

ABSTRACT

THESIS: A Polynomial Time Heuristic Algorithm for Certain Instances of 3-Partition

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There are problems in computational complexity so difficult that the only known ways to solve them are impractical. A problem that has a few hundred inputs may take more time to solve with a super computer than the time that has passed since the beginning of the universe. One of these problems is the strongly NP-Complete 3-Partition. The goal of this thesis is to examine a fast heuristic algorithm that can solve 3-Partition quickly in certain cases but in the worst case may not find a solution even though one exists.

Keywords: 3-Partition, Heuristic, Decision Problem, Strongly NP-Complete