

Breed Proximity

Farmer John's N cows ($1 \leq N \leq 50,000$) are standing in a line, each described by an integer breed ID. Cows of the same breed are at risk for getting into an argument with each-other if they are standing too close. Specifically, two cows of the same breed are said to be "crowded" if their positions within the line differ by no more than K ($1 \leq K < N$). Please compute the maximum breed ID of a pair of crowded cows.

Input

Input description...

Output

Output description...

Example

Input:

etc.

Output:

etc.