Math 2270-1
Review sheet for exam 1
Friday Sept 23, 2005

We will spend at least part of Monday's class reviewing for the exam, which is on Tuesday.

The exam will cover chapters 1-3.3, plus the affine transformation concepts we needed to draw fractals.

Chapter 1:
  *linear systems
  *geometric meaning
  *rref(A | b) and rref(A) to determine solution characterstics

Chapter 2 plus affine transformations:
  *linear transformations (concrete and abstract definitions)
  *affine transformations (linear composed with translation)
  *geometric properties (e.g. parallel lines get mapped to parallel lines)
  *geometric transformations (scalings, rotations, projections, reflections, shears)
  *inverses
  *products
  *matrix algebra

Chapter 3: subspaces of R^n
  *subspace
  *image, kernel
  *linear dependence and independence
  *span
  *possible subspaces of R^n
  *basis, how to find bases
  *dimension
  *rank + nullity theorem about dim(kef(f))+dim(image(f))=n.

Exam will be a mixture of compuational and theoretical - the practice exam gives an indication of the kinds of questions which I ask.