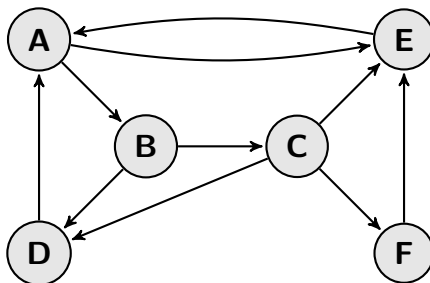


Worksheet 12 for November 17th and 19th

1. Suppose there is an epidemic in which every month half of those who are well, become sick, and a quarter of those who are sick become dead. Set up a 3×3 transition matrix A and find the steady state \mathbf{v}_∞ .

2. Find the page rank for the following system of webpages:



3. Find the characteristic polynomial, eigenvalues, and a basis for the corresponding eigenspaces for the following matrix.

$$A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & -1 & 0 \end{bmatrix}$$

Tutoring Room (443 Altgeld Hall): Mon 4-6 PM, Tue 5-7 PM, Wed 6-8 PM

Midterm Date: November 19 7-8:15 PM, Conflict November 20, 8-9:20AM and 9:30-10:50AM, Conflict sign up deadline: November 13

Final Date: December 17 8-11AM, Conflict December 15, 8-11AM. You are allowed to take the conflict exam if you have more than two examination within 24 hours. Conflict sign up deadline: November 30