

Due at the start of class Thursday, March 6, 2009.

Problem 1. Do Exercises 2.25 (page 64) in Kinber and Smith.

Problem 2. Do Exercises 2.26 (page 64) in Kinber and Smith.

Problem 3. Consider the following regular expression:

$$a^*b^*(aa \cup bbb)^*$$

Convert this regular expression into a NDFA using the construction given in class.

Problem 4. Consider the following language over the alphabet $\Sigma = \{a, b\}$.

$$L = \{w \mid \text{all } a\text{'s in } w \text{ come before all } b\text{'s and } |w| \geq 1\}$$

- a. Give a DFA with at most four states that accepts L .
- b. Convert this DFA into a regular expression using the construction given in class. Simplify your final regular expression.