
Problem A. 0689

Input file: **standard input**
Output file: **standard output**
Time limit: **1 second**
Memory limit: **256 megabytes**

We call a string as a 0689-string if this string only consists of digits ‘0’, ‘6’, ‘8’ and ‘9’. Given a 0689-string s of length n , one **must** do the following operation exactly once: select a non-empty substring of s and rotate it 180 degrees.

More formally, let s_i be the i -th character in string s . After rotating the substring starting from s_l and ending at s_r 180 degrees ($1 \leq l \leq r \leq n$), string s will become string t of length n extracted from the following equation, where t_i indicates the i -th character in string t :

$$t_i = \begin{cases} s_i & \text{if } 1 \leq i < l \text{ or } r < i \leq n \\ '0' & \text{if } l \leq i \leq r \text{ and } s_{l+r-i} = '0' \\ '6' & \text{if } l \leq i \leq r \text{ and } s_{l+r-i} = '9' \\ '8' & \text{if } l \leq i \leq r \text{ and } s_{l+r-i} = '8' \\ '9' & \text{if } l \leq i \leq r \text{ and } s_{l+r-i} = '6' \end{cases}$$

What’s the number of different strings one can get after the operation?

Input

There are multiple test cases. The first line of the input contains an integer T , indicating the number of test cases. For each test case:

The first and only line contains a 0689-string s ($1 \leq |s| \leq 10^6$).

It’s guaranteed that the sum of $|s|$ of all test cases will not exceed 10^7 .

Output

For each test case output one line containing one integer, indicating the number of different strings one can get after applying the operation exactly once.

Example

standard input	standard output
2	8
0689	2
08	

Note

We hereby explain the first sample test case.

Substring	Result	Substring	Result
0	0689	68	0899
6	0989	89	0668
8	0689	068	8909
9	0686	689	0689
06	9089	0689	6890

It’s easy to discover that we can get 8 different strings after the operation.