

B. Aggressive cows

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Farmer John has built a new long barn, with n stalls. The stalls are located along a straight line at positions x_1, x_2, \dots, x_n .

His c cows don't like this barn layout and become aggressive towards each other once put into a stall. To prevent the cows from hurting each other, Farmer John wants to assign the cows to the stalls, such that the minimum distance between any two of them is as large as possible. What is the largest minimum distance?

Input

The first line of input contains two integers n, c ($2 \leq c \leq n \leq 10^5$). The second line contains n number x_i ($1 \leq x_i \leq 10^9$).

Output

print one integer the largest minimum distance.

Example

input	Copy
5 3 1 2 8 4 9	
output	Copy
3	

Note

Farmer John can put his 3 cows in the stalls at positions 1, 4 and 8, resulting in a minimum distance of 3.

ICPC Assiut University Training - Standard - Juniors Phase 1

Public

Participant

→ Group Contests

- Standard #5 (Bits , bit-masking)
- Standard #4 (Binary search , two pointers)
- Standard #3 (set , sorting, compare function , map)
- Standard #2 (binary search , stack , queue, deque , priority queue)
- Standard #1 (Frequency , prefix sum , vector , pair ,struct)

Standard #4 (Binary search , two pointers)

Finished

Practice

→ Virtual participation

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Start virtual contest

→ Submit?

Language: GNU G++20 11.2.0 (64 bit, w

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
226627406	Oct/04/2023 19:12	Accepted
226615531	Oct/04/2023 18:33	Accepted