ASSIGNMENT

1. With the use of Venn Diagrams verify the following:

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

b. $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

2. Suppose $A = \{1,2,3,4\}$, $B = \{3,4,5,6\}$ and $C = \{8,9,0\}$. Then find the following sets:

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

b. $(A \cap B) \cup (A \cap C)$

c. $A - B$

d. $B - C$

e. $A \cup (B \cup C)$

f. $(A \cup B) \cup C$

g. Verify De Morgan's Laws considering

$$U = \{0, 1, 2, \dots 10\}$$