



## C. Hexadecimal's Numbers

time limit per test: 1 second

memory limit per test: 64 megabytes

One beautiful July morning a terrible thing happened in Mainframe: a mean virus Megabyte somehow got access to the memory of his not less mean sister Hexadecimal. He loaded there a huge amount of  $n$  different natural numbers from 1 to  $n$  to obtain total control over her energy.

But his plan failed. The reason for this was very simple: Hexadecimal didn't perceive any information, apart from numbers written in binary format. This means that if a number in a decimal representation contained characters apart from 0 and 1, it was not stored in the memory. Now Megabyte wants to know, how many numbers were loaded successfully.

### Input

Input data contains the only number  $n$  ( $1 \leq n \leq 10^9$ ).

### Output

Output the only number — answer to the problem.

### Examples

input	<a href="#">Copy</a>
10	
output	<a href="#">Copy</a>
2	

### Note

For  $n = 10$  the answer includes numbers 1 and 10.

### → Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

### Codeforces Beta Round 9 (Div. 2 Only)

Finished

Practice



### → Virtual participation

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### → Submit?

Language: [GNU G++23 14.2 \(64 bit, ms\)](#)

Choose file: [Choose File](#) No file chosen

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### → Last submissions

Submission	Time	Verdict
<a href="#">325141583</a>	Jun/19/2025 14:46	Accepted

→ **Problem tags**

brute force implementation math

\*1200

No tag edit access

→ **Contest materials**

- Codeforces Beta Round #9
- Codeforces Beta Round #9
- Tutorial

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