Problem G. Greedy String Match

Input file:	`stdin`
Output file:	`stdout`
Time limit:	1 second

Given a long string and a set of keywords, you are asked to find non-overlapped matches of these keywords in the given string. Although there are several dynamic programming algorithms can maximize the total number of matched characters, you are NOT going to do that in this problem, considering the efficiency.

Alternatively, you are going to implement a greedy algorithm: from the left to the right, try to match the longest keyword starting from every non-matched character. In the end, print the total number of matched characters.

Input

The first line of input contains the long string S ($1 \leq |S| \leq 10^5$). The second line contains an integer N, i.e., the number of keywords ($1 \leq N \leq 10^4$). In next N lines, there is a single keyword per line. The lengths of these keywords are no longer than 100. All strings consist of only lowercase English letters.

Output

For each test case, print a line of the total number of matched characters.

Examples

stdin	stdout
thisicpccontestissooocoooool 3 icpc so cool	6
thisisanoverlapcase 4 this isis is san	6