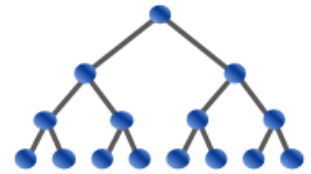


USA Computing Olympiad



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USACO 2023 JANUARY CONTEST, BRONZE

PROBLEM 3. MOO OPERATIONS

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Contest has ended.

Submitted; Results below show the outcome for each judge test case

*	*	*	*	*	*	*	*	*	*	*
1	2	3	4	5	6	7	8	9	10	11
31.8mb	31.8mb	32.1mb	31.8mb	31.8mb	31.8mb	31.8mb	32.0mb	31.8mb	31.9mb	32.0mb
183ms	194ms	193ms	203ms	193ms	192ms	199ms	199ms	202ms	177ms	206ms

English (en) ▼

Because Bessie is bored of playing with her usual text string where the only characters are 'C,' 'O,' and 'W,' Farmer John gave her Q new strings ($1 \leq Q \leq 100$), where the only characters are 'M' and 'O.' Bessie's favorite word out of the characters 'M' and 'O' is obviously "MOO," so she wants to turn each of the Q strings into "MOO" using the following operations:

1. Replace either the first or last character with its opposite (so that 'M' becomes 'O' and 'O' becomes 'M').
2. Delete either the first or last character.

Unfortunately, Bessie is lazy and does not want to perform more operations than absolutely necessary. For each string, please help her determine the minimum number of operations necessary to form "MOO" or output -1 if this is impossible.

INPUT FORMAT (input arrives from the terminal / stdin):

The first line of input contains the value of Q .

The next Q lines of input each consist of a string, each of its characters either 'M' or 'O'. Each string has at least 1 and at most 100 characters.

OUTPUT FORMAT (print output to the terminal / stdout):

Output the answer for each input string on a separate line.

SAMPLE INPUT:

```
3
MOMMOM
MMO
MOO
```

SAMPLE OUTPUT:

```
4
-1
0
```

A sequence of 4 operations transforming the first string into "MOO" is as follows:

```
Replace the last character with O (operation 1)
Delete the first character (operation 2)
Delete the first character (operation 2)
Delete the first character (operation 2)
```

The second string cannot be transformed into "MOO." The third string is already "MOO," so no operations need to be performed.

SCORING:

- Inputs 2-4: Every string has length at most 3.
- Inputs 5-11: No additional constraints.

Problem credits: Aryansh Shrivastava

Language:

C ▼

Source File:

Choose File

No file chosen

Note: Many issues (e.g., uninitialized variables, out-of-bounds memory access) can cause a program to produce different output when run multiple times; if your program behaves in a manner inconsistent with the official contest results, you should probably look for one of these issues. Timing can also differ slightly from run to run, so it is possible for a program timing out in the official results to occasionally run just under the time limit in analysis mode, and vice versa. Note also that we have recently changed grading servers, and since our new servers run at different speeds from the servers used during older contests, timing results for older contest problems may be slightly off until we manage to re-calibrate everything properly.
