**Algebra Test Study Notes**

**Test Date –Friday, 11 February 2011**

**Polynomials**

* Monomials
  + Product of Powers 
  + Power of a Power 
  + Power of a Product 
  + Quotient of Powers 
  + Power of a Quotient 
  + 
  + Simplifying monomial expressions
    - Each base appears only once
    - No powers of powers
* Polynomials
  + The degree of a monomial is the sum of the exponents of all its variables
  + The degree of a polynomial is equal to the degree of the largest monomial degree
  + Terms are typically written in descending order (highest degree first)
  + Be prepared to order terms based on only one of the variables
* Adding and Subtracting Polynomials
  + Group like terms. Each term must have the same degree(power) for each variable
  + Non-like terms do NOT get combined, but are left separate in the answer
* Multiplying Polynomials
  + If multiplying by a monomial, use the distributive property, and be careful to include all terms.
  + If multiplying to binomials, use FOIL, then combine like terms
  + If multiplying more than a binomial, use distributive property, being careful to include the product of all terms – then combine like terms
* Special Products of Polynomials – These may be memorized or calculated as needed
  + Square of a sum 
  + Square of a difference 
  + Product of a sum and a difference 
* Review Problems
  + Graphing a line
  + Solving a system of equations with elimination