

Review for FINAL MATH Linear Algebra Fall 2009

The final exam is comprehensive. Given the nature of the material the majority of questions will be related to material on the second exam and the material since the second exam (the items we covered in Sections 6.5, 7.2, 8.1, 8.2).

Some practice problems for material in Chapter 6: pp372-373 #3, 5, 7, 9, 13, 24, 25, 29

Some practice problems for Chapter 8: P. 445 #1, 3,7 P. 446 #1, 4b-e

There is a general set of true/false questions starting on P. 555

The following form a good review:

1-4, 6, 8, 9, 12-14, 16, 17, 19, 21-24, 26-30, 34-37, 39, 41-43, 49, 52, 54, 57-59, 61, 66-68, 70-74, 76-81, 83, 84, 86,87,93-97

Particular items:

- About $\frac{1}{4}$ of the exam will be on material covered since the second exam.
- It is possible that a question on least squares will appear on the exam.
- There will be questions that connect the following major ideas:
 - Systems of linear equations
 - RREF
 - Closure
 - Span
 - Linear Independence/Dependence
 - Vector spaces & subspaces
 - Solution spaces
 - Dimension
 - Rank
 - Bases
 - Nonsingular/Singular matrices
 - Linear transformations\matrix transformations
 - Eigenvalues & vectors
 - Eigenspaces
 - Similar matrices
 - Diagonalizable matrices