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# ON SOME PROPERTIES OF ONE-DIMENSIONAL DIFFUSION PROCESSES ON AN INTERVAL

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*Abstract:* Some equations are obtained for the moments of the first passage time of a one-dimensional time-homogeneous diffusion process, through each of two accessible boundaries $\alpha$ and $\beta$, given that the process has started from $x \in (\alpha, \beta)$. Some examples are considered and the results are graphically shown. Moreover, a special class of one-dimensional diffusions, of peculiar importance in biological modeling, is considered; the first passage times, and other properties such as ergodicity and reversibility of the stationary distribution, are investigated for these processes.

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