

4 Global Raining of Bididibus

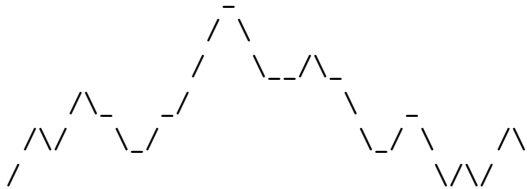
4.1 Problem

Bididibus is an ancient two-dimensional universe populated by the Bididibusians. The Bididibusians have their own 2D water, 2D mountains, 1D television, and even amazing new 2D cinemas!

These days, Bididibusian scholars warn the public about the risks of global raining, a climate catastrophe that would fill all the valleys of the universe with water.

Bididibus consists of blocks with uniform width and height. Bididibusian orography is described by a series of symbols, from left to right, indicating that the land rises one unit (represented by “/”), descends one unit (represented by “\”), or that it is flat (represented by “_”).

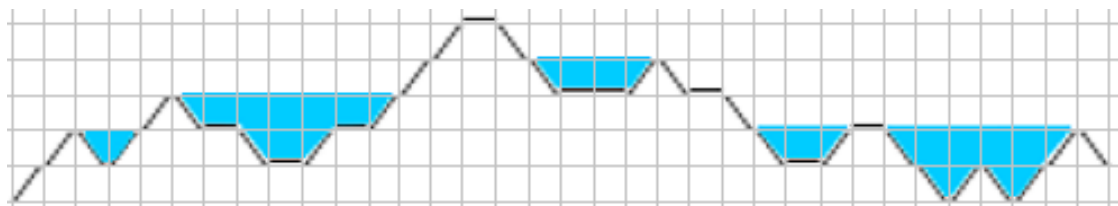
For example, we can have a 2D universe like this:



It goes without saying that the native geographers are big fans of ASCII art. They also use a simplified representation, where each column (from left to right) is replaced by the symbol it contains. For example, the simplified representation of the previous universe would be:

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//\//\_\_/_//\_\\\_/\\_\\//\//\
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After the global rain, water fills all the blocks of all valleys. If we represent water areas in blue, we would have the following:



Observe that a block with “/” or “\” partially filled with water corresponds to $1/2$ units of water. A block completely filled with water corresponds to 1 unit of water. For example, in the previous universe we have a total of 21 units of water. Also note that the

border regions do not suffer from global raining since they are not completely enclosed by mountains.

Given a simplified representation of the universe, your task is to compute the units of water that we would have after the global rain.

4.2 Input

The first line of the input contains an integer T ($1 \leq T \leq 1000$), the number of test cases.

Each test case consists of a string composed from three possible characters: “/”, “\” or “_”, followed by a newline character. There will be at least one and at most 10000 characters in each input string.

4.3 Output

For each test case, the output should contain a single line with an integer indicating the amount of water in the universe in units after the raining.

4.4 Sample Data

[illegible]