F - Athletic

Editorial (/contests/abc408/tasks/abc408_f/editorial)

Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 500 points

Problem Statement

There are N scaffolds numbered from 1 to N arranged in a line. The height of scaffold $i (1 \leq i \leq N)$ is H_i.

Takahashi decides to play a game of moving on the scaffolds. Initially, he freely chooses an integer $i (1 \leq i \leq N)$ and gets on scaffold i.

When he is on scaffold i at some point, he can choose an integer $j (1 \leq j \leq N)$ satisfying the following condition and move to scaffold j:

- $H_j \leq H_i - D$ and $1 \leq |i - j| \leq R$.

Find the maximum number of moves he can make when he repeats moving until he can no longer move.

Constraints

- $1 \leq N \leq 5 \times 10^5$
- $1 \leq D, R \leq N$
- H is a permutation of $(1, 2, \ldots, N)$.
- All input values are integers.

Input

The input is given from Standard Input in the following format:

$$N \quad D \quad R$$
$$H_1 \quad H_2 \quad \ldots \quad H_N$$

Output

Output the answer.

Sample Input 1 Copy

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

Sample Output 1 Copy

```
2
```

Takahashi initially gets on scaffold 1 and can move between the scaffolds as follows:

- First move: Since $H_2 \leq H_1 - D$ and $|2 - 1| \leq R$, he can move to scaffold 2. Move from scaffold 1 to scaffold 2.
- Second move: Since $H_3 \leq H_2 - D$ and $|3 - 2| \leq R$, he can move to scaffold 3. Move from scaffold 2 to scaffold 3.
- Since the height of scaffold 3 is 1, he can no longer move.

As shown above, he can move 2 times. Also, no matter how he chooses the scaffolds to move to, he cannot move 3 or more times. Therefore, output 2.

Sample Input 2 Copy

```
13 3 2
13 7 10 1 9 5 4 11 12 2 8 6 3
```

Sample Output 2 Copy

```
3
```

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