**End of lecture quiz**

**Question1: Determine whether each of the following implications is true or false.**

**a) If 0.5 is an integer, then 1 + 0.5 = 3.**

**b) If cars can fly, then 1 + 1 = 3.**

**c) If 5 > 2 then pigs can fly.**

**d) If 3\*5 = 15 then 1 + 2 = 3.**

**Question2: Let p and q be the propositions**

**p: Your car is out of gas.**

**q: You can't drive your car.**

**Write the following propositions using p and q and logical connectives.**

**a) Your car is not out of gas.**

**b) You can't drive your car if it is out of gas.**

**c) Your car is not out of gas if you can drive it.**

**d) If you can't drive your car then it is out of gas.**

**Question3: Write the truth table of the following two formula (p ∧ ¬(q ∨ r)) and (¬p ∨ (q ∨ r)). Say for each one if it is a tautology, satisfiable or contradiction. Say if one is a logical consequence (entailment) of the other?**