

Problem Set 5: Problem 16: Due Thursday March 16 at noon

Instructions: Do either **one** of the following problems. Of course you can do more than one if you wish, but one is enough.

I realize that the due date is after our last class meeting (next Tuesday). You can put your solution in my box, under my door, send it by email, or hand it to me in class on Tuesday (if you're done early). Skywriting also acceptable; please tell me where and when to look.

Problem 16b. Provide a direct perfect zero-knowledge proof, in the envelope model, for 3SAT. (By “direct” I mean that you should not reduce 3SAT to some other NP-Complete language.)

Problem 16c. Show that $\text{PCP}[O(\log n), O(\log n)] \subseteq \text{NP}$.