

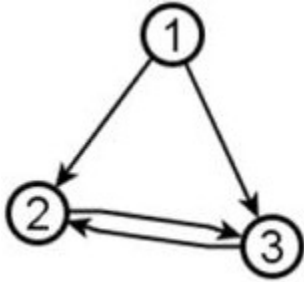
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Instructions: Show working. You can use extra sheet.

Q1: Create Probability Transition matrix P for following graph, where vertex 1, 2 and 3 represent states.

The teleportation probability of 0.5. Note $P[i][j]$ should be the transition probability from state i to state j .



Q2: Given that at time $t=0$ the probability vector is $[1 \ 0 \ 0]$ (for state 1, 2, 3 resp.). Find the probability vector at time $t=1$, using probability transition matrix (as given in Manning)

Q2: Given that at time $t=0$ the probability vector is $[0.5 \ 0.5 \ 0]$ (for state 1, 2, 3 resp.). Find the probability vector at time $t=1$, using the method given in Croft. (Note that you cannot use probability transition matrix in this question)