Problem B. Banana Sambuca

Input file:	*standard input*
Output file:	*standard output*
Time limit:	4 seconds
Memory limit:	256 mebibytes

You are given a string s consisting of digits and a prime number K. Let us define string w as concatenation of infinitely many strings s ($w := s + s + s + \ldots$). Your task is to find the minimal nonnegative integer which is a multiple of K such that its decimal representation is a substring of w, or detect that such a number does not exist.

Input

The first line of input contains a non-empty string s that consists of not more than $4 \cdot 10^5$ digits.

The second line contains a prime number K ($1 \le K \le 4 \cdot 10^5$).

Output

Print one line with a single integer on it: the answer to the problem (without leading zeroes) if it exists and -1 otherwise.

Example

standard input	standard output
74 3	474