Artificial Intelligence (CPS 170) : Homework 2

Due February 16, 2004

Problem 1: Do problem 5.2.

Problem 2: Do problem 5.11.

Problem 3: Do problem 5.13. Note that the simple table-based notion of constraints we discussed in class won't be practical for this problem. You'll probably want to do some kind of backtracking and using a table, as in Figure 5.6, is a good way to keep track of your progress. Alternatively, you could write s small program and submit the program. In either case, don't just provide a satisfying assignment. Show us how you found it.

Problem 4: *You should do this part of the problem independently before moving on to the second part. (I don't want to get a dozen identical CSPs):* Do a search on the internet or more traditional medium for standardized test sample questions (IQ tests, GRE, LSAT, etc.), find a problem that looks like a CSP. Copy it (with appropriate citation) and describe the variables and constraints.

    You are encouraged to discuss this part of the problem with your friends: If you had seen this problem before studying CSPs, would you have approached it differently? How? Does your understanding of CSPs make you think such problems are more or less relevant to testing intelligence? Why? (Note: There's no wrong answer to these questions. I just want an answer that shows that you've thought about the issues.)

Problem 6: Do problem 7.5.

Problem 6: Do problem 7.8.

Problem 6: Do problem 7.10.