

Combinatorial Search #1

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- **Proposition 1** *If π_1 and π_2 are good representations that are polynomially equivalent, then $L_1 \in \mathbf{P} \Leftrightarrow L_2 \in \mathbf{P}$*

Proof

The proof is symmetric, so we have:

\Leftarrow

Given an instance π_2 in language L_2 we have an algorithm A that can make a good translation of this, to an instance of L_1 in polynomial time.

We then have a efficient function $r()$ which evaluates an instance