

Analysis of Algorithms

Homework 7 – NP

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1 Subgraph Isomorphism

We are given two graphs, G_1 and G_2 . The subgraph isomorphism problem (SGI) is to determine if there exists a subgraph of G_2 which is isomorphic to G_1 .

Part A

To prove that $SGI \in NP$ we must show that there is a way to verify a solution to the problem in polynomial time.