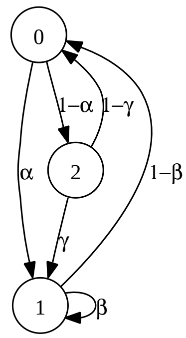
1 Markov chain



Consider the Markov chain characterized by the following transition matrix:

$$\begin{pmatrix} 0 & \alpha & 1-\alpha \\ 1-\beta & \beta & 0 \\ 1-\gamma & \gamma & 0 \end{pmatrix}$$

1. Determine the invariant probability distribution as a function of α, β and γ.

2. Estimate the entropy rate for $\alpha = \beta = \gamma = 0.5$.