

Problem Statement

You start with an initially empty array. You need to handle q queries. The queries are of two types:

1. `1 x` - Add the number x to the array. All x provided are distinct.
2. `2` - Report the number which has $\text{floor}(3k/4)$ elements greater than it in the array, where k is the current number of elements in the array.

Constraints

- $1 \leq x \leq 10^9$
- $2 \leq q \leq 2 \times 10^5$

Input Format

- The first line contains an integer q , the number of queries.
- The next q lines contain queries in one of the two formats:
 - `1 x` (where x is a distinct integer to be added to the array)
 - `2` (to report the required number)

Output Format

For each query of type `2`, output the required number on a new line.

Sample Input

```
6
1 5
1 3
1 10
2
1 7
2
```

Sample Output

3

5

Explanation

- After processing 1 5 , array = [5]
- After processing 1 3 , array = [3, 5]
- After processing 1 10 , array = [3, 5, 10]
- Query 2 : k = 3, $\text{floor}(9/4) = 2 \rightarrow$ The element with 2 greater elements is 3
- After processing 1 7 , array = [3, 5, 7, 10]
- Query 2 : k = 4, $\text{floor}(12/4) = 3 \rightarrow$ The element with 3 greater elements is 3