

D. Grouping

time limit per test: 2 seconds
memory limit per test: 256 megabytes

A group of numbers is called **good** if

- the size of the set (the amount of numbers) does not exceed k ;
- the difference between the minimum and maximum number does not exceed M ;

The group may contain duplicate values — for example, the size of the group $(2, 7, 3, 7)$ is 4, and the difference between the minimum and maximum number is $7 - 2 = 5$.

Given an array of integers a . Split its elements into **the minimum number** of good groups.

Input

The first line contains integers n, M, k ($1 \leq n, k \leq 10^5, 0 \leq M \leq 10^9$) — the number of elements in the array, the maximum difference between the numbers in the set, and the maximum size of the set, respectively.

The second line contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^9$) — the elements of the array.

Output

In a single line, output the minimum possible number of good groups into which the given array can be split.

Examples

input	Copy
4 3 3 5 8 13 21	
output	Copy
3	

input	Copy
10 5 3 1 6 4 15 4 10 8 2 12 5	
output	Copy
4	

Note

The **second** test example

The array can be split, **for example**, into the following groups:

- $(1, 4, 6)$ — maximum difference 5;
- $(2, 5)$ — maximum difference 3;
- $(4, 8)$ — maximum difference 4;
- $(10, 12, 15)$ — maximum difference 5.

2024-2025 ICPC NERC, Kyrgyzstan Qualification Contest

Finished

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