COCI '07 Contest 1 #3 Prinova

Time limit: 0.6s **Memory limit:** 32M

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. If there are multiple solutions, output any of them.

Input Specification

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

Output an integer, the name for the little girl.

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
```