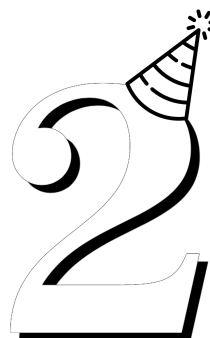


H Hasty Guesses

Time limit: 1s

For their 22nd birthday, your friend invited you to their party whose theme is the number two. Upon arriving to the party, you find that everyone is playing a strange game. Your friend is employed at Researchable, so he really likes numbers and therefore the game is about guessing numbers. One person says a target number, and then everyone writes down a number on a piece of paper. All the paper sheets are collected and the winner(s) of the round are determined. The second closest number to the target wins. As multiple people can choose the same number, there may be more than one winner.



The game seems to be super popular but it takes too much time to determine the winning number and people start second-guessing the choice. Can you help automating the process of determining the winning number?

Input

The input consists of:

- One line with two integers n, k ($2 \leq n \leq 10^5$, $0 \leq k \leq 10^5$), the number of people playing the game, and the target number.
- One line with n integers x ($0 \leq x \leq 10^5$), representing the guesses.

It is guaranteed that there will be at least two distinct guesses.

Output

Output the second closest number to the target from the set of numbers k .

If two numbers are equally close to the target, treat the smaller as being closer.

Sample Input 1

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3 10
7 15 12
```

Sample Output 1

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7
```

Sample Input 2

```
5 20
17 17 15 23 50
```

Sample Output 2

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23
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