Find the formula for $P(A \cup B \cup C)$;

Find the formula for $P(\bigcup_{i=1}^{n} A_i)$ and show its validity for every $n$ by using induction;

Show formula valid for every $n$,

$$P(A_1 \cap A_2 \cap \ldots \cap A_k) = P(A_1) \cdot P(A_2 \mid A_1) \cdot \ldots \cdot P(A_k \mid A_1, A_2, \ldots, A_{k-1});$$

Page 54, No.4,8,12,16,20;

Page 60, No.2,4,8.