**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