



Expected Schoolwide Learning Results

E – Effective Communicators

Students are able to communicate effectively in both oral and written language. *They will...*

- Read with comprehension and literary analysis skills
- Write with clarity, creativity and power
- Speak with poise and command of language

A – Academically Successful

Students will possess learning skills which enable them to achieve academic success. *They will...*

- Strive to reach their God-given potential
- Develop research and organizational skills
- View learning as a life-long process

G – Greater Appreciation for the Arts and Cultural Diversity

Students are healthy and well-rounded individuals. *They will...*

- Develop an understanding and appreciation of diverse cultures and opinions
- Develop an understanding and appreciation of the arts
- Develop positive habits of good nutrition and physical fitness

L – Lovers of God

Students will have knowledge of Christ, which leads to personal salvation and a discerning lifestyle that *honors God*. *They will...*

- Develop an understanding of the Bible and Christian world-view
- Successfully integrate Christian ideals into their lives
- Recognize their personal value and giftedness

E – Effective Users of Technology

Students will have the computer and technology skills needed for success in the 21st Century. *They will...*

- Demonstrate competency in the use of the computer and technology
- Advance their achievement using the Internet and other technology resources
- Demonstrate high standards of ethics in the use of technology

S – Skilled Thinkers and Problem Solvers

Students are complex thinkers with creative problem solving abilities. *They will...*

- Be able to compare, analyze and evaluate effectively
- Transfer learned skills to new situations
- Use logical and effective decision making skills

Philosophy

Math for the Christian is the study and application of God's orderly nature. The discovery of practical usage and order results in a greater appreciation of biblical philosophy. Students will consistently explore mathematical methods and theories to uncover God's divine order. Emphasis will be placed on math application in daily life and becoming wise and responsible stewards.

Math Placement

Students will be placed in the math class that is deemed to give the student the greatest success. All students will achieve the California State Standard of Algebra I completion prior to entering high school.

Homework

Homework is a vital part of the learning process. Assignments are designed to extend or reinforce concepts learned in class. Students should expect regular homework assignments.

Electives Supporting Math

Logic and Rhetoric – Have you ever watched a commercial, heard someone debate, or read an argument and knew it didn't make sense? In this class, students will learn how to identify "logical fallacies." Don't confuse a silly argument with an intelligent debate; learn the difference while developing critical thinking skills.

This brochure is designed to give an overview of the curriculum taught at Foothill Christian School. The depth of each subject taught goes far beyond this brief description. For further insight, you may contact your child's teacher.

Foothill Christian School



Junior High Math Curriculum Overview



FOOTHILL
CHRISTIAN SCHOOL

Decidedly Academic. Distinctively Christian.

The mission of Foothill Christian School is to provide families with a Christ-centered, biblically-directed education which encourages the development of a personal relationship with God and which instills the vision and practice of excellence in academics, character and service to God and others.

Pre-Algebra

- ✚ Know the properties of, and compute with, rational numbers expressed in a variety of forms
- ✚ Use exponents, powers, and roots and use exponents in working with fractions
- ✚ Express quantitative relationships by using algebraic terminology, expressions, equations, inequalities, and graphs
- ✚ Interpret and evaluate expressions involving integer powers and simple roots
- ✚ Graph and interpret linear and some nonlinear functions
- ✚ Solve simple linear equations and inequalities over the rational numbers
- ✚ Choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems
- ✚ Compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less common objects. They know how perimeter, area, and volume are affected by changes of scale
- ✚ Know the Pythagorean theorem and deepen their understanding of plane and solid geometric shapes by constructing figures that meet given conditions and by identifying attributes of figures
- ✚ Collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set by hand and through the use of an electronic spreadsheet software program
- ✚ Make decisions about how to approach problems, use strategies, skills, and concepts in finding solutions, and move beyond the problem by generalizing to other situations

Algebra I

- ✚ Identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable
- ✚ Understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents
- ✚ Solve equations and inequalities involving absolute values
- ✚ Simplify expressions before solving linear equations and inequalities in one variable
- ✚ Solve multi-step problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step
- ✚ Graph linear equations
- ✚ Verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations by using the point-slope formula
- ✚ Understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Students are able to find the equation of a line perpendicular to a given line that passes through a given point
- ✚ Solve a system of two linear equations in two variables algebraically and are able to interpret the answer graphically. Students are able to solve a system of two linear inequalities in two variables and to sketch the solution sets
- ✚ Add, subtract, multiply, and divide monomials and polynomials. Students will solve multi-step problems, including word problems
- ✚ Apply basic factoring techniques to second- and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials

Algebra I (con't)

- ✚ Simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms
- ✚ Add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques
- ✚ Solve a quadratic equation by factoring or completing the square
- ✚ Apply algebraic techniques to solve rate problems, work problems, and percent mixture problems
- ✚ Understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions
- ✚ Determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression
- ✚ Determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion
- ✚ Know and use the quadratic formula and are familiar with its proof by completing the square. Students graph quadratic functions and know that their roots are the x-intercepts
- ✚ Use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points
- ✚ Apply quadratic equations to physical problems, such as the motion of an object under the force of gravity