Study for Test #4 – M120 Sp15

- Scientific Notation
  - Standard Form → Scientific Notation
  - Scientific Notation → Standard Form
  - Multiplying/Dividing Using Scientific Notation
  - Application of Scientific Notation
  - "Correct" Scientific Notation
- Review of Exponent Rules
- Review of Radicals
  - Simplify Radical Expressions (especially those with different indexes)
  - Rationalize a radical expression
  - Simplify Complex Numbers
- Review of Rational Exponents
  - Interpret rational exponent as a radical
  - Simplify using prime factorization
  - Use to simplify with different indexes for radicals
- Solving Radical Equations
  - Involving 1 radical & other terms
  - Involving 2 radicals & other terms
  - Don't forget to check solutions!
- Graphing Radical Functions
  - Basic domain & range
  - Translations – Horizontal & Vertical Shifts, Stretches and Reflections
- Graphing Exponential Functions
  - Basic domain & range
  - y-intercept
  - horizontal asymptote
  - Translations – Horizontal & Vertical Shifts, Stretches and Reflections
- Solving Exponential Equations
  - Use in applications
- Modeling Exponential Functions
  - Use points including the y-intercept & not including the y-intercept
  - Application problems to find a model (especially half-life & doubling time)
- Definition & Identification of 1:1 Functions
- Finding an Inverse Function
  - Algebraically
  - Graphically
  - Using a set of ordered pairs
- Composite Functions Algebraically
- Differentiate between sets of ordered pairs for linear, quadratic & exponential f(n)
  - Linear – constant rate of change $\Delta y/\Delta x$
  - Quadratic – symmetry about a vertex
  - Exponential – ratio of dependents remains constant