

## Overseeing (solution)

by Ong Kah Kien

The first step as instructed is to figure out in each of the 16 given Othello board positions, which one of the discs had been duplicitously flipped over. In Othello, players start with two discs each and one disc is added to the board each turn. As these were proper Othello games and neither player had skipped a turn, we can deduce which player had made the last move based on Black moving first and whether the total number of discs is odd (Black moved last) or even (White moved last). This is helpful, as solvers will eventually notice a pattern that the flipped disc always belonged to the player who made the last move, and can use this knowledge to narrow down the search for the flipped disc. The positions of the flipped discs for all the boards are unique, and matches the 16 unfilled spaces on the main board at the start showing the game to be finished. So these could potentially be the unknown moves to be made on the main board by both players to finish the game. However, while there are 8 of each flipped disc color, they do not alternate in the given ordering, which suggests that a reordering is needed.

Concurrently, each board position (including the main board) has a text clue alongside which can be independently solved. The intended answers to these clues are all 5-letter words, and they are quite close in letters to some of the other answers. The aha is that all these answers can be reordered to form a word ladder, starting from the answer BLACK from the main board, flipping/changing one new letter with each “move”, and ending with the answer WHITE. And this references the flipping of a disc in an Othello game. This word ladder order becomes a new ordering for the Othello boards, and in this board order, the correct color of the flipped discs/player who last moved can be observed to alternate, starting with Black. And together with the identified positions of the flipped discs for each board, these can now be interpreted as a sequence of Othello moves by both players to finish the game from the main board position as instructed, flipping other disc/s after each move following standard Othello rules.

The instructions say that at the end of the game, to note the other changes, in the given board order, to figure out what to do. The “other changes” refer to the new letter swapped into each word ladder step, then matched back to its corresponding board/text clue in the given order of the boards. These extracted new letters form the clue phrase TOUCH SAVE MID ROWS. The word TOUCH is an instruction to read the discs of the finished main board game akin to the black (raised) and white (flat) dots of Braille lettering. This is also hinted in the puzzle title and flavortext by the words “oversee” and “eye”. And SAVE MID ROWS is an instruction to ignore the discs in the middle two rows of the board when doing so. This would then leave two sets (top and bottom) of 3 x 8 discs, each of which could be interpreted as four 3 x 2 matrices for a Braille letter, giving the final 8-letter answer for this puzzle **REBELLER**. The answer is a thematic reference to how one needs to keep an eye on a potential rebel/rebeller, otherwise he/she might flip over to the other side, like the flipping discs/colors in an Othello game.

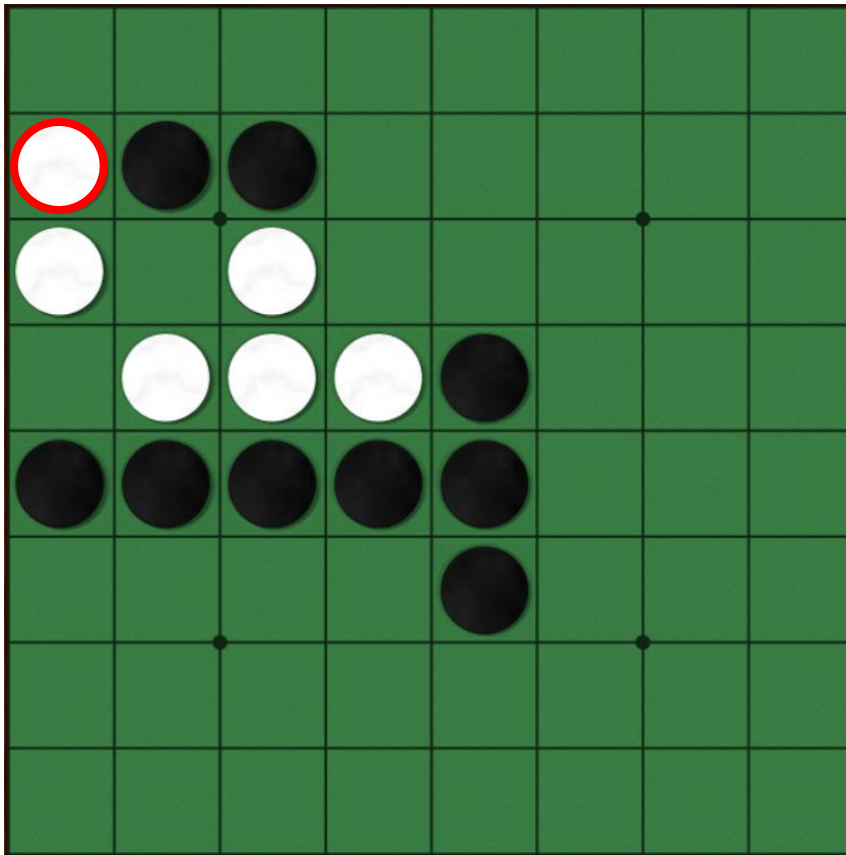
The table below summarizes the answers matching each text clue in the given order, and the new letters from the word ladder matching the corresponding boards in the given order:

Board	Clue	Answer	New letter in ladder
Main	Side that moves first in Othello	BLACK	-
1	Lead role in Noh play	SHITE	T
2	Wheel stopper wedge	CHOCK	O
3	Hen's sound	CLUCK	U
4	Timepiece	CLOCK	C
5	Throw quickly	CHUCK	H
6	Nickname for Sea Harriers	SHARS	S
7	Dilapidated hut	SHACK	A
8	A close one	SHAVE	V
9	Feeling of humiliation	SHAME	E
10	Pretences	SHAMS	M
11	Wide cork or wooden bung	SHIVE	I
12	Pottery or glass fragment	SHARD	D
13	A pool expert	SHARK	R
14	Obstruct, clog	BLOCK	O
15	Caucasian	WHITE	W
16	Violent surprise	SHOCK	S

The table below summarizes the reordering based on the word ladder order (forming the move order), the corresponding boards, flipped disc position/move and alternating disc colors:

