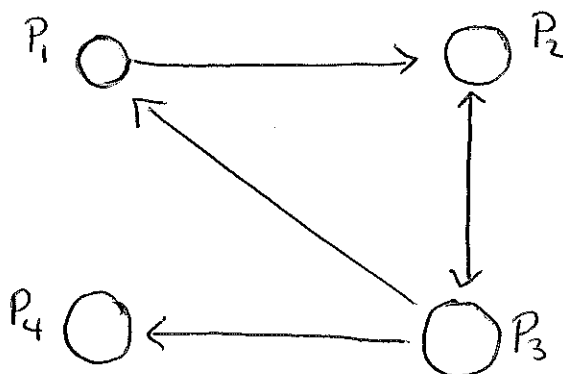


ADDITIONAL HOMEWORK PROBLEMS

MATH 22

- (1) For the web below:
- Write the matrix H corresponding to the web.
 - Write the matrix S corresponding to the web.
 - Write the Google matrix G for this web.
 - Find the importance vector



- (2) Prove that the google matrix is stochastic.
Recall that $G = \alpha S + (1 - \alpha) \frac{1}{n} \mathbf{1}$, where $\mathbf{1}$ is the $n \times n$ matrix of all 1's.