1 Tautology and Contradiction

1. Tautology: always true
2. Contradiction: always false
3. Contingency: neither a tautology or a contradiction

2 Logial Equivalence

$p \equiv q$ ($p \longleftrightarrow q$): The compound propositions p and q are logically equivalent if $p \leftrightarrow q$ is a tautology (always true)

1. $\neg(p \vee q) \equiv \neg p \wedge \neg q$
2. $p \rightarrow q \equiv \neg p \vee q$
3. $p \vee (p \wedge r) \equiv (p \vee q) \wedge (p \vee r)$

3 De Morgan's Laws

Insert notes...

4 Key Logical Equivalences

Insert notes...