Proofing the KB entailment

$A \Leftrightarrow (B \vee C) \models_? B \Rightarrow A$ **as an example**

- Convert to CNFs $A \Leftrightarrow (B \vee C)$
- Proof by contradict: $KB \Rightarrow \alpha$ to $KB \wedge \neg\alpha$ is unsatisfiable (always false)
  - There is no case where KB is true and α is false

- Resolution: $(A \vee B) \wedge (\neg A \wedge C) = (B \vee C)$
- Empty ($A \wedge \neg A = F$) means $KB \wedge \neg\alpha$ is unsatisfiable then $KB \models \alpha$

Forward chaining and backward chaining

- $A \Leftrightarrow (B \vee C) \models_{?} B \Rightarrow A$ as an example

- B
- $D = B \vee C$
- $E = A \Leftrightarrow (B \vee C)$
- A