

Math 2210Q-004 Applied Linear Algebra
E-Mail Assignments
on the readings in the textbook

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Submit by E-Mail by 7:00 am on the date due (before class)
to dgross@math.uconn.edu.

Due for Thursday, February 12

Section 2.3 Characterizations of Invertible Matrices

Section 2.5 Matrix Factorizations

To read: Read Sections 2.3 and 2.5.

To Do: Homework from section 2.1 and 2.2.

Be sure sure to understand: The statement of Theorem 8 in §2.3; the definition of the matrices L and U (last paragraph page 142) in an LU factorization and the LU factorization algorithm on page 145.

Email Subject Line: 2210EA 02/12 YourLastName

Questions:

1. Suppose A is a square matrix (i.e., an $n \times n$ matrix for some n) and $A\vec{x} = \vec{0}$ has exactly one solution. Then does there exist a matrix X so that $XA = I$, where I is the $n \times n$ identity matrix?
 2. Theorem 8, part b says that A is row equivalent to the identity matrix. What does the phrase “row equivalent” mean?
 3. What kind of form does the matrix U have in an LU factorization of a matrix?
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