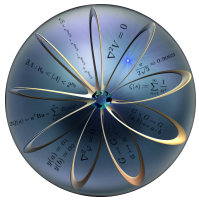

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hitting time

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Defines	absorption probability

Let $(X_n)_{n\geq 0}$ be a Markov Chain. Then the *hitting time* for a subset A of I (the indexing set) is the random variable:

$$H^A = \inf\{n \geq 0 : X_n \in A\}$$

(set $\inf \varnothing = \infty$).

This can be thought of as the time before the chain is first in a state that is a member of A.

Wite h_i^A for the probability that, starting from $i \in I$ the chain ever hits the set A:

$$h_i^A = P(H^A < \infty : X_0 = i)$$

When A is a closed class, h_i^A is the *absorption probability.*