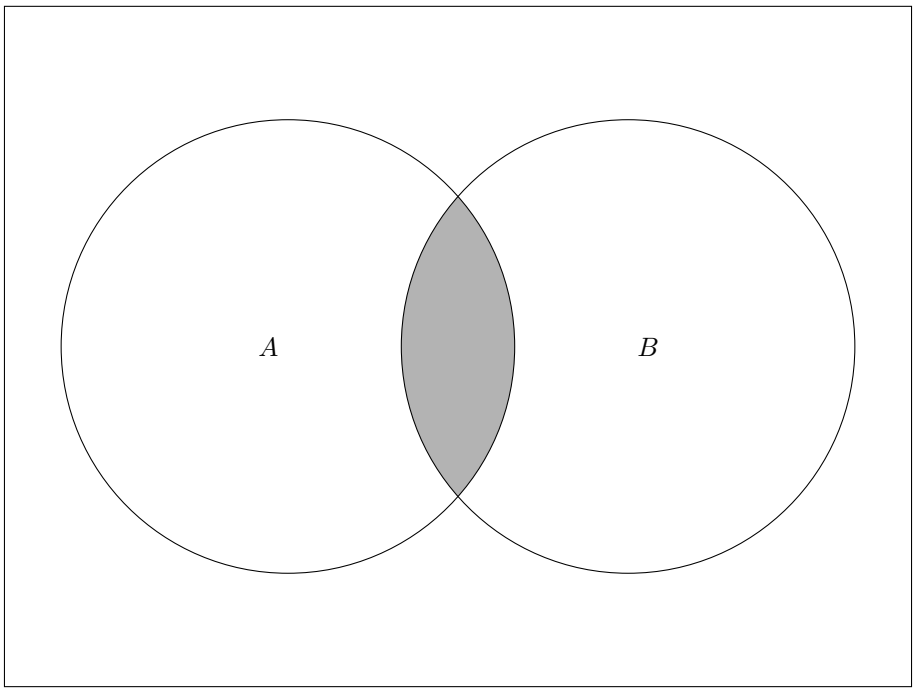
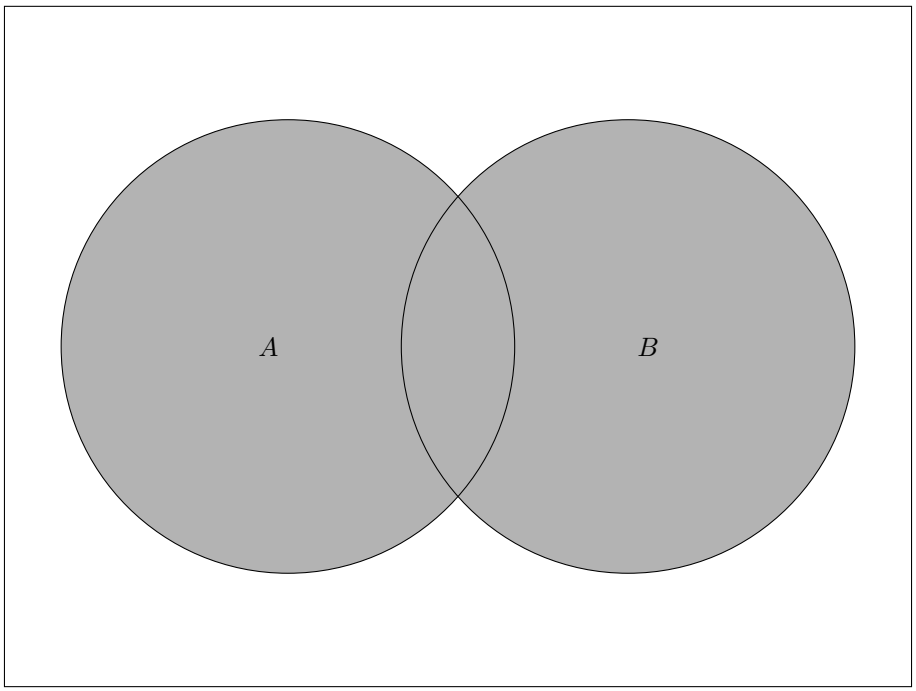
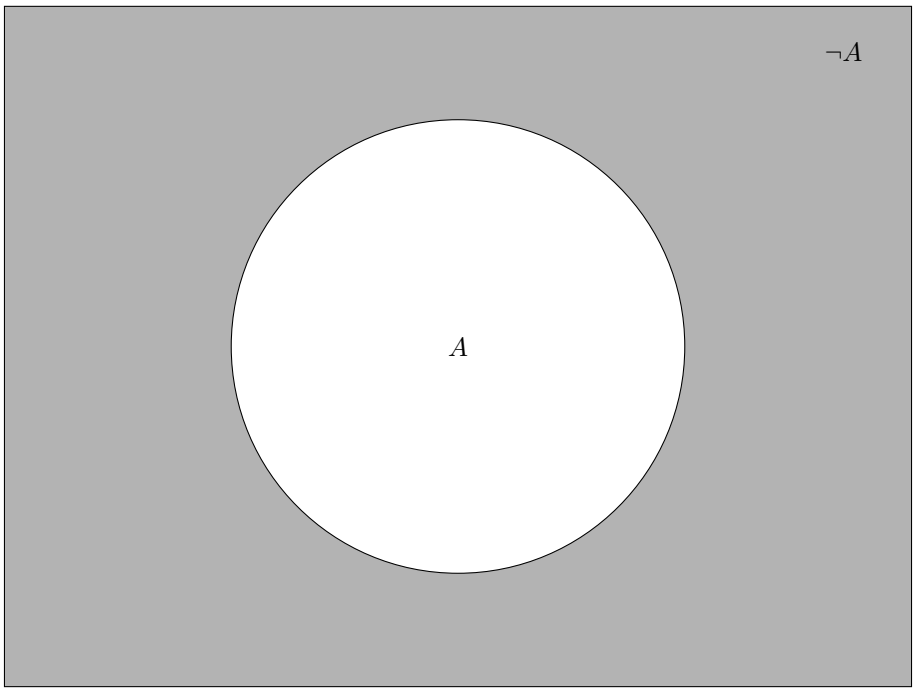


