MATH-332: Linear Algebra Chapter: 4

Vector Spaces

Section 4.9: Applications to Markov Chains

pgs. 288 - 295 *July 22, 2009*

Lecture: Applications to Markov Chains

Topics:	Probability Vectors/Stochastic Matrices Steady State Vectors
Problems	Prac: 1, 2, 3 Prob: 1, 3, 5, 7, 11, 13

Section Goals

- Understand the terminology associated with Markov Chains.

Section Objectives

- Define the terms Markov chain, probability vector, stochastic matrix, regular stochastic matrix and steady-state vector.
- Present theorem 4.9.18 on page 294, which states that for a regular stochastic matrix there exists a unique steady-state vector that the Markov chain converges to as $t \to \infty$.