Problem H
Prinova

Problem ID: prinova
CPU Time limit: 1 second
Memory limit: 1024 MB

Source: Croatian Open Competition in Informatics 2007/2008, contest #1

Brojko and Brojana are happily married with N little boys. The boys are named with distinct even integers $P_1, P_2, \ldots, P_N$.

Brojko and Brojana are expecting an addition to their family and have to come up with a nice name for the little girl. They have decided that the name will be an *odd* integer in the range $[A, B]$. Because they find all integers in that range equally beautiful, they have decided to choose the number which maximizes the distance to the name of the closest of the N boys.

More precisely, they seek an odd integer $X \in [A, B]$ such that the expression

$$\min\{|X - P_i|, i \in [1, N]\}$$

is as large as possible.

Write a program that determines the name for the little girl.

Input

The first line contains an integer N ($1 \leq N \leq 100$), the number of boys.

The second line contains N distinct positive even integers, the names of the boys. The integers will be less than 10^9.

The third line contains the integers A and B ($1 \leq A < B \leq 10^9$), the range of names they are considering for the girl.

Output

Output an integer, the name for the little girl. If there are multiple solutions, any one of them will be accepted.

Sample Input 1

```
3
2 6 16
20 50
```

Sample Output 1

```
49
```

Sample Input 2

```
3
2 6 16
3 15
```

Sample Output 2

```
11
```

Sample Input 3

```
3
2 6 16
1 7
```

Sample Output 3

```
5
```