CSC 373 H1 | Quiz # 9 | 8 November 2012
Aids Allowed: **none** | *Worth*: 1.5% | *Duration*: **10 minutes**

1. Recall the Clique decision problem from last week's tutorial.

Input: An undirected graph $G = (V, E)$ and a positive integer k.

Question: Does G contain a *clique* of size at least k, *i.e.*, a subset of k or more vertices such that G contains **every** possible edge between the vertices in the clique?

In last week's tutorial, you showed that Clique $\in$ *NP*. Now, show that Clique is *NP*-hard. Give a detailed reduction and argument of correctness. (Hint: You can use any of the problems you know to be *NP*-hard from lectures, tutorials, or the textbook — except for Clique itself, of course!)