_\_\_\_\_

Guardian Name (Print) \_\_\_\_\_ Signature  
\_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_  
Work Phone: \_\_\_\_\_

Guardian E-mail: \_\_\_\_\_ Best Time to Reach  
You: \_\_\_\_\_