**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