Fixed points P34682_en

Segon Concurs de Programació de la UPC - Primera Semifinal (2004-09-14)

Let $S = x_1, \ldots, x_n$ be a sequence of integer numbers such that $x_1 < \cdots < x_n$. For every integer number a and every index $1 \leq i \leq n$, define $f_a(i) = x_i + a$. Write a program that, given S and a, tells whether there is some i such that $f_a(i) = i$.

Input

Input consists of several cases. Every case begins with n, followed by S, followed by a number m, followed by m different integer numbers $a_1, \ldots, a_m$. Assume $1 \leq n \leq 10^6$.

Output

For every case, print its number starting at 1. Afterwards, for every a_j print the position of its fixed point. If no fixed point exists, state so. If there is more than one fixed point, print the smallest one. Print a blank line after the output for every case.

Sample input

```
5
-7 -2 0 4 8
1
0

5
0 1 2 3 4
3
0 -1 1
```

Sample output

```
Sequence #1
fixed point for 0: 4

Sequence #2
no fixed point for 0
no fixed point for -1
fixed point for 1: 1
```

Problem information

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