1158 - Least Power

Description

As almost everybody knows, any non-negative integer can be written as a sum of power of 2. Moreover, today's computers have a way to do the same with negative integers, but in this problem this is not what we are going to talk about. Consider any positive integer which fits in 64 bits, can you compute what's the least power of 2 involved in the base 2 representation of that number? For example, for 4, the answer should be 4 itself, but for 192, the answer is 64. Really easy right?

Input specification

The input contains several test cases and begins with a number **T (T <= 10^3)** denoting how many test cases there are. **T** lines follow, each one with a single positive integer in the range **[1, 2^63-1]**.

Output specification

For every test case, output a single line with the requested number: the least power of 2 in the base representation for the number in the test case.

Sample input

```
2
4
192
```

Sample output

```
4
64
```

Hint(s)

Source	The 2010 Caribbean Local Contests
Added by	**ejaltuna**
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Test limit (ms)	1000