

Linear Algebra and Differential Equations (550.291)
Homework 3 (Due Thursday, October 6, 2005)

General Directions: You must show all work and document any assumptions to receive full credit. All problems are to be done by hand unless otherwise stated.

Introduction to Linear Systems

1. Edwards & Penney: Problem 3.1.27
2. Edwards & Penney: Problem 3.1.31

Matrices and Gaussian Elimination

3. Edwards & Penney: Problem 3.2.12
4. Edwards & Penney: Problem 3.2.14
5. Edwards & Penney: Problem 3.2.15

Matrix Operations

6. Edwards & Penney: Problem 3.4.27
7. Edwards & Penney: Problem 3.4.31
8. Edwards & Penney: Problem 3.4.42

Applications

Create a mathematical model for the word problems listed below. Be sure to clearly label what your variables represent (including the units.) Do not solve.

9. Edwards & Penney: p.196, Problem 3 (but in my book it's listed as #5)
10. Edwards & Penney: p.197, Problem 5