Exercises for Limits of Computational Learning

http://www.mpi-inf.mpg.de/departments/d1/teaching/ss12/learning/

Assignment 6

Deadline: Wed 14.6.2012, 10am

Exercise 1 (4pts) Show that

$$S_{\text{FinSup}} \cup S_{\text{SD}} \not\in \text{GBc}.$$ 

Exercise 2 (4pts) Let $$a, b \in \mathbb{N} \cup \{ \ast \}$$. Show that

$$\text{GEx}^a \subset \text{GEx}^b.$$ 

Exercise 3 (4pts) Show that

$$\text{GEx}^\ast \subset \text{GBc}.$$ 

Exercise 4 (4pts) Show the following three statements.

(a) $$\tau(\text{Cons}) \text{GBc} = \text{GBc}.$$ 

(b) $$\tau(\text{Cons}) \text{GFin} = \text{GFin}.$$ 

(c) $$\text{ItBc} = \text{GBc}.$$ 

Exercise 5 (4pts) Show one of the following two statements; showing both gives extra credit (4pts).

(a) $$\text{ItEx} \not\subseteq \text{GConfEx}.$$ 

(b) $$\text{GConfEx} \not\subseteq \text{ItEx}.$$