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	Sample Output 1
3 S 0 M 5 L 0	1

Sample Input 2	Sample Output 2
3 S 3 S 4 S 2	2

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

Sample Input 4	Sample Output 4
4 L 6 M 2 M 6 L 6	2