Math 2603 Quiz 2: Chapter 1   **Name:** _____
Fri 12 September 2014

You have 20 minutes to complete this quiz. No calculators allowed. Eyes on your own paper and good luck!

1. **Definitions/Concepts.** Write down the definition of

   (a) proposition

   (b) contrapositive

2. **Questions/Problems.**

   Let $K(x, y)$ be the propositional function "x knows y". The domain of discourse is the Cartesian product of the set of students taking discrete math with itself (i.e., both x and y take on values in the set of students taking discrete math). Represent the assertion "someone does not know anyone" symbolically.

3. **Computations/Algebra.**

   (a) Write the truth table of the proposition $\neg(P \vee Q) \wedge \neg((\neg P \vee R) \wedge Q)$.

   (b) $|\{\emptyset\}| =$