Home Work #2

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We learned the two facts that,

1) PSPACE = NPSPACE and

2) TQBF is one of the hardest problem in PSPACE
   in that every problem in PSPACE can be efficiently convertible to TQBF.

Using the two facts above, we can induce a theroem that,

"every problem in NPSPACE can be convertible to TQBF".

P $\subset$ PSPACE, NP $\subset$ NPSPACE

if We have a magical device "X" that can decide TQBF in one step,

and "X" can decide any language L in P or NP,

then any language L in P or NP are in PSPACE or NPSPACE ,which are the same sets,

can be converted to TQBF efficiently.

and we can use "X" freely to decide TQBF.

That means that P can be solved and proved efficiently, and NP can be solved and proved efficiently.

Therefore, P = NP