

Prefix Divisible by Suffix

Input file: standard input
Output file: standard output
Time limit: 8 seconds
Memory limit: 512 megabytes

You are given two positive integers n and c .

Consider a positive integer x and its decimal representation $x = \overline{(x_{k-1}x_{k-2}\dots x_1x_0)}_{10}$ (without leading zeros). We call the number x *good* if its decimal representation can be divided into non-empty prefix $p = \overline{(x_{k-1}\dots x_i)}_{10}$ and non-empty suffix $s = \overline{(x_{i-1}\dots x_0)}_{10}$ (for some $0 < i \leq k - 1$), such that p is divisible by $s + c$. Note, that $x_{i-1} = 0$ is possible.

Calculate the number of good integers from 1 to n .

Input

The only line contains two positive integers n and c ($1 \leq n \leq 10^{14}$, $1 \leq c \leq 10^4$).

Output

Print a single integer — the number of good integers from 1 to n .

Examples

standard input	standard output
20 1	2
111 4	9
1111 10	75
1000000 7	111529

Note

In the first test, good numbers are 10, 20.

In the second test, good numbers are 40, 51, 62, 73, 80, 84, 95, 101, 106.