Party

N people came to a party. Then those, who had no friends among people at the party, left. Then those, who had exactly 1 friend among those who stayed, left as well. Then those, who had exactly 2, 3, ..., **N** - 1 friends among those who stayed by the moment of their leaving, did the same.

What is the **maximum** amount of people that could stay at the party in the end?

Input

The first input line contains one number T — amount of tests ($1 \leq T \leq 10^5$). Each of the following T lines contains one integer number N ($1 \leq N \leq 10^5$).

Output

For each test output in a separate line one number — the maximum amount of people that could stay in the end.

Sample

Input	Output
1	1
3	

Explanation

For N = 3, if the friend structure is: people A and people B are friends, and people A and people C are friends, but people B and people C are NOT friends.
After the "leaving process", only people A will stay. This friend structure can give maximum number of people stay at the end.