Quiz 1

1. Show that HC (the Hamiltonian Cycle problem) is in **NP**.

2. Define what it means for a decision problem Π to be **NP-Complete**.

3. Answer if each of the following is **True** of **False** and *explain* your answer in a few words. Here A and B are arbitrary languages (decision problems).

   (a) $A \propto A$.

   (b) if $A \propto B$ and $A \in \mathbf{P}$ then $B \in \mathbf{P}$.

   (c) PRIMES $\propto$ 3SAT.