GRADIOR

An abstract game for 2 players by Kashio Fujii

Components

- 12 White pieces and 12 Black pieces
- A regular hexagonal board of triangular grid, with 4 spaces per side

Definitions

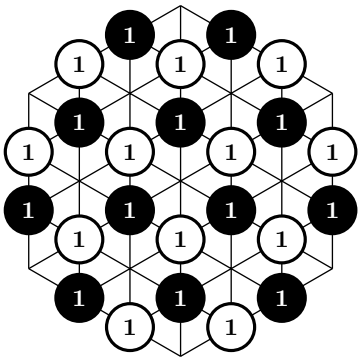
Move count The number of times a piece has moved so far. At the start of the game, every piece's move count is 0.

Line A straight row of spaces (intersections) across the board. Three lines pass through every space.

In the diagrams of these rules, the number on a piece is how many spaces it moves next (its move count + 1).

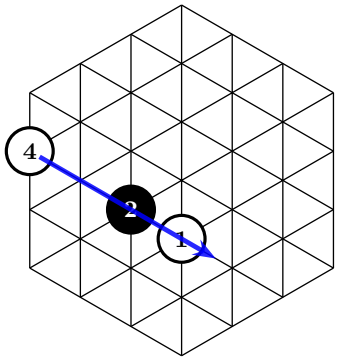
Setup

1. Place the pieces as shown below.
2. Choose your color. White moves first.



End of the Game

- You win as soon as one of your pieces reaches a move count of 4.
- You lose if you have no piece that can move on your turn.

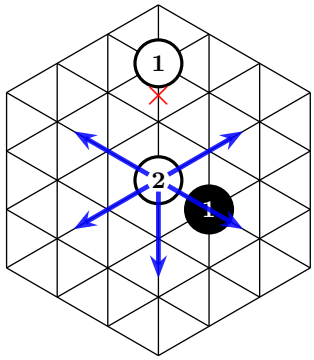


A piece showing 4 (it has moved three times) moves exactly 4 spaces; its move count reaches 4 and its player wins.

On Your Turn

On your turn, move exactly one piece of your color, following these rules:

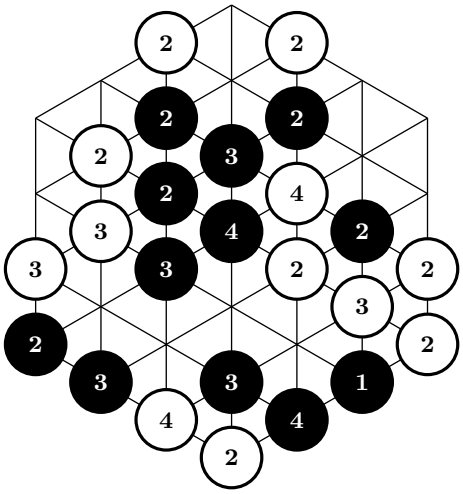
- A piece moves along a line, in any of the six directions. It may jump over any number of pieces, both yours and your opponent's.
- The number of spaces it moves must be exactly (its current move count) + 1.
  A piece that has never moved moves 1 space, a piece that has moved once moves 2 spaces, and a piece that has moved twice moves 3 spaces.
- A piece cannot move off the board or onto an occupied space.



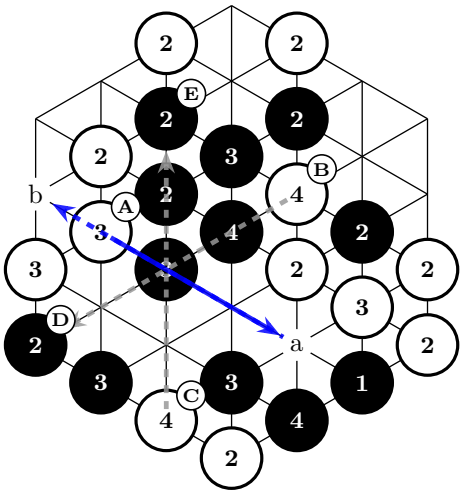
The piece in the center shows 2 (it has moved once), so it moves exactly 2 spaces. To the right it jumps over the Black piece. It cannot move up, because a White piece stands two spaces away. After moving, this piece shows 3.

Example of Play

In the position below it is White's turn. In fact, White has already won. Which piece should White move?



Solution



The solid arrow is the solution; the blue dashed arrow is White's winning move next turn. The grey dashed arrows are the moves of B and C, blocked for now.

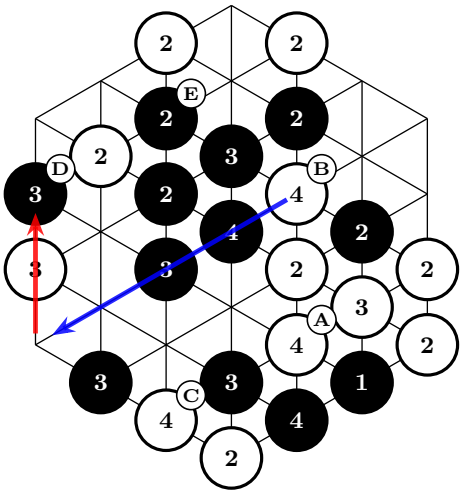
The answer is to move A to a.

A shows 3, so it moves exactly 3 spaces and stops on a. Now A shows 4: one more move of 4 spaces wins. The space b, four spaces from a, is empty, so if Black does nothing, White moves A to b next turn and wins.

Now look at White's B and C. Both show 4, but Black's D and E stand on the spaces four steps away, so for now they cannot move.

Black has no piece that can win in one move (each Black piece showing 4 would land off the board or on an occupied space). So Black must put a piece on b to stop A. But only D and E can reach b, and each of them is blocking B or C.

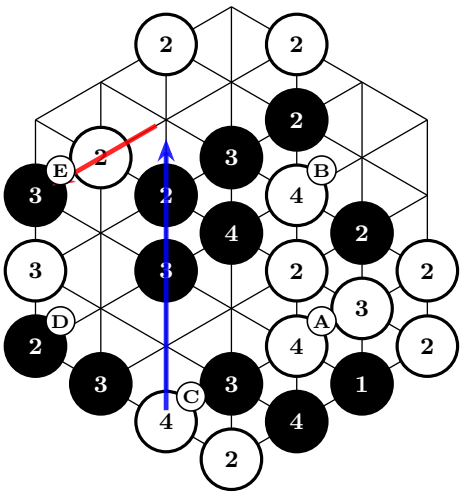
If Black moves D



Red is Black's move; blue is White's winning move.

D shows 2, so it moves 2 spaces onto b and stops A. But the space D has left is now empty: B moves exactly 4 spaces onto it, and White wins.

If Black moves E



Red is Black's move; blue is White's winning move.

E also shows 2 and can move 2 spaces onto b. But then the space E has left is empty: C moves exactly 4 spaces onto it, and White wins.

Black could stop A only with a piece that was holding back one of White's.