CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
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Project Number
J1414

Project Title
Chinese Checkers Strategy

Abstract

Objectives/Goals
The main goal of my science fair project is to create an effective opening repertoire and strategy for penetrating the opponent#s formation in a two-player Chinese Checkers game. My technique helps the player understand exactly how he should force his way through the opposing player#s marbles and gain the upper edge in a position.

Methods/Materials
The materials used were a pencil or pen, a Chinese Checkers board, and a computer opponent against which to play practice games. I started by analyzing my games, and noticed many recurrent strategies that were being used to advance one#s marbles to the center. By combining these strategies, I formulated an opening repertoire that helps the player start off strong. To complement my repertoire, I created a middlegame strategy that guides the player to which plans he should undertake after the opening phase. Further analysis led me to discover certain formations that transport marbles across the board, which in turn served as the foundations of my #vacancy test# and finally my two-step technique.

Results
I invented an opening repertoire and middlegame strategy which, when combined, created a two-step technique that can be used to devise a plan for penetrating the opposing formation.

Conclusions/Discussion
I was able to successfully create an opening repertoire and formulate a novel strategy for finding the best plan(s) in a two player Chinese Checkers game. I then used the opening and strategy to create a two-step technique that enables a player to gain the advantage in a game, which met my initial need. In further research, I plan to extend my findings to multi-player Chinese Checkers games.

Summary Statement
My project creates an effective technique for penetrating the opponent#s formation and gaining an advantageous position in a two-player Chinese Checkers game.

Help Received
No help was received.