

CSci 3501 Assignment 9
Due Friday, November 21st in class

Problem 1 (5 points). Sipser, exercise 2.14 p. 156.

Problem 2 (5 points). Sipser, exercise 2.26 p. 157. This is a very important result for future material. Think carefully about it. You may start with an example, but your final result must be a proof. Hint: use Chomsky normal form.

Problem 3 (5 points). Construct a context-free grammar and a PDA for the following language: $(ab)^k(ba)^{k+1}$, $k \geq 0$. For instance, strings ba and $abbaba$ are in the language.

Problem 4 (4 points). Sipser, exercise 2.12 p. 156.

Problem 5 (6 points). Sipser, exercise 2.5 (parts b,c of 2.4 only!) p. 155.