Dr. Bakhsh **Summer Review Topics for AP Precalculus**

T**his course is meant for the most capable mathematical minds and for talented students who challenge each other in the pursuit of excellence. The course demands analytical reasoning, skilled and disciplined student habits appropriate for continued success at the college level.**

The following topics are prerequisites for this course and they must be thoroughly reviewed during the summer:

1. INEQUALITIES
   a. Solving inequalities in one and two variable
   b. Combined inequalities
   c. Inequalities (Absolute value)
   d. Polygon vertex Theorem (Graphing of inequalities)
   e. Quadratic inequalities
   f. Applications

11. FUNCTIONS AND GRAPHS

   a. Linear functions and their properties
   b. Quadratic functions and their graphing (phase shift or transformation)
   c. Absolute Value Function (graphing with shift)
   d. Cubic Functions (graphing with shift)
   e. Rational functions and their graphs
   f. Function and Relations
   g. Combination of functions
   h. Graphing of Rational Function

111. Polynomials
   a. Factoring (all kinds including special cases)
   b. Solving of Quadratic Equations
   c. Using Completing the Square
   d. Polynomial Division and Synthetic Division (successive Synthetic division)
   e. Solving Rational Expressions

1V. Radical Expressions

   a. Properties of Radicals
   b. Sum, difference, product and rationalization
   c. Application

V. Complex Numbers and their Operations

V1. Factor and Remainder Theorem

V11. Rational Zero Theorem
V111. Fundamental Theorem of Algebra

- A good understanding of how to apply the concepts in any given situation is very important (WORD PROBLEMS).

- A comprehensive test will be given in the first week of the school.

Enjoy your summer Break