ST227 Table

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Symbol	Name	Description
S	State Space	Possible values taken by the Markov chain
P	Transition matrix	A matrix containing the probabilities of going between state spaces, rows being "old" and columns being "new" spaces, all 1-step
P_{ij}	Transition probability	A probability of Markov Chain going from state i to state j in 1-step
P_{ij}^n	Transition probability	A probability of Markov Chain going from state i to state j in n-steps
λ	Initial distribution	A vector containing distribution of the first state of the chain
λ_i	Initial probability of state i	A probability of state i being the first state of the Markov's chain
d_i	State Period	Greatest Common divisor of all loops leading from state i to i
h_{ij}	Hitting time	Probability of reaching state j from state i.
h_{iA}	Hitting time	Probability of entering a set A from state i.
η_{ij}	Expected hitting time	Expected number of steps until state j is reached from state i
η_{iA}	Expected hitting time	Expected number of steps until set A is reached from state i
T_i	First Return time	Number of steps until state i loops on itself
f_i	Return probability	probability of chain returning back to state i from i, basically h_{ii}
m_i	Expected return time	Expected number of steps until state i loops on itself, basically η_{ii}