

CSCI 2400 – Models of Computation

Homework 4

Due: Thursday February 19

Problem 1. Use the pumping lemma to show that the following language is not regular:

$$L = \{www : w \in \{a, b\}^*\}$$

Problem 2. Use the pumping Lemma to show that the following language is not regular:

$$L = \{0^n10^n : n \geq 1\}$$

Problem 3. Is the following language regular? Prove your answer.

$$L = \{a^n b^l : n \geq 3l\}$$