Another Longest Common Subsequence Problem

Given a non-negative integer **X**. Calculate the smallest non-negative integer **Y**, such that **Y** <= **X**, and the length of the longest common subsequence (not necessarily continuous) of **string(Y)** and **string(X-Y)** is maximum possible, where **string(T)** denotes the decimal notation of number **T** without any leading zeroes.

Input

Multiple test cases. Each test case contains one line with one integer **X** ($0 <= \mathbf{X} <= 10^{16}$).

Output

For each test case output one line with one integer **Y**.

Example

Input:
1001
500

Output:
91
250