## CISC 301 Homework 3 Due on Thursday, September 29, 2005 **No Late Submissions**

- 1. Use resolution to establish the following:
- a.  $(A \to (B \to C)) \to ((A \lor D) \to ((B \to C) \lor D))$  is valid.
- b.  $((((A \to B) \to (\neg C \to \neg D)) \to C) \to E) \to ((E \to A) \to (D \to A))$  is valid
- c.  $(A \land (\neg B \to (C \land \neg C))) \to (A \land B)$  is valid.
- d.  $A \to \neg B$  is a consequence of  $\{(A \to (B \to C)), \neg C\}$