Logic and Computation I, Autumn 2022

Homework No.5
Due Date: November 28, 11:59 pm (Beijing)
Name:

Problem 1
Use the compactness theorem to prove:
An infinite graph (vertices) can be colored with k colors (each edge has a different color at each end) iff any finite subgraph of it can be colored with k colors.

Solution:

Problem 2 A CNF with exactly 2 literals in each clause is called a **2-CNF**, and the satisfaction problem for it is called **2-SAT**. Prove that 2-SAT belongs to P.

Solution: