

Problem Set 4 Due Thursday October 21 CS4860 Fall 2010

Reading: Please read Smullyan pages 117-118.

1 Problem 1

Solve Exercise 3 page 118 of the textbook.

2 Problem 2

Apply the results of Problem 1 to put the following formula in prenex normal form.

$$\exists y \forall x. Axy \supset \exists v \forall u. Buv$$

3 Problem 3

Define the satisfiability relation in words and then relate it to Smullyan's definition of satisfiability on page 51.

$$\mathcal{M} \models_{\alpha} \phi$$