



Hello, 2024101067.

AN APPLE A DAY

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Problem Statement

You have k apples initially. Each apple has a specific day when it will rot, given in an array `rot`. For each of the initial apple, `rot[j]` represents the number of days after which it will become rotten and inedible. Starting today, you can receive one apple per day for the next n days. The apple given on the i th day will rot after `days[i]` days, i.e. after `i+days[i]` the apple will become inedible. If `days[i]` is 0, it means you didn't receive an apple that day.

Edible days `[1,rot[j]-1]` both inclusiveEdible days `[i,i+days[i]-1]` both inclusive

Days start from Day 1

Starting from the first day you can eat at most one apple a day. Note that you can continue eating apples after the first n days.

Given an array `days`, return the maximum number of apples you can eat.

Input Format

`k` the first line contains a single integer k which is the no of apples you have initially`rot[1] rot[2] rot[k]` the second line consists of k integer which is the rotting time of k apples`n` the third line contains a single integer n which is the no of days you might be given a single apple`days[1] days[2] . . . days[n]` the fourth line consists of n integers which tell the rotting time of the apple given on the respective day



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Constraints

 $1 \leq k \leq 1e5$ $1 \leq n \leq 1e5$ $1 \leq \text{rot}[i] \leq 1e9$ $0 \leq \text{days}[i] \leq 1e9$

Sample Testcase

Input:

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

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Output:

```
5
```

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Explanation

- Day 1 you eat initial apple number 1 (Rot on day 2)
- Day 2 you eat initial apple number 3 (Rot on day 3)
- Day 3 you eat the apple recieved on day 3 (Since $3+1 > 3$)
- Day 4 you eat the apple recieved on day 2 (Since $2+3 > 4$)
- Day 5 you eat the apple recieved on day 4 (Since $4+5 > 5$)
- Note you cant eat apple recieved on day 1 on Day 3 because $1+2 == 3$ You can't eat apples on more number of days than 5

? Clarifications

[Request clarification](#)

No clarifications have been made at this time.