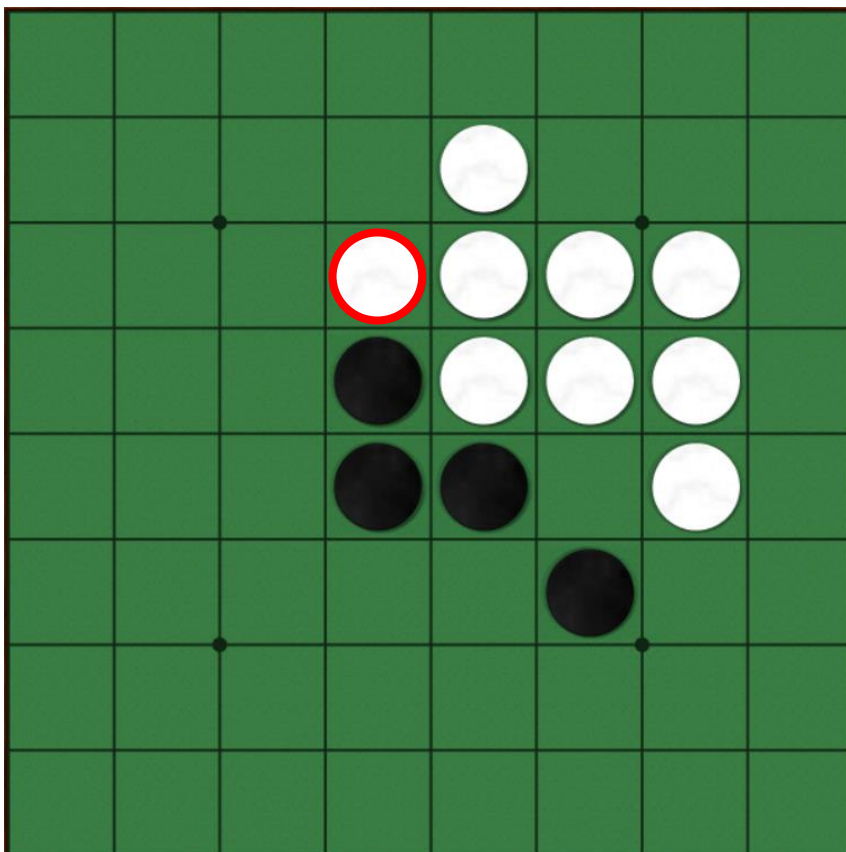
Ladder/Move order	Answer in ladder order	Board	Flipped disc position/ Move (refer to final board)	Correct disc color/ Player to move
-	BLACK	-	-	-
1	BLOCK	14	f3	Black
2	CLOCK	4	c5	White
3	CLUCK	3	a4	Black
4	CHUCK	5	b4	White
5	CHOCK	2	d3	Black
6	SHOCK	16	a7	White
7	SHACK	7	b3	Black
8	SHARK	13	h6	White
9	SHARD	12	f5	Black
10	SHARS	6	h3	White
11	SHAMS	10	h2	Black
12	SHAME	9	g2	White
13	SHAVE	8	h7	Black
14	SHIVE	11	h4	White
15	SHITE	1	a2	Black
16	WHITE	15	c4	White

The sample logic solutions for deriving the flipped piece for each board are outlined over the following pages, including the move history which led to the position (for interests sake).



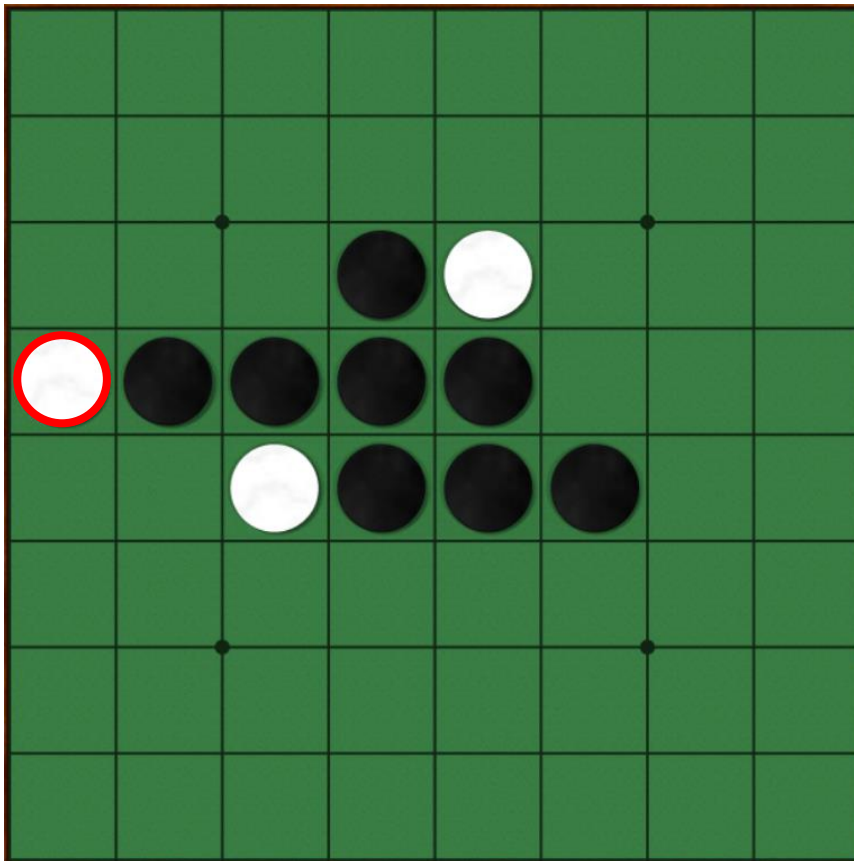
Black	White
1. c4	2. c3
3. c2	4. b4
5. a5	6. c5
7. e6	8. b2
9. a2	10. a3
11. b5	

If a2 is White, then both b2 and c2 need to be White to place a2, as they both cannot be flipped



