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*Birth-Death Markov chains Having Hyper-Probability Transitions.*

We consider birth-death Markov chains having transition hyper-probabilities rather than probabilities. Under mild restrictions, the ideas of steady state distributions and gamblers ruin probabilities generalize and have the same form as the classical results. Examples of hyper- probabilistic birth-death chains exhibiting real behavior (such as: real ruin probabilities or real steady state distributions or steady state distributions with real averages) will be discussed. (Received September 21, 2010)