Consider Set all the variables to False.

Construct a directed graph.

Each variable is a node. For each implication clause there is a directed edge from \( w \) to \( x \).

\[(x \wedge y \wedge z) \Rightarrow w, (x \wedge y) \Rightarrow w, x \Rightarrow y, w \wedge z \Rightarrow z \]

Initial True list consist of clause \( \perp \) the horn

\[ \Rightarrow x \]

Starting from the true list, add all nodes that can be reached from true nodes. Set all these nodes to True.

By with variable in true list ad false list, if all be negated clause are satisfiable, then the horn clause \( \perp \) satisfiable else \( \perp \) not satisfiable.

E.g. in page 152

\[(w \wedge y \wedge z) \Rightarrow x, (x \wedge y) \Rightarrow w, x \Rightarrow y, \Rightarrow x, (x \wedge y) \Rightarrow w, (w \vee \overline{x} \vee y) \Rightarrow \perp \]

True list \( x \)

\[ \ perp \]

hence

\( \perp \) is unsatisfied.