Problem J. Restore the sequence

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Vanya constructed a sequence f_i according to the following rule:

1. $f_0 = x$, $f_1 = y$;

2. $f_i = f_{i-1} + f_{i-2}$, $i > 1$.

Unfortunately, Vanya lost this sequence. However, he memorized one number N, which belongs to this sequence. He also remembers that all elements of the sequence are non-negative integers.

Help Vanya find such x and y, by which he can restore the sequence. Vanya understands that there can be many answers, so he wants the value of $x + y$ to be as small as possible, and in case there are several such pairs, x should be the minimum possible.

Input

The single line contains one integer N — the number that Vanya memorized.

$$1 \le N \le 10^6$$

Output

In the single line output two integers x and y — the initial parameters of the sequence.

Examples

standard input	standard output
42	0 2
19	3 2