

Math 339SP, Spring 2022 — Absorbing chains

Class on March 3

The following problem tries to get us working with ideas related to absorption.

Problem 1. A mouse is placed in the maze below, starting in room A . A (humane) trap is placed in room F and a piece of cheese is placed in room I . From each room, the mouse moves to an adjacent room through an open door, choosing from available doors with equal probability. What is the probability the mouse finds the cheese before the trap? Note that the R command `solve(eye(7)-Q)` can be used to compute $(I - Q)^{-1}$ when I and Q are 7×7 matrices.

