

Joey Kahl Homework for 4-25-12

A

4-25-12

$$P = \begin{pmatrix} 0 & 1/2 & 1/2 & 0 \\ 0 & 0 & 1/2 & 1/2 \\ 0 & 1/2 & 0 & 1/2 \\ 0 & 1/2 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix} \rightarrow Q = \begin{pmatrix} 0 & 1/2 & 1/2 & 0 \\ 0 & 0 & 1/2 & 1/2 \\ 0 & 1/2 & 0 & 1/2 \\ 0 & 1/2 & 0 & 0 \end{pmatrix}$$

$$I - Q = \begin{pmatrix} 1 & -1/2 & -1/2 & 0 \\ 0 & 1 & -1/2 & -1/2 \\ 0 & -1/2 & 1 & -1/2 \\ 0 & -1/2 & 0 & 1 \end{pmatrix}$$

~~used matrix calculator~~ used TI-89 calculator

$$N = (I - Q)^{-1} = \begin{pmatrix} 1 & 7/3 & 5/3 & 2 \\ 0 & 8/3 & 4/3 & 2 \\ 0 & 2 & 2 & 2 \\ 0 & 4/3 & 2/3 & 2 \end{pmatrix}$$

$$1 + 7/3 + 5/3 + 2 =$$

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