

# Lecture #12: Classical Reductions

## What Will Happen During the Lecture

### **Remember... You Had Homework!**

Students were asked to work through the following set of lecture notes before this lecture.

- Lecture Notes — “Classical Reductions”.

It is possible (but not guaranteed) that some — or, even, all — of the material in the lecture notes might be review material. However, it is also possible that all of it is new.

### **Activities During the Lecture Presentation**

A decision problem, resembling one of the decision problems considered in the lecture notes, will be introduced and — along with an appropriate encoding— used to define a language. A proof of the  $\mathcal{NP}$ -completeness of this language will be sketched.

Indeed, if time allows — and things go well — the students in the class will solve this problem — with the instructor helping, as needed.