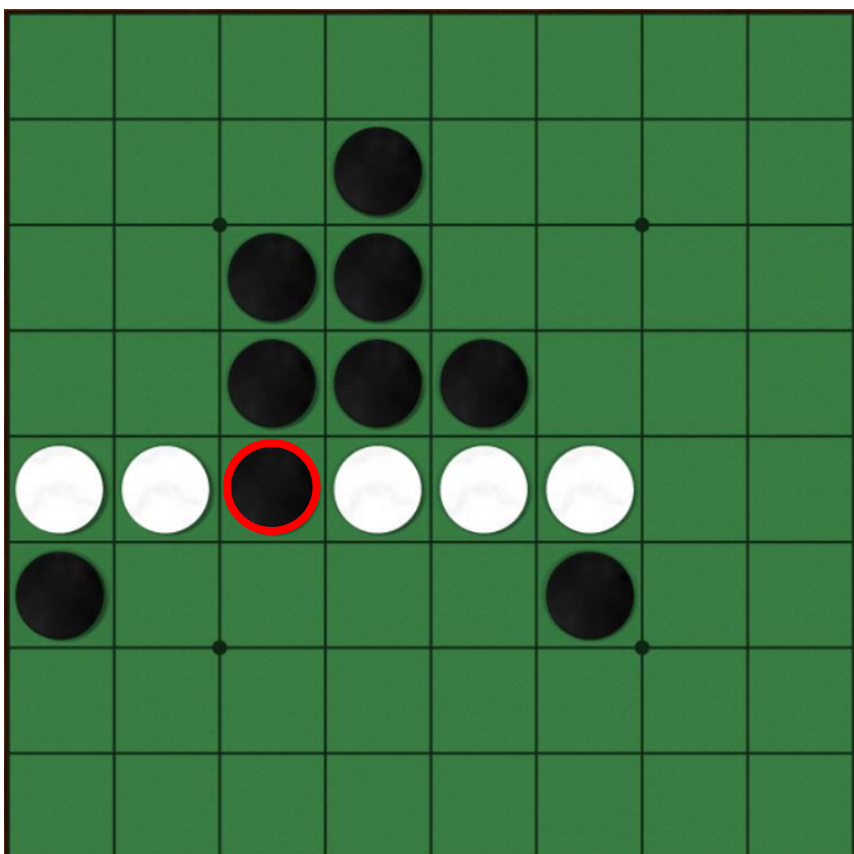
Black	White
1. d3	2. e3
3. f4	4. g3
5. g4	6. g5
7. f3	8. e2
9. f6	

d3 must have been Black's first move as it is the only one of the four first move possibilities which is occupied. And there is no way to flip it to White.



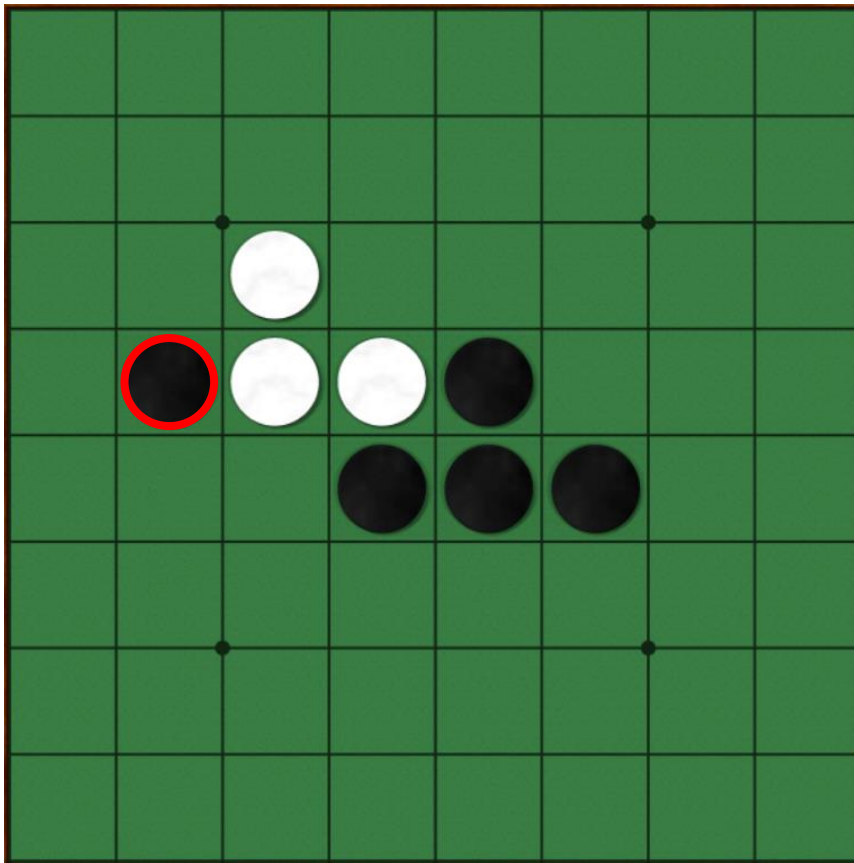
Black	White
1. c4	2. e3
3. f5	4. b4
5. d3	6. c5
7. a4	

If a4 is White, then b4 should be White too as there is no other way that b4 could have been flipped. But if b4 is White, then c4 should be White too in order to place b4, and as there is no other way to flip c4.



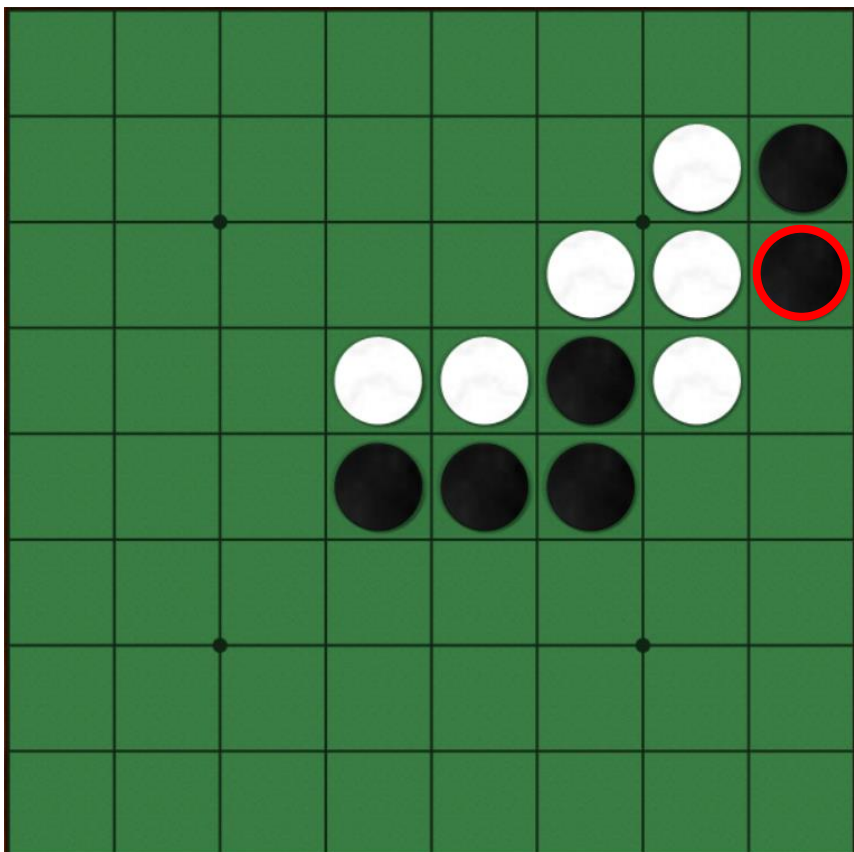
Black	White
1. c4	2. c5
3. f6	4. d3
5. c3	6. b5
7. d2	8. f5
9. a6	10. a5

a5 must be White and only way to make that move requires c5 to be White too. And there is no way to flip c5 to Black.



