Math 302
Homework 1

1. Prove that " $p \Rightarrow q$ " is equivalent to " $\sim q \Rightarrow \sim p$ "

2. Negate the statement "If one can see a rainbow then it rains and it is sunny".

3. Let A , B, and C be three sets. Prove the following statements:

(a) $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

(b) $(A \cup B)^c = A^c \cap B^c$

4. Design an electric circuit that models (represents) the logical "$p \Rightarrow q$"

Also from our textbook (Stewart):

Page 130 Exercises 1, 2abc, 3abd, 4d, 8abcd