The Chapman-Kolmogorov Relation

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- Explain what the Chapman-Kolmogorov relation can be used to compute.

- Explain how the probability that $P(T_3 = b \wedge T_2 = c | T_1 = a)$ is computed from elements of the 1-step transition probablity matrix and the justification for calculating this quantity in this way.

- Hence, explain how the probability that $P(T_3 = b | T_1 = a)$ is computed from the elements of the 1-step transition probability matrix and the justication for calculating this quantity in this way.

- Give a statement of the Chapman-Kolmogorov relation

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- Give what you have learnt in this video write an expression for the conditional probability $P(T = 4 = a|T_1 = a)$ using summation notation. Hint: there will be two summation signs in your expression.