**Spring Semester Test Study Guide**

**Chapter 5:**

* Know whether a given ordered pair is a solution to a system of equations or not
* Solve systems of equations by graphing
* Solve systems of equations using substitution and elimination
* Tell when a system of equations has no solution or infinitely many solutions

**Chapter 6:**

* Write a number in scientific notation
* Simplify numbers with negative exponents
* Simplify a group of equations with negative exponents (move negatives either above or below the fraction bar to make them positive)
* Simplify numbers to the power of zero (anything to the power of 0 equals 1!)
* Put negative numbers in parentheses when entering them into your calculator!!!!!!!!!
* Simplify a number that has a fraction as an exponent
* Find the degree of a monomial
* Classify a polynomial by its degree and number of terms
* Write a polynomial in standard form
* Give the leading coefficient of a polynomial
* Solve story problems involving polynomials
* Add and subtract polynomials
* Multiply polynomials (distributive property, FOIL, box method)

**Chapter 7:**

* Factor equations using greatest common factor
* Factor equations of the form x2 + bx + c and ax2 + bx + c

**Chapter 8:**

* Solve factored equations using the zero product property
* Solve quadratic equations using factoring, square roots, and the Quadratic Formula
* Know the quadratic formula
* Know what an axis of symmetry is and what the formula for axis of symmetry is
* Solve story problems using factoring

**Chapter 9:**

* Find a certain term in a geometric sequence (know the geometric sequence formula and what the variables all stand for)
* Know what a common ratio is
* Use the exponential growth and decay formulas to solve story problems (know both formulas and what the variables stand for, as well as what exponential growth and decay are)
* Use the compound interest formula to solve a story problem (know the compound interest formula and what all the variables stand for)
* Know the formula for half-life, what the variables represent, what a half-life is, and how to use the formula to solve a story problem; make sure you know how to find *t*