We first construct a corresponding flow network with square 0 as the source and square as the sink. For every from 0 to , connect every square with squares with a directed edge of infinite capacity. Since limit the maximum number of children who can jump on square , each vertex has capacity . We reduce the case by splitting each vertex into two vertices and with an edge of capacity connected. We now run the Edmons-Karp algorithm to find the maximal flow through such a network. The max flow is the largest number of children who can successfully complete the game.

Time complexity: Constructing a network and running the Edmons-Karp algorithm