

Problem E. Master Zhu and Palindromes

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

Master Zhu has a string $S[1, \dots, n]$. This string can contain only the first five lowercase English letters. Another peculiar property of S is that the length of each palindrome substring in S is less than 20.

For a palindrome string $P[1, \dots, k]$, its *tail* is the string $P[\lfloor k/2 \rfloor + 1, \dots, k]$. For example, the tail of the string “aba” is “ba”, and the tail of the string “caac” is “ac”.

Given L , R , and a string T , Master Zhu wants you to find the number of different palindrome substrings in $S[L, \dots, R]$ such that T is a prefix of their tails. Here, two substrings are considered different if their starting or ending positions in S differ.

Input

The first line of input contains one integer C , the number of test cases ($1 \leq C \leq 50$).

The first line of each test case contains a string S consisting only of the first five lowercase English letters ($1 \leq |S| \leq 10^5$, the length of each palindrome substring in S is less than 20).

The second line contains one integer q , the number of queries ($1 \leq q \leq 10^5$). Each of the next q lines contains two integers L and R and a string T consisting only of the first five lowercase English letters ($1 \leq L \leq R \leq |S|$, $1 \leq |T| \leq 10$).

Output

For each query, print a single line with a single integer: the number of different palindrome substrings in $S[L, \dots, R]$ such that T is a prefix of their tails.

Example

standard input	standard output
1	3
bceaeddee	2
5	0
5 8 e	4
3 5 e	1
1 2 a	
5 9 d	
5 9 de	