MTH 309

Additional Problems for Sec 2.2

1. Prove one of the distributive laws of sets in Table 1 by using set builder notation and the corresponding law of logic.

2. Prove one of the absorption laws of sets in Table 1 by using set builder notation and the corresponding law of logic

3. Use the set identities in Table 1 to prove the following identities (be sure to give the identity being used at each step):

   (a) $\overline{\overline{(A \cup \overline{B})} \cup \overline{A}} = A$

   (b) $A \cap (B - C) = (A \cap B) - (A \cap C)$