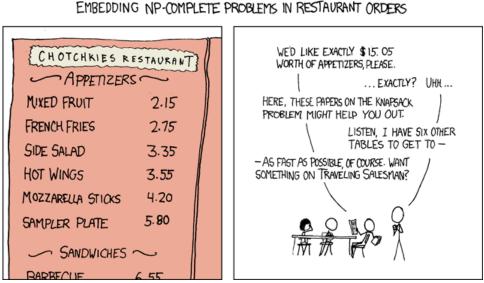
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- 1. Write your name below:
- 2. In the custom of *good bad jokes*, explain the following, due to Randall Munroe, from http://xkcd.com/287/, 2012-08-07.



MY HOBBY: EMBEDDING NP-COMPLETE PROBLEMS IN RESTAURANT ORDERS

- 3. Consider the problem of *unordered search*, i.e., of determining whether a collection of objects (e.g., integers) contains a specified object (e.g., 7). 5
 - (a) Using the textbook's terminology, define a corresponding *abstract problem*.
 - (b) Define a suitable encoding and the corresponding *concrete problem*.
 - (c) Define a formal language L_s corresponding to the above.
 - (d) Prove or disprove: $L_s \subseteq P$.

[additional space for earlier material]