



# Problem A

## A - A Little Leftover Pizza

Time Limit: 1 second, Memory limit: 2G

The CS department has just had a big party and ordered too much pizza. Now it is time to put away the leftovers. They ordered a number of small, medium, and large pizzas, and there are still slices remaining in some or all of the pizza boxes. A small pizza comes in 6 slices, a medium pizza in 8 slices, and a large pizza in 12 slices. To save space, you can combine the leftover slices from the same size pizzas into a box of the right size, but you can't put a slice into a box for a different sized pizza, and you can't put more slices into a box than it originally held. What is the smallest number of boxes you will need to hold all the leftovers?

### Input

The first line of input contains one positive integer  $n$  ( $n < 1000$ ), the number of pizzas that were ordered. Each of the following  $n$  lines contains two items  $s_i$  and  $l_i$  (separated by a space) representing the leftovers for a given pizza.  $s_i$  is a string S, M, or L representing the size of pizza  $i$ , and  $l_i$  is an integer representing the number of leftover slices for pizza  $i$ . You can assume that each  $l_i$  is between zero and the original number of slices of that size pizza, inclusive.

### Output

Output a single number, the fewest possible total boxes that can hold the leftover pizza according to the constraints given above.

#### Sample Input 1

3 S 0 M 5 L 0	1
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#### Sample Output 1

#### Sample Input 2

3 S 3 S 4 S 2	2
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#### Sample Output 2

#### Sample Input 3

4 S 1 M 1 M 3 L 1	3
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#### Sample Output 3



**Sample Input 4**

4
L 6
M 2
M 6
L 6

**Sample Output 4**

2
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