

# Last survivor

Make an output that satisfies the following rules.

Rule 1 : A random number  $k$  is written on  $n$  cards.

Rule 2 : Check the number  $k$  of the front card, discard that card, and repeat the process of sending the front card number  $k$  to the back.

Rule 3 : Repeat Rule 2 until you have one card left.

Input :  $N$  and the written numbers on the card

Output : The number written on the last card

$2 < N < 100,000$

$1 < K < 100,000,000$

Time limit : 3s

Example

input	Output
5 1 2 3 4 5	2

Phase 1 : 3 4 5 2

Phase 2 : 4 5 2

Phase 3 : 5 2

Phase Last : 2