Perfect Split

Task

When Onisilos of Salamis rose to free his land, an oracle told him: *"To win, you must divide your power in two yet keep your spirit whole"*. At first, Onisilos was puzzled by this phrase, but later realized its meaning.

The army of Onisilos consists of n soldiers. Onisilos defines the **spirit** of an army of size x as the sum of digits of the number x in decimal notation. For example, the spirit of the army of size 243 is $s(243) = 2 + 4 + 3 = 9$.

Onisilos needs to split his army into two parts, such that each part has the same spirit as the whole army. In other words, you need to find two positive integers a and b such that:

- $n = a + b$, and
- $s(a) = s(b) = s(n)$, where $s(x)$ is the sum of digits of the number x in decimal notation.

For example, if $n = 243$, you can choose $a = 216$ and $b = 27$, so $243 = 216 + 27$, and $2 + 1 + 6 = 2 + 7 = 2 + 4 + 3$.

Input format

The input contains one integer n without leading zeroes ($1 \leq n < 10^{100000}$). Note that this number may be huge.

Output format

Print two integers a and b that satisfy the required properties. If there are multiple solutions, output any of them. If there is no solution, output -1.

Examples

Input	Output
243	216 27
42	-1

Subtasks

This task contains four subtasks. To get the points for a subtask, your solution should pass all the tests in the corresponding subtask.

Subtask	Constraints	Points
1	$n \leq 10^6$	13
2	$n \leq 10^{50}$	19
3	$n \leq 10^{1000}$	32
4	No additional constraints	36