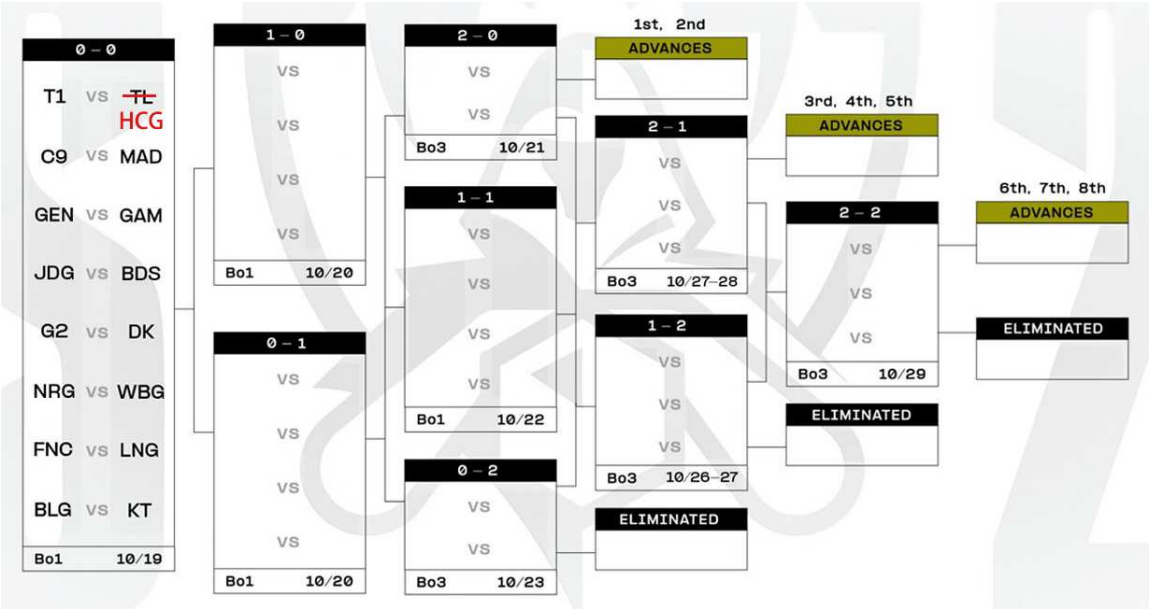
Problem C. Swiss Stage

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

After five years, the League of Legends World Championship (Worlds) returns to South Korea. This pinnacle event of the LoL esports season is scheduled to take place from October to November in the Land of the Morning Calm.

Worlds 2023 brings forth an exciting new format, featuring the Swiss Stage, along with new qualification paths for teams.



The Swiss Stage of Worlds 2023
(Credit: Riot Games)

In the Swiss Stage of Worlds 2023, there are 5 rounds in total for the 16 participating teams. In each round, the teams will be paired based on each team's win-loss record, where the teams with the same number of wins and losses will play each other. Rounds related to advancement and elimination, i.e., rounds for the teams accumulating two wins or two losses, will adopt the best-of-three rule, where the team who first defeats the other team in two out of three games wins the round, and the other loses (If one team defeats the other team consecutively in the first game and the second game, there will be no need for the third game). Other rounds will adopt the best-of-one rule, where the team who defeats the other team in the only game wins the round, and the other loses. The teams accumulating three wins advance to the next stage, while those accumulating three losses bid farewell to the tournament.

Now team HCG has x wins and y losses, and you, the coach of team HCG, would like to know the **minimum** number of **additional** games that team HCG needs to play to advance to the next stage.

Input

The only line contains two integers x and y ($0 \le x, y \le 2$), denoting the current number of wins and losses of team HCG.

Output

Output a single integer, denoting the minimum number of additional games that team HCG needs to play to advance to the next stage.

Examples

standard input	standard output
0 1	4
1 2	4

Note

In the first sample case, team HCG can win two rounds with the best-of-one rule and one round with the best-of-three rule to advance, with at least 4 additional games.

In the second sample case, team HCG must win two rounds with the best-of-three rule consecutively to advance, with at least 4 additional games.