

Dirty Diaper (diaper)

Stewie is a baby with a very specific goal: he wants to ruin his mother Lois's day by maximizing the number of diaper changes. Lois feeds Stewie N times throughout the day, numbered from 0 to $N - 1$. During the i -th feeding, she gives him F_i grams of food of type T_i . The food type T_i is one of two things:

- 'M' – Milk: Stewie can use this to fill his bladder.
- 'B' – Baby food: Stewie can use this to fill his... lower digestive tract.

Lois is a responsible parent: **before every single feeding**, she checks Stewie's diaper and changes it if it is dirty. To make a diaper dirty between two feedings, Stewie must perform one of the following "actions":

- *Pee*: Requires 50 grams of previously consumed Milk.
- *Poop*: Requires 80 grams of previously consumed Baby food.

Stewie starts the day with an empty stomach. He can store an unlimited amount of milk and baby food indefinitely. Once a diaper is changed, it is clean again. If Stewie performs multiple actions between two feedings, it still only counts as one diaper change (Lois only checks once before the next meal).

Determine the **maximum** number of diaper changes Stewie can achieve.



Figure 1: Lois and Stewie.

☞ Among the attachments of this task you may find a template file `diaper.*` with a sample incomplete implementation.

Input

The first line contains an integer N , the number of feedings.

The next N lines each contain an integer F_i and a character T_i (separated by a space), representing the amount and type of food given at the i -th feeding.

Output

Print the maximum number of diaper changes Stewie can trigger.

Constraints

- $1 \leq N \leq 100$.
- $1 \leq F_i \leq 1000$ for each $i = 0 \dots N - 1$.
- T_i is either 'M' or 'B'.

Scoring

Your program will be tested against several test cases grouped in subtasks. In order to obtain the score of a subtask, your program needs to correctly solve all of its test cases.

- **Subtask 1** (0 points) Examples.

- **Subtask 2** (30 points) Lois only gives Stewie Milk ('M').

- **Subtask 3** (10 points) Stewie receives enough food at each feeding to perform an action immediately.

- **Subtask 4** (60 points) No additional limitations.


Examples

input	output
3 100 M 30 M 80 B	2
6 40 M 40 M 20 M 300 B 10 B 10 B	4

Explanation

In the **first sample case**, Stewie triggers 2 changes. After Feeding 0, he uses 50g of his 100g milk to soil his diaper, which Lois changes before Feeding 1. He then uses another 50g of his remaining milk supply to ensure a second change before Feeding 2. Although he receives baby food at the final feeding, there are no subsequent checks for Lois to perform.

In the **second sample case**, Stewie achieves 4 changes by rationing his supplies. He cannot trigger a change before Feeding 1 as he only has 40g of milk. By Feeding 2, he has 80g total and uses 50g for the 1st change. After receiving more milk at Feeding 2, he has enough for a 2nd change before Feeding 3. Upon receiving 300g of baby food at Feeding 3, he strategically uses only 80g per interval to trigger the 3rd and 4th changes before the final two feedings, rather than wasting his surplus all at once.