Quiz 1  MAA 4224–Introduction to Analysis, Fall 2005

Student’s Name:______________________   E. Hironaka
                                              September 2, 2005

This is a 20 minute quiz.

1. Which of the following is true and which is false? For parts (a) and (b), if the statement is false give a counter-example.

   (a) $A \cap (B \cup C) \supset (A \cap B) \cup C$.
   (b) $A \cap (B \cup C) \subset (A \cap B) \cup C$.
   (c) $\sqrt{17}$ is rational.

2. Which of the following is the logical negative of the statement “all apples are red”? That is, which of the following is equivalent to the statement “it is not true that all apples are red”?

   (a) All apples are not red.
   (b) Some apples are not red.
   (c) No apples are red.
   (c) All oranges are red.