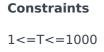# A Card Game

Alice loves to play card games. He was getting bored so he invented a game, that he will arrange all the cards 1 to N in a seqeunce and start removing it one by one alternatively (from odd positions). He will do this until one card is left. Your task is to tell the remaining card.

Input Format

First line contains the number of test cases t . The next t lines contain integer n, the number of cards for that case.

Constraints

1<=T<=1000

1<=N<=10^9

Output Format

Single line output, Print the required output.

Sample Input 0

```
2
2
7
```

Sample Output 0

```
2
4
```