Friday, 30 October 2020 09:43

$S: \{0, 1, 2\}$,

$\pi(0) = (1 \quad 0 \quad 0)$

$$P = \begin{bmatrix} 1/3 & 1/3 & 1/3 \\ 1/3 & 1/3 & 1/3 \\ 1/3 & 1/3 & 1/3 \end{bmatrix}$$

$E(T)$?

$$E(x) = \sum x \, p(x)$$

$\pi(1) = \pi(0) \, P = [1/3 \quad 1/3 \quad 1/3]$

$\pi(2) = \pi(0) \cdot P^2 = [1/3 \quad 1/3 \quad 1/3]$

$\pi(3) = \pi(0) \, P^3 = [1/3 \quad 1/3 \quad 1/3]$

$$E(T) = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 1$$