**A4 ==> Clown**

Recently on the news a report about the arrest of a clown who has gone insane because of his job was aired. The clown is now in a mental hospital. Intrigued and bored, Ivancho started wondering whether there isn’t a link between insanity and the way people think under the effect of various drugs.

For this, Ivancho will need a program clown , which, with a given string S of length N - the words of the clown, integer Q and Q strings - the words of some person as a result of drug use - each of length M[i]. The program must answer for each of the Q strings how many times it has been encountered in S. Ivancho will use this data to impact the whole field of psychology and become famous all around the world.

**Input**

At the first line of the file clown.in is the string S. At the second - the integer Q. At the next Q lines there is exactly one string.

**Output**

You must print in the file clown.out *Q* integers - how many times each of the Q strings has been encountered - in the same order as the input.

**Constraints**

1 <= N <= 500000 (5 \* 10^5)

1 <= Q <= 20

1 <= M[i] <= 5000

**Examples**

|  |  |
| --- | --- |
| **Input (clown.in)** | **Output (clown.out)** |
| miraclesinmississippihonk5inimiismotherfaygo | 16220 |
| nanananabatman3nananaan | 344 |