BU CLA CS 530: Analysis of Algorithms
Spring 1995

Problem Set 12 (due Friday 95.04.21 at 4:30 p.m.)

---

1. Exercise 36.5-4, page 960, in [CLR]. (Hint: SUBSET-SUM $\leq_{\mathrm{P}}$ PARTITION.)

2. Show that the Traveling-Salesman Problem (TSP) remains NP-complete if we restrict the cost function to satisfy the triangle inequality. The "triangle inequality" is defined on page 969, in [CLR]. (Hint: You may get some help by reading Exercise 37.2-1, page 973, in [CLR].)

3. Problem 36-1, page 961, in [CLR]. (Hints: The hints in the book are useful. But here are additional hints: (i) If $G = (V, E)$ is an undirected graph, then $V' \subseteq V$ is an independent set iff $V - V'$ is a vertex cover. (ii) In a bipartite graph, the size of a maximum matching is equal to the size of a minimum vertex cover. If you are going to use these hints, you should also prove them.)

Created: 95.04.12