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Today Space complexity; Savitch's theorem; PSPACE completeness. §§ 8.{1,2,3}.Next class Catch-up and review.Reminders Midterm exam date change. Newsgroup. Homework. Posters and portfolios.

- 1. List the members of your group below. Underline your name.
- 2. Provide an example of a problem that is in PSPACE but not known to be in PTIME. Define the problem carefully, following the textbook's conventions, and justify your answer.

3. Solve the *ladder* problem from the textbook (Problem 8.9, p. 358).

4. Prove or disprove: NPSPACE = PSPACE.

- 5. Prove or disprove (separately): PSPACE is closed under
 - (a) union
 - (b) intersection
 - (c) complementation
 - (d) star (Kleene closure)