

MAT210 Project

Read Section 10.1 and 10.2 from the attached chapter from David Lay's Linear Algebra Textbook.

Analyze example 6 from section 10.1. Answer the following questions:

1. What is the probability that a mouse starts in room 1 and returns to room 1 in 5 steps, 6 steps, and 10 steps?
2. What is the probability that a mouse starts in room 2 and returns to room 2 in 5 steps, 6 steps, and 10 steps?
3. Compute P^n for $n = 5, 10, 15$. What does P^n converge to? Find the steady-state vector.
4. Analyze question 20 on page 10 and answer question 1, 2 and 3