Problem L: Largest Number

Time limit: 3s; Memory limit: 512 MB

You are given an integer N. Arrange the numbers 1, 2,…, N (all written in decimal representation) in a way so that the resulting number, written in decimal expansion, is the largest. For example, if N = 10, the resulting number is 98765432110.

Given two integers N and K, find the K-th leftmost digit from such number representation, or -1 if the resulting number has less than K digits.

Input
- The first line contains an integer T ($1 \leq T \leq 100$), the number of test cases.
- Each following T lines, each contains two numbers N and K ($0 < N, K \leq 10^{18}$).

Output
- For each test case, output the K-th leftmost digit of the resulting number on a single line, or -1 if that digit does not exist.

Sample

Input	Output
3	9
10 1	1
10 10	-1
5 7	