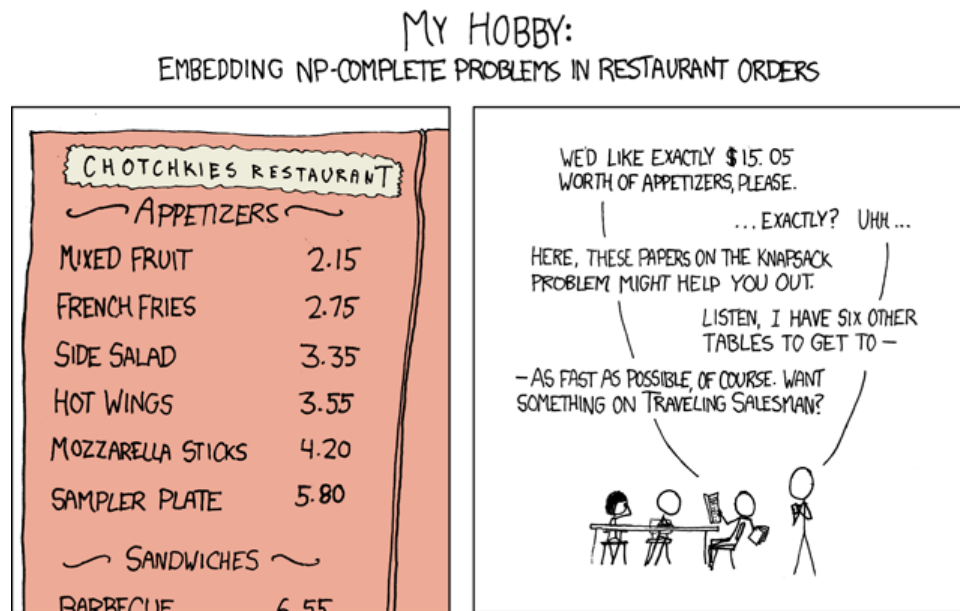**Today:** NP-completeness, continued. §§ 34.*.
Next class: Catch-up and review.
Reminders: Midterm exam soon. Use the class newsgroup.

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

2. In the custom of *good bad jokes*, explain the following, due to Randall Munroe, from `http://xkcd.com/287/`, 2012-08-07.

3. Consider the following KNAPSACK problem: Given a set S of items, where each item $s_i \in S$ has a weight (cost) of w_i and a value (benefit) of v_i, find the most beneficial (highest aggregate value) subset $S' \subseteq S$ of items that can be carried in a knapsack of capacity (by weight) W.

   Prove or disprove: KNAPSACK $\in$ NP.

4. Prove or disprove: KNAPSACK is NP-hard. [Hint: See Question 2.]