

Marquette University High School Mathematics Course Syllabus 2013-14

Course: Accelerated Algebra 1/Honors - 2 Semesters (1 Credit)

Teacher: Mr. Dan Cleary

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Classroom: Room 103 **Office:** Math Department: Look for short hallway opposite east side of gym
Available for student help 1st period (2nd half on M,W,F), homeroom (103), 4th, and 6th

Class Materials: It is **your responsibility** to be prepared for class. This includes having the appropriate materials to complete class activities, a system for note taking, completing and saving assignments, and general preparation to be an active participant in class. Such materials will include: Folder and/or 3 ring binder, loose leaf paper, notebook, graph paper, mechanical pencils and eraser (no pens!) graphing calculator-TI-84 Plus or TI-84 Plus Silver. Consequences for not having appropriate materials for class may include, but are not limited to monetary fines, demerits, and jugs.

Text: Beginning Algebra 6th Edition by Martin-Gay. Copyright 2013, Pearson Education Inc.
www.pearsonhighered.com. ISBN-13: 978-0-321-78491-9

NOTE: Electronic devices such as cell phones/Blackberry's, I-pods, I-phones etc are absent from this list. Please leave these types of items in your locker. If these are seen or heard within the classroom they will be confiscated and delivered to the Dean of Students. Personal computers, I-pads, and tablets will be allowed at my discretion.

Homework: Your primary homework responsibility will be to watch, listen, and take notes from a video covering a section of the text/algebraic topic. Videos will be posted at www.mrcleary.com/Accel_Algebra1_Index.html and hosted on www.youtube.com Notes and completed sample problems will be due in the class day after it is assigned. Notes will be checked frequently in class and will be graded on completion (2 points) and neatness (1 point). **Late homework (video notes) can earn up to 1 point.** Illness/absence from class does not excuse you from homework. Homework must be turned in upon your return to class.

Classwork: Classwork will focus on reinforcing and teaching the skills and concepts from the previous night's video homework, and may include, but is not limited to, exercises from the text, worksheets, and online practice. The goal is to complete all assigned classwork during class time. Unfinished classwork will be required to be completed as homework in addition to any video homework. Classwork must be completed in pencil. Make sure you have a pencil with a good eraser. I reserve the right to collect and/or spot check classwork. Classwork evaluations will be based on algebraic process (did you **show** correct algebraic process?) (2 points), completion (did you complete/make a sincere and honest attempt to complete the assigned work?) (2 points), and neatness (can I read it?) (1 point). . Late classwork may earn up to 3 points. After an absence it is your responsibility to turn in your classwork and homework to earn full credit.

Notebooks: It is essential to keep good lecture notes in Algebra. Designate a single notebook that is used exclusively for Algebra. You will use a separate notebook for notes and homework. Be sure to label your notes with the date, section number and topic. Notes may be taken in either pen or pencil. Your notes should include definitions, sample problems, and hints from the video. Taking notes is more than just re-writing what is on the screen. Be sure to LISTEN for hints and valuable tips that should be included in your written notes.

Mathematics is not a spectator sport. You will learn more by being involved in the subject through both class participation and homework. As a result, you can expect to earn a higher grade by keeping up with homework and classwork. Completing your classwork will confirm what you do and do not understand. It is the best test preparation you have.

Tests: Tests are scheduled at the culmination of each section of the text. The concepts in Algebra build upon one another synthesizing material learned in prior sections. The tests will reflect that. Each test will be one class period. The semester exam (75 minutes) will be cumulative. You will be notified well in advance of test dates. If you know you will be absent (games, trips, etc.), see me to make alternate arrangements. If you are absent the day of a test, you must take the test the next day in the library. If you miss the day before the test you will take the test with the class. For longer absences, see me to schedule a make-up during one of your free periods.

Quizzes: There will be periodic quizzes throughout the semester. Most will be announced, however, I do reserve the right to give unannounced quizzes. These will be a great way to boost your score and show you are keeping up with the work. In general, I will try to give a short (20-40 point) quiz each week. Quizzes missed due to absence will not be made up -- no effect on your grade -- You will receive a copy of the quiz for study. If you know you will be absent, advance arrangements should be made to take the quiz. Abuse of this policy will be reviewed on a case by case basis.

Projects: A longer term individual or group project may be assigned. Projects will synthesize your current studies in Algebra, math history and current applications of algebra and mathematics.

