E. Power Of Two

time limit per test: 0.25 seconds
memory limit per test: 64 megabytes
input: standard input
output: standard output

ACM ACPC Club has a number of trainees.

Who will solve the problem quickly?

He gave them the number N and asked them to convert the number to this format:

N = $2^a + 2^b + 2^c + ...$.

where a, b, c... are integer numbers.

And your task calculates the summation of numbers (a+b+c+...).

Input
The input contains one integer N ($1<=N<=10^{18}$)

Output
Print answer of the problems

Examples

input	Copy
3	

output	Copy
1	

input	Copy
120	

output	Copy
18	

Note
the first test:

$3 = 2^0 + 2^1$, so answer = 0 + 1 = 1.

ICPC Assiut Advanced Newcomers 2023

Private

Participant

⭐

→ Group Contests ⌄

- ICPC Assiut Advanced Newcomers 2023 Contest 5
- ICPC Assiut Advanced Newcomers 2023 Contest 4
- ICPC Assiut Advanced Newcomers 2023 Contest 3
- ICPC Assiut Advanced Newcomers Practice #1
- ICPC Assiut Advanced Newcomers 2023 Contest 2
- ICPC Assiut Advanced Newcomers 2023 Onsite Contest 2
- ICPC Assiut Advanced Newcomers 2023 Contest 1
- ICPC Assiut Advanced Newcomers 2023 Onsite Contest 1

ICPC Assiut Advanced Newcomers 2023 Contest 3

Finished

Practice

⭐

→ Virtual participation ⌄

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Submit?

Language: GNU G++20 11.2.0 (64 bit, w ⌄

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
227213287	Oct/08/2023 17:56	Accepted
227212212	Oct/08/2023 17:49	Accepted