Assignment 6

due Wednesday, March 11, 2020

Let HamPath be the following problem: Given an undirected graph $G$, does $G$ have a Hamilton path? Recall that a Hamilton path is one that visits every node exactly once. The HamCycle problem has the same input but is asking whether the graph has a Hamilton cycle.

Show that $\text{HamPath} \equiv_{p} \text{HamCycle}$.

Note that this is really two questions:

- $\text{HamPath} \leq_{p} \text{HamCycle}$
- $\text{HamCycle} \leq_{p} \text{HamPath}$