Clause Normalization Rules

$$\frac{F[\neg\neg A]}{F[A]} \qquad \frac{F[\neg(A \vee B)]}{F[\neg A \wedge \neg B]} \qquad \frac{F[\neg(A \wedge B)]}{F[\neg A \vee \neg B]}$$

$$\frac{F[A \vee (B \wedge C)]}{F[(A \vee B) \wedge (A \vee C)]} \qquad \frac{F[(A \wedge B) \vee C]}{F[(A \vee C) \wedge (B \vee C)]}$$

$$\frac{F[A \Rightarrow B]}{F[\neg A \vee B]} \qquad \frac{F[A \Leftrightarrow B]}{F[(A \Rightarrow B) \wedge (B \Rightarrow A)]} \qquad \frac{F[A \not\Leftrightarrow B]}{F[(A \vee B) \wedge (\neg A \vee \neg B)]}$$

Final Step: Clausification

$$\frac{A \wedge B}{A,\ B}$$

Literals: atoms or negated atoms

Result: Set of clauses $C_1, \ldots, C_n$ where each C_i has form $L_1 \vee \ldots \vee L_n$