

C. Cows in Stalls

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

Stalls are located on a straight line, your task is to arrange the cows to stalls so that the minimum distance between the cows is as large as possible.

Input

The first line contains numbers n ($2 \leq n \leq 10^4$), the number of stalls and k ($2 \leq k \leq n$), the number of cows. The second line contains n integer numbers in ascending order, the coordinates of the stalls (coordinates are in the range from 0 to 10^9 , inclusive).

Output

Print one number, the largest possible minimum distance between two cows.

Example

input	Copy
6 3 2 5 7 11 15 20	
output	Copy
9	

