Chapter 4: Markov Chains

Due before class at 10:00am on Thursday, October 23.

Problems from Chapter 4 of *Stochastic Processes*, second edition, by Sheldon Ross.

- Problem 4.1
- Problem 4.2
- Problem 4.3
- Problem 4.4
- Problem 4.5

Problem 4.12 (Hint: Under the ergodicity condition [p. 177], the limiting probabilities coincide with the stationary vector, the vector $\pi$ such that $\pi = \pi P$. Recall that the elements of the vector $\pi P$ are defined by

$$(\pi P)_j \equiv \sum_{i=1}^{n} \pi_i P_{i,j}.$$