

OK to post

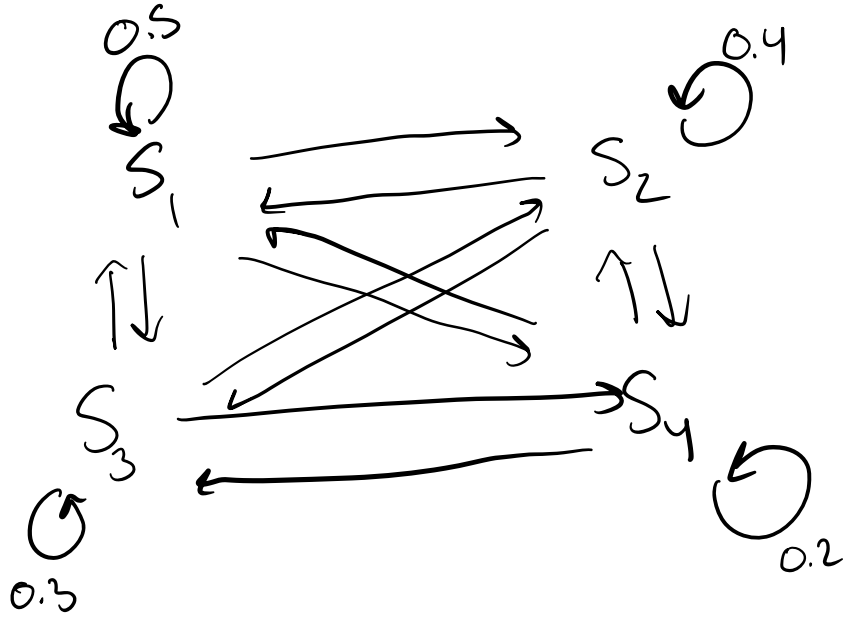
Anne Somalwar, 9/27/2021, hw6

$$1) n_0(t) = (0.1)n_0(t-1) + (1.2)n_1(t-1) \\ + (0.9)n_2(t-1) + (0.1)n_3(t-1)$$

$$n_0(t) = (0.1)n_0(t-1) + (1.2)(0.95)n_0(t-2) \\ + (0.9)(0.97)n_0(t-3) + (0.1)(0.9)n_0(t-4)$$

$$R\{C = \{0.1, 1.2 \cdot 0.95, 0.9 \cdot 0.97, 0.1 \cdot 0.9\}$$

3)



$$\begin{bmatrix}
 0.5 & \frac{0.5}{3} & \frac{0.5}{3} & \frac{0.5}{3} \\
 0.2 & 0.4 & 0.2 & 0.2 \\
 \begin{pmatrix} 0.1 \\ \frac{0.1}{3} \end{pmatrix} & \begin{pmatrix} 0.1 \\ \frac{0.1}{3} \end{pmatrix} & 0.3 & \begin{pmatrix} 0.1 \\ \frac{0.1}{3} \end{pmatrix} \\
 \begin{pmatrix} 0.8 \\ \frac{0.8}{3} \end{pmatrix} & \begin{pmatrix} 0.8 \\ \frac{0.8}{3} \end{pmatrix} & \begin{pmatrix} 0.8 \\ \frac{0.8}{3} \end{pmatrix} & 0.2
 \end{bmatrix}$$