Black	White
1. c4	2. c3
3. f5	4. b4

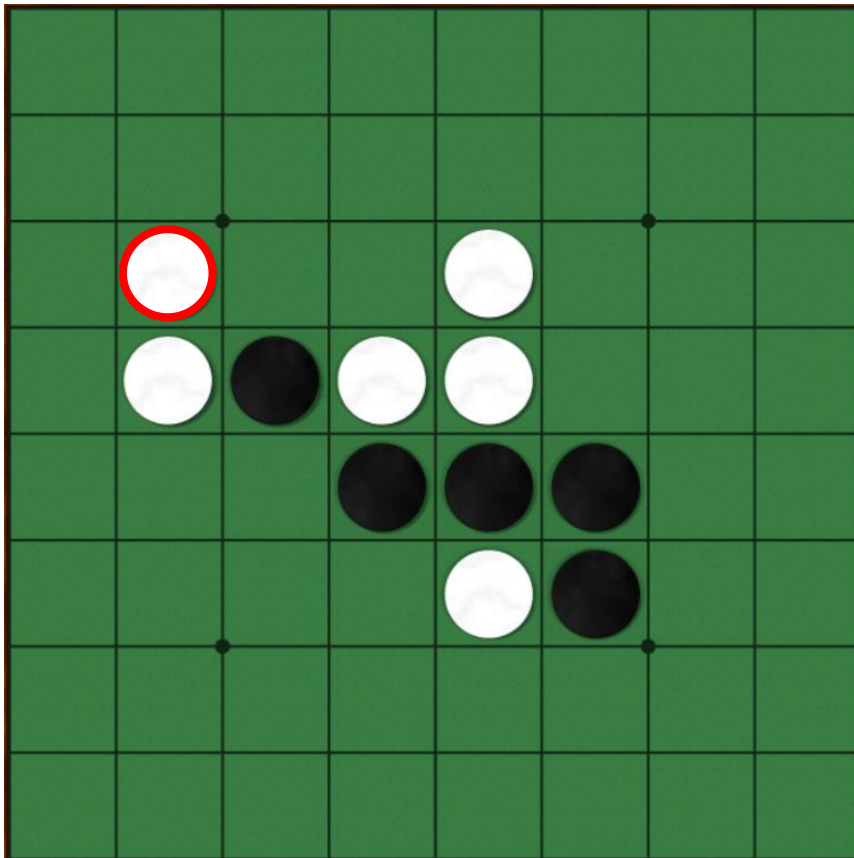
Last disc White placed needs to have at least 3 Whites in a line, so must be at c3 or b4. If last disc was placed at c3, then e5 is White, and Black disc on f5 cannot be placed. So last disc was at b4 which should be White.



Black	White
1. f5	2. f4
3. f3	4. g4
5. g3	6. g2
7. h2	8. h3

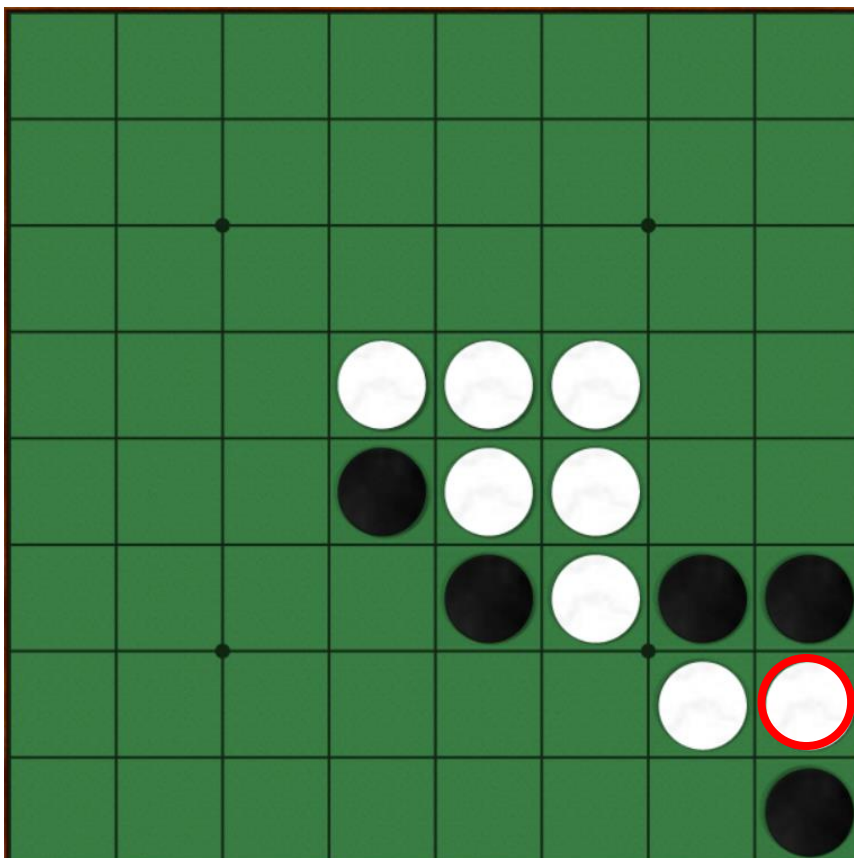
If h3 is Black, it can only flip g4, as f3 cannot be flipped. But g4 cannot be flipped either. So h3 is White.





