Review for MA 101 Final Exam

Monday, December 11, 2000
Time: 1:00 p.m. - 3:00 p.m.
Room: Kettler G46

Note the location of the final is NOT in our classroom.

It's a good idea to look at old assignments, quizzes, tests and review sheets. Review the following concepts, skills, and processes.

SETS

1. Set-Builder Notation, Listing Set Elements
   2-1, page 70: 1ac
2. Determine the Number of Elements in a Set
   2-1, page 71: 7abde
   2-2, page 82: 37
3. $\subseteq, \subset, \in, \varnothing$
   2-1, page 71: 17
   page 121: 1
4. Equal Sets vs. Equivalent Sets
   2-1, page 71: 6
   2-3, page 91: 31ab
5. Use $\cup, \cap$, complement, and set difference.
   2-2, page 79: 3a
   page 91: 37
   page 121: 2
6. Describe a shaded region of a Venn Diagram
   2-2, page 79: 8
7. Shade a Venn diagram described by a set
   2-2: page 79: 9
   page 118: 41
   page 121: 3
8. Use a Venn Diagram to Determine if something is true
   2-2, page 80: #10abc
9. Use Venn diagrams to solve problems involving counting
   2-2, page 80: 16, 18
   page 121: 7, 11
10. Use Cartesian Product to construct sets
    2-2, page 81: 25ad, 26

WHOLE NUMBERS

1 Closure under addition or multiplication
   2-3, page 89: 2
   2-4, page 100: 3
2. Scratch Addition
   3-2, page 144: 21
   page 166: 4
3. Thinking Strategies
   3-5, page 163: 1
   Also see previous review sheets
4. Lattice Multiplication
   3-3, p 153: 2a, 29a
   page 166: 5
5. Number Bases
   3-1, page 134: 8ac, 13, 16ab, 17ac,19a
   3-2, page 143: 12ace
6. Model Two Digit Multiplication Using a Grid
   3-3, page 153: 7
7. Equal Additions Algorithm
   for Subtraction
   3-2, page 144: 32
8. Other algorithms for Whole Number
   Addition, Subtraction, Mult., Division
   (see review sheets and Test 2)

INTEGERS AND NUMBER THEORY

1. Charged-Field Models of Addition and Subtraction (Take Away/Adding Opposite)
   page 243: 5
2. Chip, Car, and Pattern Models of Integer Addition and Subtraction
3. Chip, Charged Field, and Pattern Models of Multiplication
4. Order of Operations, Distributing the Negative
   page 192: 13, 16gh
5. Divisibility Tests page 243: 11, 13, 15a
6. Sums and Differences of Multiples: page 243: 12
7. Prime Factorization: page 243: 23ac
8. Determine the Number of Divisors
9. Find the GCD and LCM: page 243: 19a, 20a
10. Use the fact that $GCD(a,b) \cdot LCM(a,b) = a \cdot b$
11. Solve problems using LCM: page 243: 26, 29

See previous review sheets, homework, quizzes 4 and 5 and Test 3 for practice questions