

Math 227 Review Sheet for Exam 1

Time and Place of Exam:

**Tuesday, October 16, 2:00–3:15 PM
MSB 215**

Coverage:

Text Sections 1.1–1.8, 2.1–2.2

Things to Bring to the Exam:

- Sharpened pencils and an eraser. *Please do not use a pen!*
- Your UConn I. D. card. You may need to show it as you turn in your exam.

Review Suggestions:

- * Use Supplementary Exercises lists for Chapters 1 (p. 95) and 2 (p. 177) to assess your mastery of the material. Try the following questions from the Supplementary Exercises:
 - Chap. 1: 1, 3, 4, 5(a), 6, 8, 9, 10, 12, 13
 - Chap. 2: 1–3, 6, 8, 9, 10
- * Rework class worksheets with books and notes closed.
- * Rework exercises from the various sections as time permits, again without referring to your notes or other parts of the text.
- * Check Web page for recent Math 227 Exam 1 postings
- * Take advantage of regular and special instructor office hours to clarify any points that you are not completely clear about.

Things to concentrate on:

- Sections 1.1 & 1.2: consistency, elementary row operations, pivots, echelon form, reduced echelon form, solution of linear systems by row-reduction of the augmented matrix.
- Section 1.3: linear combinations, span of a set of vectors, boxed property on p. 44
- Sections 1.4, 1.5: Matrix-vector product, Theorems 3 & 4, boxed statements on p. 41, p. 43, p. 49 and p. 53, Theorem 6
- Section 1.6: Definition of linear dependence/independence, boxed statement on pp. 60 and 61, Theorems 8 & 9.
- Sections 1.7, 1.8: Definition and properties boxed on p. 71 and p. 81, Theorems 10, 11, & 12.
- Section 2.1: Definition of matrix multiplication (p. 101), and boxed statements on pp. 102–103, transpose (including Theorem 3).
- Sections 2.2: Theorems 4, 5 and 6 (and boxed statements on pp. 113–114), how to determine whether a given matrix is invertible (Theorem 7 and algorithm, p. 116).