

Homework 5

Due at the *beginning* of class on Dec. 12

1. Arora-Barak, Exercise 11.2. (This result was mentioned in class, but without a rigorous proof.)
2. Arora-Barak, Exercise 11.8.
3. Arora-Barak, Exercise 11.11.
4. Give an example of a Karp reduction to an \mathcal{NP} -complete problem that is *not* parsimonious.
5. Prove formally that the problem of computing the permanent of positive integer matrices is in $\#\mathcal{P}$. (In the lecture notes I gave some initial hints, but they need to be fleshed out to give a complete proof.)