

## Reading

Please read the notes on Expressing Mathematical Concepts (# 19 & 20) for Thursday, April 2.

Please read chapter 16 in Boolos & Jeffrey and/or the notes on Axiomatizing Integer Arithmetic and Arithmetic Representability (# 21 & 22) for Thursday, April 9.

## Questions

- (1) Solve the first group of exercises on page 56 of Smullyan's book. Submit your solutions for the second, third, and last one.
- (2) Give Refinement Logic proofs for the seventh and last of the above exercises and construct the evidence terms from the proofs.  
Show by giving counterexamples why the converse is not valid.
- (3) Solve the second group of exercises on page 56 of Smullyan's book. Submit your solutions for the sixth and the last one.
- (4) Solve the exercise on page 63 of Smullyan's book.  
*(In contrast to Homework 5 (4) you now have to prove that the given formula is not finitely satisfiable)*