Tobbe the half-witted Wizard of CSIE

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1. Topic

Stack, Postfix and Infix

2. Description

    Once upon a time, there was a Swedish man called Tobbe. He came from the north and traveled across the globe to get to the beautiful island of Taiwan (Formosa). There he encountered a dark wizard named Roger who tried to instruct him in the art of dark magic (programming). However, Tobbe wasn't a very quick-witted apprentice, and had significant trouble mastering the spell of INTOPO (a dark incantation that allows you to convert infix notation to postfix notation). We should also mention that he is very fond of ducks (this has zero relevance to the problem). Help Tobbe master this spell!

3. Input and output format

Input:
N
p_1
p_2
....
Output:
T_1
T_2
....

N: Number of spells. (<= 20)
p_i: Infix expression to convert to postfix. Includes the characters (,), *, /, +, - and integers greater than 0 and less than 10^4 ($0<p<10^4$). Length of string p_i is between 0 and 100 ($0<p≤100$).
T_i: The Postfix notation equivalent of p_i.
Note: All characters (except for integers >= 10) in the input and output are separated by a space. Refer to the sample input and output for more clarity.

4. Sample input and output

Input:
2
7 + 1 * (3 / (5 + 1) * 6)
13 + 37 * 2 / 2 + 8 * (2 + 4)

Output:
7 1 3 5 1 + / 6 * * +
13 37 2 * 2 / + 8 2 4 + * +

5. Time and memory limit

Time: 1 sec.
Memory: N/A

6. Program usage:

Your program should take standard input and generate standard output:

myProgram < input.txt > output.txt