



Honors Algebra (40130)

2011-2012

Instructor Information

Name: Mr. Tim Kuehl, BS, MS

Office Location: 1321 (Inside room 1323)

Office Hours: 1st and 8th hour, after school until 3:15 (in fall) or 3:45 (non-fall) or by appointment

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General Course Information

Title: Honors Algebra (40130)

Department: Mathematics

Credits: 1 credit

Length: 2 semesters

Elective or Required: Elective

Grade Level: 9

Semester: Both

Meeting Schedule: 6th hour

Prerequisites: By math department placement

Course Description: Algebra is a branch of mathematics that is an important stepping stone to higher mathematics and very useful in today's technological workplace. This course develops basic algebraic concepts in a problem solving and systematic way; turning arithmetic into Algebra by using letters to represent unknown numbers, and continuing to find the unknown numbers through algebraic and graphical means. Topics include: A review of algebraic concepts, solving one and two variable equations, functions, finding and using linear equations and inequalities to solve problems, finding and using quadratic equations to solve problems, absolute value functions, graphs of equations, solving systems of equations and inequalities, rational and radical expressions and equations, rules of exponents, studying quadratic, polynomial, and exponential equations and their graphs, matrices, one and two variable statistics and probability. This course is for the more able math student, as it goes into greater depth and at a faster pace than Algebra. Honors Algebra is a college-prep course.

Parent-Instructor Communication

The instructor will strive to contact the parents when he observes tendencies including – but not limited to – the following: lack of academic effort, poor and failing grades, and classroom misconduct. Parents are urged to communicate with the instructor when they have questions and concerns. Contact by email is preferred by the instructor. The instructor will make every effort to respond to voice mails and emails in a timely manner.

Course Details

Course Purpose: The purpose of the Honors Algebra course is to begin the student's growth beyond basic arithmetic to the use of the abstract mathematics of Algebra which is used in the higher sciences and daily life.

Course Goals:

This course will:

- Allow students to display their God-given talents by applying Algebra to various real-world and mathematical situations in service to Him.
- Allow students to prepare for higher-level math and science courses for which Algebra acts as a gateway and refine their current math skills

Course Outcomes:

The students will:

- Demonstrate multiple techniques while solving linear equations and inequalities, systems of equations, absolute value equations and inequalities, exponential equations, quadratic equations, rational equations, and radical equations
- Translate a real-world problem into algebraic terms and produce an applicable solution
- Create a linear or quadratic equation to model a given situation
- Demonstrate a sound understanding of the important features of linear, quadratic, absolute value, exponential, rational, and radical functions and expressions
- Produce a graph (by hand, calculator and computer) to accurately display a function or statistical information

Student Materials:

- Text: *Algebra 1 (Prentice Hall, 2011)*
- Pencil/Pen
- TI-83/84 type graphics calculator
- Three-ring binder (at least 1" width) with dividers
- Notebook
- Student Planner

Instructional Strategies

Each day will begin with an opening activity which students are expected to quietly work on until class begins. These activities include (but are not limited to): a group or individual investigation that leads into the day's lesson, correction of homework due, or a surprise quiz. Most class time will be spent in large or small group discussion of the topics presented on the section notes. Homework will be corrected in class, with discussion of the problems in class. Occasionally there will be exit quizzes.

Assignments & Assessments

Homework will be assigned from problems in the textbook or separate worksheets may be given. The home/class-work grade will also include assessment of your work during class. A quiz covering the material from each section will be given in class after discussion of the homework is completed. Projects will be assigned for each unit which have you apply the concepts learned in that unit. Tests will be given every unit as well. A "weekly" homework assignment will also be given on the first day of the school week and will be due the following week. A project applying the statistics you learn in the "weeklies" will also be assigned each semester and due at the end of the semester. There is no cumulative semester exam.

Grading**KML Standard Grading Scale:**

95-100%	A	87-90%	B	79-82%	C	72-74%	D
93-94%	A-	85-86%	B-	77-78%	C-	70-71%	D-
91-92%	B+	83-84%	C+	75-76%	D+	60-69%	F

Grading Policy:

The final semester grade in this course is calculated based on all of the assignments given over the course of the semester using the percentage breakdown: Home/Class-work (10%), Quizzes (20%), Projects (30%), and Tests (40%). For this reason, the semester grade shown in PowerSchool is a better indicator of student achievement during the course than the quarter grade. Class participation will be considered in grade adjustments at the end of each quarter.

Grading Procedures: Grades will be entered into PowerSchool regularly. If grades are not updated during the school week, they will be updated by Sunday evening. The home/class-work grade will be a letter grade given each week reflecting the student's effort and studiousness on homework due, on opening activities, on

class discussions, and class work that week. Quizzes and tests are graded on a “points received/points possible” percentage. Projects will either be graded by points or given a letter grade based on a rubric.

Make Up Work: Home/class-work grades cannot be made up if you are in class, but being absent will not count against you. Homework, quizzes and tests are to be made up within the number of days you have been absent. If you were only ill for the one day or were absent due to a preplan, you are expected to make up a quiz/test the day you return (the next day). Projects are due on their due date or the day you return from illness.

Late and Incomplete Work: Coming to class with your homework not completed will seriously affect your home/class-work grade that week. It is advised that you still do/finish the homework for practice for quizzes and tests. Habitually coming to class with your homework incomplete or failure to make up a quiz, test, or project within the grace period given will result in an academic detention and a reduction in grade (usually 5% per day late).

