Submit a solution for A-187089. Nearest number

Time limit: 3 s

Real time limit: 6 s

Memory limit: 256M

Problem A: 187089. Nearest number

You are given list of integers and an integer k. Find nearest to k number in the list. Distance between numbers is defined as absolute value of their difference. If there are multiple such numbers, choose the first one.

Input format

The first line of input contains an integer n, number elements in the list $(1 \le n \le 10^6)$. Next line contains n integers, values of the list $(-10^8 \le a_i \le 10^8)$. The last line contains an integer k $(-10^8 \le k \le 10^8)$.

Output format

Print the offset from the head of list of the nearest to k number from the list. If there are multiple answers, choose the first one (with smaller offset).

Examples

Input

```
6
7 8 -10 4 2 -1
5
```

Output

```
3
```

Input

```
3
1 2 3
-10
```

Output

```
0
```

Input

```
5
1 1 1 1 1
1
```

Output

```
0
```

Input

```
6
1 2 90 32 2 2
10
```

Output

```
1
```

Notes

In the first example, the closest number to 5 is 4, which offset is 3.

In the second example, the closest number to -10 is 1. Its offset is 0.

In the third example, distance to k is equal for all numbers of the offset. So we will take first of them (with offset 0).

In the last example, the closest number to 10 is 2, so we take the offset of its first occurrence – 1.

Submit a solution

Language: g++ - GNU C++ 11.4.0

File Choose File No file chosen

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Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Failed test	View source	View report
1495	538:26:58	1524	A	g++	OK	N/A	View	View

A B C D E F H I K L

ejudge 3.10.3+ (GIT 6da71ff82) (2023-08-02 06:59:26).

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