## Next power of 2

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English version

For gven integer $\mathbf{n}$ print next power of 2 greater than $\mathbf{n}$.

## Input

The first line of the standard input contains one integer $\mathbf{t}(\mathrm{t}<10001)$ which is the number of test cases.

In each of the next $\mathbf{t}$ lines there is an integer $\mathbf{n}\left(0<=n<=10^{\wedge} 9\right)$.

## Output

For each test, print the next power of 2 greater than $\mathbf{n}$.

## Example

Input:
5
5
4
10
16
100
Output:
8
8
16
32
128

