# Things to know for the final:

#### Basic Facts about Numbers:

- Natural, Whole, Integer,
  Rational, Real and Complex
  Numbers
- Set Builder Notation
- o Interval Notation
- Order of Operations
- Exponent Rules

#### **Functions**

- Domains of Functions
- Function Notation
- Composing Functions
- Finding Inverses of functions
- Graphing Functions
- Algebra with Functions (Ex: (f+g)(x))

#### Inequalities

- Solving inequalities
- Graphing inequalities on a number line
- o Inequalities with two variables
- Or vs. And (Unions and Intersections)
- Absolute Values

## **Polynomials**

- How to graph
  - o What degree?
  - o End Behavior of a graph

#### **Rational Equations**

- Multiplying
- Adding and Subtracting

 Long Division/Synthetic Division

### **Radical Equations**

- o Simplifying
- o Fractional Exponents
- o Multiplying, Dividing
- o Addition, Subtraction
- o Complex Numbers
- Fractals

### **Quadratic Functions**

- Complete the Square
- o Transformations
- o Physics

## **Exponential and Logarithmic**

#### **Functions**

- Exponential Growth/Decay
- o What are Logs?
- Log form and exponential form
- o Log rules
- Logarithmic equations
- o Natural Log and e

## Trigonometry

- o Right Triangle Trig
- o Unit Circle
- Radians
- o Graphs of Trig Functions
- o Solve Trigonometric Problems

#### **Conic Sections**

- o Circle
- o Ellipse
- o Parabola
- o Hyperbola
- o Definitions, Verticies, Foci