

# 計算理論 Theory of Computation (705 30400)

## Homework 5

Due 3:30 pm, June 9, 2010

1. Exercise 7 (a), (b), p. 280.
2. Exercise 6 (a), (b), p. 284.
3. Exercise 1 (a), (b), (c), (d), p. 295-296.
4. Exercise 2 (a), (b), (c), p. 296.
5. Exercise 3 (a), (b), p. 296.
6. Exercise 5, p. 296.
7. Exercise 2 (a), (b), (c), (d), p. 307-308.
8. Exercise 12 (a), (b) p. 321.
9. Let  $R$  be a regular language, and  $L$  be a context-free language. Is  $L - R$  context-free? Can  $L - R$  be regular?
10. Show that language  $\{a^{[n^2]} \mid n \geq 1\}$  is not a context-free language.

## 1 Homework and Exam Grades

Visit the following link to check your grades:

<http://spreadsheets.google.com/pub?key=tilflHotNwhyhQkW92tilcA>

Please let me and the TA know if you have any question.

## 2 PLEASE NOTE, NO EXCEPTION

- Homework is due **before the class begins** on June 9, 2010.
- Homework must be **computer typeset or neatly written**. Hand in **hardcopy**.
- You are expected to do the homework by yourself. Discussion among peers is encouraged but **copying from others is a shame**.