COURSE DESCRIPTION:
Algebra is the study of relationships between known and unknown quantities and the concepts arising from them. This course is the foundation for high school mathematics courses. It is the bridge from the concrete to the abstract study of mathematics. Topics include simplifying expressions, evaluating and solving equations and inequalities, and graphing linear and quadratic functions and relations. Real world applications are presented within the course content and a function's approach is emphasized.

TOPICS COVERED:
- arithmetic and evaluation of expressions involving signed numbers, exponents, and roots
- properties of real numbers
- absolute value
- equations and inequalities involving absolute value
- scientific notation
- unit conversions
- solution of equations in one unknown
- solution of simultaneous equations
- the algebra of polynomials and rational expressions
- word problems requiring algebra for the solution (such as uniform motion and coin problems)
- graphical solution of simultaneous equations
- graphs of a variety of functions: linear, quadratic, cubic, square root, absolute value, etc.
- translations and reflections of graphs
- factoring
- Pythagorean theorem
- algebraic proofs
- functional notation and functions
- solution of quadratic equations by factoring, completing the square, and quadratic formula
- direct and inverse variation
- exponential growth
- computation of the perimeter and area of two-dimensional regions
- computation of the surface area and volume of a wide variety of geometric solids
- statistics/probability
REQUIRED TEXT:

Saxon Math Algebra 1

GRADING: To determine your final grade in the course, I will calculate your percentage by dividing your total earned points by the total points possible. These will be converted to letter grades as follows:

90-100% = A      80-89% = B      70-79% = C      65-69% = D      < 65% = F

Faculty assess achievement of the student and assign grades according to a collegial GPA: 4 (A, excellent), 3 (B, above average), 2 (C, average), 1 (D, below average), 0 (F, requirements not met).

GRADING BREAKDOWN

Classroom Participation: 50%
Course Assignments: 25%
Tests: 25%

ATTENDANCE:

Lack of attendance could affect participation and final assessment by the teacher. The virtual classrooms are available to any students with internet access. We attempt to record all video calls to make them available for students who are absent. The recorded videos are made available for enrolled students to review when absent. If you are absent, it is YOUR responsibility to make up the assignments and/or tests when you return. Absent students can watch the recording of the class to catch up with the discussion and learn the homework assignments. If you do not make up your assignments within one week, they will turn into zeros.

CLASSROOM EXPECTATIONS:

1. Arrive to class on time
2. Be prepared
3. Respect your classmates and teacher
4. Strive for excellence in your work
5. Be responsible for your actions
6. No eating, drinking, cell phones, or extra electronics permitted during class time
7. Communicate any difficulties with the class in a timely way so that issues can be addressed as quickly as possible

ASSIGNMENT SUBMISSION: Assignments are to be submitted via the online portal for the class.