

## Problem C

### Jim's Precision Timing I

Time limit: 3 seconds

Memory limit: 1024 megabytes

#### Problem Description

Jim is a skilled League of Legends player who prides himself on his precise timing. Whenever he knows he can escape successfully, he taunts his opponent with perfect timing.

One day, immersed in the cheering of the crowd, Jim suddenly realizes he's just an ordinary programmer staring at VSCode. Although he lacks natural time perception, he can use his programming skills to compensate!

In this scenario, Jim is under attacks that apply a poison effect:

- Each attack at second  $t$  poisons him for duration seconds, starting from  $t$ .
- If a new attack occurs before the current poison effect ends, the timer is reset: the poison lasts duration seconds from the new attack.

Given  $n$  non-decreasing integer  $time_i$  (where  $1 \leq i \leq n$ ), denotes the attack occurs at  $time_i$  second, and an duration  $dura$ , calculate the total number of seconds Jim is poisoned.

#### Input Format

The input consists of multiple test cases until EOF. Each test case is formatted as follows: First line is an integer  $n$  representing the number of attacks. Second line are  $n$  integers,  $time_i$  where  $1 \leq i \leq n$ , sorted in non-decreasing order, which representing the attack occur at  $time_i$  second. Third line is an integer  $dura$  representing the duration of each attack.

#### Output Format

For each test case, output one line representing the total number of seconds Jim is poisoned.

#### Technical Specification

- $0 \leq n \leq 10^4$
- $0 \leq time_i \leq 10^7, 1 \leq i \leq n$
- $0 \leq dura \leq 10^7$

#### Sample Input 1

```
2
1 4
2
2
```

#### Sample Output 1

```
4
3
```

1 2
2