

Problem B. Nein

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

Given k and n , find the n -th positive integer x such that the decimal representation of $x \cdot \underbrace{999 \dots 9}_k$ doesn't contain any 9.

Input

The only line contains two integers k and n ($1 \leq k \leq 18$, $1 \leq n \leq 10^{18}$).

Output

Print the answer.

Examples

standard input	standard output
1 1	2
1 8	9
1 9	12
1 10	13
5 1	11112
5 84	11235
5 668	12345
5 733942	2281488

Note

For $k = 1$, the sequence of all valid numbers starts with 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, ...