Orbito

2022, Marino Carpignano (?), https://www.pergioco.net/4/orbito.html

Orbito is an alignment game featuring a distinctive mechanism that allows all the pieces on the board to orbit around the central intersection.

The game consists of a 4×4 board (see Figure 1) and 16 marbles or pieces (eight white and eight black). At the beginning of the game the board is empty, and each player has eight pieces. Either player may start.
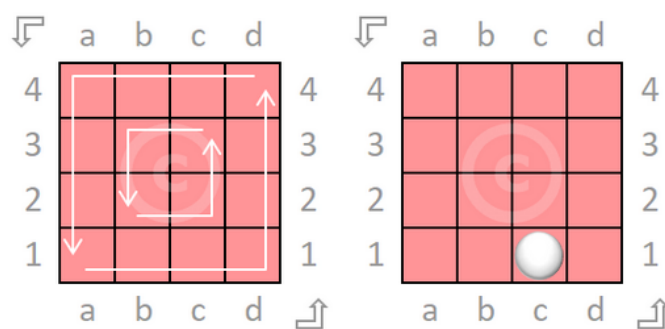

Figura 1   Figura 2

A move consists of the following three phases:
  a) move one of the opponent's pieces already on the board to an orthogonally adjacent empty square;
  b) place one of your own pieces on any empty square of the board;
  c) make all the pieces on the board orbit counterclockwise around the central intersection.

As a result of phase c), all pieces are shifted by one square along the ring they occupy (inner or outer), as illustrated in Figure 1.

Phase a) is always optional, whereas the other two phases are mandatory and may never be omitted. During the first turn of the game, phase a) cannot be carried out, since there are no pieces on the board yet. Phase a) is also not possible when all orthogonally adjacent squares to the opponent's pieces are occupied.

Suppose White starts the game and, on their first turn, places a piece on square b1 during phase b). At the end of phase c), the piece is moved to c1, as shown in Figure 2. Continuing the example, suppose Black moves the piece from c1 to c2 (phase a) and then places a piece on a2 (phase b). At the end of phase c), the new board position is the one shown in Figure 3: the piece on c2 is moved to c3, and the piece on a2 is moved to a1.
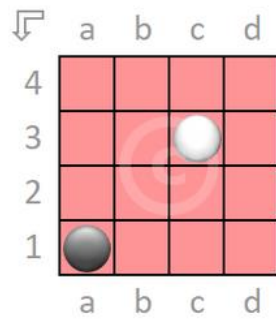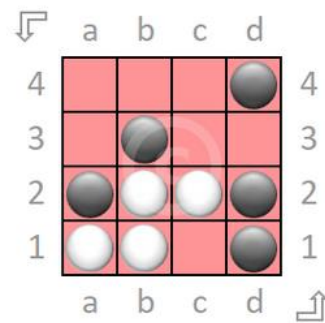
Figura 3

Figura 4

Let us now consider a situation in an advanced stage of the game. Suppose that in the example shown in Figure 4, White, who is to move, moves the black piece from d4 to d3 and then places one of their own pieces on d4. At the end of phase b), the new position is the one shown in Figure 5. At the end of phase c), all pieces move one square clockwise along their respective rings, and the new board position is the one shown in Figure 6. Along column "c" an alignment of four pieces of the same color is formed, and White therefore wins the game.
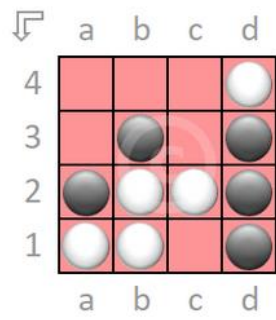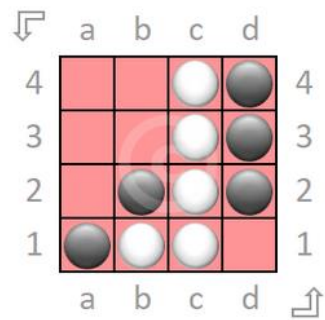

Figura 5

Figura 6

The objective of the game is in fact to create, at the end of phase c) of any player's move, an alignment of four pieces of one's own color, either orthogonally or diagonally. Alignments formed at the end of phases a) and b) are not valid. It is possible that, at the end of phase c), a player creates an alignment of pieces of the opponent's color, thereby causing the opponent to win. If both players simultaneously create a winning alignment, the game ends in a draw.

If both players have used all their available pieces and neither has achieved the objective, phase c) is executed five consecutive times: the first player to obtain an alignment wins the game. If even after this procedure no player achieves victory, the game ends in a draw.