## Additional Problems Assignment 6

1. In class we showed that if $U$ and $V$ are open subsets of $\mathbb{R}$ then so is $U \cap V$. Use induction to show that if $U_{1}, U_{2}, \ldots, U_{n}$ are open then so is $U_{1} \cap U_{2} \cap \cdots \cap U_{n}$.
