

CSE 322
Winter Quarter 2001
Assignment 5
Due Friday, February 9, 2001

All solutions should be neatly written or type set. All major steps in proofs and algorithms must be justified.

1. (10 points) In this problem you will apply the pumping lemma to show that a language is not regular. Consider the language $P = \{0^n : n \text{ is prime}\}$. So $P = \{0^2, 0^3, 0^5, 0^7, \dots\}$. Use the pumping lemma to show that P is not regular.