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Andrew Beveridge* (abeverid@macalester.edu), Department of Mathematics, Macalester College, 1600 Grand Avenue, St Paul, MN 55105. *A hitting time formula for the discrete Green's function.*

The discrete Green's function \mathbb{G} is a pseudo-inverse of the combinatorial Laplace operator of a graph. We describe a fundamental connection between Green's function and the theory of exact stopping rules for random walks on graphs. A stopping rule is characterized by its exit frequencies, which are the expected number of exits at a given vertex before the rule halts the walk. We show that Green's function is, in fact, a matrix of exit frequencies plus a rank one matrix. This leads to an elementary formula for Green's function in terms of state-to-state hitting times. (Received August 23, 2016)