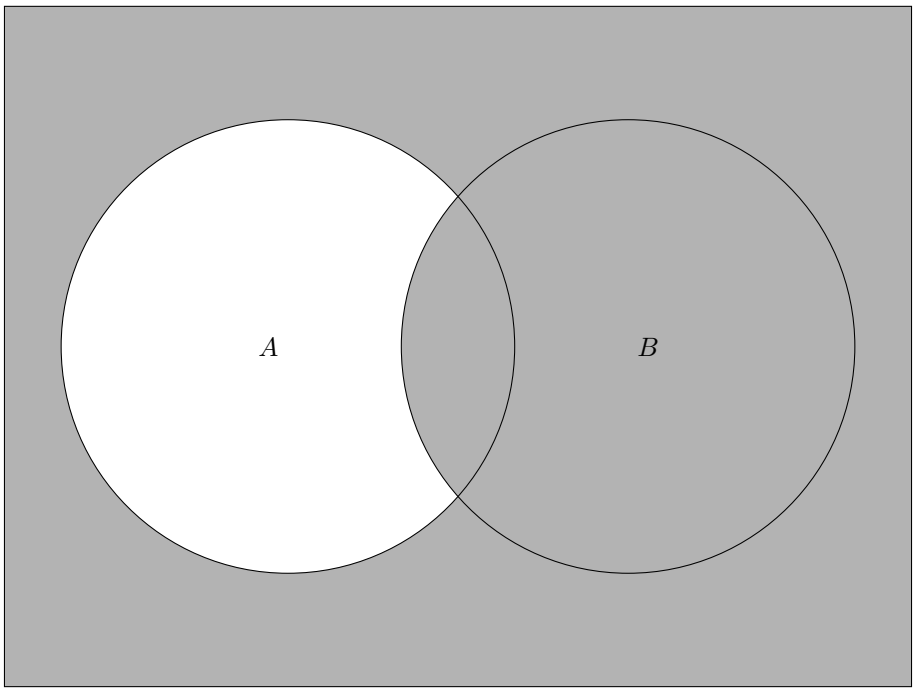
$A \wedge B$



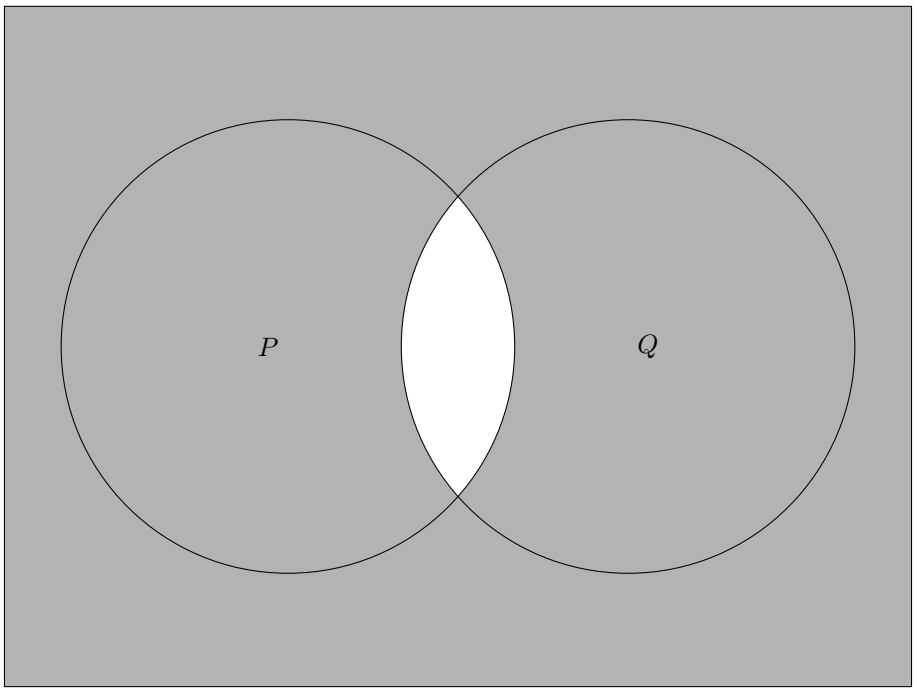
$A \vee B$



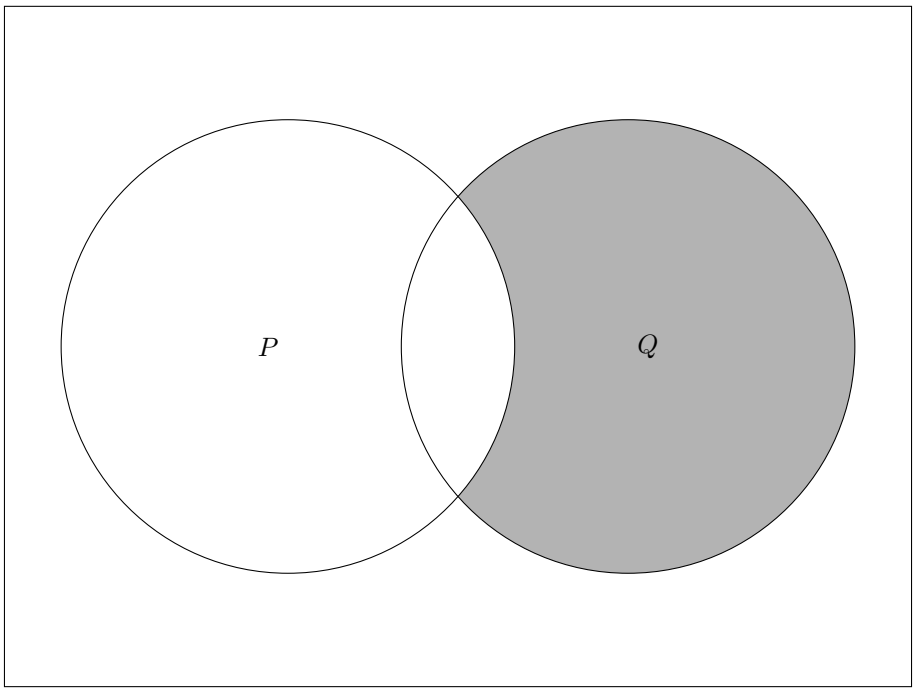
$\neg A$



$A \to B$

