1. Describe a state space in which iterative deepening search preforms much worse than depth-first search (e.g. $O(n^2)$ vs. $O(n)$). Explain why. (Do not collaborate on this problem beyond discussing the working of the search algorithms.)

2. A *horn clause* is a clause with at most one positive (non-negated) literal. How can you modify the DPLL algorithm given in figure 7.16 of R & N to answer a query $KB \models p$ in linear time if $KB$ is a collection of horn clauses and $p$ is a propositional symbol?