CMPE 350 - Spring 2016

PS 8 - 06.04.16

• For some $n \geq 1$, does there exist an n-state PDA which accepts finitely many strings, and at least one of those strings is of length n?

2.35 Let G be a CFG in Chomsky normal form that contains b variables. Show that if G generates some string with a derivation at least 2^b steps, $L(G)$ is infinite.

• A k-PDA is a pushdown automaton with k stacks. Show that 2-PDAs are more powerful than PDAs with only 1 stack.

• Prove that a PDA that has the ability to reverse the contents of its stack is more powerful than the ordinary PDA.