Frequent Opposite-Supported Numbers X78889_en

Given a sequence of integers, we say that an integer n is opposite-supported in the sequence if both n and $-n$ appear in it. Write a program that finds a frequent opposite-supported number in a sequence.

Input

Input starts with a non-negative integer k that indicates the desired frequency. Then, a sequence of integers follows, possibly distributed along several lines.

Output

Write the absolute value of the first integer in the sequence that is found both to appear at least k times in it and to be opposite-supported in it. Write "NONE" if no such integer is found.

Sample input 1

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

Sample output 1

```
1
```

Sample input 2

```
33
1 -2 3 -1 2 1 -3 1
```

Sample output 2

```
NONE
```

Sample input 3

```
3
-5 -5 -6 -6 -5
7 6 -6 7 -7 5 7
```

Sample output 3

```
6
```

Sample input 4

```
3
1111111111111111 -5 -5 -6 -6 -5
7 -6 7 -7 -6 6 5 7
```

Sample output 4

```
6
```

Problem information

Author: José Luis Balcázar

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