Theoretical Part: Resolution

$A \Leftrightarrow \neg C$

$B \Leftrightarrow (A \wedge C)$

$C \Leftrightarrow B$

$(A \Rightarrow \neg C) \wedge (\neg C \Rightarrow A)$ $\quad (B \Rightarrow (A \wedge C)) \wedge ((A \wedge C) \Rightarrow B)$

$*(\neg A \vee \neg C) \wedge (C \vee A)$ $\quad *(\neg B \vee (A \wedge C)) \wedge (\neg (A \wedge C) \vee B)$

$(C \Rightarrow B) \wedge (B \Rightarrow C)$

$*(\neg C \vee B) \wedge (\neg B \vee C)$

$KB \equiv (\neg A \vee \neg C)$

$\{(C \vee A)$

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

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

$(\neg C \vee B)$

$(\neg B \vee C)$

(1) $(\neg A \vee \neg C)$

(2) $(C \vee A)$

(3) $(\neg B \vee A)$

(4) $(\neg B \vee C)$

(5) $(\neg A \vee \neg C \vee B)$

(6) $(\neg C \vee B)$

(7) $(\neg B \vee C)$

(8) $\neg A$ Prove that Amy is telling truth

(9) 8 + 1 $\neg C$

(10) 9 + 2 A

(11) $\{\text{null}\}$ Contradiction

∴ Amy is telling the truth, Cal is a liar, Bob is a liar