# **Problem 1 – Dynamic Programming**

This task is not a Dynamic Programming problem.

You are part of a pyramid scheme and want to calculate the total number of money you owe to the participants. Before you go to jail, you will need to write a program, which will find the sum of the money you owe.

In the pyramid, every person earns a commission for each referred friend. If a person doesn’t have referred friends, she earns exactly $1.00. If she has referred friends, she earns money equal to the total sum of her direct referrals multiplied by the total number of the direct referrals. One person can be referred by many people.

You will be given the total number of people participating in the pyramid (marked with **C**) and a list of the direct referrals for every person. The list will be a string containing `**-**` and `**R**`. If on row **i** and column **j** the letter is `**R**`, then person **j** is a direct referral to person **i**.

Find the total sum you owe to these people.

#### Input

* The input data should be read from the console.
* On the first line there will be the total number of participants in the pyramid - **C**.
* On the next **C** lines there will be exactly **C** symbols, each of them either `**R**` or `**-**`.
* The input data will always be valid and in the format described. There is no need to check it explicitly.

#### Output

* The output should be printed on the console.
* Output the total sum of money you owe to the participants.

#### Constraints

* **C** will be a non-negative integer between **1** and **50**, inclusive.
* A person will never be a direct referral to herself.
* If person **A** referred person **B**, then in the input it will never occur that person **B** referred person **A**.
* Allowed working time for your program: **0.1 seconds**. Allowed memory: **16 MB**.

#### Examples

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | | **Output** | **Comment** |
| 1  - | | $1.00 | Only one person in the pyramid and you owe her $1.00. |
| **Input** | **Output** | | **Comment** |
| 4  --R-  --R-  ----  -RR- | $7.00 | | 4 people in the pyramid. 0, 1 and 3 referred 2. 3 refered 1. 2 does not have any referrals.  For 2 – we owe $1.00  For 0 – we owe the money of 2 multiplied by 1 - $1.00  For 1 – we owe the money of 2 multiplied by 1 - $1.00  For 3 – we owe the money of 2 and 1 multiplied by 2 - $4.00 |
| **Input** | | **Output** | **Comment** |
| 6  ------  R-R--R  R----R  ------  R-R---  R--R-- | | $83.00 | - |