THE JOSEPHUS PROBLEM GENERALIZED

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Abstract

The purpose of this research is to present some algorithmic solutions of a generalization of the well known Josephus problem (see [1]-[11]) in which the elimination process consists of only one step by allowing it to have multiple steps. First, it is given an algorithm (Theorem 1) to solve a particular case of the Josephus problem generalized (JPG) by following the approach developed by Graham, Knuth and Patashnik in [4, p. 81]. Next, the JPG is solved in full (Theorem 2) and a recursion probed (Corollary 2). The technique used is based on modular arithmetic in accordance with some ideas introduced by Halbeisen and Hungerbuhler in [6], with a few changes.

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