

Matching Pair

Sambhav is searching for a matching pair. His box is filled with numbers from 1 to N, each number is exactly present twice so there are N pairs. In his worst case scenario, how many numbers 'x' should he pick and remove from his box until he finds a matching pair?

Input:

The first line of input contains an integer T denoting the no of test cases, then T test cases follow. Each test case contains an integer N, which indicates the total pairs of numbers present in the box.

Output:

Print the number of Draws (x) Sambhav makes in the worst case scenario.

Constraints:

$1 \leq T \leq 500$

$1 \leq N \leq 100000$

Example

Input

2
1
2

Output

2
3

Explanation

For first test case

When $N=1$ Then there is one pair and a matching pair can be extracted in 2 Draws.

For second test case

when $N=2$ Then there are 2 pairs Let them be $\{1,2,1,2\}$ and a matching pair

will be made in 3 Draws. This can be observed when we change the permutations of the numbers.