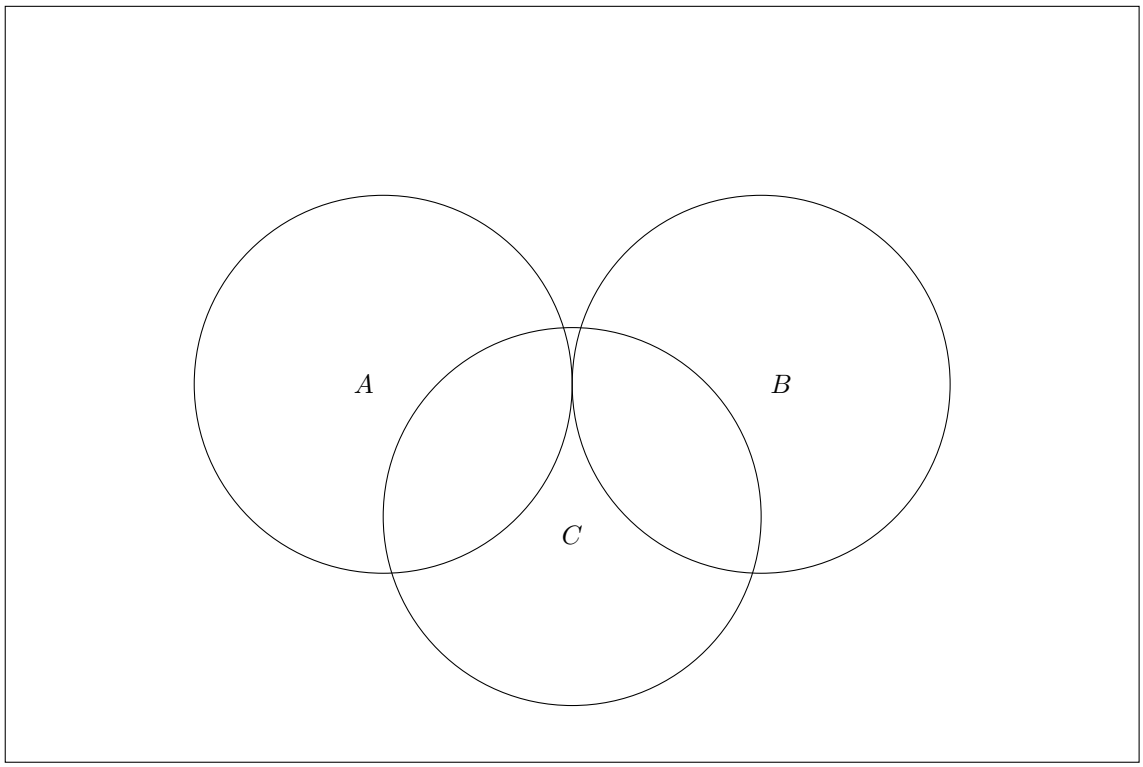


$$\neg(P \wedge Q) \equiv (\neg P) \vee (\neg Q)$$



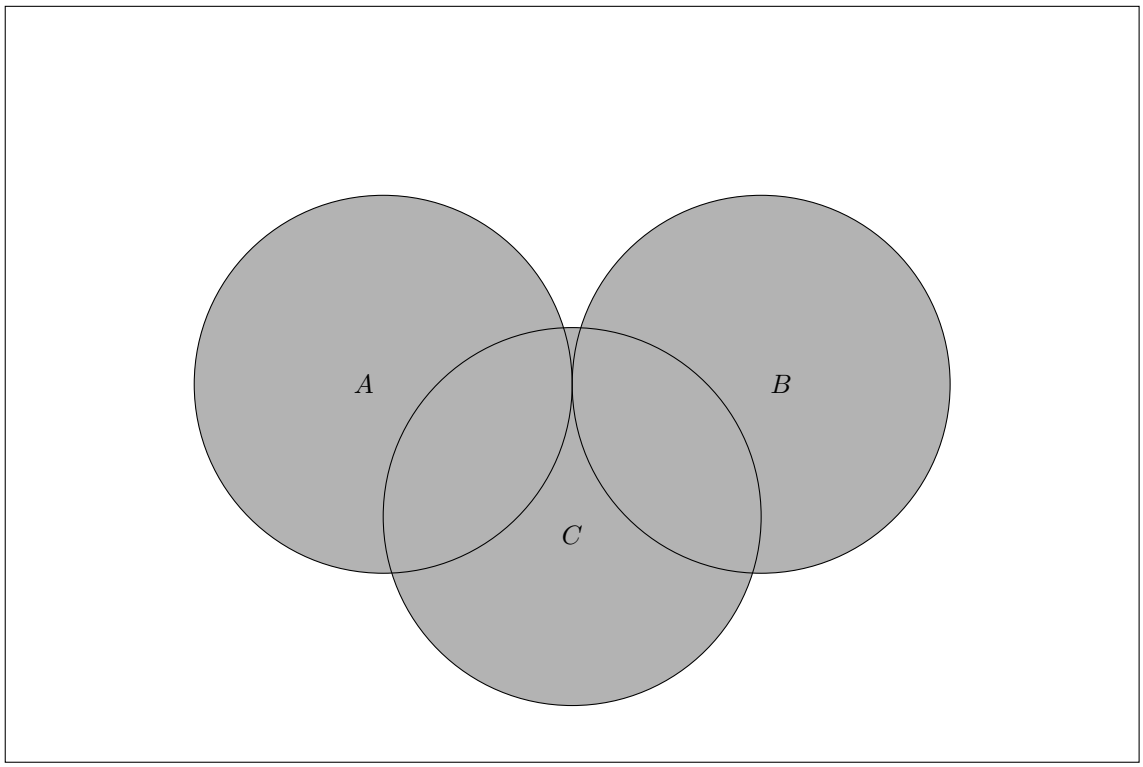
$(\neg P) \wedge Q$

