

Problem C: My Cabbages!

Cai, a cabbage salesman in the Earth Kingdom, has terrible luck with his cabbage cart being routinely destroyed. Each time that it's destroyed, he loses half of his cabbages, rounded down. A lost cabbage is one that is smashed and no longer able to be sold. When he purchases cabbages from his supplier, he always buys 15 at a time.



Given a list of cabbage events, either a purchase of 15 cabbages, or half of his stock being destroyed, you should compute how many cabbages he has left. Cai always starts with zero cabbages and never actually sells any.

Input

The first line of input is an integer, N , giving the number of cabbage events in the input. Following that are N lines, each giving one cabbage event which is either the word “purchase” or the word “smash!”.

Output

You should output a single integer, giving the number of cabbages that are left at the end.

Sample Input

```
6
purchase
purchase
smash!
purchase
smash!
smash!
```

Sample Output

```
8
```