



Detailed Summer Study and Enrichment Plan

Our detailed plan is as follows:

- 1) Fractions: Add, subtract (both special cases), multiply, and divide
- 2) Decimals: Add, subtract, multiply, and divide
 - Learn divisibility rules from 2-9
 - Understand why division by zero in mathematics is undefined
 - Learn to multiply 2 digit by 1 digit, multiply by eleven, and the square of 15, 25...
- 3) Convert fractions to decimals and decimals to fractions.
- 4) Integers, absolute value, order of operations, PEMDAS
 - Learn proper rules when negative numbers are taken to powers
- 5) Algebraic expressions and evaluating them with in negative numbers
- 6) Equations: using distributive property
 - Using operations to solve effectively
 - Solve equations with only variables
 - Inequalities: logic and graphing solutions on a number line
- 7) Algebra 1: Coordinate plane, slopes, 3 different forms of equations for a line, parallel lines, and perpendicular lines.
- 8) Geometry and Algebra 2: Factoring and solving quadratic equations efficiently and accurately. Square roots and the simplification of square root quantities.
- 9) Pre-Calculus: twelve basic functions, the use of Ti 84+ calculator, rational roots theorem, rational functions and more.
- 10) Calculus: function operations, compositions, inverses, unit circle, trigonometric proofs, and more.
- 11) Common concepts from all subjects tested on PSAT, ACT, and SAT
- 12) After all of the elements are solidified, and the necessary practice has been fulfilled, we will move into your next year's text and give you a logical preview of next year.