Resolution Algorithm

Goal: Determine whether $\{\varphi_1, \ldots, \varphi_k\} \models \varphi$ holds

1. Let $\psi$ be the formula $\varphi_1 \land \ldots \land \varphi_k \land \neg \varphi$.

2. Transform $\psi$ into Skolem normal form $\forall X_1, \ldots X_n \xi$.

3. Transform $\xi$ into CNF resp. into clause set $\mathcal{K}(\xi)$.

4. Compute $\text{Res}^*(\mathcal{K}(\xi))$.

   If one finds $\square$, stop and return “true”.

   Otherwise, if $\text{Res}^*(\mathcal{K}(\psi))$ was computed completely, stop and return “false”.