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Today: NP completeness. §§ 34.{1,2} Next class: NP completeness. §§ 34.* Next week: Project Report 2 due Tue.

Reminders: Term projects. Read material before and after class. Use newsgroup.

- 1. List the members of your group below. Underline your name.
- 2. Recall, from Homework 3, 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 $formal\ languages$.