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E. Sum of Digits

time limit per test: 2 seconds

memory limit per test: 512 megabytes

input: standard input

output: standard output

Let $f(x)$ be the sum of digits of a decimal number x .

Find the smallest non-negative integer x such that $f(x) + f(x + 1) + \dots + f(x + k) = n$.

Input

The first line contains one integer t ($1 \leq t \leq 150$) — the number of test cases.

Each test case consists of one line containing two integers n and k ($1 \leq n \leq 150$, $0 \leq k \leq 9$).

Output

For each test case, print one integer without leading zeroes. If there is no such x that $f(x) + f(x + 1) + \dots + f(x + k) = n$, print -1 ; otherwise, print the minimum x meeting that constraint.

Example

input	Copy
7 1 0 1 1 42 7 13 7 99 1 99 0 99 2	
output	Copy
1 0 4 -1 599998 9999999999 7997	

Educational Codeforces Round 90 (Rated for Div. 2)

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

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brute force constructive algorithms dp
greedy *2200

No tag edit access

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