

Strange Counter

There is a *strange counter*. At the first second, it displays the number **3**. Each second, the number displayed by decrements by **1** until it reaches **1**. In next second, the timer resets to **2 × the initial number for the prior cycle** and continues counting down. The diagram below shows the counter values for each time *t* in the first three cycles:

time	value	time	value	time	value
1	3	4	6	10	12
2	2	5	5	11	11
3	1	6	4	12	10
		7	3	13	9
		8	2	14	8
		9	1	15	7
			
				21	1

Find and print the value displayed by the counter at time *t*.

Function Description

Complete the *strangeCounter* function in the editor below.

strangeCounter has the following parameter(s):

- *int t*: an integer

Returns

- *int*: the value displayed at time *t*

Input Format

A single integer, the value of *t*.

Constraints

- $1 \leq t \leq 10^{12}$

Subtask

- $1 \leq t \leq 10^5$ for 60% of the maximum score.

Sample Input

4

Sample Output

6

Explanation

Time $t = 4$ marks the beginning of the second cycle. It is double the number displayed at the beginning of the first cycle: $2 \times 3 = 6$. This is shown in the diagram in the problem statement.