1. Find a counterexample consisting of 4 points in the plane to the proposition that the closest pair algorithm (pg 6) produces a solution to the robot tour optimization problem (pg 5). Explain how the algorithm fails on your counterexample.

2. Exercise 1-6.
   Example of what the question is talking about: Let $S_p$ be the set of people who are friends with person $p$. Find the smallest number $k$ of people, $p_1, p_2, \ldots, p_k$, such that everyone in the world is a friend of at least one of them.

3. Exercise 1-11.
   Remind me to do the similar problem 1-12 in class

   This is the rather surprising identity that the square of the sum of the first $n$ positive integers is the sum of their cubes. You can establish this identity directly by induction or you can do exercise 1.10 using induction and follow up by using 1-10 and 1-12 to establish this identity. The second approach may be simpler.

5. 2-1.
   Remind me to do the similar problem 2-2 in class

6. 2-7. Explain your reasoning.

7. 2-11.