

STA 360: Practice Problem

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Find the stationary distribution π of transition matrix T :

$$T = \begin{bmatrix} 0 & 0 & 1/2 & 0 & 1/2 \\ 0 & 0 & 1 & 0 & 0 \\ 1/4 & 1/4 & 0 & 1/4 & 1/4 \\ 0 & 0 & 1/2 & 0 & 1/2 \\ 0 & 0 & 0 & 0 & 1 \end{bmatrix}$$

Answer: $\pi = [0 \ 0 \ 0 \ 0 \ 1]$

Solution: Compute $\lim_{n \rightarrow \infty} T^n$ and read off the first row.