Flipping bits



Problem Statement

You will be given a list of 32-bits unsigned integers. You are required to output the list of the unsigned integers you get by flipping bits in its binary representation (i.e. unset bits must be set, and set bits must be unset).

Input Format

The first line of the input contains the list size **T**. T lines follow each line having an integer from the list.

Constraints

 $1 \le T \le 100$

Output Format

Output one line per element from the list with the requested result.

Sample Input

```
3
2147483647
1
0
```

Sample Output

2147483648 4294967294 4294967295

Explanation