CSE 322 Spring'07: HW 3
Due back Friday April 20th

Reading Assignment: Sipser Section 1.4, converting a DFA/NFA to a Regular Expression (see notes posted on website).

Practice Problems: Exercise 1.29.

Problems for Submission:

1. Problem 1.21 (Eliminate one state at a time, and write down the resulting GNFA).

2. Let $S(n) = \sum_{i=1}^{n} i$. Prove that the following language is not regular:

$$L^+ = \{0^{S(n)} \text{ for } n \geq 1\}$$

   Let $P(n) = \prod_{i=1}^{n} i$. Prove that the following language is not regular:

$$L^\times = \{0^{P(n)} \text{ for } n \geq 1\}$$

3. Problem 1.46 parts a, c, d.

4. Problem 1.54

Next Week: The Myhill-Nerode theorem, Minimizing states in a DFA, Equivalence of two regular languages. Reading material for these topics is posted on the course website.