Sherlock and MiniMax

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Русский \| 中文

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, $min\ \{|A_i-M|,\ 1 \le i \le N\}$ 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.

Constraints

$1 \le N \le 10^2$
$1 \le A_i \le 10^9$
$1 \le P \le Q \le 10^9$

Output Format

In one line, print the required answer.

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.

```java
import java.io.*;
import java.util.*;
import java.text.*;
import java.math.*;
import java.util.regex.*;

public class Solution {

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
    }
}
```

Line: 1 Col: 1

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