Isosceles Triangles

Sevenkplus has a regular polygon. Each vertex of the polygon has a color, either white or black. Sevenkplus wants to count the number of isosceles triangles whose vertices are vertices of the regular polygon and have the same color.

Input Format

The first line contains an integer T. T testcases follow.
For each test case, there is only one line, which consists of a 01-string with length >= 3. Number of vertices `n` of the regular polygon equals length of the string. The string represents color of vertices in clockwise order. `0` represents white and `1` represents black.

Output Format

For each test case, output one line in the format `Case #t: ans`, where `t` is the case number (starting from 1), and `ans` is the answer.

Constraints

Sum of all n in the input <= 10^6.

Sample Input

```
5
001
0001
10001
111010
1101010
```

Sample Output

```
Case 1: 0
Case 2: 1
Case 3: 1
Case 4: 2
Case 5: 3
```

Explanation

In case 5, indices of vertices of the three monochromatic isosceles triangles are (0,3,5), (1,3,5) and (2,4,6) (assuming indices start from 0).

Timelimits

Timelimits for this challenge is given here