

22C:002 Algorithms: From Euclid to the iPad

Homework 7 Due: 11-17, Th, in-class

1. Consider the following network of web pages, with the *hubs* shown on the left and the *authorities* shown on the right.

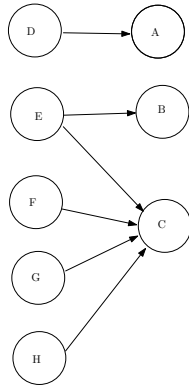


Figure 1: Web graph for Problem 1

- (a) Show the normalized hub and authority scores that each node gets when you run a two-step hub-authority computation on this network.
 - (b) Which of nodes A and B has higher authority score? Give a brief explanation in which you provide some intuition for why the difference in the authority scores between A and B turned out the way it did.
2. For the following network of web pages, run the *basic page rank update* algorithm for two steps and show the page rank values obtained. Are these *equilibrium* page rank values? Explain how you can determine this.

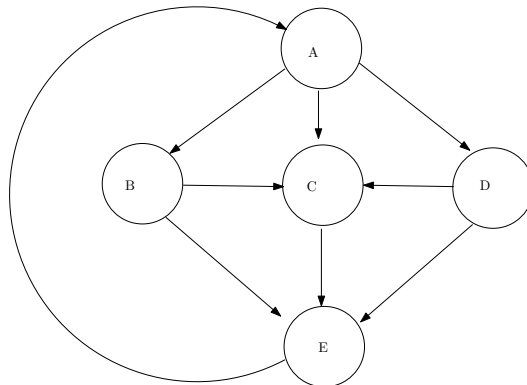


Figure 2: Web graph for Problem 2
