Topics to Cover in Functions

* Relation Vrs. Function – vertical line test. One to one, many to one etc
* Domain and Range
* Inverse of a function
* Finding f(3) , f( x-2) etc
* Finding f(x) = 3 etc
* fog, gof, f0g(3), etc
* Graphing inverses of functions

Functions:

1. Linear Equations
   1. Equation of a line, standard form
   2. Slope, x and y intercept
   3. Perpendicular and parallel lines
   4. Mid point and distance of a line
   5. Review problems from worksheet.
2. Quadratic Functions
   1. Solving Equations, factoring, formula, completing the square, graphing
   2. Discriminant, how know if there is one, two or no solution
   3. Vertex form. Finding the vertex and hence the line of symmetry
   4. Drawing the graphs
   5. Worded problems: consecutive numbers, number problems, maximization problems , similar triangle problems, geometry problems…etc
3. Reciprocal Functions
   1. Drawing functions
   2. Finding domain and range
   3. Finding vertical and horizontal asymptotes
4. Absolute Value Graphs
   1. Know how to graph
   2. Find solutions
5. Cubic Functions
   1. Know how to find solutions on calculator
   2. Know factor form and how the graph is translated
6. Translation of Graphs
   1. Vertical and Horizontal translations
   2. Translation up down, right and left
   3. Reflection over the x axis
   4. Vertical Stretch or shrink
   5. –f(x) and f(-x)
7. Graphs to remember
   1. Logs
   2. Exponentials
   3. Rational
   4. Step Functions
   5. Sine graphs