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 $S = \{x_1, x_2 \ldots\ldots x_m\}$. 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

$2 <= n <= 2 * 10^9$
$1 <= d <= n/2$
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

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8 2
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Sample Output

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6
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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.