**Algebra Test Study Notes**

**Unit 11 Radicals**

* Simplify radical equations – Numbers or Variables
	+ Perfect squares, or squared variables may be removed from inside a radical sign
	+ Fractions inside a radical may be split with numerator and denominator separate
	+ Use prime factorization to simplify and find pairs as necessary
	+ A simplified radical cannot have a radical sign in the denominator
	+ A simplified radical does not have any pairs that can be removed
* Simplify square roots with radicals in the denominator
	+ 
* Pythagorean Theorem
	+ c2 = a2 + b2, where “c” is the hypotenuse of a triangle, and “a” and “b” are legs
	+ Solving for the length of a side, will often require solving a radical equation
* Operations with Radicals
	+ Simplify by combining like terms as necessary
	+ Example :
	+ Some terms may need to by reduced before combining
	+ Multiply Square Roots
		- Use the commutative property when multiplying to simplify similar terms
* Solve equations involving a radical
	+ Isolate the radical sign
	+ Square both sides of the equation
	+ Check final answer for extraneous solutions
		- If the squared result is a quadratic equation, solve with factoring or the quadratic formula
	+ A radical equation has no solution when the radical equals a negative number