Today Reductions and space complexity.
Next class Space complexity. §§8.1–8.3. Midterm exam 2 on 2013-04-18.

1. List the members of your group below. Underline your name.

2. Using the textbook's method, reduce the following SAT instance to a SUBSET-SUM instance. Are the instances satisfiable? If so, depict corresponding solutions; otherwise explain why they are not satisfiable.

$$(x \vee y \vee \bar{z}) \wedge (\bar{x} \vee \bar{y} \vee z) \wedge (x \vee \bar{y} \vee z) \wedge (\bar{x} \vee \bar{y} \vee \bar{z})$$

3. Prove or disprove: NPSPACE = PSPACE.

4. Prove or disprove (separately): PSPACE is closed under

   (a) union

   (b) intersection

   (c) complementation

   (d) star (Kleene closure)