

HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

A. Raising Bacteria

time limit per test: 1 second memory limit per test: 256 megabytes input: standard input output: standard output

You are a lover of bacteria. You want to raise some bacteria in a box.

Initially, the box is empty. Each morning, you can put any number of bacteria into the box. And each night, every bacterium in the box will split into two bacteria. You hope to see exactly *x* bacteria in the box at some moment.

What is the minimum number of bacteria you need to put into the box across those days?

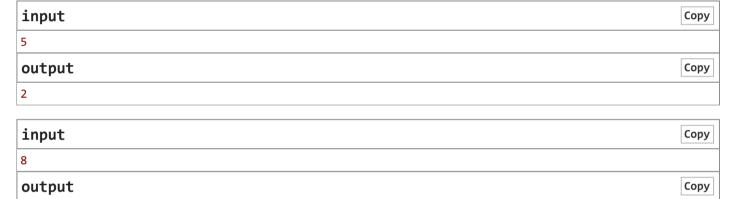
Input

The only line containing one integer x ($1 \le x \le 10^9$).

Output

The only line containing one integer: the answer.

Examples



Note

For the first sample, we can add one bacterium in the box in the first day morning and at the third morning there will be 4 bacteria in the box. Now we put one more resulting 5 in the box. We added 2 bacteria in the process so the answer is 2.

For the second sample, we can put one in the first morning and in the 4-th morning there will be 8 in the box. So the answer is 1.

<u>Codeforces Round 320 (Div. 2)</u> [<u>Bayan Thanks-Round</u>]

Finished

Practice



\rightarrow 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

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win ➤

Choose file: No file chosen

Submit

→ Last submissions Submission Time Verdict

Submission	Time	verdict
228473382	Oct/17/2023 00:20	Accepted
228471439	Oct/16/2023 23:45	Accepted
228467545	Oct/16/2023 22:50	Wrong answer on test 3

→ Problem tags

(bitmasks) (*1000)

No tag edit access

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→ Contest materials

- Announcement (en)
- Tutorial (en)