

COURSE DESCRIPTION
SEVENTH GRADE
PRE-ALGEBRA

Philosophy Statement: Mathematics instruction has four main functions. First, it equips students to function effectively in an ever-changing world by becoming proficient in computational and communication skills. Second, it enables students to understand and apply mathematical concepts in everyday life. Third, it develops higher-order thinking skills necessary to make a contribution in related fields of study, research, and technology. Finally, it clearly illustrates the order and structure of the world God created.

Objectives: Students will know the properties of, and compute with, rational numbers expressed in a variety of forms. Students will read, write and compare rational numbers, and understand how to differentiate between rational and irrational numbers. Students will calculate with percentages, factor, work with permutations and combinations, multiply and divide exponential values, and represent quantitative values graphically and formulaically. Students will calculate the surface area of three-dimensional objects, and calculate the area and volume of two- and three-dimensional shapes. Students will distinguish between linear and non-linear functions. Students will use and manipulate Pythagorean Theorem to deepen their understanding of the attributes of figures. Students will begin to utilize the quadratic equation and understand quadratic systems in plotting linear and non-linear functions on a coordinate plane.

Textbook: Pre-Algebra (Glencoe Mathematics, California Edition)

Time Allotment: 60 minutes per day, 5 days per week

Units of Study: Algebra and Integers
Algebra and Rational Numbers
Linear Equations, Inequalities and Functions
Applying Algebra to Geometry
Extending Algebra to Statistics and Polynomials

Areas to be Evaluated: Class Work
Homework
Tests/ Quizzes
Class Participation

Additional Activities: Students have the opportunity to be selected as a BCS representative for the Association of Christian Schools International (A.C.S.I.) Math Olympics in the area of computation or reasoning.