



SLCA SYLLABUS 2018-2019

ALGEBRA 1 (GRADE 8)

Mission Statement: SouthLake Christian Academy exists for the sake of God's glory and mission; proclaiming the gospel and discipling the whole person in all aspects of God's reality.

Course Description: Algebra 1 utilizes student's mastery of middle grade math concepts without the use of calculators to integrate numbers, variables and graphs in algorithms. Students will practice, among other things, solving equations and inequalities, graphing lines, finding slope, midpoints and distances, use properties to solve algebraic proofs, analyze data, graphs, statistics, and probabilities, explore functions and their graphs, and develop problem solving skills and critical thinking as topics are introduced. Students will also be introduced to quadratic and exponential functions. Technology is integrated in notes and class lessons, as well as some graphing calculator usage for specific topics. Most calculations should be mastered by hand, and skills will be practiced throughout the course. Real world application problems will also be integrated throughout, as students work to develop concept comprehension to utilize in future courses. Algebra 1 requires students to apply properties at a higher level of complexity in problem solving, abstract reasoning and real world applications. Throughout the course, Christian worldview will be incorporated to assist students in recognizing and appreciating the sovereignty of God through mathematics.

Course Objectives: Students who complete this course will be introduced to algebraic concepts to equip them for college prep courses and to enable them to better understand God's world mathematically. Upon the completion of this course, students should be able to:

1. Understand and apply order of operations, integers and rational numbers, equations and inequalities.
2. Work with exponents and polynomials, factoring, graphs and linear equations.
3. Identify properties and solve systems of equations with inequalities and absolute value, rational expressions and equations.
4. Understand rational expressions and equations, relations and functions, and quadratic equations.

Technology: Most calculations in this course will be done without the use of a calculator to ensure that students have mastered operations with fractions and decimals. A calculator will be used for exploration and deeper understanding of concepts. It is strongly recommended that students purchase a calculator in the TI-84+ family, since students will use a graphing calculator in future courses (Geometry and Algebra II). A scientific calculator is acceptable (TI-30 family recommended). If students misuse calculators, they will be asked not to bring them to class.

Evaluation: The course will be evaluated as follows:

Homework & Classwork is worth **10%** of the student's total grade. Homework will be assigned and **checked for completion** on a daily basis. **Completion** is defined as all problems attempted, with work shown appropriately and adequately. Refer to the Parent/Student Handbook for the SouthLake Christian Academy Homework Policy. It is the student's responsibility to find out what assignment(s) need to be made up due to absence (assignments are available in Renweb under the homework section).

Quizzes are worth **20%** of the student's total grade. Quizzes will be given on a regular basis and **may or may not be announced**.

Tests will be weighted as **70%** of the student's total grade. Tests will be given approximately every 2 weeks, and will be posted on RenWeb.

ALL ASSIGNMENTS AND ASSIGNMENT DATES on RenWeb are subject to change.

****Extra Credit**, beyond possible bonus opportunities during tests, will not be provided as per school policy. Bonus opportunities on tests will not cause the final grade to exceed 100%.

Classroom Expectations: Our goal is that SouthLake Christian Academy students will learn to bear responsibility for their own success. In an effort to support students in achieving this goal, we have established the following classroom expectations:

1. Submit to authority. (Romans 13:1-2) – Follow all rules and procedures as outlined in the SouthLake handbook as well as the Class rules and procedures handout given on the first day of class.
2. Treat others with respect. (Matthew 7:12) – Treat others with respect and kindness in word and action. Speak when invited to do so by the teacher.
3. Be prepared. (1 Timothy 6:18-19) – Come to class ready with all required materials and/or assignments. Be in your seat ready to start class when the bell rings.
4. Be eager. (Colossians 3:23) – Display a positive attitude about learning. Listen actively. Participate appropriately during class activities.
5. Focus your energy. (Ecclesiastes 3:1) – Keep discussions and comments pertinent to the topic being covered. Gum is not permitted in the classroom at any time. Food and drink should be limited only to the time designated for snacks. A water bottle with a secured lid is permitted at any time as long as it is not a distraction to others.
6. Display academic honesty. (Proverbs 12:17-22) – Complete your own work honestly using only those resources permitted by the teacher.

Required Supplies:

- Pencils, eraser
- Colored pens (*not* black)
- Ruler
- 1 1/2" – 2" 3-ring binder
- Tabbed dividers for a 3-ring binder
- College-ruled notebook paper
- Graph paper
- Approved calculator (see details under "Technology")