MATHEMATICAL LOGIC — ASSIGNMENT ONE

(1) Prove $\vdash (A \supset B) = (\neg B \supset \neg A)$.
(2) Show that in a bounded lattice, every element is greater that $\bot$ and less than $\top$.
(3) Prove that Pierce's Law $(((B \supset C) \supset B) \supset B)$ implies the Law of Excluded Middle $(A \vee \neg A)$.

Each question is worth 12 points. The points in all the four assignments will be added together and the result will be divided by 4, and this will be the final result. Remember to mark your answer sheet with your name.