Problem Set 10

Math 20

Due April 21, 2006

Reading

Read Sections 8.1 and 8.1 of Kolman and Hill. Notice especially how the eigen-business is used to analyze problems in Markov Chains, Linear Economic Models, and Stable Age Distribution in a population.

Section 8.2 is theoretical, but a key idea is this: *if an $n \times n$ matrix has n distinct eigenvalues, the matrix is diagonalizable.*

There is a neat little couple of paragraphs about the Fibonacci sequence on page 429. The full coverage is in Seciton 9.1.

Practice Problems

Try as many as you want until you feel comfortable doing them.

- Section 8.1: 1–15 odd, 18–23, 27

- Section 8.2: 1–45 odd

Problems to Hand in

- Section 8.1: 2, 4, 14, 18, 26, 28, T.8 (look at T.5 for a hint), T.14

- Section 8.2: 2, 8, 10, 12, 14, 30 T.2, T.10

Division

- Part I: Section 8.1 exercises
- Part II: Section 8.2 exercises