A Perfect Set



Problem Statement

There are n tokens in a box numbered from 1 to n. You are also given an integer d. You have to pick m different tokens blindly, but the numbers written on the tokens must have a special property.

Suppose the set of numbers written on the tokens you picked is $S = \{x_1, x_2, \dots, x_m\}$. The set S is perfect if there is at least d pairs of numbers (x_a, x_b) in the set such that $x_a + x_b = n + 1$.

 (x_a,x_b) and (x_b,x_a) are considered the same pairs. Also, x_a and x_b are not the same.

What is the minimum number of tokens you must pick so that it's guaranteed that S is a perfect set?

Input Format

There are two integers n and d separated by a space.

Constraints

$$2 \le n \le 2 * 10^9$$

 $1 \le d \le n/2$

It is guaranteed that a valid answer exists.

Output Format

Print a single number denoting the minimum number of tokens you must pick up so that it's guaranteed that S is a perfect set.

Sample Input

8 2

Sample Output

6

Explanation

If you pick any 6 numbers from 1 to 8, there will always be at least two pairs that add up to n+1. For example: if you pick $\{1,4,5,6,7,8\}$, the valid pairs will be (1,8) and (4,5).

If you pick less than 6 numbers, there is a chance there might be less than two such pairs.