Fishermen's Lake

You like jogging and there is no better place to jog than the lake nearby. The lake is circular with a circumference of T and has a reputation for having very tasty fish, so as you jog, you pass along many fishermen, who have built their houses around the lake. There are N fishermen and the i-th fisherman lives in a house built at position X_i. Since the lake is circular, position 0 is the same as position T.

When two fishermen meet, they often engage in a fishing contest. When you jog past such a contest, you can decide to stop and support one of the two fishermen, or to ignore it and keep jogging. You can make a fisherman happy, if:

- you support him at least once, and
- in no contest that he participates you support his opponent.

You have noticed that two fishermen i and j engage in a fishing contest, only if the distance between their houses is at most R, so when $\min(|X_i - X_j|, T - |X_i - X_j|) \leq R$. You can consider that, since you jog there everyday, you will eventually see all such possible contests.

You are asked to write a program that computes the maximum number of fishermen that you can make happy.

Input

Your program must read from the standard input.

The first line of the input will contain three space-separated integers N, R and T: the number of fishermen, the maximum distance between the houses of two fishermen that can engage in a contest, and the lake's circumference.

Each of the following N lines will contain an integer X_i: the position of the house of the i-th fisherman.

It is guaranteed that the positions of the fishermen's houses X_i will be unique and given in ascending order.

Output

Your program must print a single line to the standard output, consisting of a single integer: the maximum number of fishermen that you can make happy.

Constraints

- $1 \leq N \leq 10^6$
- $1 \leq T \leq 10^9$
- $0 \leq R \leq T$
- $0 \leq X_i \leq T$
- Time and memory limit: See the CMS.

Subtasks

- Subtask 1 (11 points): $R = 1$
- Subtask 2 (20 points): $X_i + R < T$ for all i
- Subtask 3 (27 points): $N \leq 10^3$
- Subtask 4 (31 points): $N \leq 10^5$
- Subtask 5 (11 points): No further constraints.

Example 1

Input

```
5 2 10
1
2
3
4
5
```

Output

```
4
```

Explanation

Pairs	Support
(1, 2)	–
(1, 3)	1
(2, 3)	2
(2, 4)	–
(3, 4)	4
(3, 5)	5
(4, 5)	–

All fishermen except fisherman 3 like you.

Example 2

Input

```
6 1 10
1
2
3
4
5
6
```

Output

```
4
```

Explanation

Pairs	Support
(1, 2)	1
(2, 3)	3
(3, 4)	–
(4, 5)	4
(5, 6)	6

All fishermen except fishermen 2 and 5 like you.

Example 3

Input

```
6 1 10
1
2
3
4
9
10
```

Output

```
4
```

Explanation

The same as example 2, but this time the houses of all fishermen are moved 2 places to the left.