



COURSE OVERVIEW

Course Title: Algebra 2

Teacher: Liz Darnell

I bring my 25+ years as a math teacher, Saxon training, and experience to the classroom. I encourage unique problem-solving perspectives but will train all students in solid and consistent math strategies that they will be able to build on.

Contact Information:

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The best time to reach me is: Monday, Wednesday & Friday afternoons. Check my SETMORE site to schedule an appointment. <https://therockacademy.setmore.com/>

Course Overview

This course is a rigorous Algebra 2 course based on the Algebra 1 and Geometry skills previously studied. The course continues using incremental development (introducing a wide variety of topics in small pieces) and continual review (repeating skills daily over a period of time until students retain the concepts). Students who are secure in their understanding and application of Algebra I skills are more likely to be successful in this upper math class.

Students will be responsible for being present for class, participating in the teaching/learning process, having their homework graded, completed, and turned in on time, asking questions, and requesting help as needed.

Students will be provided with interactive, in-class teaching, weekly videos for reinforcement if needed, and Guided Study time to complete all assignments. If more assistance is necessary, parents may need to hire a private tutor. Please contact me if your student is struggling.

Goals: Each student will be able to:

- Achieve independent mastery of the Algebra skills taught
- Hone their problem-solving skills as it relates to math and other areas of life
- Take on the challenge of math and overcome deficits and/or fear of the subject
- See the beauty of Intelligent Design in all facets of their math experience
- Improve their time management and organizational skills
- Be prepared for standardized testing as well as future math courses

Algebra 2 Course Overview

Semester I Weekly Overview	Semester II Weekly Overview
Week 1 – Lessons 1, 2, & 3—Polygons; Neg Exponents; Evaluation of Expressions; Adding Like Terms	Week 19 – Lessons 54, 55, 57—Polar Coordinates; Word Problems & Quadratic Equations; Ideal Gas Laws
Week 2 – Lessons 4, 5, & 6—Distributive Property; Word Problems; Fractional Parts; Equations w/ Decimals; Consecutive Integers	Week 20 – Lessons 58, 59, & 60—Lead Coefficients; More on Completing the Square; Experimental Data; Rectangular to Polar Form; Direct & Inverse Variation
Week 3 – Lessons 7 & 8—Percent; Polynomials; Graphing Linear Equations; TEST 1	Week 21 – Lessons 62, 63, 64—Complex Roots; Complex Numbers; Addition of Vectors; Complex Fractions & Complex Numbers TEST 14
Week 4 – Lessons 9, 10, 11, & 12—Percent Word Problems; Pythagorean Theorem; Addition of Fractions; Equation of a Line	Week 22 – Lessons 66, 67, & 69—Signs of Fractions; 30-60-90 Triangles; Radical Denominators; Gas Law Problems
Week 5 – Review; Practice Test; TEST 2	Week 23 – Lessons 71, 72, & 73—Quadratic Formula; Experimental Data; Negative Angles; RADIANS; More Radical Denominators TEST 16
Week 6 –Lessons 13, 14, 15, & 16 —Substitution; Finding the Equation of a Line; Elimination; Mult & Div Polynomials	Week 24 – Lessons 75, 76, & 77—Factorable Denominators & Sign Changes; Substitution & Elimination; Negative Vectors; Advanced Radical Equations; Multiple Radicals
Week 7 – Lessons 17, 18, & 19— Subscripted Variables; Ratio Word Problems; Value Word Problems; TEST 3	Week 25 – Lessons 78, 79, & 81—Force Vectors at a Point; 45-45-90 triangles; Complex Numbers. TEST 19
Week 8 – Lessons 20, 21, & 22—Simplifying Radicals; Scientific Notation; Two Statements of Equality; Uniform Motion; TEST 4	Week 26 – Lessons 83, 84, & 85—Product & Power Rule for Variables; Systems of Equations; Systems of Non Linear Equations
Week 9 – Lessons 24, 25, 26 – Fractional Equations; Factoring; Cancellation; Parallel Lines; Trinomial Factoring; TEST RETAKE Notebooks Due	Week 27 – Lessons 86, 87, & 88—Trichotomy Axiom; Slope Formula; Distance Formula TEST 20 Notebooks Due
Week 10 – Lessons 27, 28, & 29—Rational Expressions; Complex Fractions; Uniform Motion Problems 2	Week 28 – Lesson 89, & 90—Review; Conjunctions; Disjunctions; Systems of 3 Equations
Week 11 – Lessons 30, 31, & 32—Review; Negative Reciprocals; Quotient Rule for Radicals; TEST 6	Week 29 – Lessons 91, 92, & 94—Radians; Linear Inequalities; Boat in the River; Functions
Week 12 – Lessons 33, 35, 36, & 37—Rules of Algebra; Fractional Exponents; Mult & Dividing Rational Expressions; Chemical Compounds	Week 30 – Lessons 95, 96, & 97—Non Linear Systems; Joint Variation; More on Functions TEST 22
Week 13 – Lessons 38, 39, & 40—Solve by Factoring; Diff of Two Squares; Abstract Fract. Equations TEST 8	Week 31 – Lessons 98, 99, 100—Number Relationships; Absolute Value; Graphs of Parabolas
Week 14 – Lessons 41, 43, & 44—Unit Multipliers; Sine, Cosine, Tangent; Solving Right Triangles	Week 32 – Lessons 102, 105— Sums and Products of Functions; Function Worksheets; Advanced Fraction; QUIZ
Week 15 – Practice Test; TEST 10 Thanksgiving Break	Week 33 –Lessons 108, 109, 110—Sum & Diff of 2 Cubes; More on Fractional Exponents; Quadratic Inequalities Greater Than
Week 16 – Lessons 45, 46, & 47—Diff of 2 Squares Theorem; Radicals; Fractional Exponents; Rate Unit Conversions; More Fractional Exponents	Week 34 – Lessons 112, & 113 – Quadratic Inequalities Less Than; Logarithms; TST 26
Week 17 – Lessons 48, 50, & 51 –Radical Equations; Quadratic Equations; Imaginary Numbers	Week 35 – Lessons 115—Exponential Equations; Logarithm Worksheets; Polynomial Worksheets
Week 18 – Lessons 52, & 53—Chemical Mixture Problems; Metric Unit Conversions. TEST 12 Notebooks Due	Week 36 – Worksheets on Functions; Logs & Polynomials Final Test. Notebook Due

