



Strange Counter ★

1280.86 more points to get your next star!

Rank: 90283 | Points: 919.14/2200

**You have successfully solved Strange Counter**

You are now 1280.86 points away from the 6th star for your problem solving badge.

[Try the next challenge](#) | [Try a Random Challenge](#)**Problem**

Submissions

Leaderboard

Editorial

RATE THIS CHALLENGE



Bob has a strange counter. At the first second, it displays the number **3**. Each second, the number displayed by the counter decrements by **1** until it reaches **1**.

The counter counts down in cycles. 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. It should return the integer value displayed by the counter at time ***t***.

`strangeCounter` has the following parameter(s):

- t***: an integer

Input Format

A single integer denoting the value of ***t***.

Constraints

- $1 < t < 10^{12}$



Subtask

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

Output Format

Print the value displayed by the strange counter at the given time t .

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 also shown in the diagram in the Problem Statement above.

[Change Theme](#)

C++



```
1  #include <bits/stdc++.h>
2  using namespace std;
3  /*
4      *
5      * Prosen Ghosh
6      * American International University - Bangladesh (AIUB)
7      *
8  */
9  int main(){
10     long long t,n = 2;
11     cin >> t;
12     while(3*(n-1) < t)n *= 2;
13     cout << 3*(n-1)-t+1 << endl;
14     return 0;
15 }
16
```

Line: 16 Col: 1

☒ Upload Code as File ☐ Test against custom input

Run Code

Submit Code

Congratulations

You solved this challenge. Would you like to challenge your friends?

[Next Challenge](#)

✓ Test case 0

✓ Test case 1

✓ Test case 2

✓ Test case 3

✓ Test case 4

✓ Test case 5

✓ Test case 6

Compiler Message

Success

Input (stdin)

1 | 4

[Download](#)

Expected Output

1 | 6

[Download](#)

[Contest Calendar](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)

