2017 Ms. Groves Algebra I Final Study Guide

Tips to prepare for final – Start reviewing NOW

- Review tests, notes, and sample review problems
- Start index card

Bring to final – Book (your book to be collected)**,** calculator, sharpen pencils (2-3), and your 3x5 index card (handwritten, both sides).

Format of the Final:

The final will consist of about 50 questions and point values will be listed next to each question. You must show work clearly in the space provided to receive full credit. There will be total of 150 points.

Topics covered:

- **Chapter 7 – LINEAR SYSTEMS** sections 1- 6
  - solve linear systems by graphing
  - solve systems with substitution method
  - solve systems with elimination (addition, subtraction & multiplication methods)
  - solve special systems ("no solution" and "infinite solutions)
  - solve linear inequality systems by graphing
- **Chapter 8 – EXPONENTS** sections 1-3
  - Understand when to write answers as powers, $(-2)^4$, and when to simplify expressions (16).
  - Simplify expressions using positive exponents, using only fractions and no decimals
  - Simplify expressions with multiplication exponent rules
  - Simplify expressions with division exponent rules
  - Simplify expressions with zero exponent rules
  - Understand how to write negative exponents with positive exponents
- **Chapter 9 – POLYNOMIALS and FACTORING sections** 1-8
  - Write polynomials in standard form (order terms from high to low exponent with the constant last, and simplify by eliminating parentheses and + -).
  - Add and subtract polynomials
  - Multiply polynomials - 2 binomials, and (binomial)x(trinomial)
  - Factor polynomials completely (remember to factor out any common factors)
  - Factor by grouping
  - Solve polynomials in factored form
  - Divide polynomials by monomials and binomials(long division)
- **Chapter 10 – QUADRATIC EQUATIONS and FUNCTIONS** sections 1-3, 6
  - Graph quadratic functions and identify/label the axis of symmetry, vertex, y-intercept
  - Solve quadratic functions by graphing
  - Solve quadratic equations with the quadratic formula
- **Chapter 11 – RADICALS** sections 2-3
  - Simplify radicals
  - Add, subtract, multiply radicals and rationalize the denominator
  - Solve radical equations
- **Chapter 12 –RATIONAL EXPRESSIONS and EQUATIONS** sections 3-7
  - Simplify rational expressions (cancel common factors)
  - Add, subtract, multiply, and divide rational expressions
  - Solve rational equations
  - Determine the value(s) of variables in a rational expression that are undefined