



Counting weak RNA sequences

Time Limit 1 second

Problem

An interesting problem in the production of proteins using bioengineering is to be able to determine when a protein can be efficiently created by a micro organism and when it is not. Some hypothesis lead that a protein will have low production levels when the transfer RNA sequence section has several bases of adenine (A) and thymine (T) chained together. This due to the fact that adenine is chained to thymine by 2 hydrogen links, while cytosine (C) is chained to guanine (G) by 3 links.

A section of the RNA sequence is any substring from the RNA sequence, this is, is formed of consecutive RNA bases from the RNA sequence. For example in the RNA sequence 'ATCTC', 'ATC' is a section of the RNA sequence while 'ACC' is not as these chars are not consecutive in the RNA sequence.

A complementary section of a RNA sequence exists only on those sequences that have only two types of bases and is defined as the sequence that contains the contrary base in the same position, examples of complementary RNA sequences are: 'TAAAA' and 'ATTTT', 'TATATA' and 'ATATAT'.

Normal ending transcription sections usually contain only bases of adenine and thymine, however it is not that usual that the RNA sequence contain also the complementary sequence of an ending transcription ection, this is why we consider a weak RNA sequence as a section of 10 elements from the RNA sequence that contains only adenine and thymine and that its complementary section exists in the given RNA sequence.

Given a RNA sequence your task is to find how many weak RNA sequences exists in it.

Input

The first line of input contains a single number T the number of test cases to follow. The next T lines contain each a RNA sequence, the RNA sequence contains only the characters 'A' for adenine, 'C' for cytosine, 'T' for thymine, and 'G' for guanine and it's length is no longer than 10^6 .

Output

For each test case print in one line the number of weak RNA sequences that exist in the given RNA sequence.

Sample Input 1	Sample Output 1
2 ATATATATATA GGCAAAGATATCGATCG	2 0