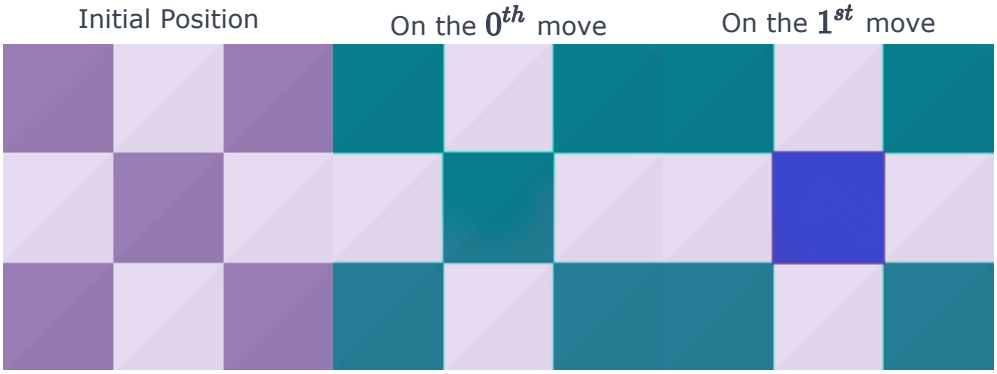
Colorful Lichess

Lichess is going to introduce a new chess mode with a board size $n \times m$. In this chess mode, they want to make sure the players not get bored while playing. So Lichess is changing the color of some black squares in the board after each move.

Initially on the 0^{th} move, Lichess will change all the black squares to the color 0. After the i^{th} move, Lichess changes the **initially black squares**, that have exactly four corner-adjacent squares painted in color $(i-1)$ to the color i. All the squares will be changed into the i^{th} color simultaneously. The process should continue until infinity.

- Initially, the upper left square of the board is always black.
- Two squares are called corner-adjacent, if they have exactly one common point.

You have to figure out how many squares are recolored **exactly** x times.



Input Format

The first line contains the board dimensions n and m. The second line contains integer x.

Constraints

- $1 \leq n, m \leq 5000$
- $1 \leq x \leq 10^9$

Output Format

Print how many squares will be recolored exactly x **times**.

Sample Input 0

```
3 3
1
```

Sample Output 0

```
4
```

Sample Input 1

```
3 3
2
```

Sample Output 1

```
1
```

Sample Input 2

```
1 1
1
```

Sample Output 2

```
1
```