Conjunction of Three Propositions: Shade only the area where all three overlap.



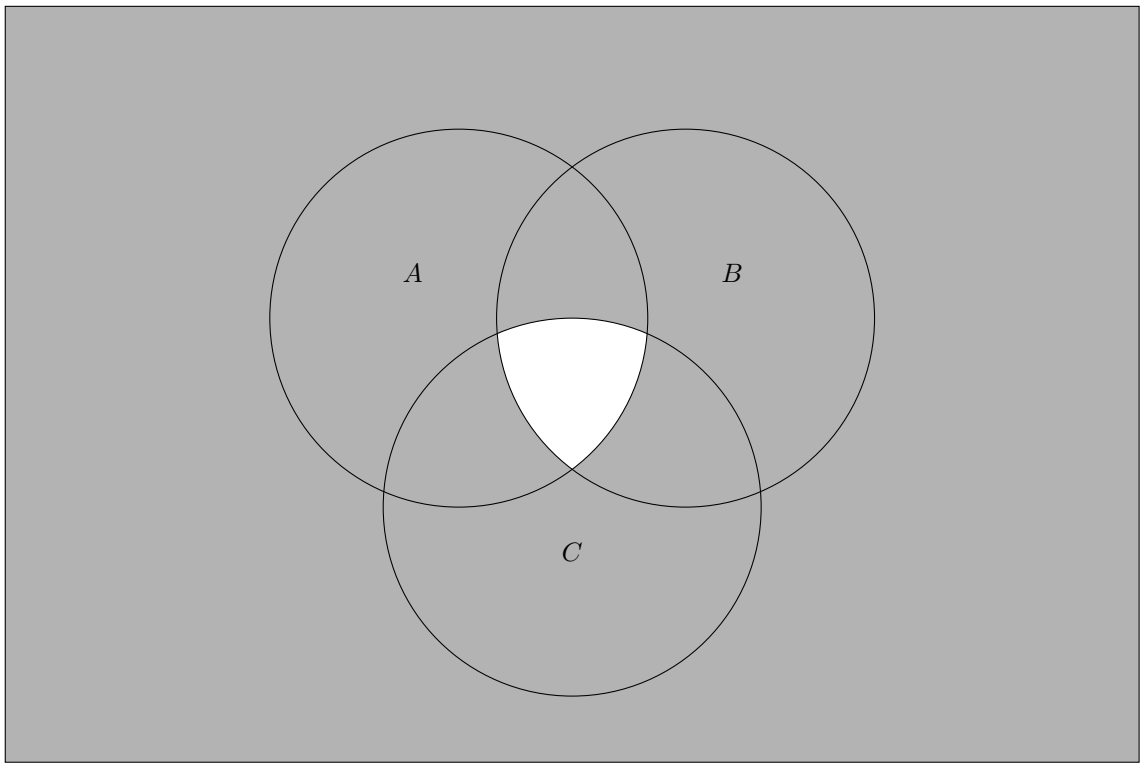
$A \wedge B \wedge C$

Disjunction of Three Propositions: Shade all areas inside any circle.



$A \vee B \vee C$

Negation of Conjunction: Shade everything except the triple intersection.



$$\neg(A \wedge B \wedge C) \equiv (\neg A) \vee (\neg B) \vee (\neg C)$$