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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS HACKS ROOM STANDINGS CUSTOM INVOCATION

C. Hack it!

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

Little X has met the following problem recently.

Let's define f(x) as the sum of digits in decimal representation of number x (for example,

$$f(1234) = 1 + 2 + 3 + 4$$
). You are to calculate $\sum_{i=l} f(i) \mod a$.

Of course Little X has solved this problem quickly, has locked it, and then has tried to hack others. He has seen the following C++ code:

This code will fail only on the test with $\sum_{i=l}^r f(i) \equiv 0 \pmod{a}$. You are given number a,

help Little X to find a proper test for hack.

Input

The first line contains a single integer a ($1 \le a \le 10^{18}$).

Output

Print two integers: l, r $(1 \le l \le r \le 10^{200})$ — the required test data. Leading zeros aren't allowed. It's guaranteed that the solution exists.

Examples input

input	Сору
46	
output	Сору
1 10	
input	Сору
126444381000032	
output	Сору
2333333 233333333333	

Codeforces Round #268 (Div. 1)

Finished

→ Practice?

Want to solve the contest problems after the official contest ends? Just register for practice and you will be able to submit solutions.

Register for 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 ACM-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

→ **Problem tags**

binary	search	constructive algorithms
math	*2800	
		No tag edit access

→ Contest materials

- Announcement (en)
- Tutorial (en)

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