All strings in Chefland are beautiful because they are binary strings (a binary string contains only characters '0' and '1'). The *beauty* of a binary string S is defined as the number of pairs (i, j) $(1 \le i \le j \le |S|)$ such that the substring $S_i, S_{i+1}, \ldots, S_j$ is special.

For a binary string U, let's denote the number of occurrences of the characters '1' and '0' in U by cnt_1 and cnt_0 respectively; then, U is *special* if $cnt_0 = cnt_1 \cdot cnt_1$.

Today, Chef's friend Araspa is celebrating her birthday. Chef wants to give Araspa the most beautiful binary string he can find. Currently, he is checking out binary strings in a shop, but he needs your help to calculate their beauties. Tell Chef the beauty of each binary string he gives you.

Input

- The first line of the input contains a single integer T denoting the number of test cases. The description of T test cases follows.
- The first and only line of each test case contains a single string S.

Output

For each test case, print a single line containing one integer — the beauty of the string S.

Constraints

- $1 \le T \le 10$
- $1 \le |S| \le 10^5$
- each character of S is '0' or '1'

Example Input

```
2
010001
10
```

Example Output

```
4
1
```

Explanation

Example case 1: The special substrings correspond to $(i, j) = (1, 2), (1, 6), (2, 3), (5, 6)$.