$$13A$$

1) $B \cap \left(\bigcup_{\alpha \in J} A_\alpha \right) = \ ?$

2) $B \cup \left(\bigcap_{\alpha \in J} A_\alpha \right) = \ ?$

3) $\left(\bigcap_{\alpha \in J} A_\alpha \right)^c = \ ?$

4) $\left(\bigcup_{\alpha \in J} A_\alpha \right)^c = \ ?$