Exam 1 Preparation

MATH 204: Linear Algebra

REMEMBER: Our exam will be Monday, September 24th from 1:25PM until 2:50PM in Eaton 110. RECALL THE EARLY START TIME!!! Remember that there will be randomized seating at the exam. You may want to wait until the names have been laid out before taking a seat .

NOTE: There will be short answer questions in addition to problems. For example, I could give you a few statements and ask you to determine whether each was true or false and to prove or give a counterexample for each. Similarly, I could ask you to give me an example of something or justify that no such example exists.

NOTE: The exam will be over all the material covered in Sections 1.1-1.5 and 1.7. This is a **rough** guideline. You should be sure to review your homework, group work, quizzes and notes from these sections.

Rules, Facts and Theorems: You should know and be able to use the theorems, facts and rules from Sections 1.1-1.5 and 1.7. Hopefully you already have these in your notes and/or on flashcards and most importantly, in your mind! For the Theorems and Facts, see your Chapter 1 Theorems and Facts sheet. The two rules are listed below.

1. Parallelogram Rule for Addition (Rule on page 26)
2. Row-Vector Rule for Computing $A\mathbf{x}$ (Rule on page 38)

Definitions: You have been working hard on definitions! Be sure you have memorized these terms for the exam: row equivalent matrices, (in)consistent system, augmented matrix, coefficient matrix, echelon form, reduced row echelon form, basic and free variables, linear independence (dependence), pivot position, the span of a set of vectors, linear combination, homogeneous and nonhomogeneous systems, parametric vector form. You should know how to use these as well as have a good definition of them memorized.

Be sure to...

(1) review your definitions and theorems.

(2) practice finding examples that satisfy or do not satisfy particular requirements (some examples of this include Section 1.7 numbers 29, and 33-38, we also did many on homework and at the beginning of some classes).

(3) practice true/false and possible/impossible questions like we did at the beginning of many classes (Making up your own is a good way to practice! Quiz each other!).

(4) practice problems with**out** your book or notes or collaborators.

(5) bring a pencil (or several!) with a good eraser.

(6) ask me questions if you are stuck or need clarification.

(7) breathe!