MATH 270 SUMMER 2007 QUIZ 1

1. Use truth tables to show that the following propostional forms are equivalent.

- a) (5 pt) $P \wedge (Q \vee R)$ is equivalent to $(P \wedge Q) \vee (P \wedge R)$. b) (5 pt) $P \vee (Q \wedge R)$ is equivalent to $(P \vee Q) \wedge (P \vee R)$.

 $2.\ (5\ {\rm pt})$ Give an example of a contradiction (and explain why it is a contradiction). Also give an example of a tautology.