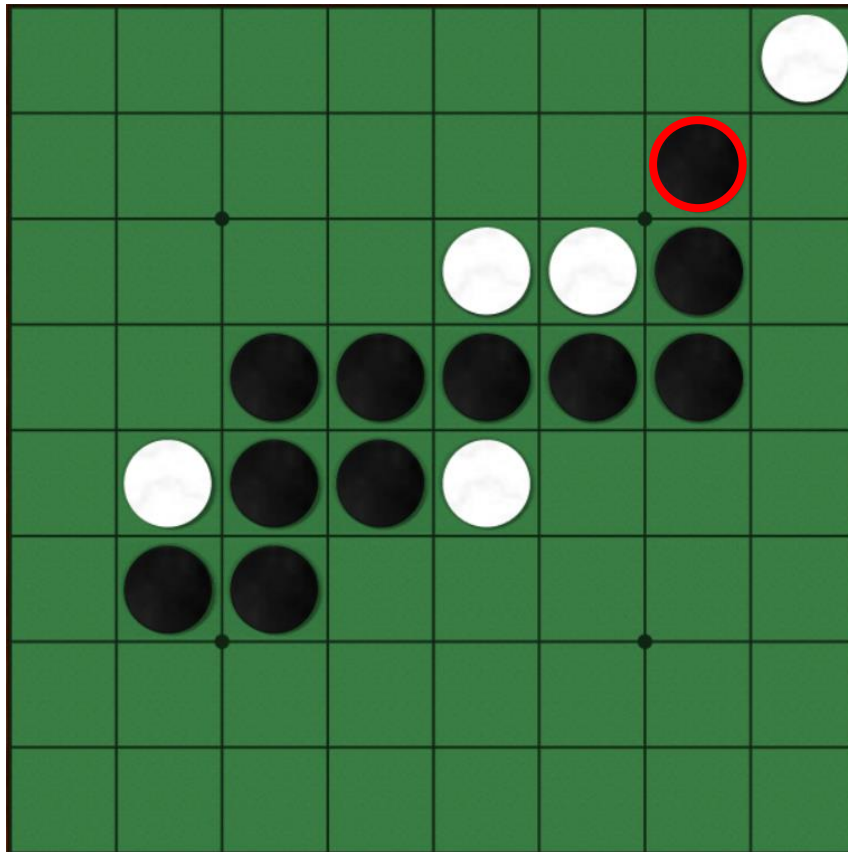
Black	White
1. c4	2. e3
3. f5	4. e6
5. f6	6. b4
7. b3	

If b3 is White, then c4 and d5 must be White too. But d5 started as Black, and can only be flipped along that same diagonal, which is not possible.



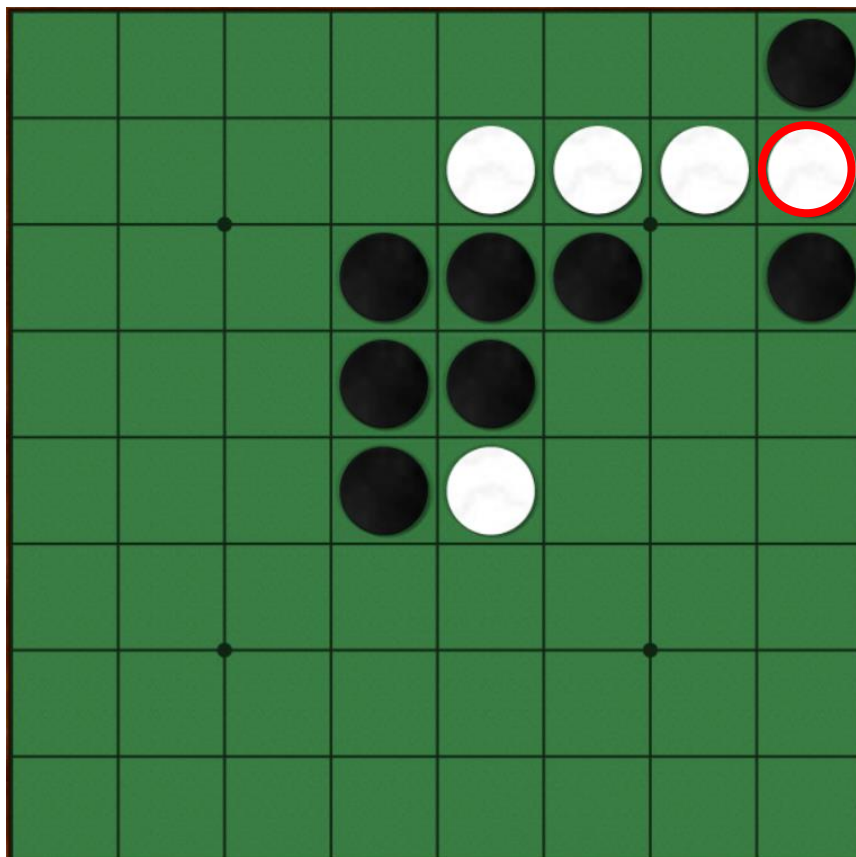
Black	White
1. f5	2. f6
3. e6	4. f4
5. g6	6. h7
7. h6	8. g7
9. h8	

If h7 is White, then it must be played after both h6 and h8. h6 requires g6 to be Black as given, but then h7 has no way to be played after that.



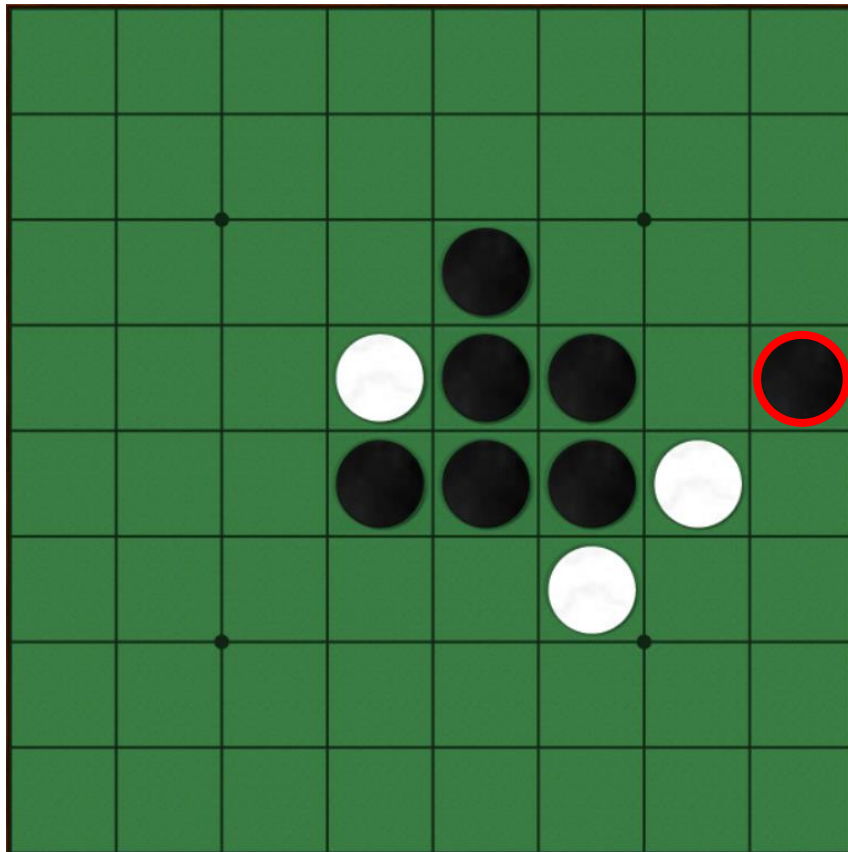
Black	White
1. c4	2. c5
3. c6	4. b5
5. b6	6. f3
7. g2	8. e3
9. f4	10. g3
11. g4	12. h1

If h1 is Black, f3 needed to have been Black, which means e3 should have been Black (since e3 cannot be flipped). So if h1 is White, then g2 must be White, and g2 cannot be flipped.



