Problem F. ConcatFibos

Input:	Standard
Output:	Standard
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Peter and John are having fun with the the succession of Fibonacci numbers that fit on 64-bit signed integer.

Fibonacci sequence is defined as:

$$F_n = \begin{cases} 1 & if \ \ n = 0 \\ 1 & if \ \ n = 1 \\ F_{n-1} + F_{n-2} & if \ \ n \geq 2 \end{cases}$$

The first terms of the sequence are: 1, 1, 2, 3, 5, 8, 13, 21, and so on.

After a while, Peter and John decided to create the **concatfibos** that are numbers built from the concatenation of two terms of the Fibonacci sequence, more formally, a term F_i and another F_k can be concatenated to create a concatfibo as F_iF_k or F_kF_i with $i \neq k$.

For example:

$$F_i = 8 \qquad F_k = 55$$

They can be concatenated as $F_iF_k = 855$ or $F_kF_i = 558$.

For example:

The concatfibo 213 may come from $F_i = 2$ and $F_k = 13$ as $F_iF_k = 213$ or from $F_i = 21$ and $F_k = 3$ as $F_iF_k = 213$.

Thus, they started to generate all the concatfibos without repetition (unique), and decided to create a greater challenge so John writes an alphanumeric string in which Peter must count the number of unique concatfibos that are contained as a subsequence of the given string.

A string T is a subsequence of another string S if deleting some elements from S and without changing the order of the remaining elements, it is possible to get T.

Help Peter discover how many unique concatfibos are contents as a subsequence of the given string.

Input

There are multiple test cases. Each test case contains a string S ($1 \leq |S| \leq 10^6$) consisting of lowercase and uppercase letters from English alphabet and digits between 0 and 9.

Output

For each test case, print exactly one line containing one integer representing how many unique concatfibos are contents as a subsequence of the given string.

Example

Input	Output
1AB3RgtR4WkE5	6
AR4KD7	0
Scc2Ls1HjMg3K	4

Explanation

In the first test case, the concatfibos inside the string are 13, 15, 35, 134, 135 and 345.

In the second test case, the string does not contain any concatfibo.

Finally, in the third test case, the concatfibos inside the string are 13, 21, 23 and 213.

Use fast I/O methods