QN III.[17] Suppose we crawled a micro-web and got 5 pages. We will assume that the web is made up of just these 5 pages. Page p1 and p2 point to p3. Page p4 points to p5. p3 and p5 point to themselves. These are the only hyperlinks.

1.[5pt]   Assuming that the hub and authority values for all these pages have been initialized to 1/sqrt(5). What will be the hub and authority values of the pages after one update of authority values and one update of hub values?

2.[3pt] What would be the authority and hub values of these pages after many (say 100) updates? How did you arrive at this answer?

We want to now do a page rank analysis on the same set of pages

3.[5pt] Show the transition probability matrix M to be used by the pagerank algorithm. .. Assume that a random surfer surfing this micro world will follow the links on the page with probability 0.9 and will randomly jump to one of the pages (including the current page) with probability 0.1.

4.[4pt] Suppose the pagerank for all pages is initialized to 1/5. What will be the page rank after one iteration of the page rank computation algorithm?