Major Assignments: Failure to complete all major assignments in a course results in an automatic “F” for the course. Major assignments include all tests and projects for this class.

Classroom Procedures

Attendance: Students are expected to attend all scheduled classes in accordance with the attendance policy as outlined in the KML Student Handbook. In the event of an absence, it is the responsibility of the student to follow all necessary steps as outlined in the handbook and this syllabus.

Tardiness: Students are expected to be inside the door of the classroom when the class bell rings in accordance with the tardiness policy as outlined in the KML Student Handbook. The instructor will notify students if they have been marked tardy. Habitual failure to bring materials required for class will also result in a tardy being issued as it demonstrates you are not ready for class in a timely manner.

Academic Dishonesty: KML expects all students will honor the principles of honesty and truth as taught in God’s Word. This means that all academic work will be done by the student to whom it was assigned without unauthorized aid of any kind. Research sources must be cited fully and accurately. The school reserves the right to use academic screening methods to check the authenticity of student work. Refer to the KML Student Handbook for additional guidelines concerning penalties for cheating.

Behavior: Students are expected to respect the instructor, fellow students, and the learning environment at all times. Discussion of topics should be done in an orderly atmosphere with only one person talking at a time and with permission. Students are expected to remain focused on the topic being discussed. Disruptions to the learning atmosphere will not be tolerated, with adequate warnings being given before a detention is issued.

Students are allowed to leave their desks to turn in quizzes and tests when done. This should be done without visiting other students. For all other reasons (to sharpen a pencil, to go to the bathroom, to work with another student, etc.) permission should be requested first. Students must remain in their desks until the bell rings and may not stand by the door or in the hallway.

You are allowed to have games on your calculator, but may not play them while class is being conducted. You may play games only during “downtime” in class.

Daily Routine:

- Enter class and begin working on the opening activity
- Questions taken on homework due (if any)
- Discussion on the current lesson, lesson investigations, activities, and class practice
- Lesson wrap-up

Academic Progress: It is the intent of KML that all students enrolled in this course should complete it successfully. The instructor will strive diligently to help students to succeed. When it becomes apparent to the instructor that a student has placed himself/herself in jeopardy of meeting the minimum requirements of the course, the instructor may begin the procedure outlined in the Academic Progress Policy of the KML Student Handbook in order to remedy the situation.

Course Help: If you are struggling in this class, DO NOT let it linger! As is typical with math, future concepts depend on the sound understanding of previous concepts, so do not fall behind! There are many avenues of assistance for this class listed at the class website, but your primary source should be Mr. Kuehl.

Other Information:

Representing Your Savior by Using Your Talents: By virtue of being in this class, you have shown yourself to be blessed by God with mathematical ability. God asks us to use our gifts and talents to serve and represent Him. As such, you will be asked to represent your Savior and your school in various math competitions during the year. Participation in these meets does not automatically make you a member of the KML Math Team. You must meet the other criteria of being a team member to be considered a member of the math team. Participation in a math meet will earn you 10 free quiz points (as long as you score a point and work faithfully) and award winning participation in a math meet will be considered for grade adjustment at the end of a quarter.

Another way you can serve God with your talents is to use your abilities to help others by becoming a peer tutor. I will either omit the lowest test grade or give a partial grade raise for any student that is a peer tutor during that semester. In order to take advantage of this, you must sign-up to be a peer tutor with Mrs. Boeldt at the beginning of the semester. The peer tutoring can be done during the school day or during ELP.

Homework:

You should spend 20 to 40 minutes a night on work for this class. When homework is assigned, you are usually given two days to complete it. Start on the homework the first day to keep the concepts fresh in your mind and to make sure you understand the material. Seek assistance if you find yourself struggling. Complete the homework the next day if needed. Keep in mind that homework is mostly graded on work shown, timeliness, completeness, and organization, and to a lesser extent the number correct. Homework is for your benefit – to allow you to practice under non-threatening conditions. The problems assigned have been carefully selected and completed by the instructor himself to offer you practice on problems that should help you solidify your skills and prepare you for assessment on quizzes, tests, and projects. Do not skip over word problems or ones you find difficult. These problems are often the more important ones. Once your work is corrected, take the time to go back and learn from your mistakes.

If there is no homework assigned, or you are done with it, there are still plenty of things to do. You can:

- review and clarify your section notes
- read the past, current, or future section in the textbook
- review for the quiz or test (including vocabulary)
- work on the unit or stats project or the “weekly”

If you need extra practice on a section you can:

- use the odd problems from the section or chapter review (the answers are in the back of the text)
- make corrections on your homework or quizzes
- go to the textbook’s website for online tutoring and practice tests

Calculators:

- be sure you have your name engraved on it
- don’t use it as a crutch to do simple calculations you should do in your head
- store the calculator safely in your locker - don’t leave it unattended on a table or in your book bag
- the school reserves the right to delete offensive and unnecessary programs from your calculator
- no password programs are allowed on your calculator

Website:

- The class website is available through the school’s website or www.mathdragon.net
- Assignments that are posted on the small white board are also posted on the class website
- Hand-outs in class can be downloaded at the class website, including completed section notes
- Graph paper is in the black trays in the back of the room and is available on the class website
- A link to the textbook’s web site is on the class website
- Links for help and tutoring and other useful sites are on the class website