COMP 301
Assignment 3
Due 10:30, Thursday, October 17, 2002
All problems are of equal value.

Reading
Sipser, Chapter 2.

Practice
Sipser, 2.1, 2.2, 2.4, 2.5, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.16, 2.17, 2.22, 2.23.

To Be Handed In

1. Sipser, 2.3.

2. For each of the languages in Sipser 2.6, show they are context-free by either constructing a PDA or a CFG.

3. Sipser, 2.15.

4. Sipser, 2.18.

5. What is the language generated by the following grammar? Prove your answer.

\[ S \to aS \mid Sb \mid bSa \mid \epsilon. \]

Bonus
Sipser, 2.26.