1. Write the symmetric difference $A \Delta B$ of two sets as an expression involving only unions, intersections, and complements.

2. Suppose $P(A) = 1/6$ and $P(B) = 2/3$.
   
   (a) What are the largest and smallest values that $P(A \cup B)$ can take?

   (b) What are the largest and smallest values that $P(A \cap B)$ can take?