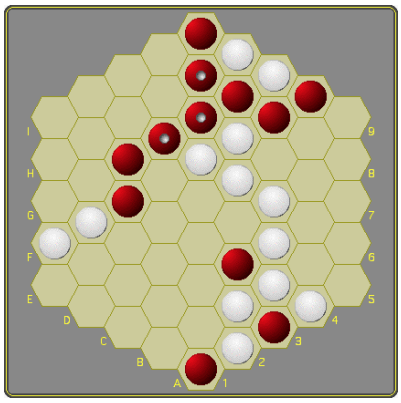
Noose

2021 Alek Erickson & Michael Amundsen
https://mindsports.nl/index.php/the-pit/1181-noose

Noose is played on a hexhex board with stones of two colors, one color per player.



Definitions:

- To *flip* an enemy stone is to replace it with a stone of your own.
- An *arc* is a possibly bent line of stones with no acute angles and no turns going in opposite directions (no S-like swingyness).
    - A chain of adjacent pieces make up an arc if it is possible to order them from first to last in a sequence where a walk from the first to the last member of the chain, visiting all members in order, will (i) at no point require a turn of more than 60 degrees, and (ii) either require no clockwise turns or no counter-clockwise turns.
    - A single stone makes up an arc by definition.
- You are said to *flank* an arc of enemy pieces if two of your pieces are the endpoints of an arc otherwise completely made up of said enemy pieces.
    - You flank an arc of your own pieces in a similar fashion.
    - You *may flip* an arc of enemy pieces if you are the only one flanking it.
- A *loop* is a group of stones causing one or more cells not contained in that group to be severed from the edges of the board in this sense: There is no chain of adjacent cells going from any of those severed cells to any edge cell that does not contain at least one stone from the loop group.

Rules

On your turn, you must either (i) place a stone of your color on an empty hex, or (ii) flip an eligible arc of enemy stones.

The winner of the game is the player to first makes a loop consisting entirely of stones of their color.