C. Given Length and Sum of Digits...

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

You have a positive integer m and a non-negative integer s. Your task is to find the smallest and the largest of the numbers that have length m and sum of digits s. The required numbers should be non-negative integers written in the decimal base without leading zeroes.

Input

The single line of the input contains a pair of integers m, s ($1 \le m \le 100, 0 \le s \le 900$) — the length and the sum of the digits of the required numbers.

Output

In the output print the pair of the required non-negative integer numbers — first the minimum possible number, then — the maximum possible number. If no numbers satisfying conditions required exist, print the pair of numbers "`-1 -1`" (without the quotes).

Examples

input
2 15
output
69 96

input
3 0
output
-1 -1