

COMP 455  
Models of Languages and Computation  
Spring 2019  
Homework 5  
Due Tuesday, March 19, 2019

1. Problem 3.1.2, from the text, page 120, except that you should give a derivation of the string *abbabbaa* instead.
2. Problem 3.1.5, part (a), from the text, page 121.
3. Show that the following language is context-free by exhibiting a context-free grammar generating it:  $\{a^m b^n : m + 1 \leq n\}$ .

For this homework you may work in groups of up to four people and groups are encouraged to turn in only one paper with everyone's names in the group on it. This will make the work of the grader easier. However, people in different groups may not collaborate.

Those who want to be part of a group and can't find others may meet in the front after class and form groups, if you desire to. You may also send email to the TA and he will assign people to groups.