

A. Do problem 8.4 (about closure properties of  $PSPACE$ ).

The space complexity class  $L$  consists of all problems that can be solved in logarithmic space. To make such a concept meaningful, we have to ignore the space used to store the input. For a precise definition of  $L$ , see Section 8.4 of our textbook. We will now do an enhanced version of problem 8.17.

B. Deciding whether a string of parentheses is a valid nest is one of our classic PDA problems. How much stack space did our PDA solution use?

C. Solve problem 8.17 (about valid parenthesis nests).