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Today: NP-Completeness. $\S\S 34.\{0,1,2\}$.

Next class: NP-completeness, continued. §§ $34.\{3,4,5\}$.

Reminders: Read material before and after class. Use the class newsgroup.

- 1. List the members of your group below. Underline your name.
- 2. Recall, from Homework 4, the problem of listing all 3-tuples of pole-lengths that satisfy the straight-line requirement described there. Define this problem formally as an *abstract problem*, using the textbook's conventions (p. 1054). Provide a small illustrative *instance* of this problem.

3. Describe a suitable *encoding* of the objects used in your definition for Question 2. Use this encoding to map the instance of Question 2 to a *concrete problem*.

4.	Define a suitable decision problem corresponding to the problem of Question 2. Provide the decision-problem instance corresponding to the instance of Question 2, in both abstract and concrete forms.
5.	Is the problem of Question 4 in P? Is it in NP? Is it NP-complete? Explain your answers briefly.
6	Recast the problem of Question 4 using formal languages.