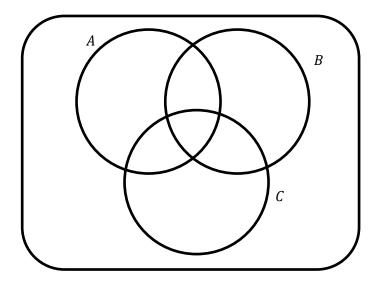
1) In the Venn Diagram below, shade the region corresponding to  $A \cap (C \cup B)^c$ . (15 points)



T or F 2) Based on the picture,  $A \subseteq B$ . (10 points)

3) Describe in one sentence what a "proof" is. (15 points)

4) Let A,B, and C be sets. Prove the following statement:  $[A\subseteq (B\cap C)]\Rightarrow [(A\subseteq B)\land (A\subseteq C)]$  (100 points)