

6th Grade Honors Math Pre-Algebra

Sixth graders will build upon the basic mathematical skills learned in previous math courses to begin their study of algebraic concepts.

1st Semester

In the first chapters the students will be introduced to the basic language of algebra. Concepts taught may include:

- *Variables and expressions
- *Order of operation
- *Writing and evaluating expressions
- *Integers and absolute value
- *Adding, subtracting, multiplying, and dividing integers
- *Solving one-step equations
- *Using the various properties of numbers
- *Inequalities and graphs
- *Solving inequalities
- *Writing and comparing decimals
- *Solving equations with decimals
- *Mean, median, mode
- *Divisibility and factors
- *Exponents and operations with exponents
- *Prime factorization
- *Rational numbers
- *Evaluating expressions with exponents and rational numbers
- *Scientific notation
- *Compare and order rational numbers
- *Solving equations with fractions and decimals
- *Problem solving (all year)

2nd Semester

The following concepts build upon those taught in earlier chapters. Topics may include:

- *Rates and proportions
- *Similar figures and scale drawings
- *Converting fractions, decimals, and percents
- *Solving equations with percents
- *Solving two-step equations
- *Solving multi-step equations
- *Writing equations from word problems
- *Solving two-step inequalities
- *Relations and functions
- *Solving equations with two variables
- *Working with linear functions (slope, y-intercept, graphing linear functions)

*Systems of linear equations

*Graphing linear inequalities

*Geometry

-points, lines, planes

-classifying and measuring angles

-classifying polygons

-circles

-translation, symmetry, reflection, rotation

-area of parallelograms, triangles, trapezoids, circles

-surface area

-volume of cylinders, prisms, pyramids, cones, spheres

The following concepts may be introduced if time permits:

*Working with right angles in algebra

*Pythagorean Theorem

*Polynomials

*** **These concepts are subject to change as needed.**