Sherlock and MiniMax

Русский \| □□

Watson gives Sherlock an array $A_1,A_2...A_N$.
He asks him to find an integer M between P and Q(both inclusive), such that, $min\ \{|A_i-M|,\ 1 \leq i \leq N\}$ is maximised. If there are multiple solutions, print the smallest one.

Input Format
The first line contains N. The next line contains space separated N integers, and denote the array A. The third line contains two space separated integers denoting P and Q.

Output Format
In one line, print the required answer.

Constraints
$1 \leq N \leq 10^2$
$1 \leq A_i \leq 10^9$
$1 \leq P \leq Q \leq 10^9$

Sample Input

```
3
5 8 14
4 9
```

Sample Output

```
4
```

Explanation
For M = 4,6,7, or 9, the result is 1. Since we have to output the smallest of the multiple solutions, we print 4.