Problem

Show that the language *MAX-CLIQUE* from Problem 7.48 is in P^{SAT}.

Step-by-step solution

Step 1 of 1

- In a graph G clique are maximum of the size k iff it has k clique size and does not have $k+1$ clique size.

- The language $CLIQUE$ is in NP, and the language $\overline{CLIQUE}$ is in $co-NP$. Since $NP \in P^{SAT}$ and $CoNP \in P^{SAT}$, $MAXCLIQUE$ is in P^{SAT}.

- Since $P^{SAT} \in NP^{SAT}$, $MAXCLIQUE$ is in NP^{SAT}.

Comment