1. The Partition Problem (PP) is described in Section 13 of the notes. Give a polynomial-time reduction from PP to the Subset Sum Problem.
2. Exercise set 0911 defines isomorphic graphs. Suppose that and are simple graphs. Say that is isomorphic to a subgraph of provided it is possible to remove zero or more vertices and zero or more edges from and get a graph that is isomorphic to . (When you remove a vertex , you must also remove all edges that are incident on .) The Subgraph Isomorphism Problem (SIP) is the following decision problem.

**Input.** Simple graphs and .

**Question.** Is isomorphic to a subgraph of ?

Prove that SIP is NP-complete. (**Hint.** Reduce from the Clique Problem.)