This schedule is an overview. TRA reserves the right to make changes during the school year.

Supplies Needed for this Course

- Saxon Algebra 2 (RED) Textbook 2nd or 3rd Edition
- Solutions Manual or Answer Key
- Scientific Calculator (not graphing—typically around \$10)
- 1.5” 3-Ring Binder with 3 dividers
- General Supplies: Pencils, Erasers, Ruler, Paper, (Lined and Graph Paper)

The Classroom:

- Class starts on time. Tardies and Absences will be recorded
- Students are to come to class PREPARED with their previous homework completed and scored
- Class will include review of previous concepts, and the introduction of new material using a variety of presentations (visual, aural, and tactile) encouraging participation in the process
- Students will practice in class, ask questions, and work together
- Students will clearly know what is expected of them throughout the week based on the Assignment Sheet provided
- Students have access to assistance in class, Guided Study and Math Lab throughout the week.

At Home or Guided Study

- Have an organized workspace and know where your supplies are
- Put your finished work IN YOUR NOTEBOOK to bring to class
- Have a schedule for completing your daily work
- Mark your Assignment Sheet when a lesson is completed

How to Get an ‘A’ in this Class:

- Follow directions!
- Be prepared for class
- Ask for help when needed
- Be neat—or be working on being neater and more organized
- Keep up with the assignments and turn things in ON TIME
- Prepare for tests and take them seriously—Always do your best
- Take advantage of the resources provided and show that you are serious about succeeding

Extra Credit:

- May or may NOT be offered each quarter
- Is not to bail out a student if they have not followed the procedures for the quarter
- When offered, is optional and is only counted in the overall grade if it helps a student’s grade.

Absence and Late Work Policies

See your FACTS Agreement for these policies. I WILL NOT accept any homework that is over 2 class periods late unless it has been worked out prior with me. **There are no exceptions to this rule!** You must text, email or speak to me to work out a new assignment date for sickness, vacations, or any other EXCUSED ABSENCES.

Expectations

You may expect the Teacher to:

- Be prepared, on time and fair in the classroom.
- Post grades in a consistent and timely manner to FACTS
- Respond to phone or email messages within 24 hours.
- Be available for conferences or discussions per appointment. Please text or use Setmore Site.
- Work hard to see every student succeed.
- Be available by text or email to answer questions or concerns.

I will expect the Parents to:

- Be aware of the current assignments for their students.
- Oversee the work at home (even if your child is in Guided Study), making sure that students complete the assignments and have their materials ready to turn in
- Provide the materials the students need to be successful in this class.
- Proctor the Take-Home Tests, signing and sealing them to be returned to class
- Contact the teacher if there are any problems ASAP
- **Check grades AT LEAST every week** on FACTS to see how their child is doing! This is IMPERATIVE.

I will expect the Student to:

- Be polite and always have good manners! (See the Code of Conduct)
- Keep current with all assignments.
- Work on keeping organized and neat
- Do all their own work with honesty and integrity
- Ask questions and ask for help when they need it.
- ALWAYS be prepared for class, that includes course material, paper, and writing utensils.
- Check FACTS regularly to see how they are doing.