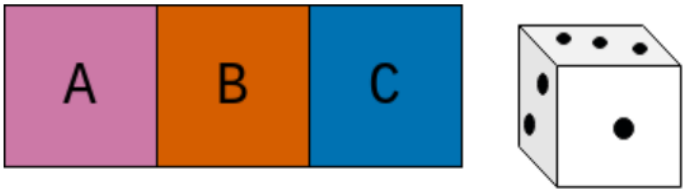
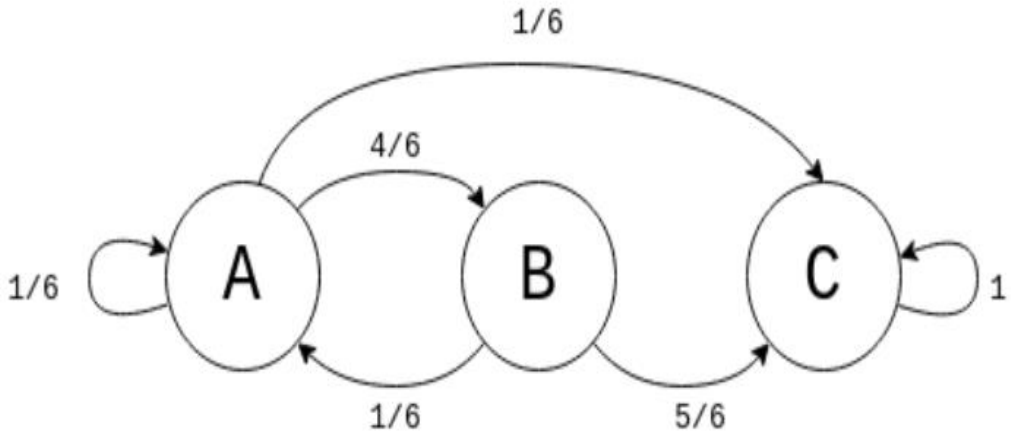
Markov chains (Board game)



It has 3 squares: A,B and C If 1 comes up, you move back to A or stay on it if you're already there. If 2-5 come up, you advance to the next square. If 6 comes up, you go straight to C, Once you're at C, the game is over and the state doesn't change anymore.

The Markov chain corresponding to that board game



transition matrix

$$P = \begin{bmatrix} p_{AA} & p_{BA} & p_{CA} \\ p_{AB} & p_{BB} & p_{CB} \\ p_{AC} & p_{BC} & p_{CC} \end{bmatrix} = \begin{bmatrix} 1/6 & 1/6 & 0 \\ 4/6 & 0 & 0 \\ 1/6 & 5/6 & 1 \end{bmatrix},$$