Grading Scale: Your grade will be based on the percentage of the total possible points you have earned. The grading scale will never be tougher than that listed in your handbook and shown below.

A+ 100-98	B+ 89-87	C+ 79-77	D+ 69-67	F below 60
A 97-94	B 86-83	C 76-73	D 66-63	
A- 93-90	B- 82-80	C- 72-70	D- 62-60	

Your total points will accumulate throughout the semester. You will start over again with zero points at the start of the spring semester. I encourage you to maintain a record of your grades and to periodically check your grades online. The purpose is two-fold, first, for you to see where you stand and, second, to compare your records to mine to ensure I have correctly recorded your scores.

Online Grade updates: Grades will be updated at the school required deadlines as outlined in the Student/Parent Handbook. More frequent updates will occur at my convenience.

Class Participation: You will be expected to participate in class. This includes and is not limited to answering and asking pertinent questions, participating in cooperative groups, and completing homework assignments at the board.

My Expectations: I expect you to be in class. I expect you to be on time for class. I expect you to do your homework daily. I expect you to participate in class and complete the assigned classwork during class time. Absenteeism, tardiness, and misconduct will be dealt with in an appropriate manner, including, but not limited to monetary fines, demerits, and jugs. Students are expected to treat the teacher and each other with respect and expect the same in return. I expect academic honesty. Academic dishonesty will not be tolerated. Refer to your student handbook for additional information. Finally, I expect you to do well in this class and for us to have a great year.

Topics Covered in Accelerated Algebra 1

Chapter 1 – Review of Real Numbers	Vocabulary – Define sets of Real Numbers, definitions of addition, subtraction, multiplication, division, and absolute value. Simplify expressions by applying Order of Operations, simplify fractions (add, subtract, multiply, divide), Algebraic Properties, including properties of equality.
Chapter 2 – Equations, Inequalities, and Problem Solving	Simplify Algebraic expressions, single variable equations and inequalities, solving single variable word problems, solving percent, mixture, investment, RTD word problems (single variable) **Add: Abs Val Inequalities and union and intersection, Interval notation, compound inequalities.
Chapter 3 – Graphing Linear Equations	Introduce coordinate plane, slope (reinforced with CBR activity), Graph linear equations (x & y ints, and slope & y-int). Write equations of lines in slope-intercept and standard forms. Introduce pt-slope form and use to write linear equations in slope intercept and standard forms. More application of slope word problems. Perpendicular and parallel. Writing linear equations from word problems. Line of best fit. Use MS Excel to determine best fitting line. Introduction to functions, function notation, and composite functions. Determine domain and range from expression and a graph.
Chapter 4 – Solving Systems of Linear Eqns and Inequalities	Solve systems by graphing, substitution, linear combination, solving 2 variable word problems (investment, mixture, solution, RTD. Graphing systems of linear inequalities. Use graphing calculator to graph lines, inequalities and systems. Solve systems with 3 variables
Chapter 5 - Exponents	Laws of exponents, including negative exponents, Scientific notation, Application of scientific notation, Add, subtract, multiply, divide polynomials – polynomial long division, synthetic division.
Chapter 6 – Factoring Polynomials	GCF, Prime Factorization, Factoring by grouping, Factoring trinomials, factoring patterns – including sum and difference of cubes, solving quadratics by factoring, solving quadratics by graphing on TI-84, solving quadratic word problems.
Chapter 7 – Rational Expressions	Simplify, Multiply, Divide, Add, Subtract rational expressions. Graph rational functions w/vertical and horizontal asymptotes. Solve equations with rational expressions. Solve proportions, work, and RTD word problems. Direct and inverse variation. Complex fractions.
Chapter 8 – Roots and Radicals	Simplify, add, subtract, multiply, and divide radicals. Rationalize denominators, conjugates, solve equations with radicals, Pythagorean Theorem and distance formula, rational exponents, imaginary and complex numbers.
Chapter 9 – Quadratic Equations	Solve quadratics using square roots, Complete the Square, Quadratic Formula, Discriminant, Graphing quadratics (vertex method), graph with TI-84, Max and Min of quadratics, Extensions with Max/Min – Quadratic word problems, Applications of quadratics, Application of discriminant.

STUDENT NAME: _____

STUDENT SIGNATURE: _____

PARENT/GUARDIAN SIGNATURE: _____