Some Algorithms for Burning Trees

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The burning conjecture makes a claim about how many rounds are needed to burn a graph with the following process. In every round, choose one node to burn. If a node is burned in round t, in round $t+1$, each of its unburned neighbors becomes burned. The process ends when all nodes are burned. The burning number of a graph G, written by $b(G)$ is then defined as the minimum number of rounds needed for the process to end. The conjecture is that if G is a simple connected graph of order n, then $b(G) \leq \lceil \sqrt{n} \rceil$. Two algorithms are introduced for burning trees and shown to prove that the burning conjecture holds for certain types of snowflake graphs.

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