1. Let p,q,r,s denote the following

p: I finish writing my computer program before lunch

q: I play tennis

r: it is sunny

s: it is soggy

Write the following in logic form (symbols: ∧, ∨, ⊻, ↔, →, ¬)

a) I will play tennis if and only if it is sunny.

b) Finishing the writing of my computer program before lunch is sufficient for playing tennis

c) The days are sunny and non-soggy whenever I play tennis

2. Construct a truth table for the following assuming that q is a tautology. Show your work.

q → [(¬p ∨ r) ∧ ¬s]

3. Simplify this network. Show your work. (symbols: ∧, ∨, ⊻, ↔, →, ¬)