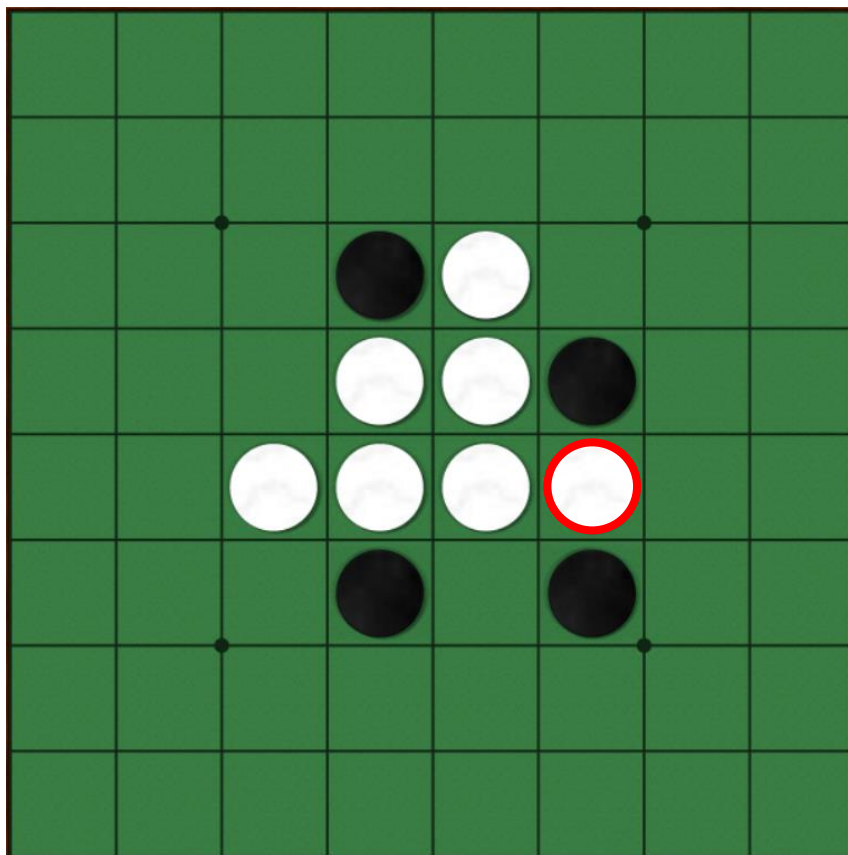
Black	White
1. d3	2. e3
3. f3	4. e2
5. f2	6. g2
7. h1	8. h2
9. h3	

Both h1 and h3 must be Black because they cannot be flipped. h3 can only be placed by flipping h2, which cannot be further flipped. So h3 should be Black.



Black	White
1. f5	2. f4
3. e3	4. f6
5. g5	6. h4

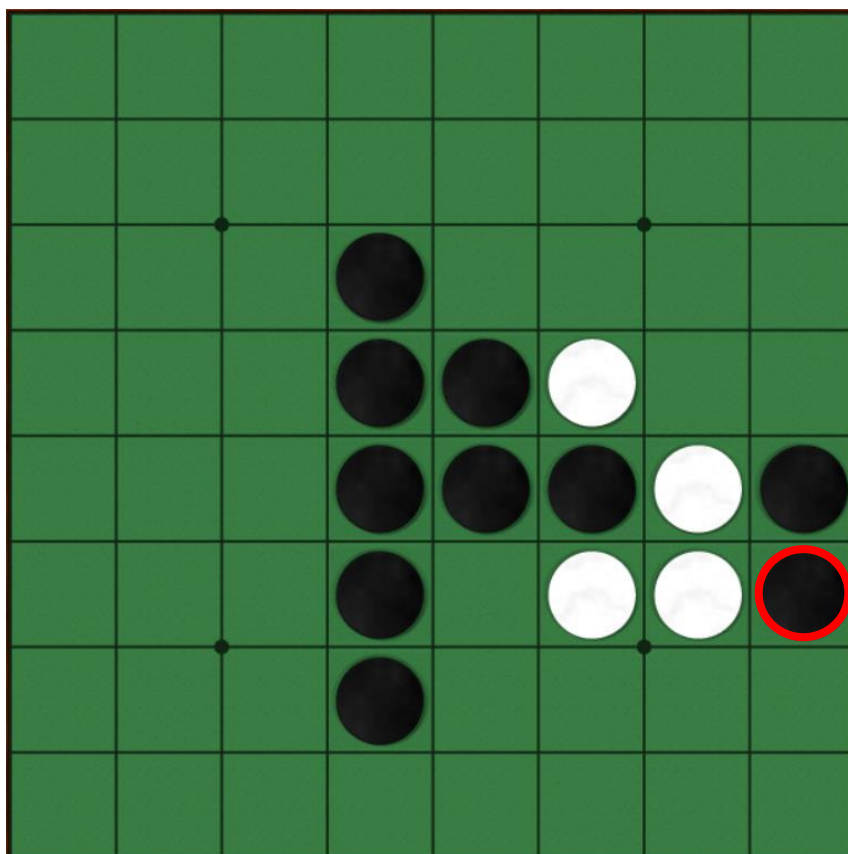
Last disc White placed is either f6 or h4. If f6, then not possible for Black to place h4. So h4 is White's last move and flipped.



