

## Count the bits

Given a number  $N$ , print the number of set bits in the binary representation of this number.

Input:

The first contains a single integer  $T$  denoting the number of test cases. Each test case contains a single integer  $N$

Output:

For each test case, print a single integer denoting the number of set bits in the binary representation of the given  $N$ .

Constraints:

- $1 \leq T \leq 1000$
- $1 \leq N \leq 1000$

SAMPLE INPUT



1  
4

SAMPLE OUTPUT



1