

The Game of Chomp

Kunal Chaudhari

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1 Introduction

Chomp is a two-player strategy game played on a rectangular grid composed of smaller square cells, resembling the blocks of a chocolate bar. Players take turns selecting and "eating" (removing) one block along with all blocks positioned below it and to its right. The top left block is "poisoned," and the player who consumes it loses the game.

1.1 Example



Player A eats two blocks from the bottom right corner; Player B eats three from the bottom row; Player A picks the block to the right of the poisoned block and eats eleven blocks; Player B eats three blocks from the remaining column, leaving only the poisoned block. Player A must eat the last block and so loses.

Check this [website](#) out to play a game of Chomp against the computer.

2 Questions to ponder about

The questions to ponder about are similar to those from the game of Nim:

1. Does there always exist a sequence of moves such that the player making the first move wins?
2. Given a Chomp position, is there a way to determine whether it is possible to win for any player with perfect play? Can you deduce it?
3. If a sequence of move which guarantees a win does exist for a Chomp position, can you determine the sequence of moves?

3 To do

Same as the game of Nim, try to answer all of the questions above and then try it out against the computer. Do ponder about the first question, but unlike the game of Nim, it recommended to look answers to questions 2 and 3 online if you get stuck pondering :D