Black	White
1. d3	2. c5
3. d6	4. e3
5. f4	6. f5
7. f6	

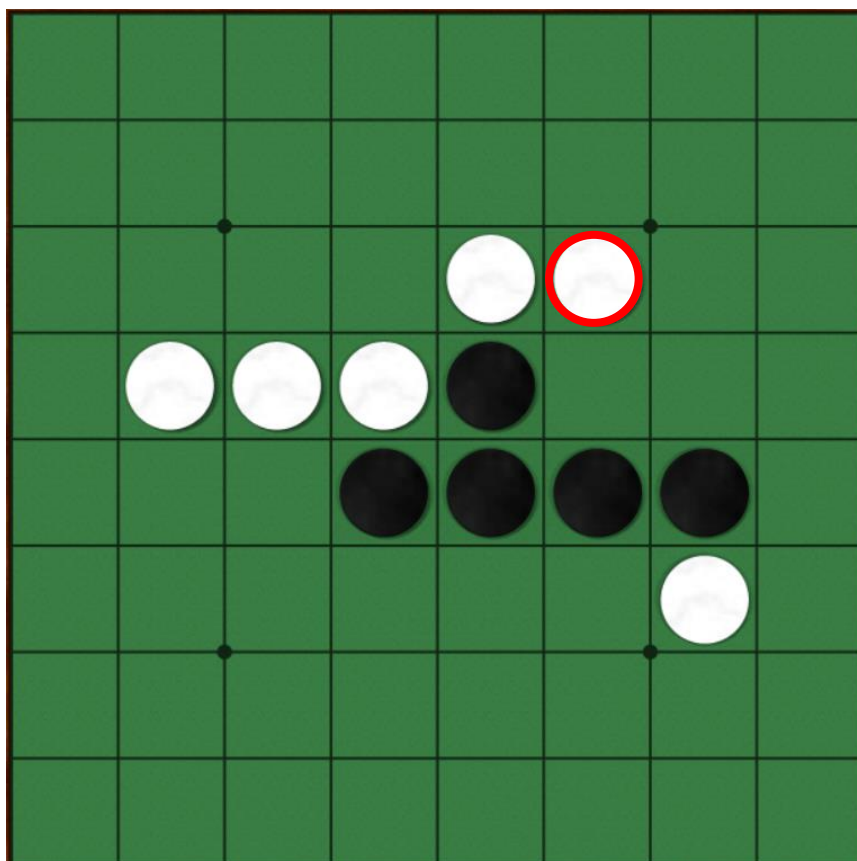
Last disc dropped must be at f6, as otherwise there would be more than 1 incorrectly flipped disc. So the flipped disc is at f5





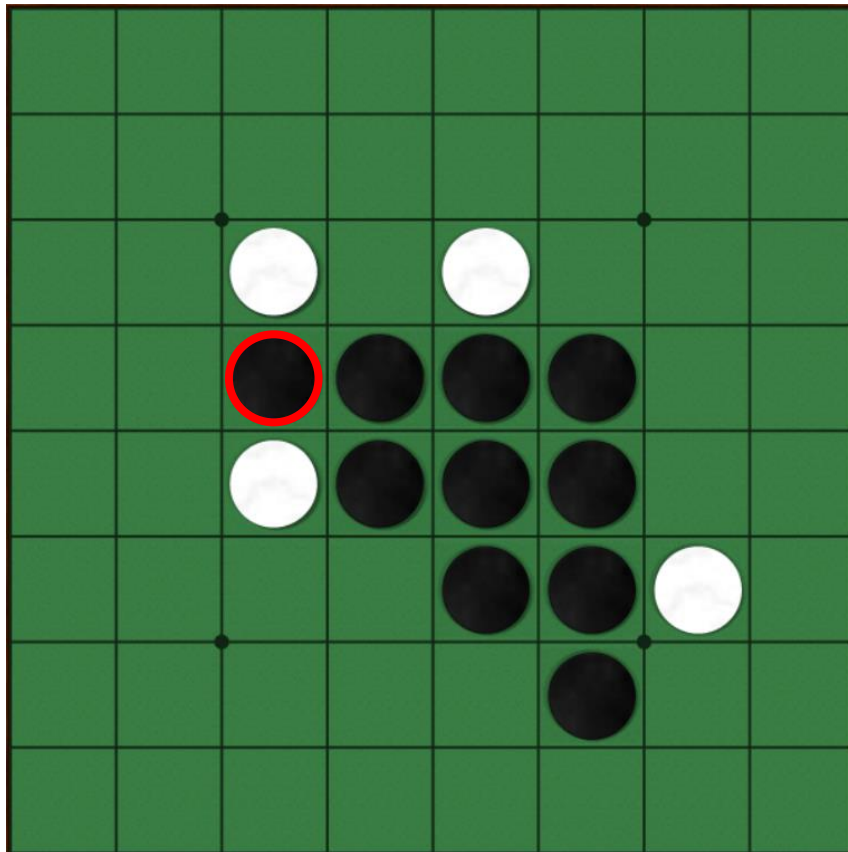
Black	White
1. f5	2. f4
3. d3	4. f6
5. g6	6. d6
7. d7	8. g5
9. h5	10. h6

Last disc White placed is either h6, f4 or f6. So either h6 or f5 is flipped. h6 and h5 cannot be both Black, as they both need to flip g5 (g6 cannot be flipped). So h6 is White's last move and flipped.



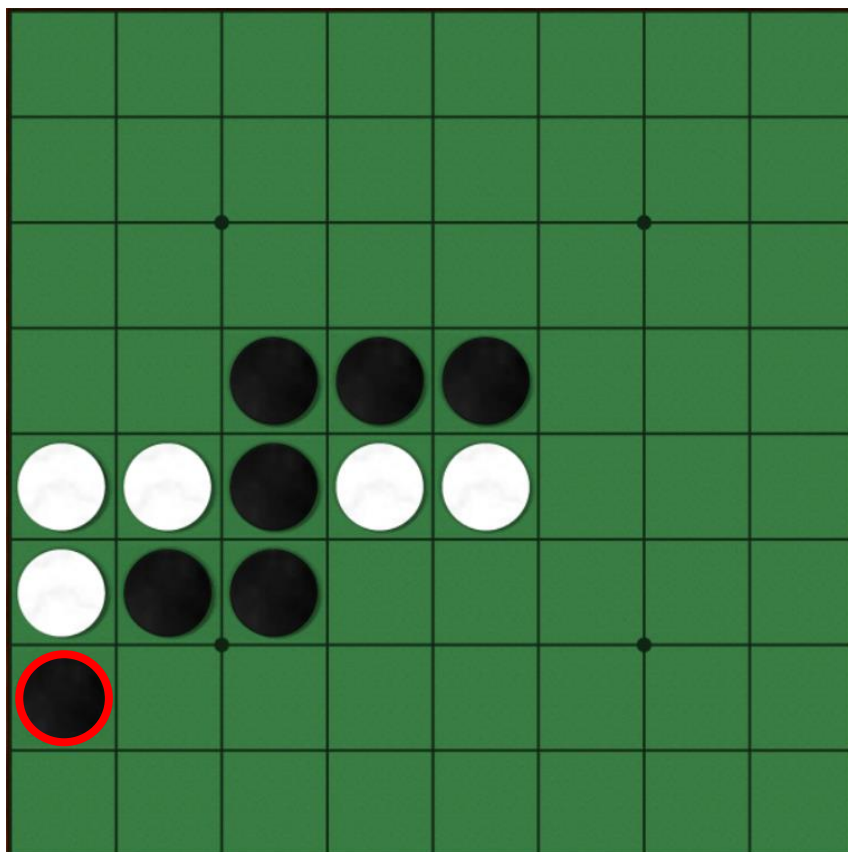
Black	White
1. c4	2. e3
3. f5	4. g6
5. g5	6. b4
7. f3	

