

Preparation Activity PA08 – Context-Free Grammars (CFGs) and Pushdown Automata (PDAs)

1. Consider the following grammar G:

$S \rightarrow ASB$

$A \rightarrow aAS \mid a \mid \varepsilon$

$B \rightarrow SbS \mid A \mid bb$

- Draw a PDA that accepts the strings of $L(G)$ by empty stack. Use the method to convert CFGs in PDAs.
- Is the PDA deterministic or non-deterministic? Justify your answer.
- Transform the PDA into a PDA that accepts the strings of $L(G)$ by final state.