7. Consider the following Grammar:

<S> ::= wc<S>
<S> ::= {<L>}
<S> ::= s;
<L> ::= <L><S>
<L> ::= ε

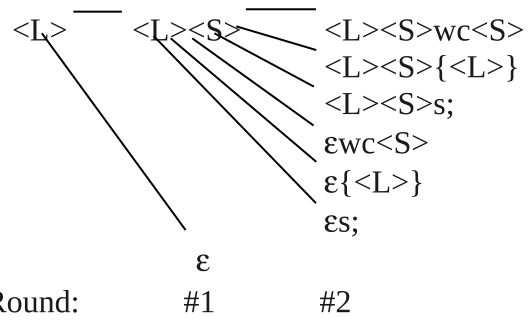
Part 1:
Letting <S> be the start symbol, list all possible strings consisting only of terminals for productions that can be reached by applying:

a) 1 round of productions
b) 2 rounds of productions
c) 3 rounds of productions.

Part 2:
Do the same for <L>, assuming that it is the start symbol.

A "round of productions" applied to a string s of terminal and non-terminal symbols is a set of strings of terminal and non-terminal symbols that can be reached by applying productions to all non-terminals in s. In subsequent rounds, start with all strings of terminals and non-terminals generated in the previous round.

To get you started, suppose we start with <L> and do two rounds.



The answer for 1 round of productions for <L> is ε, and the answer for 2 rounds of productions is s;. All other generated strings have one or more non-terminals in them and are therefore not "strings consisting only of terminals." Note that when we write strings of all terminals in our answer, we drop ε unless it stands alone.