Dr. Bakhsh

Summer Review Topics for Pre calculus Honors

This 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. You may review topics on your own through resources such as Khan Academy OR join our *Methodize Math* online self-paced course for Algebra II review. The course will cover some toopics required by this course.

To join the optional online Math Course:
1. **Go to https://methodize.methodlearning.com/join**
2. **Enter the class code xzyeh5u**
3. Complete the units, lessons, quizzes, and tests applicable for the required topics.
4. Questions or need help? Email Mrs. Arguelles at aarguelles@ndhsriverside.org

I. 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

II. 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

III. 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

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

V. Complex Numbers and their Operations

VI. Factor and Remainder Theorem

VII. Rational Zero Theorem

VIII. 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