Nth Natural Number

Given a positive integer n. You have to find **n^{th}** natural number after removing all the numbers containing the digit **9**.

Examples :

Input: n = 8
Output: 8
Explanation: After removing natural numbers which contains digit 9, first 8 numbers are 1,2,3,4,5,6,7,8 and 8^{th} number is 8.

Input: n = 9
Output: 10
Explanation: After removing natural numbers which contains digit 9, first 9 numbers are 1,2,3,4,5,6,7,8,10 and 9^{th} number is 10.
Expected Time Complexity: O(logn)
Expected Auxiliary Space: O(1)

Constraints:
$1 \le n \le 10^9$
Try more examples