

Problem Set 2

CS4860 Fall 2010

Due Thursday 30, 2010

Reading

Please read Smullyan Chapter III sections 1, 2, and 4 and all of Chapter IV. Also read the following paper on the resolution method.

http://arxiv.org/PS_cache/cs/pdf/0606/0606084v3.pdf

Problems

1. Solve exercise 3 page 30 of the textbook.
2. Solve the exercise on page 36 of the textbook.
3. Execute the Davis Putnam procedure (see Lecture 8 supplemental material) or the Resolution procedure from the above reading on the following formulas (put into Conjunctive Normal Form if necessary).
 - (i) $(p \text{ or } q) \text{ and } (q \text{ or } r) \text{ and } (\text{not } p \text{ or } \text{not } q \text{ or } r)$
 - (ii) $(p \text{ imp } q) \text{ imp } (\text{not } q \text{ imp } \text{not } p)$
4. Solve exercise 2 on page 50.
5. Solve exercise 3 on page 50.