

Pre-AP Algebra II Fall Semester Final 2015

TOPICS

- Categories of Numbers and Properties of Numbers
 - Real, Rational, Irrational, Integer, Whole, Natural
 - Associative, Commutative, Distributive
- Domain and Range
 - Interval Notations
 - Set-Builder Notation
 - Domain and Range on a Piecewise
- Linear Functions
 - Solving for a single variable
 - Finding the slope using multiple methods
 - Writing the equation for a line
 - $y = mx + b$ and $y = m(x - x_1) + y_1$
 - Graphing Linear Equations
 - Linear Inequalities-graphing and solving by hand
 - GEOMETRIC FORMULAS NEEDED
- Systems of Equations
 - Solving a System of Two and Three Variable
 - Substitution
 - Elimination
 - Using the Calculator (matrix)
- Quadratics Functions
 - Factoring-by sight, quadratic formula, completing the square
 - Simplifying Radical
 - Complex Numbers and i
 - Conjugate $(a + bi)(a - bi)$
 - Working in Standard form
 - Working in Vertex form
 - Transformations
- Piecewise Functions
 - Writing a Piecewise
 - Graphing a Piecewise
 - Domain and Range
 - Evaluating for example $f(3)$ or $f(x) = 3$
- Polynomial Function
 - $(f + g)(x), (f - g)(x), (fg)(x), \left(\frac{f}{g}\right)(x)$
 - Long Division and Synthetic Division
 - Factor Theorem and Remainder Theorem
- Properties of Exponents