Final Exam Guidelines

The final time for all sections is MONDAY, 6/6/2016, from 8:00 - 9:50 A.M in HSS 110 A

- You may bring **one** 3" x 5" note card with notes on BOTH sides to the exam.
- You may not use a calculator or note card on Part One of the exam.
- You may use a calculator on Part Two of the exam.
- The Final Exam is a mix of true-false, multiple choice, and short answer questions
- You may use your personal manipulative kit during the exam
- You may not use a cell phone or any other electronic device during the exam.

Concepts to Know

- Problem Solving: Know what the Polya Four Steps are and how to use them
- Problem Solving: Recognizing and extending patterns.
- Set sorting and set operations (element, subset, intersection, union)
- Properties of addition, subtraction, multiplication and division of whole numbers, integers and subsets of whole numbers and integersclosure, associative, commutative, identity
- Arithmetic Sequences, Geometric Sequences, the method of Finite Differences
- Base modeling, understanding digits, place values and numerals
- Basic logic, distinguishing between valid and invalid arguments using Venn Diagrams, re-writing conditional phrases using converse, inverse and contrapositive.
- Adding, subtracting and multiplying in various bases with base pieces
- Converting base 10 numbers to other bases (such as base 5)
- The 3 subtraction settings: Comparison, Take Away and the Missing Addend-how to recognize them and work with them
- Base piece models for multiplication, Partial Products for multiplication and how they relate to the base 10 multiplication model and the standard multiplication algorithm
- The three division models: Sharing, Measurement and Array-how to recognize them and work with them
- The concepts of factor, divisibility and multiple and how to write this symbolically (i.e. $a|b$).
- Prime factorization and how it relates to the number of overall factors in a number
- The concept of Least Common Multiple, what it means, how to compute it, how to apply it and its relationship to GCF
- The concept of Greatest Common Factor, what it means, how to compute it, how to apply it and its relationship to LCM

- Divisibility tests for 2, 3, 4, 5, 6, 8, 9, and 10, what they are and how to apply them
- Black and Red tile models for integer addition, subtraction, multiplication and division; how to use them, what they mean
- Fraction bar sketches (all operations)
- Fraction word problems
- Computations with fractions (i.e. common denominators, reducing, etc.)

Review Suggestions

- Practice Problems: Chapter Five Test, page 299 # 1 3, however, this is not enough practice, refer to homework problems, activity set activities and homework.
- Go through the exam guidelines, suggested problems, and review problems from EXAMS One & Two.
- Practice all of the Math 211 Final Exam Review Practice Problems passed out in class and linked to your class webpage.