f3 cannot be White as only way to make that move requires d5 to be White too. But d5 started as Black, and could not have been flipped yet in current position.



Black	White
1. c4	2. e3
3. f6	4. e6
5. f5	6. c5
7. f4	8. g6
9. f7	10. c3

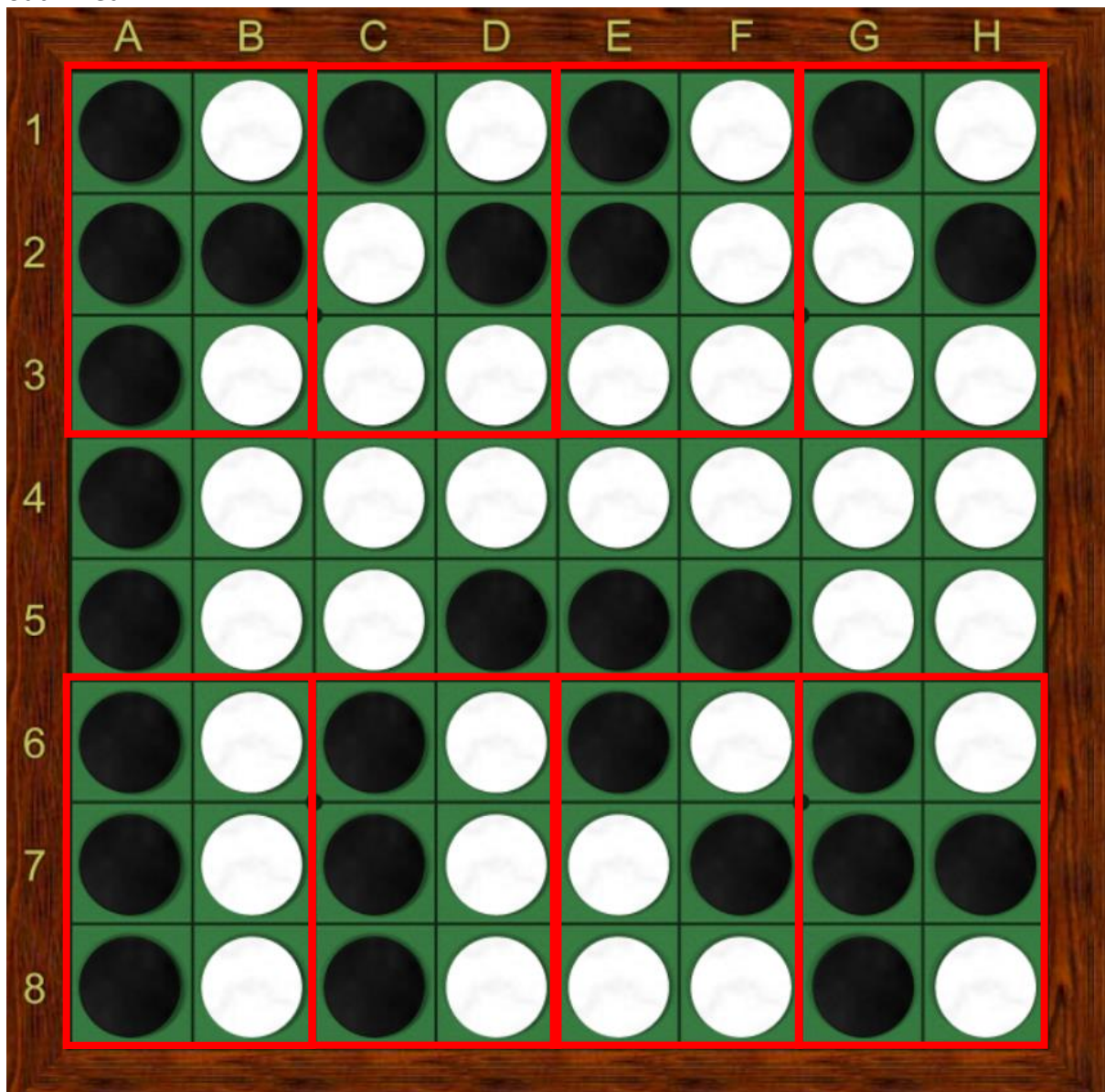
Last disc White placed is either c3 or e3, as c5 would flip two discs. d4 started as White. In order for e3 to be played last, d4 must be Black and flipped by c4, but then move c3 cannot be made. So c3 is last disc White placed, and c4 was flipped.



Black	White
1. c4	2. c5
3. c6	4. b5
5. a6	6. a5
7. b6	8. a7

c4 is the only possible first move for Black, so c5 is the second move for White. Third move must be b6 or c6 (both must be Black), and fourth move must be b5. So fifth move must be a6, so that White can place a5 next. Therefore, a7 must be White as both sides played the same number of moves.

The finished main board game position is shown below, with the Braille letters segmented out in red:



Constructor's notes:

Using the puzzle answer as a starting point, the game of Othello had a clear possible thematic reference, with its warring context and pieces flipping sides. The game is also well-known, simple to learn, and provides much puzzle potential in terms of logic gameplay and its grid layout. I also saw a link with the overseeing puzzle theme being a possible reference to a Braille extraction, which will fit the Othello discs perfectly. However, it still took quite a long time to figure out a workable Othello themed idea, which did not require too long or complicated retrograde analysis. I also felt that it was important for the puzzle to involve an element of playing through a game, placing pieces and flipping them, which is really the essence of Othello, and would be a disservice for an Othello-themed puzzle to not include that. The eventual sequence of moves for the solution took a few iterations/attempts as well. Working in reverse from the Braille letters, it was challenging to find enough valid moves to arrive at a somewhat fragmented position.