Do Not love them

Farabi is a very much attentive student and as usual he gets cgpa 4 out of 4.

On these behalf He wants to arrange a party.

Though he is a good student he isn't a good person of pure heart. He hates too many people.

But the reason behind his hating others is weird.

His roll number is the last roll number in the class and it also indicate the number of student present in his class where roll number starts with 1.

He hates the person with roll number with whom the common divisor is equal to or grater than 2.

He doesn't want to invite them.

But he is confuse with the number of person he is going to invite.

Can you help him!!

Input

There will be only one line of input which is an integer n ($1 \le n \le 10^9$).

Output

Output the expected result in one line.

Example

Input:

1

Output:

1