

1. (1 pt.)

- This *quick check* is **closed book, notes, etc.**
- You may use a 3 in. × 5 in. **reference card**, *hand-written by you*.
- Use the **classroom and textbook conventions** and terminology.

Read the above carefully; then write your name below:

2. (6 pts.) At the very beginning of the chapter on NP-Completeness, the textbook lists three pairs of problems such that the problems in each pair are very similar but one is easy and the other is hard.

List the problems in any two of those three pairs and indicate the easy and hard problems.

3. (2 pts.) Provide the textbook's definition of the *closure* of a language.

4. (1 pt.) Provide the textbook's definition of the complexity class *NP*.