Algebra I – Mastery Exam Topics

- Simplifying Expressions
  - Add/subtract polynomials
  - Multiply/divide polynomials
  - Simplify expressions with square roots
  - Factor quadratic expressions
  - Apply exponent properties
- Functions and Relations
  - Evaluate a function
  - Describe a graph: domain, range, maximum/minimum, x-intercepts/y-intercepts, etc.
- Linear Equations and Inequalities
  - Represent and solve real world problems
  - Graph linear equations
  - Write a linear equation given two points
  - Solve linear equations for a specified variable
  - Solve and graph one-variable linear inequalities
  - Graph two-variable linear inequalities
  - Solve linear systems by substitution or elimination
  - Create and solve a system of linear equations from a real world problem
- Quadratic and Exponential Functions
  - Distinguish between scenarios that could be modeled by linear, quadratic, and exponential functions
  - Represent real-world situations with exponential equations
  - Graph exponential functions
  - Solve quadratic equations by factoring