

To nisu istine

Little Zvonimir is playing the following game. Using a pocket calculator, he enters a positive integer K and presses "+". The calculator still shows the number K . Then again he enters the number K . After pressing the "+" key for the second time, the result is: $K + K$. The game goal is to obtain a number, consisting of equal digits only, by repeating this operation many (possibly 0) times. But soon he got bored of pressing same button so many times.

Soon, his friends Dominik and Mislav came and he presented his problem to them. They talked about his problem for a few seconds and they knew the solution. Zvonimir was so upset and he screamed: "To nisu istine", and he placed a bet that their solution is incorrect. Please solve this problem so they can confirm that Zvonimir was wrong.

Input

On the standard input, a positive integer K is given. On the standard input, a positive integer K is given. In each test case the following inequality holds $1 \leq K \leq 10^{18}$.

Output

If reaching the goal is impossible, print "Impossible". If possible, a line of the standard output should contain two integers separated by a space: the first is the digit itself and the second is the amount of digits of the obtained number.

Example

Input:

37

Output:

1 3

Explanation:

$37 + 37 + 37 = 111$