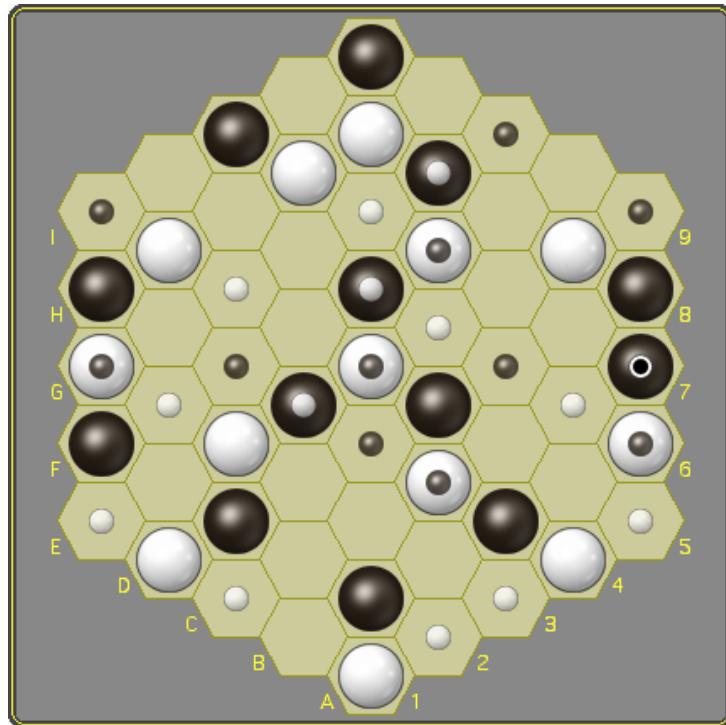


# Greylox

2024, Christian Freeling, <https://mindsports.nl/index.php/the-pit/1261-greylox>

Greylox is a game with a 'largest group, cascading' goal, meaning that in case the game ends with an equal largest group score, the next largest groups are compared and so on, till an unequal score results.

It uses the one bound - one free opening protocol and cannot end in a draw.



## Definitions

- Two stones, or a stone and an empty cell, **see** each other if they lie on the same straight line of adjacent cells and there are no other stones between them along that line.
- You **control** a cell, whether empty or occupied, if the number of stones of your colour it sees, is more than half the number of cells adjacent to it. That's 4 cells for a cell in the field, 3 cells for an edge cell and 2 cells for a corner cell.

There are two players, Black and White. Each has a sufficient number of either black or white stones and both place only with their own colour. A 'group' is a full number of connected like-coloured stones. A single stone is a group by definition.

The game starts on an empty hexhex board, base 5 or 6 depending on preference. White moves first, after which turns alternate. Placement is compulsory but the game is hot, meaning that there's never a reason not to place, except resignation.

## **The opening phase**

White starts by placing one stone on the empty board. From that point on players take turns to:

- Place a stone on a cell adjacent to the last stone placed by the opponent, and ...
- ... place a stone on a on a cell that has only vacant cells as neighbours.

Both placements are compulsory. If the player to move can no longer make the second placement, then both his turn and the opening phase end. Controlled cells, both vacant and occupied, are now highlighted and the opponent may start the single placement phase. The number of white and black stones will always be equal, although the 'density' of the position may vary and either player may end up being the one to start the single placement phase.

## **The single placement phase**

In this phase players take turns to compulsory place one stone on a vacant cell that is not controlled by the opponent, or flip an opponent's stone that is under their control.

## **Object**

The game ends when one player can no longer place or flip a stone because all remaining vacant cells, if any, are controlled by the opponent. These cells are then added to the score of the player controlling them as if they were occupied by his colour.

If both the players' scores are equal, then their largest groups are out of contention and their next largest groups are compared, and so on till an unequal score is reached. Draws are impossible on boards with an odd number of cells (like hexhex boards).