

## HW Assignment 5 (Due date: November 14, Friday)

1. [Encoding, 10 points] Exercise 34.1-4, page 978.
2. [Graphs, 10 points] Exercise 34.2-2, page 983.
3. [NP, 10 points] Show that the Integer Factorization problem is in NP  
(*hint: use the fact that PRIMES is in P*).
4. [Reduction, 10 points] Exercise 34.3-2, page 994.
5. [Reduction, 10 points] Exercise 34.4-1, page 1002.
6. [NPC, 20 points] Exercise 34.5-1, page 1017.
7. [NPC, 10 points] Exercise 34.5-5, page 1017.
8. (\*) [Polynomial Time, 10 points] Exercise 34.1-5, page 978.