**List of Topics for the Midterm – Advanced Math 8**

**WAYS TO STUDY:**

* Review notes
* Review homework assignments
* Review quizzes (ask me)
* Review lessons from my website: (lischwe.weebly.com)
* Looking at the textbook or textbook website (connected.mcgraw-hill.com)
* Replay the Kahoots: Links on my website! (You will have to create a free Kahoot account. It’s easy.)
  + **Units 1 & 2 – Link posted on my website under Tuesday, 12/6**
  + **Unit 3 – Link posted on my website under Wednesday, 12/7**
  + **Unit 4 – Link posted on my website under Friday, 12/9**

Unit 1

* Converting fractions to decimals
* Converting decimals to fractions
* Converting repeating decimals to fractions
* Finding square roots/cube roots that are whole numbers
* Estimating roots that are decimals
* Solving x2 and x3 equations
* Rational vs. Irrational numbers

Unit 2

* What is/is not a function
  + Table
  + Graph
  + Situation
* Evaluating using function notation (like f(3) )
* Linear vs. nonlinear equations
* Linear vs. nonlinear tables
* Writing an equation from a table
* Graphing functions using a table
* When you should/should not connect the points
* Graphs of stories (Tom climbed a hill, then ran down, etc.)

Unit 3

* Proportional vs. nonproportional
* Linear vs. nonlinear
* Finding slope from a graph
* Finding slope from 2 points without a graph
* Writing y = mx + b equations from a graph
* Graphing y = mx + b equations
* Interpreting the meaning of the slope and y-intercept in a story problem
* Comparing tables/graphs/equations/situations
* Graphing standard form equations (Ax + By = C) by finding the intercepts (plugging in zero)

Unit 4

* Solving equations:
  + Variables on one side
  + Variables on both sides
  + With fractions
  + Distributive property/combining like terms
* Writing equations from a real-world situation
* Equations with no solution or infinite solutions

Unit 5

* Solving systems of equations by:
  + Graphing
  + Substitution
  + Elimination
* System of equations story problems
* Checking the answer of a system