

once upon a time in china
Problem Name : ONCE UPON A TIME IN CHINA
Time Limit: 1s

Once upon a time in china , there lived Wu yangwi.He had two children Bu yangwi and Yu yangwi.Bu yangwi had one child Su yangwi who had no child, while Yu yangwi had two children Hu yangwi & Ju yangwi , Hu yangwi had(this goes on).This is too confusing and we want to know how many generations they existed ,given information about yangwi family. you have to write a program to find that.

The tree will be represented in the following specification.
A specification will be sequence of digits(without spaces).
The first digit in the specification tells the number of children of the first yangwi ancestor.
Then follows the specification of the first child.
Then follows the specification of the next child and so on ...

And government of china had imposed a strict rule restricting the number of children , one can have , to TWO.

INPUT:

First line contains the number of test cases.Each test consists of a string of charaters (without spaces) representing the specification(it will contain either '0' or '1' or '2').length of the string will be less than 100.

OUTPUT:

For each test print an integer in a separate line,the number of generations for which the family existed.

Sample Input:

```
4
10
200
210200
110
```

Sample Output:

```
2
2
3
3
```

EXPLANATION:

for the third test case , first member had two children , the first child had one child who had no child, the second child had two children , both of them have no child.So this faily existed for three generations

once upon a time in china