RANDOM WALKS: THE PROBLEM OF ATTAINING A SET

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Abstract	Keywords
The work deals with the problem of a particle performing a random walk attaining a certain set. We consider the definition of a random walk as a stochastic Markov process and characteristics of random walk functional trajectories. We present a stationary distribution and limiting characteristics for random walks. We formulate the problem of attaining a set. We solve the problem of attaining a horizontal line. We found an expression to search for the probability of landing in a set. We describe the limit behaviour of the landing coordinate, the distribution density of which approaches the density of Student's t-distribution. We supply the results concerning the distribution of the moment when the particle first lands in the set. We derive an expression for the Markov operator norm. We estimate the first landing moment time for a limit case	

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