Problem A
1's For All

The *complexity* of an integer is the minimum number of 1's needed to represent it using only addition, multiplication and parentheses. For example, the complexity of 2 is 2 (writing 2 as $1+1$) and the complexity of 12 is 7 (writing 12 as $(1+1+1)\times(1+1+1+1)$). We'll modify this definition slightly to allow the concatenation operation as well. This operation (which we'll represent using ©) takes two integers and "glues" them together, so $12 \copyright 34$ becomes the four digit number 1234. Using this operation, the complexity of 12 is now 3 (writing it either as $(1 \copyright 1)+1$ or $1 \copyright (1+1)$). Note that the concatenation operation ignores any initial zeroes in the second operand: $1 \copyright 01$ does not result in 101 but results in 11.

We'll give you 1 guess what the object of this problem is.

Input

Each test case consists of a single line containing an integer n, where $0 < n \leq 100\,000$.

Output

Output the complexity of the number, using the revised definition above.

Sample Input 1	Sample Output 1
2	2

Sample Input 2	Sample Output 2
12	3