

## Matrices for Project3 NUMN21

October 15, 2025

1 Room 1

$$\begin{pmatrix} -36 & 9 & 0 & 9 & 0 & 0 & 0 & 0 & 0 \\ 9 & -36 & 9 & 0 & 9 & 0 & 0 & 0 & 0 \\ 0 & 9 & -36 & 0 & 0 & 9 & 0 & 0 & 0 \\ 9 & 0 & 0 & -36 & 9 & 0 & 9 & 0 & 0 \\ 0 & 9 & 0 & 9 & -36 & 9 & 0 & 9 & 0 \\ 0 & 0 & 9 & 0 & 9 & -36 & 0 & 0 & 9 \\ 0 & 0 & 0 & 9 & 0 & 0 & -27 & 9 & 0 \\ 0 & 0 & 0 & 0 & 9 & 0 & 9 & -27 & 9 \\ 0 & 0 & 0 & 0 & 0 & 9 & 0 & 9 & -27 \end{pmatrix}$$

## 2 Room 2

[illegible]

### 3 Room 3

$$\begin{pmatrix} -27 & 9 & 0 & 9 & 0 & 0 & 0 & 0 & 0 \\ 9 & -27 & 9 & 0 & 9 & 0 & 0 & 0 & 0 \\ 0 & 9 & -27 & 0 & 0 & 9 & 0 & 0 & 0 \\ 9 & 0 & 0 & -36 & 9 & 0 & 9 & 0 & 0 \\ 0 & 9 & 0 & 9 & -36 & 9 & 0 & 9 & 0 \\ 0 & 0 & 9 & 0 & 9 & -36 & 0 & 0 & 9 \\ 0 & 0 & 0 & 9 & 0 & 0 & -36 & 9 & 0 \\ 0 & 0 & 0 & 0 & 9 & 0 & 9 & -36 & 9 \\ 0 & 0 & 0 & 0 & 0 & 9 & 0 & 9 & -36 \end{pmatrix}$$